

Varazdin Development and Entrepreneurship Agency  
in cooperation with  
University College of Inspection and Personnel Management in Split  
The University of Applied Sciences Baltazar  
University North  
Faculty of Management University of Warsaw  
Faculty of Law, Economics and Social Sciences Sale - Mohammed V University in Rabat



# Economic and Social Development

44<sup>th</sup> International Scientific Conference on Economic and Social Development

## Book of Proceedings

Editors:

Mila Nadrljanski, Jasmina Grzinic, Katarzyna Kinga Kowalczyk



ISSN 1849-7535



9 771849 753006 >

Split, 19-20 September 2019

**Varazdin Development and Entrepreneurship Agency**  
in cooperation with  
**University College of Inspection and Personnel Management in Split**  
**The University of Applied Sciences Baltazar**  
**University North**  
**Faculty of Management University of Warsaw**  
**Faculty of Law, Economics and Social Sciences Sale - Mohammed V University in Rabat**

Editors:

**Mila Nadrljanski, Jasmina Grzinic, Katarzyna Kinga Kowalczyk**

## **Economic and Social Development**

44<sup>th</sup> International Scientific Conference on Economic and Social Development

### **Book of Proceedings**

Split, 19-20 September 2019

**Title** ■ Economic and Social Development (Book of Proceedings), 44<sup>th</sup> International Scientific Conference on Economic and Social Development

**Editors** ■ Mila Nadrljanski, Jasmina Grzanic, Katarzyna Kinga Kowalczyk

**Scientific Committee / Programski Odbor** ■ Marijan Cingula (President), University of Zagreb, Croatia; Sandra Raquel Alves, University of Aveiro, Portugal; Ayuba A. Aminu, University of Maiduguri, Maiduguri, Nigeria; Anona Armstrong, Victoria University, Australia; Gouri Sankar Bandyopadhyay, The University of Burdwan, Rajbati Bardhaman, India; Haimanti Banerji, Indian Institute of Technology, Kharagpur, India; Elisabeth de Jesus Oliveira Brito, University of Aveiro, Portugal; Alla Bobyleva, The Lomonosov Moscow State University, Russia; Leonid K. Bobrov, State University of Economics and Management, Novosibirsk, Russia; Rado Bohinc, University of Ljubljana, Slovenia; Belma Ramic Brkic, University of Sarajevo, Bosnia and Herzegovina; Zeki Atil Bulut, Dokuz Eylul University, Turkey; Adnan Celik, Selcuk University, Konya, Turkey; Angelo Maia Cister, Federal University of Rio de Janeiro, Brazil; Alexey Chernov, RUDN University, Russian Federation; Przemyslaw Chmielecki, Higher Baptist Theological Seminary in Warsaw, Poland; Mirela Cristea, University of Craiova, Romania; Sreten Cuzovic, University of Nis, Serbia; Oguz Demir, Istanbul Commerce University, Turkey; T.S. Devaraja, University of Mysore, India; Onur Dogan, Dokuz Eylul University, Turkey; Darko Dukic, University of Osijek, Croatia; Gordana Dukic, University of Osijek, Croatia; Josko Dvornik, University of Split, Croatia; Alba Dumi, Vlora University, Vlore, Albania; Ksenija Dumcic, University of Zagreb, Croatia; Galina Pavlovna Gagarinskaya, Samara State University, Russia; Fran Galetic, Zagreb University, Croatia; Mirjana Gligoric, Faculty of Economics, Belgrade University, Serbia; Mehmet Emre Gorgulu, Afyon Kocatepe University, Turkey; Aleksandra Grobelna, Gdynia Maritime University, Poland; Liudmila Guzikova, Peter the Great Saint Petersburg Polytechnic University, Russia; Anica Hunjet, University North, Koprivnica, Croatia; Oxana Ivanova, Ulyanovsk State University, Ulyanovsk, Russia; Irena Jankovic, Faculty of Economics, Belgrade University, Serbia; Lara Jelenc, University of Rijeka, Croatia; Myrl Jones, Radford University, USA; Gorazd Justinek, Graduate School of Government and European Studies, Slovenia; Hacer Simay Karaalp, Pamukkale University, Turkey; Grzegorz Karasiewicz, University of Warsaw, Poland; Dafna Kariv, The College of Management Academic Studies, Rishon Le Zion, Israel; Ljilja Kascelan, University of Montenegro, Montenegro; Salih Katircioglu, Eastern Mediterranean University, Northern Cyprus, Turkey; Hilal Yildirim Keser, Uludag University, Bursa, Turkey; Sophia Khalimova, Institute of Economics and Industrial Engineering of Siberian Branch of Russian Academy of Science, Novosibirsk, Russia; Marina Klacmer Calopa, University of Zagreb, Croatia; Andrej Kovacic, Faculty of Media, Ljubljana, Slovenia; Vladimir Kovsca, University of Zagreb, Croatia; Goran Kozina, University North, Koprivnica, Croatia; Dzenan Kulovic, University of Zenica, Bosnia and Herzegovina; Robert Lewis, Les Roches Gruyere University of Applied Sciences, Bulle, Switzerland; Ladislav Lukas, Univ. of West Bohemia, Faculty of Economics, Czech Republic; Pascal Marty, University of La Rochelle, France; Vaidotas Matutis, Vilnius University, Lithuania; Marjana Merkač Skok, GEA College of Entrepreneurship, Ljubljana, Slovenia; Daniel Francois Meyer, North West University, South Africa; Gabriela Mezeiova, Slovak Centre of Scientific and Technical Information, Slovak Republic; Marin Milkovic, Rector, University North, Koprivnica, Croatia; Raquel Filipa do Amaral Chambre de Meneses Soares Bastos Moutinho, University of Porto, Portugal; Djordje Nadrljanski, University College of Inspection and Personnel Management in Split, Croatia; Mila Nadrljanski, University College of Inspection and Personnel Management in Split, Croatia; Zlatko Nedelko, University of Maribor, Slovenia; Stevo Nikic, Adriatic University BAR, Serbia; Gratiela Georgiana Noja, West University of Timisoara, Romania; Zsuzsanna Novak, Corvinus University of Budapest, Hungary; Alojzy Z. Nowak, University of Warsaw, Poland; Tomasz Ochrowski, University of Warsaw, Poland; Mislav Ante Omazic, University of Zagreb, Croatia; Barbara Herceg Paksic, University of Osijek, Croatia; Vera Palea, Università degli Studi di Torino, Italy; Dusko Pavlovic, Libertas International University, Zagreb, Croatia; Igor Pihir, University of Zagreb, Croatia; Dinko Primorac, University North, Koprivnica, Croatia; Zeljka Primorac, University of Split, Croatia; Mirosław Przygoda, University of Warsaw, Poland; Karlis Purmalis, University of Latvia, Latvia; Nicholas Recker, Metropolitan State University of Denver, USA; Kerry Redican, Virginia Tech, Blacksburg, USA; Humberto Ribeiro, University of Aveiro, Portugal; Robert Rybnicek, University of Graz, Austria; Amelia Cristina Ferreira da Silva, Polytechnic of Porto, Portugal; Vladimir Simovic, University of Applied Sciences Baltazar Zapresic, Croatia; Slavko Simundic, University of Split, Croatia; Tomasz Studzieniecki, Gdynia Maritime University, Poland; Elzbieta Szymanska, Bialystok University of Technology, Poland; Katarzyna Szymanska, The State Higher School of Vocational Education in Ciechanow, Poland; Jan Turyna, University of Warsaw, Poland; Ilaria Tutore, University of Naples Parthenope, Italy; Rebeka Danijela Vlahov, University of Zagreb, Croatia; Bosko Vlahovic, Eduka Publishing, Belgrade, Serbia; Ilko Vrankic, University of Zagreb, Croatia; Stanislaw Walukiewicz, Bialystok University of Technology, Poland; Thomas Will, Agnes Scott College, USA; Li Yongqiang, Victoria University, Australia; Peter Zabielskis, University of Macau, China; Tao Zeng, Wilfrid Laurier University, Waterloo, Canada; Grzegorz Zimon, Rzeszow University of Technology, Poland; Snezana Zivkovic, University of Nis, Serbia.

**Review Committee / Recenzentski Odbor** ■ Marina Klacmer Calopa (President); Ana Aleksic; Sandra Raquel Alves; Ayuba Aminu; Mihovil Andjelinovic; Josip Armeric; Lidija Bagaric; Tomislav Bakovic; Sanja Blazevic; Leonid Bobrov; Ruzica Brečić; Anita Ceh Casni; Iryna Chernysh; Mirela Cristea; Oguz Demir; Jasmina Dvorski; Stjepan Dvorski; Robert Fabac; Ivica Filipovic; Sinisa Franjic; Fran Galetic; Mirjana Gligoric; Tomislav Globan; Anita Goltnik Urnaut; Tomislav Herceg; Irena Jankovic; Emina Jerkovic; Dafna Kariv; Oliver Kesar; Hilal Yildirim Keser; Tatjana Kovac; Vladimir Kovsca; Angelo Maia Cister; Katarina Marosevic; Vaidotas Matutis; Marjana Merkač Skok; Josip Mikulic; Ljubica Milanovic Glavan; Daniel Francois Meyer; Natanya Meyer; Guenter Mueller; Ivana Nacinovic Braje; Zlatko Nedelko; Gratiela Georgiana Noja; Zsuzsanna Novak; Alka Obadic; Claudia Ogrea; Igor Pihir; Najla Podrug; Vojko Potocan; Dinko Primorac; Zeljka Primorac; Sanda Renko; Humberto Ribeiro; Vlasta Roska; Souhaila Said; Armando Javier Sanchez Diaz; Tomislav Sekur; Lorena Skufflic; Mirko Smoljic; Petar Soric; Mario Spremic; Joanna Stawska; Matjaz Stor; Tomasz Studzieniecki; Lejla Tijanic; Daniel Tomić; Boris Tusek; Rebeka Daniela Vlahov; Ilko Vrankic; Thomas Will; Zoran Wittine; Tao Zeng; Grzegorz Zimon; Snezana Zivkovic; Berislav Zmuk.

**Organizing Committee / Organizacijski Odbor** ■ Domagoj Cingula (President); Ivan Brkovic; Marina Klacmer Calopa; Spomenko Kesina; Erlino Koscak; Mila Nadrljanski; Veronika Nemetschek; Mirosław Przygoda; Michael Stefulj; Kristina Vidovic; Rebeka Danijela Vlahov; Sime Vucetic; Nikola Vukcevic.

**Publishing Editor** ■ Domagoj Cingula

**Publisher** ■ **Design** ■ **Print** ■ Varazdin Development and Entrepreneurship Agency, Varazdin, Croatia / University College of Inspection and Personnel Management in Split, Split, Croatia / The University of Applied Sciences Baltazar, Zapresic, Croatia / University North, Koprivnica, Croatia / Faculty of Management University of Warsaw, Warsaw, Poland / Faculty of Law, Economics and Social Sciences Sale - Mohammed V University in Rabat, Morocco

**Printing** ■ Online Edition

**ISSN 1849-7535**

The Book is open access and double-blind peer reviewed.

Our past Books are indexed and abstracted by ProQuest, EconBIZ, CPCI (Web of Science) and EconLit databases and available for download in a PDF format from the Economic and Social Development Conference website: <http://www.esd-conference.com>

© 2019 Varazdin Development and Entrepreneurship Agency, Varazdin, Croatia; University College of Inspection and Personnel Management in Split, Split, Croatia; The University of Applied Sciences Baltazar, Zapresic, Croatia; University North, Koprivnica, Croatia; Faculty of Management University of Warsaw, Warsaw, Poland; Faculty of Law, Economics and Social Sciences Sale - Mohammed V University in Rabat, Morocco. All rights reserved. Authors are responsible for the linguistic and technical accuracy of their contributions. Authors keep their copyrights for further publishing.

## **CONTENTS**

<b>BENEFITS OF EDUCATIONAL DATA MINING .....</b>	<b>1</b>
Alisa Bilal Zoric	
<b>STRATEGIES FOR IMPROVING SOCIO-ECONOMIC DEVELOPMENT BASED ON KNOWLEDGE IN POST-CONFLICT AREAS OF COLOMBIA: THE CASE OF BIOREFINERIES IN MONTES DE MARIA (MARIA MOUNTAINS) .....</b>	<b>8</b>
Carlos Ariel Cardona, Carlos Eduardo Orrego, Carlos Daniel Acosta, Juan Camilo Solarte, Sara Piedrahita, Johnny Poveda, Natalia Salgado, Steven Delgado	
<b>CONDUCTING PSC INSPECTION ON CROATIAN VESSELS .....</b>	<b>17</b>
Luka Grbic, Mate Baric, Karlo Cimera, Dragan Curin	
<b>CONFLICT OF JURISDICTION AND CONFLICT OF LAWS IN THE ELECTRONIC COMMERCE CONTRACTS .....</b>	<b>22</b>
Maher Aljaber	
<b>EDUCATION AND ENTREPRENEURSHIP CAREER CHOICE IN KOSOVO .....</b>	<b>26</b>
Saranda Lajqi, Justina Shiroka-Pula, Besnik A. Krasniqi	
<b>CUSTOMER PREFERENCES IN PASSENGER RAILWAY TRANSPORT .....</b>	<b>35</b>
Grazyna Rosa, Izabela Ostrowska, Agnieszka Tomaszewicz	
<b>CHALLENGES AND PERSPECTIVES OF SOCIAL ECONOMY IN SLOVAKIA ....</b>	<b>43</b>
Eva Pongracz	
<b>DEVELOPMENT OF WAGES IN THE SLOVAK REPUBLIC – NATIONAL AND REGIONAL VIEW .....</b>	<b>50</b>
Eva Rievajova, Roman Klimko	
<b>COURT SYSTEM AS ONE OF THE MAIN ECONOMIC ISSUES .....</b>	<b>63</b>
Farouq Al-Shibli	
<b>SPECIAL EVIDENTIARY ACTIONS IN THE CONTEXT OF JUDICIAL CONTROL OF THEIR APPLICATION IN PRACTICE IN THE REPUBLIC OF CROATIA .....</b>	<b>69</b>
Nevena Aljinovic	
<b>ECONOMIC DIMENSION OF CHILDCARE IN POLAND IN 2017-2018 .....</b>	<b>81</b>
Agata Gomolka	
<b>GLOBALIZATION AND CLIMATE CHANGE - ARE STATE INTERVENTIONS A SOLUTION?.....</b>	<b>91</b>
Hana Polackova	
<b>INCREASE OF RESIDENTIAL REAL ESTATE PRICES AS A THREAT OF SYSTEMIC RISK ACCUMULATION IN CROATIA – NEW CHALLENGES FOR MONETARY POLICY MAKERS .....</b>	<b>100</b>
Suzana Herman, Petra Popek Biskupec	

<b>TOURISM PRODUCT OF KRIŽNICA: ANALYSIS AND FUTURE DEVELOPMENT GUIDELINES.....</b>	<b>108</b>
Ivona Haluzan Bistrovic, Irena Bosnic	
<b>THE IMPORTANCE OF MARKET POWER IN BANKING: THE CASE STUDY OF THE CZECH REPUBLIC.....</b>	<b>116</b>
Jan Cernohorsky, Lucie Kricenska	
<b>ZERO MARGINAL COST IN MAGAZINE INDUSTRY: CHANGING OF COST PARADIGM IN „NEW“ MAGAZINE INDUSTRY .....</b>	<b>125</b>
Josko Lozic	
<b>DETERMINANTS OF BANK PROFITABILITY: EVIDENCE FROM THE CZECH BANKS .....</b>	<b>137</b>
Libena Cernohorska, Pavla Kotatkova Stranska, Karolina Broklova	
<b>THE DYNAMICS OF MUNICIPALITY CONSOLIDATION - COMPARATIVE ANALYSIS OF SUCCESS AND FAILURE CASES.....</b>	<b>147</b>
Marian Kachniarz	
<b>THE RATE OF RETURN ON PUBLIC INVESTMENTS INTO ENTREPRENEURSHIP DEVELOPMENT SUPPORT PROGRAMS.....</b>	<b>155</b>
Ranko Markus, Mirela Omerovic	
<b>THE ECONOMIC IMPACT OF THE GROWTH OF HEALTH EXPENDITURE ON HOUSEHOLDS IN SLOVAKIA .....</b>	<b>165</b>
Michaela Novakova	
<b>EXPLAINING CHINESE FDI IN CEE COUNTRIES - A FIXED EFFECTS PANEL DATA ANALYSIS .....</b>	<b>173</b>
Popovici Oana Cristina	
<b>INFORMATION RELATED TO HUMAN RIGHTS IN FINANCIAL REPORTING – THE CASE OF POLAND .....</b>	<b>182</b>
Ewelina Papaj-Wlislocka	
<b>THE APPLICATION OF THE THREE LINES OF DEFENSE CONCEPT IN RISK MANAGEMENT AND FRAUD RISK ON THE EXAMPLE SELECTED LISTED COMPANIES .....</b>	<b>190</b>
Agnieszka Skoczylas-Tworek	
<b>DETERMINING THE EFFECTS OF SECTORAL LABOUR PRODUCTIVITY USING DIVISIA DECOMPOSITION METHOD ON ECONOMIC GROWTH OF SELECTED ASEAN ECONOMIES .....</b>	<b>203</b>
Ricardo L. Dizon	
<b>FINANCIAL ASPECTS OF DIVORCE PROCEEDING – CASE LAW FINDINGS..</b>	<b>216</b>
Natasa Lucic, Katarina Marosevic	
<b>MARKETING OF STEM IN CROATIA BY USING NEW TECHNOLOGIES.....</b>	<b>225</b>
Ante Roncevic, Kristina Androlic, Nina Druzinic	

<b>THE NEEDS AND CAPABILITIES OF A QUALITY PRIVATE INITIATIVE IN HIGHER EDUCATION .....</b>	<b>240</b>
Djordje Nadrljanski, Mila Nadrljanski, Veronika Nemetschek	
<b>ANALYSIS OF CREDIT RATING IMPACT - CASE STUDY OF THE CZECH REPUBLIC .....</b>	<b>249</b>
Simona Pichova, Jan Zila	
<b>ECONOMY AND GLOBALIZATION .....</b>	<b>257</b>
Sladjana Zivanovic, Sanja Smolovic	
<b>MODEL OF ANALYSIS OF DEMAND FOR AIR TRANSPORT IN THE ADRIATIC AIRPORTS .....</b>	<b>265</b>
Teo Bratincevic, Eva Mijatovic, Toni Miljak	
<b>THE INTERNATIONAL COMPETITIVENESS OF FORMER EAEC COUNTRIES: WHAT WOULD BE THEIR INTERNATIONAL TRADE? .....</b>	<b>272</b>
Tomislav Galovic, Petar Misevic, Igor Arapovic	
<b>THE MUSIC INDUSTRY IN THE CONTEXT OF DIGITIZATION.....</b>	<b>279</b>
Miroslav Skoro, Ante Roncevic	
<b>THE ROLE AND REPRESENTATION OF EXPERT SYSTEMS IN MAKING DECISIONS ON GRANTING CREDIT IN BANKS IN THE REPUBLIC OF CROATIA .....</b>	<b>289</b>
Luksa Lulic, Branka Stipanovic, Hrvoje Smoljic	
<b>TAX INCIDENCE OF THE IMPLEMENTATION OF THE PHILIPPINE TAX REFORM FOR ACCELERATION AND INCLUSION (TRAIN) ACT: A COMPUTABLE GENERAL EQUILIBRIUM-MICROSIMULATION APPROACH</b>	<b>304</b>
Ricardo L. Dizon	
<b>THE RECONSTRUCTION OF AGE LIMITATION TO MARRY AFTER THE CONSTITUTIONAL COURT’S VERDICT AS A LANDMARK DECISION.....</b>	<b>321</b>
Moh Fadhil	
<b>ADULTERY ARTICLES IN THE CRIMINAL CODE BILL: FORMS OF ACCOMMODATION FOR THE DEVELOPMENT OF NATIONAL LAW AGAINST ISLAMIC VALUES .....</b>	<b>332</b>
Any Ismayawati	
<b>PUBLISHING ACTIVITIES OF SHITES AND DEMOCRATIZATION OF ISLAMIC THOUGHT IN INDONESIA .....</b>	<b>339</b>
Idzam Fautanu, Taufiq Rahman	
<b>SHARIA AND DEMOCRACY: EFFORTS TO SYNERGIZE THE DEMANDS OF FAITH WITH THE LEGAL SYSTEM IN INDONESIA .....</b>	<b>347</b>
Nurrohman Syarif	

**REACTUALIZATION OF (MASLAHAH) THE COMMON GOOD AS A BASIS OF CONTEMPORARY ISLAMIC LAW ISTINBATH - A COUNTER SCRIPTURALISM PARADIGM ON INTERPRETATION OF RELIGIOUS TEXTS IN THE ERA OF SUSTAINABLE DEVELOPMENT GOALS ..... 360**  
Muhammad Usman, Joko Roby Prasetyo

**LITERATURE REVIEW ON MEDIATION/SULH IN RESOLVING CHILD CUSTODY DISPUTES IN THE SYARIAH COURT IN MALAYSIA..... 371**  
Nora Abdul Hak, Ahmad Mukhlis Bin Mansor, Roslina Che Soh

## BENEFITS OF EDUCATIONAL DATA MINING

**Alisa Bilal Zoric**

*Polytechnic Baltazar Zaprešić, Croatia*

*abilal@bak.hr*

### **ABSTRACT**

*We live in a world where we collect huge amounts of data, but if this data is not further analyzed, it remains only huge amounts of data. With new methods and techniques, we can use this data, analyze it and get a great advantage. The perfect method for this is data mining. Data mining is the process of extracting hidden and useful information and patterns from large data sets. Its application in various areas such as finance, telecommunications, healthcare, sales marketing, banking, etc. is already well known. In this paper, we want to introduce special use of data mining in education, called educational data mining. Educational Data Mining (EDM) is an interdisciplinary research area created as the application of data mining in the educational field. It uses different methods and techniques from machine learning, statistics, data mining and data analysis, to analyze data collected during teaching and learning. Educational Data Mining is the process of raw data transformation from large educational databases to useful and meaningful information which can be used for a better understanding of students and their learning conditions, improving teaching support as well as for decision making in educational systems. The goal of this paper is to introduce educational data mining and to present its application and benefits.*

**Keywords:** *Data, Education, Educational data mining, Teaching, Students*

### **1. INTRODUCTION**

Today, universities operate in a highly competitive and complex environment. With rapid technology development and cheaper IT equipment, the amount of data stored in educational databases increases rapidly, but if this data is not further analyzed, it remains only huge amounts of data. Data mining tools, methods and techniques, allow us to analyze this data and find hidden patterns and information. Data mining is used to detect patterns and relationships in data to improve decision-making processes. It is an interdisciplinary area that brings together techniques from statistics, artificial intelligence, neural networks, database systems, machine learning, pattern recognition, data visualization, knowledge acquisition and information theory (Sumathi and Sivanandam, 2013). The application of data mining is wide and various. It is used in finance for analyzing customer behavior data to increase customer loyalty, it also helps in finding hidden correlations between various financial indicators to detect suspicious activities. By collecting historical data and turning them into useful and valid information it can detect fraudulent and non-fraudulent actions. Using data mining in healthcare can help in discovering the relationships between diseases and the effectiveness of treatments. It also supports healthcare insurers in detecting fraud. It is used in crime agencies for finding patterns related to money laundering, narcotics trafficking, etc. A common use of data mining in telecommunication is in analyzing customer data to improve profitability by providing customized services and also to reduce customer churn by understanding demographic characteristics and predicting customer behavior. The results of the data mining process can be used to develop appropriate marketing campaigns and pricing strategies. In marketing and sales, data mining techniques are used to find the hidden patterns from historical purchasing data. Results of data mining provide information on combinations of products purchased together in market basket analysis and are used to identify customer's behavior buying patterns. It is also used for the prediction of future trends and customer purchase habits. The banking industry usually uses data mining methods to predict customer churn, as well as in fraud and bankruptcy

detection. There are also disadvantages of data mining, namely in user privacy and security. It has to be clear how and with whom the information will be used and shared. Data mining tools and techniques work with very big amounts of data, so there is great cost at the implementation stage. It requires great IT experts for preprocessing data and finding the best model and technique for analysis. The techniques of data mining are not 100% accurate, so it may cause serious consequences and expenses. This work is based on special use of data mining algorithms, techniques and concepts in the educational environment, called educational data mining (EDM). The remaining of the paper is organized as follows. After a summary of the history and definition of educational data mining, the process is presented in “Educational data mining process” section, by detailing the data pre-processing and the knowledge extraction phase, and by describing all phases. After that, selected methods and techniques, as well as its use in the educational sector are described in “Methods and techniques” section. In the next section, related work is covered and in the most relevant section, benefits and applications of educational data mining are presented and discussed, along with relevant research in the application of educational data mining. Final remarks conclude into “Conclusion” section.

## **2. EDUCATIONAL DATA MINING (EDM)**

The amount of data collected and stored in many educational institutions grew too big and educational data analysis could not be performed manually anymore. EDM is a relatively new discipline that emerged from the application of data mining techniques on educational data. The first international research conference on EDM was in Montreal, Canada in 2008. Journal of Educational Data Mining started publishing in 2009 and the International Educational Data Mining Society was founded in 2011 (Romero and Ventura, 2010, pp. 601-618). From that point, EDM continues to grow from different research areas such as data mining and machine learning, pattern recognition, psychometrics and other areas of statistics, artificial intelligence, information visualization and computational modeling. The final goal of EDM is to improve the educational process and to explain educational strategies for better decision making (Silva, Fonseca, 2017, p. 87). There are different definitions of EDM, but they all have common that it is an interdisciplinary research area which uses different methods and techniques from machine learning, statistics, data mining and data analysis, to analyze data collected during teaching and learning in order to discover previously unknown information, relationships and patterns in large data repositories.

### **2.1. Educational Data Mining Process**

The EDM process has four main phases. Problem definition is the first phase in which a specific problem is translated into a data mining problem. In this phase, the project goal and objectives are formulated, as well as the main research questions. The most time-consuming phase is the second phase, Data preparation and gathering phase. It can take up to 80 % of all analysis time. Data quality is a major challenge in data mining (Blake and Mangiameli, 2011). In this phase, source data must be identified, cleaned and formatted in prespecified format. After that, there is a Modeling and Evaluating phase in which the parameters are set to optimal values and different modeling techniques are selected and applied. The deployment phase is the last phase in which the results of data mining are organized and presented through graphs and reports. It is important to point out that the data mining process is an iterative process which means that the process does not stop when a particular solution is deployed. It can be just a new input for a new data mining process.

### **2.2. Methods and Techniques**

Various methods, algorithms and techniques are used for educational data mining. The most often use is for classification, clustering, prediction and association. The most frequently used

data mining techniques are neural networks, decision trees, regression analysis and cluster analysis. Classification is a data mining technique that segments data in a collection to target categories or classes. It helps in analyzing data and predicting outcomes. The goal of classification is to accurately predict the target class for each case in the data. The classifier training algorithm uses pre-classified examples for determining the set of parameters required for classification (Oracle, 2019). In the educational sector, this technique is often used for classifying students based on some characteristics such as age, gender, grades, knowledge, academic achievements, motivation, behavior, demographic or geographic characteristics, etc. Clustering analysis is used to segment similar data into clusters that were not previously defined. It is useful in the data-preprocessing phase to identify homogeneous groups used as input for other models. Similar to classification, cluster analysis can be used to investigate similarities and differences between students, courses, teachers, etc. Prediction refers to calculated assumptions for certain events made based on available processed data. Regression technique can be used for prediction, to model the relationship between one or more independent variables and dependent variables. Independent variables are attributes already known and response variables are what we want to predict (Bhatnagar, 2013). It has many applications in business planning, trend analysis, financial forecasting, time series prediction, trend analysis, etc. In the educational sector, it is used for the prediction of students' academic performance, prediction of enrolled students, prediction of the final grade, prediction of drop-outs, etc. Association is a data mining technique used to discover the probability of the co-occurrence of items in a collection. The relationships between co-occurring items are called association rules. Association rules are frequently used to analyze sales transactions. This type of finding is valuable for sales promotions, direct marketing, catalog design, cross-sell marketing and for discovering business trends. Based on certain rules, this technique can be used for the introduction of new courses or to open new colleges. Neural networks are a set of computational algorithms, inspired by the human central nervous system, that is designed to recognize complex patterns and prediction problems by considering learning material, without being programmed (Graupe, 2013). They automatically identify special characteristics from the examples that they process. Neural networks consist of connected nodes called artificial neurons. Every connection can transmit a signal from one to another artificial neuron. A signal is a real number. Artificial neurons and connections have weights that adjust during the learning process. Neurons are divided into three layers, input, output and hidden layer. Signals travel from the input layer through hidden layers to the output layer, performing different kinds of transformations on their inputs. Its most important ability is to learn and model non-linear and complex relationships. The most common use of artificial neural networks is for speech and image recognition, computer vision, machine translation, for playing video games, financial analysis, social network filtering, control, optimization and medical diagnosis. A decision tree is a decision support tool that uses a tree-shaped graph or model for classification. It is a supervised learning method. Each internal node represents a test on an attribute, each branch represents an outcome of the test, and each leaf node represents a class which is a decision after computing all attributes. The paths from the root to leaf are classification rules (Vidal et al, 2014). Their greatest advantage is stability and easy interpretation. Because of their simplicity, they are suitable for solving a different kind of problems in a broad range of industries such as financial, business, healthcare, education, energy, engineering, pharmaceutical, law, etc.

### **3. RELATED WORK**

Educational data mining is a young research area which is becoming increasingly popular due to its potential. Educational data can be used to assist instructors, to improve curriculums, to understand students' behavior, to improve teaching process, to improve e-learning systems, to identify reasons for dropping out, to support decision making, etc. (Romero and Ventura,

2010). Educational data mining research can be divided into two main categories, one regarding the analysis of learning behavior and attributes that affect a successful study, and the main goal of other research is to find a predictive model for student's performance. A review of research literature on EDM between 1995 and 2005 is covered in *Educational Data Mining: A Survey from 1995 to 2005*, wrote by Romero and Ventura (2007). They discussed the use of web mining techniques in education systems and compared the traditional classroom teaching and web-based education. A systematic review of the published EDM literature between 2006 and 2013, based on the highly cited paper collected through Google scholar index, is provided by Al-Razgan and Al-Khalifa (2014). In *Educational Data Mining Applications and Trends*, author gave a bibliographic review of the various educational data mining studies, used techniques and contribution to their application (Peria-Ayala, 2013). Kumar and Chadha (2011) presented an empirical study of the applications of data mining techniques in higher education in which they tried to identify the potential areas in which data mining techniques could be applied. They concluded that potential applications are: organization of syllabus, predicting the registration of students in an educational program, predicting student performance, detecting cheating in the online examination and identifying abnormal or erroneous values and used data mining techniques are: association analysis, classification, prediction, clustering and outlier analysis. Ali (2013) emphasized following benefits of educational data mining: identifying students' pattern trends, preferences and course needs, selection of specialization, predicting students' final results, automatic exploration of data and profiling students.

#### **4. BENEFITS AND APPLICATIONS OF EDUCATIONAL DATA MINING**

Benefits and applications of educational data mining are numerous. There are many research papers and studies regarding the use and applications of data mining techniques in education. Some of them will be described later. The most common use of educational data mining is: improving the process of studying, improving course completion, supporting students in course selection, students' profiling, finding problems leading to dropping out, students' targeting, curriculum development, predicting student's performance and as a support for decision-making at student enrolment. Romero and Ventura (2010) pointed out these areas of application of EDM: student's modeling, predicting student's performance, data visualization, social network analysis, feedback for support management, planning and scheduling, grouping students, detection of undesirable behaviors. In *Mining educational data to analyze students' performance*, Baradway and Pal (2012) pointed out the capabilities of data mining techniques in the context of higher education by offering a data mining model for the higher education system. The decision tree method was used to evaluate a student's performance. This research could help educators in the early detection of dropouts and students who need special attention to provide appropriate advising or counseling. In second research, *Data Mining: A prediction for performance improvement using classification* Bhardwaj and Pal (2012) used Bayes classification for the construction of a prediction model to identify the difference between high learners and slow learners. Pal (2012) used the classification task to evaluate previous years of student dropout data to find students who are likely to drop out of their first year of engineering. Decision tree methods (ID3, C4.5, CART and ADT) were applied and information about previous education, student's family income, parents' education, etc. were used to predict the list of students who need special attention to reduce the drop-out rate. Results from this research show that the machine learning algorithm can establish an effective predictive model from the existing student dropout data. Luan (2002) discussed the potential applications of data mining and explained how data mining techniques can save resources and maximize efficiency in higher education. Kovačić (2012) examined the socio-demographic variables (age, gender, ethnicity, education, work status, and disability) and study environment (course program and course block) that may help in identifying successful and unsuccessful students.

This research concluded that classifying students based on pre-enrolment information can help to identify students at-risk of dropping the course and suggest advising and mentoring programs to make them successful. Kabackijeva (2012) applied different data mining methods (rule learner, a decision tree classifier, a neural network and the nearest neighbor classifier) to develop an enrollment prediction models based on student's personal, pre-university and university characteristics. Maqsood (2013) stated that data mining can be used to report and analyze the data that can help in preparing marketing strategies for targeted students. Kardan et al. (2013) focused on identifying various factors influencing student's online course selection using neural networks and applying these factors to predict the final number of students in every course. Guo (2010) used neural networks to analyze and predict students' course satisfaction. This study showed that the most influential factors to student course satisfaction are the number of enrolled students in a course and the high distinction rate in the final grading. Mardikyan and Badur (2012) used two different data mining techniques: stepwise regression and decision trees to identify varied factors that affect instructors' teaching performance in university. Tsai et al. (2011) applied three different cluster techniques (k-means, self-organizing maps, and two-step clustering) to cluster students into different groups based on their computer literacy. After clustering students into different groups, the decision tree algorithm was used to extract useful rules from each group. This research concludes that data mining techniques can help universities to identify several groups who need additional training to pass a computer proficiency test. Hsia et al. (2008) used different data mining algorithms: decision tree, link analysis and decision forest to study course preferences, completion rates and profession of enrollees. The results of this study found the correlation between course category and enrollee professions and pointed out the importance of data mining in building curriculum and marketing in the field of higher education. These results may be used as a reference for marketing and curriculum development. Understanding students' behavior and how they learn can help educational management to improve current study programs and educational practice in general. By analyzing the educational data, as well as analyzing the importance of the influence of individual variables, various data mining models could be used as support for decision-making in education, thus contributing to a more successful study and enhancing the quality of education. Educational data mining results can help universities to allocate resources more effectively.

## **5. CONCLUSION**

Educational data mining is a young discipline with high potential for every participant in the educational process. Data mining techniques were developed to automatically discover hidden knowledge and recognize patterns from data. Educational data mining can be used for classifying and predicting students' performance, dropouts as well as teachers' performance. It can help educators to track academic progress to improve the teaching process, it can help students in course selection and educational management to be more efficient and effective. Educational data mining can be used to attract, maintain and retain the students to achieve the profitability of University. Analyzing students' data is crucial for discovering, detecting and understanding which instructional practices are effective. In this paper, we presented the benefits and applications of data mining techniques in many educational areas. The main goal of the paper is to reveal the high potential of educational data mining applications and to encourage others to use it.

**LITERATURE:**

1. Al-Razgan, M., Al-Khalifa, A. S., Al-Khalifa, H. S. (2014). Educational data mining: A systematic review of the published literature 2006-2013. *In Proceedings of the First International Conference on Advanced Data and Information Engineering (DaEng-2013) (711-719)*. Singapore: Springer.
2. Ali, M. M. (2013). Role of data mining in education sector. *International Journal of Computer Science and Mobile Computing*, 2(4), 374-383.
3. Baker, R. S., Yacef, K. (2009). The state of educational data mining in 2009: A review and future visions. *JEDM/ Journal of Educational Data Mining*, 1(1), 3-17.
4. Baradwaj, B. K., Pal, S. (2012). *Mining educational data to analyze students' performance*. Retrived 25.5.2019. from <https://arxiv.org/pdf/1201.3417.pdf>.
5. Bhardwaj, B. K., Pal, S. (2012). *Data Mining: A prediction for performance improvement using classification*. Retrived 25.5.2019. from <https://arxiv.org/pdf/1201.3418.pdf>.
6. Bhatnagar, V. (Ed.). (2013). *Data mining in dynamic social networks and fuzzy systems*. IGI global.
7. Blake, R., Mangiameli, P. (2011). The effects and interactions of data quality and problem complexity on classification. *Journal of Data and Information Quality (JDIQ)*, 2(2), 8.
8. Daniel, G. (2013). *Principles of artificial neural networks (Vol. 7)*. World Scientific. Retrived 15.07.2019. from [https://books.google.hr/books?id=W6W6CgAAQBAJ&printsec=frontcover&redir\\_esc=y#v=onepage&q&f=false](https://books.google.hr/books?id=W6W6CgAAQBAJ&printsec=frontcover&redir_esc=y#v=onepage&q&f=false)
9. Guo, W. W. (2010). Incorporating statistical and neural network approaches for student course satisfaction analysis and prediction. *Expert Systems with Applications*, 37(4), 3358-3365.
10. Han, J., Pei, J., Kamber, M. (2011). *Data mining: concepts and techniques*. Elsevier.
11. Hsia, T. C., Shie, A. J., Chen, L. C. (2008). Course planning of extension education to meet market demand by using data mining techniques—an example of Chinkuo technology university in Taiwan. *Expert Systems with Applications*, 34(1), 596-602.
12. Kabakchieva, D. (2012). Student performance prediction by using data mining classification algorithms. *International journal of computer science and management research*, 1(4), 686-690.
13. Kardan, A. A., Sadeghi, H., Ghidary, S. S., Sani, M. R. F. (2013). Prediction of student course selection in online higher education institutes using neural network. *Computers Education*, 65, 1-11.
14. Kovacic, Z. (2012). Predicting student success by mining enrolment data. *Research in Higher Education*, 15.
15. Luan, J. (2002). Data mining and its applications in higher education. *New directions for institutional research*, 2002(113), 17-36.
16. Maqsood, A. M. (2013). Customer Relationship Management in B-Schools: An Overview. *International Journal of Computer Sciences and Management Research*, 2(4), 2108-2119.
17. Mardikyan, S., Badur, B. (2011). Analyzing Teaching Performance of Instructors Using Data Mining Techniques. *Informatics in Education*, 10(2), 245-257.
18. Oracle, (2019). Retrieved 23.07.2019. from [https://docs.oracle.com/cd/B28359\\_01/datamine.111/b28129/classify.htm#i1005746](https://docs.oracle.com/cd/B28359_01/datamine.111/b28129/classify.htm#i1005746)
19. Peña-Ayala, A. (Ed.). (2013). *Educational data mining: applications and trends (Vol. 524)*. Springer.
20. Pena, A., Domínguez, R., Medel, J. (2009). Educational data mining: a sample of review and study case. *World Journal On Educational Technology*, 1(2), 118-139.
21. Romero, C., Ventura, S. (2007). Educational Data Mining: A Survey from 1995 to 2005. *Expert Systems with Applications*. Vol. 33, pp. 135-146.

22. Romero, C., Ventura, S. (2010). Educational data mining: a review of the state of the art. *IEEE Transactions on Systems, Man, and Cybernetics, Part C (Applications and Reviews)*, 40(6), 601-618.
23. Silva, C., Fonseca, J. (2017). *Educational Data Mining: a literature review*. In Europe and MENA Cooperation Advances in Information and Communication Technologies (pp. 87-94). Springer, Cham.
24. Sun, H. (2010). Research on student learning result system based on data mining. *IJCSNS*, 10(4), 203. (9)
25. Tsai, C. F., Tsai, C. T., Hung, C. S., Hwang, P. S. (2011). Data mining techniques for identifying students at risk of failing a computer proficiency test required for graduation. *Australasian Journal of Educational Technology*, 27(3).
26. Vidal, J. C., Lama, M., Vázquez, B., Mucientes, M. (2014, September). *Reconstructing IMS LD Units of Learning from Event Logs*. In European Conference on Technology Enhanced Learning (pp. 345-358). Springer, Cham.

# **STRATEGIES FOR IMPROVING SOCIO-ECONOMIC DEVELOPMENT BASED ON KNOWLEDGE IN POST-CONFLICT AREAS OF COLOMBIA: THE CASE OF BIOREFINERIES IN MONTES DE MARIA (MARIA MOUNTAINS)**

**Carlos Ariel Cardona**

*\*Instituto de Biotecnología y Agroindustria, Facultad de Ciencias Exactas y Naturales,  
Facultad de Ingeniería y Arquitectura,  
Universidad Nacional de Colombia sede Manizales, Colombia*

**Carlos Eduardo Orrego\***

**Carlos Daniel Acosta\***

**Juan Camilo Solarte\***

**Sara Piedrahita\***

**Johnny Poveda\***

**Natalia Salgado\***

**Steven Delgado\***

## **ABSTRACT**

*The socio-economic development of different areas in the Colombian territory has suffered a considerable detriment due to the armed conflict that was experienced in the country during the last 50 years. Indeed, the backwardness of productive systems in rural areas, the conflict itself, the difficult access to education, job training, absence of entrepreneurship initiatives, and lacks in research and innovation for strengthening of productive chains are the main aspects that must be covered to establish a framework for sustainable development in these areas. Currently, the Peace agreement signed in 2016th between Colombian Government and the Armed ilegal groups allows the establishment of projects aimed at improving conditions through the promotion of enterprises that generate incomes from the management of agricultural resources. Then, Today there is an opportunity focused on the enrichment of the regions using their same natural and human resources based on the knowledge increase. In the present paper is described the strategy applied for the Montes de Maria (Maria Mountains, one of the post-conflict rural areas in the country, to increase the socio-economic development based on:*

- 1. Analysis of the region state, including the natural and human resources available.*
- 2. The interaction with the communities through the local actors*
- 3. The market analysis*
- 4. The assessment and prioritization of the potential for entrepreneurship based on agribusiness activity and local knowledge*
- 5. The assessment of energy access and potential for renewable energy in the region*
- 6. The final characterization of prioritized productive chains and establishment of actions for improvement*
- 7. The inclusion of the biorefinery concept in the strategy*
- 8. The sustainability assessment of the entrepreneurship proposed and the preliminar business case development*

## 9. *The local training and the implementation of the project*

*In the post-conflict area of Montes de Maria it was established a deep backwardness in agronomy and technology development of the productive chains with important potential for producing plantain and avocado added value products. The main local actors were prioritized and strategically harmonized based on the local University of Sucre and the producers in the rural areas (some of them returning back to the region after the Peace Agreement signed). The Energy needs based on not interconnected to the electric grid areas were identified. The agronomy strategies were recognized, and the implementation began to improve the crops productivity together with the producers. Finally, the conceptual design of the processes based on the biorefinery concept to valorize the plantain and the avocado together with their residues was developed and calculated to measure the technical, economic and environmental impact as well as a preliminary social analysis. All the results will be shared in the conference as well as the recommendations to extend this approach to other conflict regions in the world.*

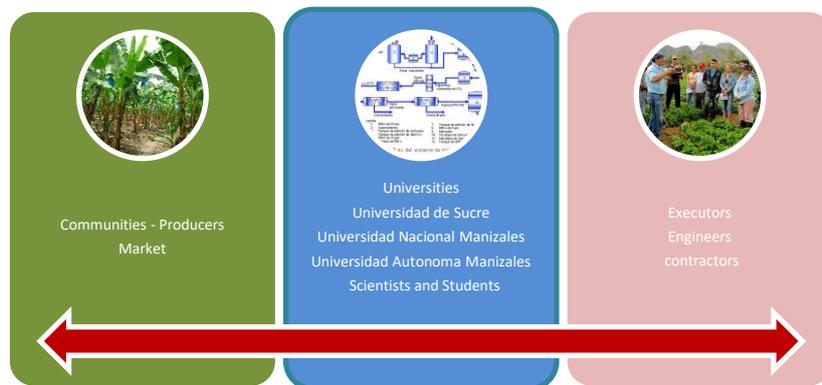
**Keywords:** *post-conflict area, biorefinery, energy, social and economic development*

### 1. INTRODUCTION

The violence in Colombia is derived mostly from the armed conflict with left based partisans (guerrilla) and pseudo armies linked to narcotics business. Among the multiple negative consequences of violence in Colombia, there is the backwardness of productive systems in rural areas most affected by the armed conflict during last 50 years. This problem therefore exists together with the difficult access to good education, job training and entrepreneurship in the rural areas. On the other side, these regions are the richest in natural and renewable resources with greater potential of agroindustrial (agribusiness production) into the country. The Peace Agreement with the main guerrilla group signed in 2016 and implemented during last years opens the doors for intervention in these rural areas for the development of projects aimed to improve the living conditions of these populations, through the promotion of enterprises that generate incomes from the proper management of agricultural resources. The Montes de María is a subregion of the Colombian Caribbean located between the departments of Bolívar and Sucre in the northwest of the country close to the Caribbean Sea. This region is made up of 15 municipalities and has many crops such as cassava, avocado, plantain, among others [1]. After the Peace Agreement Colombia established as one of the strategies to impact these regions to get interest from Universities to transfer knowledge to these Regions including their Universities. Colombia Científica is a program led by the Ministry of National Education, the Ministry of Commerce, Industry and Tourism, Icetex and Colciencias, which seeks to raise the quality of Higher Education by promoting research and innovation projects that promote the development of the regions and respond to the needs of the productive sector. One of the main components of this program is a Scientific Ecosystem to create alliances that involve Higher Education Institutions, international universities, the productive sector, and international research centers. One of the alliances created and financed was Reconstruction of the social environment in post-conflict zones in Colombia'. The project seeks to create strategies to strengthen political, citizen, productive and sustainable development capacities in 19 populations affected by the armed conflict. It will impact the departments of Caldas (in the center of the country), Chocó (in the west of the country close to the Pacific Ocean) and Sucre (specifically in the Montes de Maria). The component of entrepreneurship is one of the basic parts of this alliance. Hereinafter it will be presented the strategy of this specific project.

## 2. ENTREPRENEURSHIP PROJECT FOR IMPROVING SOCIO-ECONOMIC DEVELOPMENT BASED ON KNOWLEDGE. THE CASE OF BIOREFINERIES IN MONTES DE MARIA (MARIA MOUNTAINS)

Thus, entrepreneurship understood as one of the main strategies for business and social development in Colombia has been postulated as one of the main alternatives of Colombians to improve their living conditions through a direct remuneration for the sale of a product commercial. On the other hand, entrepreneurship is an option that allows the discovery of new markets. To create a strategy for this type of projects is difficult given the fact that precedents for this type of cases is not very common. Additionally, it is imperative to get connection between the Communities and the Universities (scientists and students) together with developers for knowledge transfer and execution (mainly engineers working directly in the field) see figure 1.



*Figure 1: Connection between the Communities and the Universities (scientists and students) together with developers for knowledge transfer and execution*

As it is shown in the figure 1 the strategy was based on the strengthening of the connection between the identified actors to create the alliance and then propose a route to develop the project. It was developed on the analysis of the region and the experience of all the actors. The proposed strategy is based on the following sections or activities:

*Table following on the next page*

ACTIVITY	Status	Verification
1. Analysis of the region state, including the natural and human resources available.	Done	Discussion of the results with the community's actors
2. The interaction with the communities through the local actors	In process	Increasing of the research capacities of the Local University (Universidad de Sucre) and the producing capacities in the field (producers)
3. The market analysis	In process	Products really commercialized in a stable market
4. The assessment and prioritization of the potential for entrepreneurship based on agribusiness activity and local knowledge	In process	Plantain and avocado identified and products are studied to be compared with market analysis
5. The assessment of energy access and potential for renewable energy in the region	Done	Inventory data and conceptual design
6. The final characterization of prioritized productive chains and establishment of actions for improvement	In process	Agronomic and processing improvements to be implemented
7. The inclusion of the biorefinery concept in the strategy	Done	The biorefinery schemes totally designed at conceptual level
8. The sustainability assessment of the entrepreneurship proposed and the preliminar business case development	To be developed	Sustainability calculations for agronomic and processing activities
9. The local training and the implementation of the project	In process (agronomics) to be developed (processing)	Entrepreneurships based on the improvements developed

*Table 1: Proposed strategy based on the following sections or activities*

The concepts of the strategy will be developed in the following sections

### **2.1. Analysis of the region state, including the natural and human resources available**

Currently, 55% of the population is in the urban area, while the other 45% is in rural areas. Different economic activities can be identified in the Montes de María such as agricultural production, with tradition in bovine livestock and agricultural production of the products mentioned above. On the other hand, the Montes de María has an approximate land area of 6,466 km<sup>2</sup>, which represents land with high cultivation potential as mentioned by Maza-Ávila et al., [2] The Montes de María are also characterized by having a great diversity of communities that are active actors of the society. The Montes de María have been a place where the armed conflict has had great repercussions on the socio-economic development of the region [3]. However, other aspects related to the low incomes perception of farmers have caused poverty and misery indices in the region to be alarming at national averages [4]. Indeed, the high levels of poverty that are manifested in this region are not only linked to the armed conflict that has been experienced in the area but also due to deficiencies in access to basic domiciliary services such as electricity, water and sewerage. In this sense, the socio-economic detriment of the region has been given in terms of the backwardness of productive systems in rural areas, the difficult access to education, job training, entrepreneurship initiatives, innovation in research terms applied to chain strengthening production and the inclusion of globalized aspects

such as the use of renewable energies and the integral use of waste through technological schemes of various complexities. These, aspects have been a consequence due to the presence of groups outside the law, which have caused a detriment of society by causing phenomena such as forced displacement thus generating a changing and difficult reality for the inhabitants in the 15 municipalities of this region [5]. Finally, another latent problem in the Montes de María is that it is listed as one of the unconnected areas of the Colombian Caribbean. From the recent political framework granted thanks to the Peace agreement, different efforts have been made to provide sustainable development in the Montes de María region. One of these options is linked to the concept promoted by the RED Development and Peace Foundation, which is referred to as the “monteriana farm” [1]. This alternative is based on the approach of a productive system where mainly cassava, yam, corn, mango, plantain, sapote, guava, orange, lemon, avocado, cocoa, teak and mahogany are grown. Thus, this agroforestry system is developed based on the concept of integral management of natural resources, family roots, belonging to the territory and environmental protection of soils. The goal of this alternative is to promote food security, family nutrition, restore the biological balance of the green areas of the region, diversify production and generate income [1]. Other options derived from local, departmental and national governments, in collaboration with international organizations, propose schemes in which small producers globalize their production by becoming active participants in the productive chain that each of the agricultural products possesses. This is done with the intention of improving the socio-economic conditions of the region through land restitution, strengthening of agriculture and the implementation of productive management plans. However, additional efforts must be made in order to increase the opportunities of the inhabitants of the Montes de María in economic terms. Thus, possibilities such as the implementation of interdisciplinary projects based on entrepreneurship and characteristics of the region generate a series of alternatives for population development [3]. Among the permanent crops of the country are plantain plantations, by 2015 there was a national production of 3.3 million tons, which places Colombia as the fourth world producer with 11% [6]. This makes it clear that the plantain trade is a potential business either for export or for sale in supermarket chains. The average yield of plantain production in Colombia between 2009 and 2013 was 8.2 t / ha per year, in the department of Meta there was an average yield of 16 t / ha per year twice the national average [7]. Higher yields are not obtained since most Colombian crops are not technified in terms of irrigation or nutrient dosing, as farmers have the false conception that rainfall in the territory is enough or that the soil is sufficiently fertile. For this reason, if it is proposed to strengthen the plantain production chain in a region, it is necessary to carry out studies over a period of basic variables of the plant (water and nutrients) and requirements for climatic changes. Such collected or historical data could help to predict the crop's needs at a given time by improving the yield since it is always worked in suitable conditions. On the other hand, through these historical recommendations can be made to farmers on water management, how and when to fertilize, thus optimizing crop management. In the harvest and processing of the plantain a series of residues are generated such as: discarded plantains (decomposed, amorphous or of poor quality), peels and pseudo total (part of the plant that supports and acts as the trunk in a tree). Within the composition of these residues are compounds of industrial interest such as carbohydrates, proteins and bio-compounds; what has been the focus of research for the integral use of waste from the plantain industry considered as biomass. Under this context, the concept of biorefinery can be applied, which consists in adapting the oil refinery scheme, with the main difference that products are derived from biomass, presenting itself as one of the most promising ways for the creation of industries Biologically based [8], [9]. The communities based mainly on producers of avocado and plantain are well organized and interested in developed the product chains. There are cooperatives and organizations well trained through different projects on communities leading

and organization all ready developed mainly by the European Union in the past. After this characterization, it was proposed as a general objective of the project: Strengthen the plantain and avocado production chain in the Montes de Maria by improving crop yields and assess the use of residues under the concept of biorefinery to obtain value-added products considering techno-economic, environmental and social factors. Specifically, the main objectives proposed were:

- Improvement of crop productivity based on knowledge of crop and soil behavior in the face of weather conditions.
- Identify the value-added products to be obtained according to the physical chemical composition of the crops products and residues.

The characterization of the raw materials under study (i.e., avocado, plantain) frames three types of analysis that are of vital importance for the proposal of their potential use to obtain products of different added value. In this sense, the chemical composition analysis, proximal analysis and energy analysis will be carried out taking into account internationally accepted standards.

## **2.2. The interaction with the communities through the local actors**

The most important factor in this strategy is the Universidad of Sucre, a local Univeristy with long history and respect in the region. Their experience in Agronomy as well in the interaction with the local growers is the key factor to get the righ and confident access to the communities.

## **2.3. The market analysis**

The analysis of the market in under development and includes two strategies: the local market and the international market based on distinctive products of natural origin. The plantain and avocado are studied with emphasis on first- and second-generation products

## **2.4. The assessment and prioritization of the potential for entrepreneurship based on agribusiness activity and local knowledge**

The local knowledge of plantain and avocado is high in the region. However different infections and diseases were developed during last years without the required control of the state. So, it is necessary to transfer a lot of knowledge to systematically treat these problems. Additionally the knowledge about processing residues as well as good manufacturing practices is required. However, the potential is very high and the growers are very interested in acquiring this knowledge. At least 47 women's organizations have made progress in their organizational processes and in the construction of the public agenda of the women of Los Montes de María, for whichThey have trained on topics such as participatory budgets with a gender approach. One of of its main achievements are the inclusion of a differential approach in development plans of the towns around

## **2.5. The assessment of energy access and potential for renewable energy in the region**

The energy access in the region is still deficient. The company Electricaribe provides an intermittent service to urban and rural areas in the region. Additionally, some of the rural centers in the regions are not connected to the grid. The processing of residues included in the present strategy requires stable and low-cost energy. The same biomass in Plantain and avocado production is considered as the solution given the potential of the derived biomass for bioenergy as biogas or direct combustion and gasification.

## **2.6. The final characterization of prioritized productive chains and establishment of actions for improvement**

The plantain and avocado productive chains are incipient. At the moment this characterization is under development. It depends strongly on the scale of production to be reached after the agronomic improvements will be finished and totally transferred to the growers.

## **2.7. The inclusion of the biorefinery concept in the strategy**

To be resumed, here it will be discussed in detail just the plantain case. It is possible to obtain the following products from plantain residues: food products, biofuels, chemicals, biocomposites and bioenergy. In the case of food products, the extraction of starch from both the peel and plantain pulp has been reported in the literature, in the form of flour with very favorable nutritional properties [10]. Among the liquid biofuels are ethanol [11], [12] and butanol which can be produced by fermentation processes from polysaccharides present in plantain residues. For biocomposites, the production of natural fibers from the pseudo-plantain has been proposed [13]. Another field of great interest is the generation of biogas from anaerobic digestion, which can be used in different applications such as heat or electricity generation [14]. These advances have allowed to show the potential to use these residues from the plantain harvest and processing as raw materials in the production of different value-added products. However, if consider these processes in a standalone way, negative net present values can be generated. For this reason, it is proposed to schematize a biorefinery in which different product families are included. In this way and in order to achieve sustainable systems, the energy efficiency analysis is done, identifying the different areas of the process in which the main energy changes are carried out. Likewise, these processes must have an environmental analysis and potential social implications. Plantain snacks and plantain flour will be generated from the extrusion of the plantain pulp. Polyphenols will be obtained through soxhlet techniques using different kinds of solvents. Finally, biogas production will be carried out from the waste generated during each of the transformation phases identified above. Biogas will be generated as an energy vector with great use potential for heat and electricity generation in Montes de María. Three technological scenarios framed in the context of biorefinery will be raised in order to obtain the products mentioned. Thus, the technological scenarios that will be evaluated are presented below:

### **1. Technological scenario 1. Low complexity biorefinery for avocado use.**

In scenario 1, the use of avocado is considered, referring to that fraction derived from the harvest that does not meet the standards established by the standards to classify them as export and / or consumption products at the national level, to obtain products as avocado oil, polyphenols and biogas as the main value-added products with the potential to be implemented regionally in the context of the Montes de María.

### **2. Technological scenario 2. Biorefinery of low complexity for the use of plantain.**

In scenario 2, the use of plantain is also referred to that fraction derived from the harvest that does not meet the standards established by the standards to classify them as export products and / or national consumption, to obtain products such as snacks, flour, starch and biogas as the main value-added products.

### **3. Technological scenario 3. Biorefinery of medium complexity for the integral use of avocadon and plantain.**

In scenario 3, the use of avocado and plantain as raw materials to be used in an integral way for the production of all the products mentioned is considered. Likewise, the inclusion of electric power generation units for self-sufficiency of biorefinery and sale of excess energy is considered. Each of the technological scenarios mentioned above will be simulated from the experimental data obtained using the Aspen Plus v 9.0 simulation software before lab

and pilot scale experiments. Which is used for the generation of the mass and energy balances necessary in the production processes.

## **2.8. The sustainability assessment of the entrepreneurship proposed and the preliminar business case development**

After the technical evaluation of the processes providing mass and energy yields of the transformation processes involved in obtaining the products the economic evaluation is carried out in the Simulation package called Aspen Process Economic Analyzer. This software uses the reports of the material and energy balances made in Aspen Plus. In this way, Aspen Process Economic Analyzer performs the sizing of the equipment to estimate investment capital, operating costs and profits. Based on the results obtained, the corresponding cash flows are generated, and the profitability analysis is carried out. The great advantage of this software is that the user can generate reports of the production costs involved in the simulated process. Also, from the environmental point of view, environmental indicators related to emissions in each process are calculated, whether solid, liquid or gaseous. The indicators developed by the Environmental Protection Agency (EPA) and greenhouse gas calculation strategies based on balances of the proposed biorefineries are used to calculate the indicators. Finally, the social analysis of each one of the proposed scenarios will consider aspects related to the work and the actors present in the productive lines of the region according to what is proposed in the SILCA methodology. This analysis will also be carried out based on the experiences of the University of Sucre regarding the good practices of plantain cultivation and its impact on the economic development of the Montes de María region.

## **2.9. The local training and the implementation of the project.**

The transfer is defined as the real result of the present project. It could be developed only after the agronomic and processing activities are totally validated. It is meaning that the demonstrations in the field as well as all the calculations confirmed that the business plan in every biorefinery case proposed are feasible. After that the training considers as more as posible the inclusion of all the communities interested an the help together with the government financing agencies to get the required Capex and first year OPEX requirements

## **3. CONCLUSIONS AND CURRENT RESULTS**

The preliminary analysis and the Agronomic improvement are being developed properly and the current results demonstrated that the communities really have found the hope in this project. The proposed Biorefineries are technically supported but only the scale reached based on the agronomic resultd will define the limits of this project in the Montes de Maria region. However, there is some valuable aspect that could contribute possitiveley to reach excellent results even at low scale conditions. The market analysis shows preliminarly that the concept of natural product together with the concept of speciality or distinctive product makes feasible every project. In this case the natural origin and the sustainability ensured in the design of teh biorefineries are expected. Additionally, the characteristic of post conflict product (with the legend of you are contrinuting to the postconflict establiity and peace in Colombia) is a mark that creates an specific market based in different buyers: the State, the people who shows solidarity with the country and the rural communities. The price then can be higher and the NET present values of the project are substantially increased.

**ACKNOWLEDGEMENT:** *Proyecto “Competencias empresariales y de innovación para el desarrollo económico y la inclusión productiva de las regiones afectadas por el conflicto colombiano” del programa Colombia científica: “Reconstrucción del tejido social en zonas de posconflicto en Colombia” Colciencias.*

**LITERATURE:**

1. M. Aguilera, “de María: Una subregión de economía campesina y empresarial.,” Cartagena, 2013.
2. F. Maza, J. C. Vergara, G. Herrera, A. Agámez, and W. Mejía, “Potencialidad de la capacidad agrícola de la zona de desarrollo económico y social - Zodes de María del departamento de Bolívar - Colombia,” *Desarro. Reg. y Compet.*, no. January, pp. 1–16, 2012.
3. B. Moro, M. del C. Sacasa, A. Preti, O. Reyes, and A. Villegas, “Los de María: Análisis de la conflictividad.,” Area de paz, desarrollo y reconciliación. Programa de las Naciones Unidas para el Desarrollo, Colombia, 2010.
4. PODEC, “Análisis del palm de consolidación de de María: Una mirada desde el desarrollo , la democracia , los derechos humanos y la cooperación internacional,” 20011.
5. C. Acevedo Navas, “Los de María: Región, conflicto armado y desarrollo productivo. Amaranto Daniels Puello & Alfonso Múnera Cavadía,” *Memorias Rev. Digit. Hist. y Arqueol. desde el Caribe*, vol. 9, no. 18, pp. 279–285, 2012.
6. “BOLETIN SITUACIONAL PLÁTANO,” 2015. [Online]. Available: [http://sinagap.agricultura.gob.ec/phocadownloadpap/cultivo/2016/boletin\\_situacional\\_platano\\_2015.pdf](http://sinagap.agricultura.gob.ec/phocadownloadpap/cultivo/2016/boletin_situacional_platano_2015.pdf). [Accessed: 11-Feb-2018].
7. “MINISTERIO DE AGRICULTURA Y DESARROLLO RURAL CADENA DE PLÁTANO,” 2014. [Online]. Available: <https://sioc.minagricultura.gov.co/Platano/Documentos/004 - Documentos Competitividad Cadena/D.C. 2014 Octubre - Indicadores platano.pdf>. [Accessed: 11-Feb-2018].
8. H.-J. Huang, S. Ramaswamy, U. W. Tschirner, and B. V. Ramarao, “A review of separation technologies in current and future biorefineries,” *Sep. Purif. Technol.*, vol. 62, no. 1, pp. 1–21, Aug. 2008.
9. B. Kamm, C. Hille, P. Schönicke, and G. Dautzenberg, “Green biorefinery demonstration plant in Havelland (Germany),” *Biofuels, Bioprod. Biorefining*, vol. 4, no. 3, pp. 253–262, May 2010.
10. I. Maltsoğlu and Y. Khwaja, “The BEFS analysis for Tanzania,” Rome, 2010.
11. Food and Agriculture Organization of the United Nations, “Bioenergy and Food Security - The BEFS Analytical Framework,” Rome, 2010.
12. S. Serna-Loaiza, E. Carmona-García, and C. A. Cardona, “Potential raw materials for biorefineries to ensure food security: The Cocoyam case,” *Ind. Crops Prod.*, vol. 126, no. September, pp. 92–102, 2018.
13. D. Piarpuzán, J. A. Quintero, and C. A. Cardona, “Empty fruit bunches from oil palm as a potential raw material for fuel ethanol production,” *Biomass and Bioenergy*, vol. 35, no. 3, pp. 1130–1137, 2011.
14. J. Moncada, M. M. El-Halwagi, and C. A. Cardona, “Techno-economic analysis for a sugarcane biorefinery: Colombian case,” *Bioresour. Technol.*, vol. 135, pp. 533–543, 2013.

## CONDUCTING PSC INSPECTION ON CROATIAN VESSELS

**Luka Grbic**

*University of Zadar, Maritime department  
Mihovila Pavlinovica 1, 23000 Zadar, Croatia*

**Mate Baric**

*University of Zadar, Maritime department  
Mihovila Pavlinovica 1, 23000 Zadar, Croatia*

**Karlo Cimera**

*Croatia*

**Dragan Curin**

*Croatia*

### **ABSTRACT**

*Overall condition of the vessel is determined during various inspections. PSC (Port State Control) inspection is one of the most important inspection regime conducted by state authorities on all vessels. This paper describes in detail this inspection regime and the results of conducted inspections on Croatian flag vessels. This research covered inspection of Croatian flag vessels in time period from 1<sup>st</sup> January 2019 to 31<sup>st</sup> December 2018. The results of this research are recommendations for ship owners for preventing deficiencies and guidelines for inspectors in order to improve inspection regime.*

**Keywords:** *Croatia, PSC inspection, Vessels*

### **1. INTRODUCTION**

Protection of environment and human lives at sea is becoming an important factor and priority in different scales of ship management. For that reason many declarations, rules and regulations were made in order to regulate technical conditions which vessel has to comply. That ensures adequate level of safety of navigation and environment protection. This paper analyses theoretical aspects of vessel inspection and legislation prescribing directives for vessel technical condition, passenger and crew safety and environment protection. Furthermore, in time period from 1<sup>st</sup> January 2016 till 31<sup>st</sup> December 2018 inspection intensity of Croatian flag vessels will be analysed. That result will be used to determine vessel safety level and all identified non-conformities will be break down till initial error is determined. Also, one of the goals of this paper is to determine frequency of inspection of Croatian vessels in foreign countries. That will be achieved using available official statistics and all materials from subject area.

### **2. CONDUCT OF VESSEL INSPECTION REGIME**

The United Nation Convention on the Law of the Sea (UNCLOS) started Port State Control inspection regime. Convention in article 25 gives option and opportunity to state to inspect every vessel which docks in port or sail in coastal waters. Also, that means undertaking every appropriate measures which prevent breaching of the laws, conventions and regulations. One of the reasons, for starting this inspection regime, was the obligation of flag state to maintain supervision of registered fleet. That obligation is a protective mechanism against substandard vessels, marine pollution and loss of human lives. As the number of convenience flagged and substandard vessels raised, the necessity for vessel inspection became indispensable. First of ten memorandums (Figure 1), which would control vessel conditions, was Paris memorandum. That was the first step in reducing convenience flagged and substandard vessels.

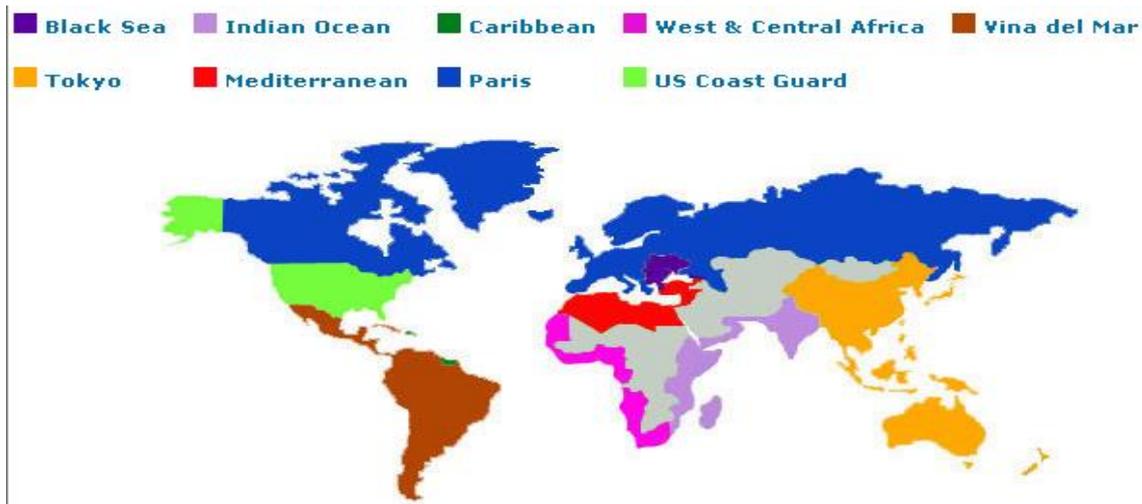


Figure 1: Current vessel inspection memorandums

Paris memorandum was adopted on 26<sup>th</sup> January 1982 as the leading act for increasing safety at sea, prevention pollution and increment of work conditions. That memorandum was signed by fourteen west European coastal countries which had large number of vessels in their ports. The purpose of this memorandum was to consolidate and coordinate vessel inspection procedures of vessels without discrimination and regardless of state flag [1]. The final goal of this inspection regime is to totally eliminate substandard vessels, without introducing new standards and rules for merchant vessels, but using existing which are adopted by International Maritime Organisation and International Labour Organisation. Inspection procedures are prescribed in Annex 1 “PSCC Instructions”. Croatian inspectors are connected with the inspectors in European countries and together they are using same inspection procedures, databases and forms. This platform enables unified and coordinated inspections of all vessels in European Union [2]. Selections of the vessel which will be inspected is preformed using risk factor by following key [7]:

- High risk vessels: inspection interval not greater than 6 months,
- Standard risk vessels: inspection interval not greater than 12 months, and
- Low risk vessels: inspection interval between 24 and 36 months.

This vessel categorisation is mainly affected by vessel type and age. The limiting factor for age is 12 years and it is considered that older vessel has greater risk. Based on vessel conditions in the last three year period there are three classification of state flags: white, grey and black. Also, every company, based on vessels status and detected non-conformities, can be compared to others. There are two company indexes: vessel stopping index and non-conformities index. Vessel stopping index is ratio between the number of stopped vessels and the number of all conducted inspection of the vessels in that company in last 36 months period. That number is then compared with the average number of all stopped vessels for all conducted inspections. Vessel non-conformities index is ratio between the number of all non-conformities and the number of all conducted inspection of the vessels in that company in last 36 months period. That is then compared with the average number of all non-conformities for all conducted inspections. First step in ship inspection is checking the list of vessels moored in port or will arrive in port. After that, those vessels are checked in THETIS system (an online base of results of all conducted inspections) which will give following information’s:

- Basic vessel information’s,
- Choice factor (number which determines level of inspection priority),
- Earlier conducted inspections with the non-conformities and undertaken measures,

- Notes from earlier inspections, and
- Vessel availability for detailed inspection.

### 3. INSPECTION REGIME IN CROATIA

Inspections in Croatia are conducted by Ministry of the Sea, Transport and Infrastructure and Harbour master office Safety of navigation inspectors. They are authorized to conduct supervision and inspections of all vessels in Croatia national waters to determine if there is any breach of national or international laws [3, 4]. Inspection regime on foreign vessels is conducted in accordance with Paris memorandum. Every inspection will determine if the vessel has valid certificates in accordance with:

- International Convention for the Safety of Life at Sea (SOLAS),
- International Load Line convention,
- International Convention for the Prevention of Pollution from Ships (MARPOL),
- International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW),
- Convention concerning Minimum Standards in Merchant Ships,
- International Regulations for Preventing Collisions at Sea 1972 (COLREGs),
- International Convention on Civil Liability for Bunker Oil Pollution Damage,
- International Convention on Tonnage Measurement of Ships (TONNAGE),
- International Convention on the Control of Harmful Anti-fouling Systems on Ships.

The signatory states are obliged to maintain efficient system for controlling vessels in ports, in order to archive satisfactory level of vessel conditions. Also, the inspection regime will be the same for the vessels which are registered in non EU states (ship below convention size) [5]. Inspection regimes are divided in three groups: basic, detailed and extended. Basic inspection includes checking vessel certificates and papers, general condition of the vessel, engine room and basic hygienic and work conditions. As the inspector initially checks the vessel, general appearance of the vessel condition, life saving and firefighting equipment, navigation equipment, electrical systems, work conditions can be determined. If there are evident reasons to believe that vessel condition, equipment or crew are not as they should be, then detailed inspection will be conducted. Extended inspection, which is conducted minimally once in 12 months period, is obligatory for following vessels:

- Oil tankers over 3000 GT and older than 15 years,
- Bulk carriers older than 12 years,
- Passenger vessels older than 15 years, and
- Liquefied gas carriers or chemical tankers older than 10 years.

Upon finished inspection, the inspector will fill inspection minutes using prescribed form. That minutes will contain results, determined non-conformities and details of taken measures. Vessel master will be informed about the results of conducted inspection and will receive his copy of inspection minutes.

### 4. VESSEL INSPECTION ANALYSIS

In time period from 1<sup>st</sup> January 2019 to 31<sup>st</sup> December 2018, 44 Croatian flagged vessels were subject of Paris memorandum inspection. On that 44 vessels there was totally 105 inspections. The results of those inspections are following: 119 non-conformities were detected and two vessels were banned to sail out. Table 1 shows types of vessels which were subject of inspection. Of those vessels 43 were registered in Croatian Bureau of Shipping and 1 had Croatian crew and foreign flag.

*Table 1: Types of Croatian flagged vessels which were subject of inspection in analysed time period*

Type of vessel	No.	No. of inspection	No. Of deficiency	No. Of detention
Bulk Carrier	17	34	55	1
Chemical Tanker	11	28	13	
Comm. Yacht	3	3	19	1
HSC	2	8	6	
Oil Tanker	7	15	4	
Ropax	3	15	19	
Tug	1	2	3	
<b>Total</b>	<b>44</b>	<b>105</b>	<b>119</b>	<b>2</b>

Source: <https://www.parismou.org/inspection-search>

Analysis of those inspections showed that 39 of them were initial inspections, 29 were detailed inspection and 37 were expanded inspection. Furthermore, in table 2 are detected non-conformities categorised by Paris memorandum guidelines.

*Table 2: Detected non-conformities analysis in analysed time period*

Non-conformity code	List of Paris MoU deficiency codes	No. of non-conformities
01	Certificates & Documentation	7
012	Certificates & Documentation - Crew Certificate	4
013	Certificates and Documentation – Document	4
02	Structural condition	7
03	Water/Weathertight condition	5
04	Emergency Systems	6
05	Radio communication	1
06	Cargo operations including equipment	1
07	Fire safety	19
092	Working and Living Conditions - Working Conditions	1
10	Safety of Navigation	13
11	Life saving appliances	16
13	Propulsion and auxiliary machinery	4
141	Pollution Prevention - MARPOL Annex I	4
144	Pollution Prevention - MARPOL Annex IV	2
145	Pollution Prevention - MARPOL Annex V	2
146	Pollution Prevention - MARPOL Annex VI	1
15	ISM	6
183	Accommodation, recreational facilities, food and catering	4
184	Health protection, medical care, social security	9
99	Other	3
	<i>Total</i>	119

Source: <https://www.parismou.org/inspection-search>

## 5. CONCLUSION

There is a large number of Croatian flagged vessel engaged in navigation in international waters. In analysed time period less than 10% of those vessels were subject of Paris memorandum inspection. In average there are less than three non-conformities per vessel. Also, 44 vessels were inspected and only 2 were detained in port, which is detention rate under 5 %. Detected non-conformities are grouped in following manner: 15 % of all detected non-conformities refer to Fire safety, 11 % refer to Safety of navigation and 13 % refer to Life saving appliances. That brings us to conclusion that vessel safety is not at desired and required level as should be by international rules and regulations. That can be improved by continuous education and more detailed inspection of vessel crew.

## LITERATURE:

1. Ćurčić-Polić, V., Pristupanje Hrvatske pariškom memorandumu o kontroli brodova u lukama, *Osvrti*, v. 34 (3-4), 321-327, 1992.
2. DIREKTIVA 2009/16/EZ EUROPSKOG PARLAMENTA I VIJEĆA od 23. travnja 2009. o nadzoru države luke, *Službeni list Europske unije*, L 131/57, 2009.
3. Ljubičić, I. Inspekcijski nadzor stranih brodova u lukama Republike Hrvatske *Zbornik radova Pravnog fakulteta u Splitu*, god. 46, 4/2009., str. 829.-843.
4. Bolanač D., Amižić, P., *Novi Pomorski zakonik Republike Hrvatske i pitanje unifi kacije pomorskog prava*, *Zbornik radova Pravnog fakulteta u Splitu*, god. 44, 1/2007., str. 41. – 51.
5. Grabovac, I., *Suvremeno hrvatsko pomorsko pravo i Pomorski zakonik*, Split, 2005., str. 7. – 243.
6. Pravilnik o obavljanju inspekcijskog nadzora sigurnosti plovidbe (NN 127/05, 38/08)
7. Staničić, M., *Inspekcijski pregled broda u skladu s procedurama Pariškog memoranduma*, *Kapetanov glasnik*, Split, br. 11, 2005.
8. <https://www.parismou.org/inspection-search>
9. Frančić, Vlado, Luka Grbić, and Lovro Maglić. "Inspections of Ro-Ro Ships Operating on "Motorways of the Sea" Routes." *Pomorski zbornik* 49.1 (2015): 41-55.
10. <http://ibicon.ru/psc-port-state-control.html>

# CONFLICT OF JURISDICTION AND CONFLICT OF LAWS IN THE ELECTRONIC COMMERCE CONTRACTS

**Maher Aljaber**

*Assistant Professor at Al-Balqa Applied University, Jordan  
Salt College of Human Sciences, Department of Law  
maheraljaber@bau.edu.jo*

## **ABSTRACT**

*Nowadays, Information Communication Technology (ICT) has an essential part in economic productivity and establishing of modern life for a society. Each person has a chance to use this technology for trading, chatting, obtaining news and other numerous advantages. However, e-trading is the most modern form of commerce used today. Due to its numerous advantages; governments around the world believe that EC will be the engine of economic stability in the future. However, this kind of commerce has numerous legal issues; and one of the main legal issues with regards to the electronic contracts is the legal requirements of its conclusion, taking in consideration that there is no differences between the traditional contracts that concluded face to face or the modern contracts that concluded electronically. So, both contracts require offer and acceptance, But, some of logical questions are standing in front of the legal experts in the EC field. For example, what do we mean by electronic offer and electronic acceptance? When the offer obliges the offeror? When the acceptance obliges the offeree? What is the time that the contract is considered concluded? What is the place of conclusion; the place of offeror? And finally, what is applicable law that govern such contracts and which court is competent to settle the dispute.*

**Keywords:** *Electronic contract, Electronic Offer, Electronic Acceptance, Place of Contract, Applicable Law, Jurisdiction*

## **1. INTRODUCTION**

There is no agreement about what constitutes electronic commerce. From a narrow side EC could be defined about business activities electronically conducted<sup>1</sup>. From a broader side EC could be defined as any transaction over any electronic medium in a computer mediated network. Some scholars explain both definitions by saying that EC refers to the practical commercial actions<sup>2</sup>, the selling and buying of products, services and information, conducted through electronic communications such as the internet and demands a financial operation. As mentioned above, and because to large geographical spaces that EC is covered, it is still new phenomenon; which raises some legal issues in front of both contracted parties; buyer and seller<sup>3</sup>. Further, despite its importance on the economic process development, efforts are still needed for consistent legislative measures that would ensure buyers' protection. This encourages different governments to establish their own laws to regulate internet contracts. One of the main legal issues with regards to the electronic contracts is the legal requirements of its conclusion. However, there is no difference between the traditional contracts that concluded face to face or the modern contracts that concluded electronically<sup>4</sup>.

---

<sup>1</sup> Aljaber, M. 2012. The Impact of Privacy Regulations on The Development of Electronic Commerce. Jordan and the UK Comparative Study. De Montfort university. UK.

<sup>2</sup> Cotoi, E. 2011. The Conclusion of Electronic Contract. In Proceedings of the 22<sup>nd</sup> International DAAAm Symposium. Viena, Austria.

<sup>3</sup> Cotoi, E. 2011. The Conclusion of Electronic Contract. In Proceedings of the 22<sup>nd</sup> International DAAAm Symposium. Viena, Austria.

Majidnia, A. Jafary, M. 2014. The Study of Rules and Process of Electronic Contracts. Bulletin of Georgian National Academy of Sciences. 8(2)

<sup>4</sup> Majidnia, A. Jafary, M. 2014. The Study of Rules and Process of Electronic Contracts. Bulletin of Georgian National Academy of Sciences. 8(2)

Both contracts are required offer and acceptance. But, some of logical questions are standing in front of the legal experts in the EC regulations. For example, what do we mean by electronic offer and electronic acceptance? When the offer obliges the offeror? When the acceptance obliges the offeree? What is the time that the contract is considered concluded? And; what is the place of conclusion; the place of offeror? Or what is the place of offeree? Responding to those questions helps the legal experts in the international private law field and national judges to determine the time of conclusion such kind of contracts and achieve its legal effects? In addition, it helps them to determine the competent jurisdiction to see the dispute and determine the applicable law on the dispute. If this happened, the ruling is enforceable anywhere in the world. This article it trying to tackle one of the most legal problematic matters regarding to contracts conducting through the internet; it's the conflicts of laws and conflicts of jurisdiction. Suppose (A) – a Jordanian merchant – buys goods from a customer (B) – an Austrian virtual merchant - and they agreed to deliver goods to the place of business (A) in Egypt. After the enforcement of contract some disputes are raised with regards to the delivered goods. From the aforementioned example which jurisdiction has the power to see and resolve this dispute; Jordanian courts, Austrian courts, or Egyptian courts? Further, what is the applicable law on the dispute; Jordanian law, Austrian law, or the Egyptian Law? When the national legislations deal with these queries, it should take in consideration that encouraging electronic commerce globally depends on achieving the harmonisation between its legislation and other national legislations with regards to conflict of jurisdictions and laws matters; otherwise, EC will not be developed. National legislations depend on the place of conclusion of the electronic contract to answer the above questions; so depending on such criterion the national courts can determine if it has a jurisdiction to resolve this dispute or not, and it can determine the applicable law on the dispute.

## **2. METHODOLOGY**

The current study discusses the problematic of determining the place of conclusion of the electronic contract and its impact of determining the competent jurisdiction to settle the dispute, and determining the applicable law that govern and apply on such contracts. To achieve the research goals; the researchers apply the Doctrinal Legal Research Approach. This approach is based on analysing the Jordanian legislations that govern electronic contract. So, the primary source of data will be the Jordanian Electronic Transaction Act No. 15 of 2015 and the Jordanian Civil Law. Other secondary sources; such as published material in books and journals are used which help the researchers to focus on the gaps, if existed, in the Jordanian legislation. So, this research will be structured into two main sections; first section will discuss the conclusion of electronic contract; by focusing on the online contract's place of conclusion; and the second section will discuss the conflicts of jurisdiction and the applicable law on the dispute will be discussed in the third section.

## **3. THE CONCLUSION OF ELECTRONIC CONTRACT**

The Jordanian Electronic Transaction act No.15 of 2015 defines electronic commerce transaction in article 2 as a “transaction that conducted electronically”. So, from this definition the Jordanian legislator does not sort it as a special kind of contracts and he named this contract “electronic” to describe its formation. In addition, the Jordanian legislator depends on the Civil Law to govern its rules. At this stance, the contract is considered included when the intents of parties about the creation of contract is announced and agreed. But the legislator does not determine the way of expression, so it does not matter if that intent is expressed electronically or not. To follow, in each contract means there are two parties; offeror and offeree.

The offeror is the party who makes an offer to another<sup>5</sup>; while the offeree is one to whom an offer to enter into a contract has been made<sup>6</sup>. So; the contract is legally concluded at the time that their consent is joined. At this sense, there is no difference in law between a contract formed in person and one formed on the internet, because both of them is concluded according to the rules described in the civil law. The online contract is a kind of contract that is concluded between two parties in different place and different time, so according to the Jordanian Civil Law the traditional contract that is between two parties in different place and time is concluded at the place and time where the offeree is express about his intent. In this essence; there are four theories about the contracts in the case of different place and time. Express consent, sending acceptance, receiving acceptance, or the knowledge of offeror about the acceptance of offeree<sup>7</sup>. On the other side, the Jordanian Transaction Act 2015 in the article 13 mention that the online contract is considered concluded at the time that the acceptance letter is entered a system that does not in the controlling of the sender. Further, the place of the online contract according to the article 14 of the Jordanian Transaction Act is the receiver's place of business.

#### **4. THE APPLICABLE LAW ON THE ONLINE CONTRACT**

Let us go to the aforementioned example; suppose (A) – a Jordanian merchant – buys goods from a customer (B) – an Austrian virtual merchant - and they agreed to deliver goods to the place of business (A) in Egypt. At this example which law should be apply on this case; Jordanian, Egyptian, or Austrian law. The Jordanian legislator has settled this issue by mentioning in Article 20 of the Jordanian Civil Law that “the substance of contractual obligations shall be governed by the law of the state in which the contracting parties are both resident if they are resident in the same state, but if they are resident in different states the law of the state in which the contract was concluded shall apply unless they agree, or it is apparent from the circumstances that the intention was, that another law should apply.” To determine the conclusion place of the electronic contract, the Jordanian Transaction Act NO. 85 of 2001 states in article 18 that “A- Unless otherwise agreed the originator and the addressee, the electronic message shall be deemed to be dispatched at the place where the originator has its place of business, and shall be deemed to be received at the place where the addressee has its place of business, if neither one has a place of business, its habitual residence shall be deemed to be its place of business.” From above; the Jordanian legislator depends on the place of business to determine the place of conclusion electronic contract. This means that it does not matter from where the acceptance message is sent, because the legislator depends on his place of business or the habitual residence. So, if the message is sent from Egypt and his place of business is Jordan the message is considered to be sent from Jordan. Furthermore, if he has more than one place of business; the article 18 states that “where the originator or the addressee has more than one place of business, the place of dispatch or receipt shall be that which has the closest relationship to the underlying transaction. When it becomes impossible to be preponderant, the principal place of business shall be deemed to be the place of dispatch or receipt.” To sum up, the Jordanian legislator is settled the problematic of conflict of laws in the electronic contract by depending on the criterion of the place of conclusion of the contract; particularly the place of business or habitual residence, with no regards from where the offeree sends his acceptance.

#### **5. JURISDICTION ON THE ELECTRONIC CONTRACT**

The Jordanian legislator; particularly in the Civil Law Proceedings set number of criteria to determine the competence of Jordanian courts to settle the dispute. The first criterion depends

<sup>5</sup> Beheshti, B. 2013. Cross-Jurisdictional Variation in Internet Contract Regulation. *Journal of International Commercial Law and Technology*. 8(1).

<sup>6</sup> Ibid.

<sup>7</sup> Alsanhoury, A. 2016. *The Sources of Obligation, The Source of Obligation in Civil Law*. Dar Althkafa for Publishing and Distribution: Amman

on the personality of litigants. It states in Article 27 that “the regular courts in Jordan shall practice the right of judiciary with all people in relation with all the civil and penal articles excluding articles where the judiciary right is delegated to religious courts or ad hoc courts according to provision in any other law.” Further; the Jordanian courts will adjudicate the case even if not within the scope of its competence if the litigant party explicitly and implicitly accepts the jurisdiction of such courts. This criterion is applied in the case that one of litigants is Jordanian or is resided in Jordan. However, in the case of contracts that no parties of the dispute is resided in Jordan; the Jordanian legislator; particularly, in article 28 of the Civil Proceedings Law states that “if the parties are not resides in Jordan, the place of conclusion the contract if in Jordan gives the Jordanian courts the competence to settle the dispute.” So; the place of conclusion the online contract gives the Jordanian courts the jurisdiction to settle the dispute. So in this case, the residency criterion is applied with no regards the contract is offline or online. In this matter the article 18 of the Jordanian Transaction Act is applied with no regards from where the offeree sends his acceptance, i.e the Jordanian courts is competent to settle the dispute if the place of business or a habitual residence of the offeree is Jordan even he sends his acceptance from outside of Jordan. To sum up, the Jordanian legislator is settled the problematic of jurisdiction of the electronic contract by depending on the criterion of the place of conclusion of the contract; particularly the place of business or habitual residence, with no regards from where the offeree sends his acceptance.

## 6. CONCLUSION

This paper is resulted that electronic contracts are differed from traditional contracts in the means of its conclusion, but are similar in the rules that govern each of them. The current research is concluded that the online contract and traditional contract are governed by the same criteria that determine the jurisdiction of national courts; and determine if the national court is competent to settle the dispute and which law is considered applicable law on the dispute. In each contract, the place of conclusion of the contract is one of the essential criteria that the judge is taking in consideration in resolving this matter. However, the judge applies these criteria with no contradiction with Jordanian public and moral system as stated in the article 29 of the Jordanian Civil law and article 29 of the Civil Proceedings Law which explicitly ceases the working of these rules in the matter that contradict with the public and moral system.

## LITERATURE:

1. Alfar, A. 2016. The Sources of Obligation, The Source of Obligation in Civil Law. Dar Althkafa for Publishing and Distribution: AmmanCivil Law.
2. Aljaber, M. 2012. The Impact of Privacy Regulations on The Development of Electronic Commerce. Jordan and the UK Comparative Study. De Montfort university. UK.
3. Beheshti, B. 2013. Cross-Jurisdictional Variation in Internet Contract Regulation. Journal of International Commercial Law and Technology. 8(1).
4. Cotoi, E. 2011. The Conclusion of Electronic Contract. In Proceedings of the 22<sup>nd</sup> International DAAAM Symposium. Viena, Austria.
5. Jafary, M. 2014. The Study of Rules and Process of Electronic Contracts. Bulletin of Georgian National Academy of Sciences. 8(2).
6. Majidnia, A. Jafary, M. 2014. The Study of Rules and Process of Electronic Contracts. Bulletin of Georgian National Academy of Sciences. 8(2).
7. Jordanian Civil Law 1976
8. Jordanian Civil Proceedings Law
9. Jordanian Transaction Act 2015

# EDUCATION AND ENTREPRENEURSHIP CAREER CHOICE IN KOSOVO

**Saranda Lajqi**

*The institute for Entrepreneurship and Small Business, Kosovo  
University of Tirana, Albania  
sarandalajqi@hotmail.com*

**Justina Shiroka-Pula**

*Kosovo Academy of Arts and Sciences, Kosovo*

**Besnik A. Krasniqi**

*University of Prishtina, Kosovo*

## **ABSTRACT**

*This chapter discusses the entrepreneurial education and entrepreneurial intentions in Kosovo. The study employs the data from the Global Entrepreneurship Monitor (GEM) survey (2014) and OECD's SME policy index (2016) to evaluate and compare entrepreneurship education in Kosovo in the regional and global context. The findings suggest that Kosovo is ranked lowest in terms of entrepreneurial education in Western Balkans. Study also shows that even though the perceived capability among students is high, there are low entrepreneurial intentions. The study urges the need for more proactive and tailored made policy measures to support entrepreneurial education, at all level of education. Taking into account limitations, the study ends with some policy proposals focusing on encouraging creativity, experiential-based learning, or personal initiative and to pay more attention on the setting up of new businesses. Provision of business support services by educational institutions such as incubation infrastructure, funding for start-ups, and business mentoring is needed to promote entrepreneurship as a career choice.*

**Keywords:** *Career, Education, Entrepreneurship, Kosovo*

## **1. INTRODUCTION**

In recent years, emerging policy initiatives have been concerned with entrepreneurial education and training and its impact on entrepreneurial intentions and entrepreneurship in general (Bosma and Kelley 2019, OECD/EU/EBRD/ETF/SEECEL 2016). Both these initiatives, GEM and OECD policy index recognise the fundamental role of the education and training in starting and growing small firms. These global and regional experiences brought by these studies reviled the important role of secondary and tertiary educational institutions for developing entrepreneurial skills which in turn contributes to economic growth. The policy interest and commitment on entrepreneurial education is recognized also at European level in Entrepreneurship 2020 Action Plan, aimed at building the necessary skills for a more entrepreneurial culture (EU 2013). This renewed interest for the entrepreneurship education and training comes from the fundamental role of human capital on growth and development. To a greater extent, the education is considered to be the vehicle to creation and growth of new entrepreneurial and technological ideas which form the basis for innovation and growth. Indeed, the universities play a significant role in enhancing the absorptive capacity of actors such as employees at firms and researchers at universities and research institution to needed to drive the economic growth (Mueller 2006, Audretsch et al. 2014). Thus, the universities help companies through technology transfers to cope with rapidly changing global business environment. These challenges that small firms face in a rapidly changing environment, globalisation of business activities, and growing uncertainty have placed the role of education

and human capital at the forefront of research and policy initiatives. Although the start-ups and small and medium sized enterprises (SMEs) are key contributors in generating income and employment, their needs are not adequately addressed by educational system. Of the six Western Balkan economies and Turkey, SME sectors account for over 70% of those employed in the business sector and generate 65% of value added (OECD/EU/EBRD/ETF/SEECEL 2019). Nonetheless, their potential remains untapped, as SMEs across the region struggle with various challenges, including human capital, that hamper their growth and productivity. The higher education stakeholders in most economies continue to address entrepreneurship education in a fragmentary manner, despite their potential for developing high-skilled entrepreneurial economies. There is critical need to ensure that all students across all disciplines have an opportunity for entrepreneurial learning (EU 2008). Not only the promotion of entrepreneurship in tertiary education, but the promotion of entrepreneurial learning at secondary and vocational education is very important for developing entrepreneurial culture. Addressing entrepreneurship consistently in the educational system is a major challenge in most EU countries (EU, 2014). The EU precession economies such as Kosovo, in addition to similar challenges face in Europe, they face particular challenges of institutional context in terms of translating the EU's best practices and recommendations on the entrepreneurship. Offering the opportunity for entrepreneurial learning for all levels of education (including non-formal education), curriculum and teaching reform, remains the key challenge for Kosovo. Yet, more challenges for human capital face SMEs in Kosovo considering the late start of transition and War in 1998/99. Therefore, the aim of this chapter is to contribute in addressing the current challenges of entrepreneurship education in Kosovo. The chapter is organized as follows. First, it discusses the literature on entrepreneurship education and training as key factors influencing start-ups and growth of SMEs. Second, it places the Kosovan education system in global and regional context. Drawing on the data from GEM report will provide a general attitude of student perception about entrepreneurship as a career choice. Finally, the chapter ends with conclusions and policy proposals for empowering the entrepreneurship education and training in Kosovo.

## **2. LINKING EDUCATION AND ENTREPRENEURSHIP**

In recent years there is burgeoning entrepreneurship literature on the role of education on entrepreneurial learning and entrepreneurial intentions. The entrepreneurship education incorporates the courses, program and process offered to students to strengthen their entrepreneurial traits, attitudes and skills and knowledge required for starting and growing new ventures (Bae et al. 2014, Nabi et al. 2017, Hahn et al. 2017, Krasniqi and Mustafa 2016, Krasniqi et al. 2008). With this mind, a wide range of initiatives have been adopted by both policy makers and educational institutions to stimulate entrepreneurship which acts as engine of growth (Shah and Pahnke 2014, Lajqi and Krasniqi 2017). Leitch et al. (2012) and Mustar (2009) place the role of entrepreneurial education in broader contexts by considering entrepreneurship as way of thinking and behaving. suggesting that the benefits of building the national entrepreneurial culture is not limited only to creation of new ventures, but rather to prepare the students for labour market. By building entrepreneurial mind-set of students, therefore, contributes to better employee performance and their entrepreneurial activity within large companies (i.e. intrapreneurship) (Kuratko 2007, Kuratko 2003, Antoncic and Antoncic 2011, Antoncic and Hisrich 2001). The European Commission (2008) report on entrepreneurship in higher education, (2008, 7) highlights that 'the benefits of entrepreneurship education are not limited to start-ups, innovative ventures and new jobs' but rather to 'an individual's ability to turn ideas into action and it is therefore a key competence for all, helping young people to be more creative and self-confident in whatever they undertake'. Skilled employees are more productive because they have higher problem-solving abilities, leading to

greater efficiency within the firm. Thus, firms that are strongly motivated to grow and train their workforce to facilitate the growth (Hallier and Butts 1999, Van der Sluis et al. 2005). Some authors argue that education may reduce the rate of entrepreneurship because of the high opportunity cost that highly educated individuals face in choosing among career options (Parker 2006). On the other hand the higher levels of education may facilitate entry in the well-paid jobs and hence can decrease the probability of an individual to start-up the business, while on the other, it can increase ability to perceive business opportunities which leads to higher entrepreneurial intentions (Krasniqi 2009, Krasniqi 2014). Focusing on role of entrepreneurship education on the career choice, the most recent and very popular global study on entrepreneurship (Global Entrepreneurship Monitor, 2019) evaluates the beliefs about status of entrepreneurs and entrepreneurship as a career choice across countries (Bosma and Kelley 2019). The issue of the beliefs about the entrepreneurship as a career choice captures the wider societal perceptions and attitudes toward the acceptance of entrepreneurship, which influences the decision of people to enter the career in the entrepreneurship. In explaining the role of education in entrepreneurial career choice, the concept of self-efficacy has been extensively used to explain perceived career options, stated career preferences, and career-oriented behaviours (Wilson et al. 2007, McGee et al. 2009). Other researchers such as Markham et al. (2002) suggests that self-efficacy is reliably predictor of the scope of career options considered. In addition, individuals with higher levels of human capital stock may be in a better position to perceive entrepreneurial opportunities in the market and therefore more likely to engage in entrepreneurial activity (Davidsson and Honig 2003). These beliefs about entrepreneurship are multifaceted phenomenon and may depend on number of aspects, such as availability of other options in career such as employment or unemployment, general framework conditions for entrepreneurship (e.g. access to finance, taxes, business support services, etc.), requirements associated with start-up such as skills and knowledge. All these factors may influence the one's choice for entrepreneurial career. Analysing all these factors is beyond the scope of this chapter, the remainder of the chapter focuses only on entrepreneurship education, training, and career choice in Kosovo.

### **3. CRITICAL ASSESSMENT OF ENTREPRENEURSHIP EDUCATION AND TRAINING IN KOSOVO**

This section provides a critical assessment of entrepreneurship education and training in Kosovo primarily based the two main sources: Global Entrepreneurship Monitor (GEM) and OECD SME Policy index. The first sources of information is based on the, the key research project aimed at describing and analysing entrepreneurial processes in an international comparison scale. GEM is conducted by the international consortium Global Entrepreneurship Research Association (GERA) and marks 20 years since its inaugural survey of entrepreneurship in 10 developed economies in 1999. Since then, GEM has included in 49 economies in 2018 survey. Kosovo was part of the GEM report for the first and last time in 2014.<sup>1</sup> The second source of information The SME Policy Index: Western Balkans and Turkey – Assessing the Implementation of the Small Business Act for Europe which offers policy makers and other stakeholders in the EU enlargement region a framework to assess progress in designing and implementing effective SME policies. It is the fourth report of its kind, following the first assessment published in 2007. This report uses an enhanced methodology to identify strengths and weaknesses in relevant policies, compares performance across economies and policy areas, and measures convergence towards the policy principles of the Small Business Act for Europe. Kosovo has been part of this study since 2007. GEM report draws on individual surveys with population and also on national experts to evaluate the framework conditions.

---

<sup>1</sup> A detailed description of the methodology behind the collection of GEM data is provided in Reynolds et al. (2005).

Three out of twelve areas of entrepreneurship framework conditions are linked to entrepreneurship: Entrepreneurial Education at School Stage, Entrepreneurial Education at Post School Stage and R&D Transfer.<sup>2</sup> The GEM national expert survey concludes that entrepreneurship education is considered to be a very important entrepreneurship framework. Entrepreneurial Education at School Stage measures the extent to which training in creating or managing SMEs is incorporated within the education and training system at primary and secondary levels while the Entrepreneurial Education at Post School Stage the extent to which training in creating or managing SMEs is incorporated within the education and training system in higher education such as vocational, college, business schools, etc. Finally, R&D transfer measures the extent to which national research and development will lead to new commercial opportunities and is available to SME. The national experts evaluation is based on the agreement or disagreement with each of the following six statements on a scale from 1 (“strongly disagree”) to 5 (“strongly agree”) for areas of included above. Table 1 provides a general overview of the results of each the three dimensions linked with education sector and entrepreneurship for the 30 international economies (mostly European) participating in the national experts survey in 2014. The table shows the average rates in a 1-5 Likert scale, the higher the rated dimension in each country suggests the better performance in terms of entrepreneurship education in a country. In addition, Kosovo (with Bosnia and Herzegovina) score lowest in terms of the R&D transfer which suggest the limited research capacities of educational system.

*Table following on the next page*

---

<sup>2</sup> The framework conditions according to the GEM report (2019) include following dimensions: Entrepreneurial Finance, Governmental Policies: Support and Relevance, Government Policies: Taxes and Bureaucracy, Government Entrepreneurship Programs, Entrepreneurial Education at School Stage, Entrepreneurial Education at Post School Stage, R&D Transfer, Commercial and Legal Infrastructure, internal Market Dynamics, Internal Market Burdens or Entry Regulation, Physical Infrastructure, Cultural and Social Norms (see GEM Report 2019 for details)

*Table 1: Average Ratings for entrepreneurship education and training in selected European and non-European economies (2014)*

economy	Basic school entrepreneurial education and training	Post school entrepreneurial education and training	R&D transfer
Denmark	3.1	3.43	2.77
Switzerland	2.56	3.42	3.57
Latvia	2.51	3.17	2.33
Netherlands	2.85	3.17	2.88
Canada	2.32	3.14	2.57
Russia	2.31	3.1	2.37
Lithuania	2.37	3.07	2.61
Portugal	2.04	3.04	2.76
Austria	1.66	3.02	2.82
United Kingdom	2.44	3.02	2.2
Estonia	2.63	2.99	2.92
Slovakia	2.21	2.98	2.13
Ireland	2.09	2.95	2.82
France	1.75	2.92	2.73
Luxembourg	2.13	2.9	2.98
<b>Kosovo</b>	<b>1.86</b>	<b>2.87</b>	<b>1.96</b>
United States	2.21	2.87	2.64
Hungary	1.68	2.82	2.41
Germany	2.13	2.81	2.75
Belgium	1.95	2.75	2.99
Sweden	2.55	2.75	2.65
Finland	2.28	2.7	2.61
Romania	2.34	2.68	2.59
Spain	1.84	2.61	2.45
Norway	2.48	2.56	2.78
Poland	1.75	2.54	2.44
Bosnia & Herzegovina	2.06	2.43	1.96
Croatia	1.68	2.35	2.04
Italy	1.68	2.33	2.18
Greece	1.5	2.31	2.26
<b>Average</b>	<b>2.17</b>	<b>2.86</b>	<b>2.57</b>

*Source: Global Entrepreneurship Monitor Database, 2014.*

For example, entrepreneurship education at basic levels (primary and secondary school) is rated rather unfavorably in most economies—only a Denmark, stand out above 3 level. This information is very essential for policy makers in Europe, as this score shows the extent to which primary and secondary education encourages creativity, self-sufficiency, and personal initiative, provides adequate instruction on new firm creation. This denotes a criticism of the existing formal entrepreneurship education which struggled to successfully adapt to the dynamic economic environment. On the other hand, the entrepreneurship education at post-school or college and university the ratings are much higher suggesting the better performance in terms of entrepreneurship education. With Denmark scoring highest, ten other economies achieved average rating above 3 (other economies such as Switzerland, Latvia, Netherlands, Canada, Russia, Lithuania, Portugal, Austria, and United Kingdom). Compared to these international economies, Kosovo has scored lower too in both, preschool entrepreneurship education (1.86) and post school education (2.87). To evaluate the effect of the university education on entrepreneurship, we have compared the responses of the sub-sample of students and non-students.

This comparison allows to identify any differences in terms of:

- a) the required knowledge, skills, and experience to start-up business
- b) entrepreneurial intentions
- c) perceptions about the entrepreneurial career
- d) perceptions of entrepreneurial opportunities.

This international and regional comparison yielded very interesting results for Kosovo. Kosovo shows highest percentage of “yes” responses in the question ‘Do you have the knowledge, skill and experience required to start a new business?’, for both, students (58) and non-students (65).

*Table 2: Comparing perceived capabilities, perceived opportunities, and entrepreneurial intentions of students and non-students (percentage of ‘yes’ responses)*

Countries	Do you have the knowledge, skill and experience required to start a new business?		Entrepreneurial intentions (in 18-64 sample that is not involved in entrepreneurial activity)		In my country, most people consider starting a new business a desirable career choice		In the next six months, will there be good opportunities for starting a business in the area where you live?	
	Students	Non-students	Students	Non-students	Students	Non-students	Students	Non-students
<b>Kosovo</b>	<b>58.1</b>	<b>65.7</b>	<b>7.0</b>	<b>7.9</b>	<b>66.1</b>	<b>70.9</b>	<b>72.8</b>	<b>67.2</b>
Croatia	29.5	52.9	42.4	22.4	65.6	59.1	26.0	18.2
Slovenia	35.5	49.7	31.5	11.8	61.0	52.7	17.0	17.1
Bosnia & Herzegovina	36.2	48.2	44.4	21.0	73.2	78.5	25.9	18.5
<b>World (average rating)</b>	<b>44.3</b>	<b>51.2</b>	<b>37.1</b>	<b>21.8</b>	<b>64.7</b>	<b>61.4</b>	<b>47.4</b>	<b>41.2</b>

*Source: Global Entrepreneurship Monitor Database, 2014.*

*Note: The world average is calculated without Kosovo, Croatia, Slovenia, Bosnia & Herzegovina*

On the contrary, when compared to the entrepreneurial intentions the Kosovo scores very low – only 7.9 percent of surveyed students and 7.9 of surveyed general population stated that they have entrepreneurial intentions in the future. The perceived capabilities for entrepreneurship may be seen as high self-efficacy among the Kosovan students which indeed indicates ‘the strong personal belief in skills and abilities to initiate a task and lead it to success’ (Bandura 1997). As Markman et al. (2002) note, the perceptions of self-efficacy are very critical in entrepreneurship, because self-efficacy perceptions rather than objective ability that motivates individuals to demonstrate entrepreneurial behaviour. However, in Kosovo, this is not the case. The large differences between the high self-perception of the knowledge, skills, and experience of students and their entrepreneurial intentions suggest that the Kosovan students have very positive self-perception about their ability. In addition, the Kosovan students also value entrepreneurship as highly desirable career choice, yet, their entrepreneurial intentions remain very low. Large proportion of both, students and non-students consider starting a new business a desirable career choice (66%) which is approximately the same as international average (64.7, and 61,4 respectively). Even higher proportion of students (more than 70), declared that there are good opportunities for starting a business in the area where they live, compared with regional and international level (47.4). The Kosovan students are more optimistic about the opportunities for entrepreneurship compared to non-student group. This explains that human capital enables individuals to better perceive entrepreneurial opportunities (Davidsson and Honig 2003). The other dimensions of unfavourable framework conditions for entrepreneurship may have influenced the low level of entrepreneurial intentions. In addition, whether the students have skills and knowledge and experience required for start-up is questionable. For example the SME Policy Index conducted by OECD places Kosovo at the bottom of the list of the Western Balkan countries and Turkey in terms of entrepreneurial learning (Kosovo lowest with 2.2 compared to Montenegro 2.83 highest).

*Table 3: OECD Policy framework for entrepreneurial learning, 2016*

Policy framework dimensions for entrepreneurial learning		ALB	BIH	KOS	MKD	MNE	SRB	TUR
		2.15	2.54	2.22	2.76	2.83	2.52	2.7
1.1	Policy partnership	2	3.5	2	4	4	3	4
1.2	Policy development process	3	4	3	3.5	4	3.5	3
1.3	Monitoring and evaluation	2	2	2	2	3	3	2
1.4	Non-formal entrepreneurial learning	2	2.5	2	2.5	2.5	2.5	2.5
1.5	Good practice exchange	3	3	3	3	3	3	3
1.6	Lower secondary education: entrepreneurial school	2	2	2	2.5	3	2	2
1.7	Lower secondary education: entrepreneurial teacher	2	2	2	2	2.5	2	2
1.8	Lower secondary education: entrepreneurial student	2.5	2.5	2.5	3.5	3.5	3	2.5
1.9	Upper secondary education: entrepreneurial school	2	3	2	2.5	2.5	2.5	2
1.1	Upper secondary education: entrepreneurial teacher	2	2	2	2	2	2	2
1.11	Upper secondary education: entrepreneurial student	2.5	3	3	3.5	3	3	3
1.12	Entrepreneurial experience for young people	2	2.5	2	2	3	3	2.5
1.13	Entrepreneurship promotion in vocational education and training	1.5	1.5	1.5	2.5	2.5	1.5	3
1.14	Entrepreneurial learning in higher education	2	2	2	2.5	2	2	2.5
1.15	Higher education co-operation with the world of business	2.5	3	3	3	3	3	3.5
1.16	Good practice exchange in higher education	2	2	2	2.5	2	2	2

*Source: SME Policy Index Western Balkans and Turkey 2016: Assessing the Implementation of the Small Business Act for Europe.*

The future study programs should be designed to encourage creativity, independence, or personal initiative and to pay more attention on the setting up of new businesses. IN addition to that, there is a need for more business support services to support students with entrepreneurial ideas. They should focus more efforts on provision of business support services and incubation infrastructure within universities to offer students opportunity to implement their business ideas.

#### **4. CONCLUSIONS AND POLICY RECOMMENDATIONS**

Even though findings show that large proportion of students stated that they have skills, knowledge and experience to start-up a business, the entrepreneurial learning and entrepreneurial intentions in Kosovo are at the bottom of the list of Western Balkan countries. The level of entrepreneurial learning in tertiary education although rated higher compared to secondary education, still needs substantial improvement. Indeed, the high perception of self-efficacy among students is not reflected in the higher level of entrepreneurial intentions as suggested by literature. The Kosovar students appear to be overconfident about their skills and knowledge required for start-up creation. However, this is not evidenced compared to their entrepreneurial intentions. Indeed, previous studies on entrepreneurship and SME growth suggest that the role of university education of employees was at best not significant in terms of small firm growth, questioning in this way the quality of education system (Krasniqi 2012a, Krasniqi 2012b) and urging the need for training as an alternative form to formal education (Krasniqi and Branch 2018). The future policy initiatives in the area of entrepreneurial education (both at secondary and tertiary level) should focus study programs to encourage creativity, independence, or personal initiative and to pay more attention on the setting up of new businesses.

Additionally, they should focus more efforts on provision of business support services and incubation infrastructure within universities to offer students opportunity to implement their business ideas. With few exceptions there are no thoughtful incubators in higher educational institutions. The entrepreneurial competence will help students to become more productive employees and fulfil, yet another important role within large organisations. This will help to place entrepreneurial learning in a broader context, not only limited to the creation of start-ups, but also to boost private sector growth.

#### LITERATURE:

1. Antoncic, B. & Hisrich, R. D. 2001. 'Intrapreneurship: Construct refinement and cross-cultural validation.' *Journal of Business Venturing*, 16:5, 495-527.
2. Antoncic, J. A. & Antoncic, B. 2011. 'Employee satisfaction, intrapreneurship and firm growth: a model.' *Industrial Management & Data Systems*, 111:4, 589-607.
3. Audretsch, D. B., Lehmann, E. E. & Wright, M. 2014. 'Technology transfer in a global economy.' *The Journal of Technology Transfer*, 39:3, 301-12.
4. Bae, T. J., Qian, S., Miao, C. & Fiet, J. O. 2014. 'The relationship between entrepreneurship education and entrepreneurial intentions: A meta-analytic review.' *Entrepreneurship Theory and Practice*, 38:2, 217-54.
5. Bandura, A. 1997. *Self-efficacy: The exercise of control*. Macmillan.
6. Bosma, N. & Kelley, D. 2019. *Global Entrepreneurship Monitor 2018/2019 Global report*. Global Entrepreneurship Research Association, London Business School.
7. Davidsson, P. & Honig, B. 2003. 'The role of social and human capital among nascent entrepreneurs.' *Journal of Business Venturing*, 18:3, 301-31.
8. EU 2008. 'Entrepreneurship in higher education, especially within non-business studies.' *Final report of the expert group*. European Commission, Brussels.
9. EU 2013. 'Entrepreneurship 2020 action plan: reigniting the entrepreneurial spirit in Europe.' European Commission Brussels.
10. Hahn, D., Minola, T., Van Gils, A. & Huybrechts, J. 2017. 'Entrepreneurial education and learning at universities: exploring multilevel contingencies.' *Entrepreneurship & Regional Development*, 29:9-10, 945-74.
11. Hallier, J. & Butts, S. 1999. 'Employers' discovery of training: self-development, employability and the rhetoric of partnership.' *Employee Relations*, 21:1, 80-95.
12. Krasniqi, B. 2012a. 'Building an Expanded Small Firm Growth Model in a Transitional Economy: Evidence on Fast Growing Firms.' *Journal of East-West Business*, 18:3, 231-73.
13. Krasniqi, B. 2014. 'Characteristics of self-employment: A refugee from unemployment or road to entrepreneurship.' *Small Enterprise Research*, 21:1, 33-53.
14. Krasniqi, B. & Branch, D. 2018. 'Institutions and firm growth in a transitional and post-conflict economy of Kosovo.' *Journal of Entrepreneurship in Emerging Economies*.
15. Krasniqi, B. A. 2009. 'Personal, household and business environmental determinants of entrepreneurship.' *Journal of Small Business and Enterprise Development*, 16:1, 146-66.
16. Krasniqi, B. A. 2012b. *Entrepreneurship and small business development in Kosova*. Nova Science Publishers.
17. Krasniqi, B. A. & Mustafa, M. 2016. 'Small firm growth in a post-conflict environment: the role of human capital, institutional quality, and managerial capacities.' *International Entrepreneurship and Management Journal*, 1-43.
18. Krasniqi, B. A., Shiroka-Pula, J. & Kutllovci, E. 2008. 'The determinants of entrepreneurship and small business growth in Kosova: evidence from new and established firms.' *International Journal of Entrepreneurship and Innovation Management*, 8:3, 320-42.

19. Kuratko, D. F. 2003. 'Entrepreneurship education: Emerging trends and challenges for the 21st century.' *White Paper, US Association of Small Business Education*, 22, 2003.
20. Kuratko, D. F. 2007. 'Corporate Entrepreneurship.' *Foundations and Trends® in Entrepreneurship*, 3:2, 151-203.
21. Lajqi, S. & Krasniqi, B. A. 2017. 'Entrepreneurial growth aspirations in challenging environment: The role of institutional quality, human and social capital.' *Strategic Change*, 26:4, 385-401.
22. Leitch, C., Hazlett, S.-A. & Pittaway, L. 2012. 'Entrepreneurship education and context.' *Entrepreneurship & Regional Development*, 24:9-10, 733-40.
23. Markman, G. D., Balkin, D. B. & Baron, R. A. 2002. 'Inventors and new venture formation: The effects of general self-efficacy and regretful thinking.' *Entrepreneurship Theory and Practice*, 27:2, 149-65.
24. McGee, J. E., Peterson, M., Mueller, S. L. & Sequeira, J. M. 2009. 'Entrepreneurial self-efficacy: refining the measure.' *Entrepreneurship Theory and Practice*, 33:4, 965-88.
25. Mueller, P. 2006. 'Exploring the knowledge filter: How entrepreneurship and university–industry relationships drive economic growth.' *Research Policy*, 35:10, 1499-508.
26. Mustar, P. 2009. 'Technology management education: Innovation and entrepreneurship at MINES ParisTech, a leading French engineering school.' *Academy of Management Learning & Education*, 8:3, 418-25.
27. Nabi, G., Liñán, F., Fayolle, A., Krueger, N. & Walmsley, A. 2017. 'The impact of entrepreneurship education in higher education: A systematic review and research agenda.' *Academy of Management Learning & Education*, 16:2, 277-99.
28. OECD/EU/EBRD/ETF/SEECCEL 2016. *SME Policy Index: Western Balkans and Turkey 2016: Assessing the Implementation of the Small Business Act for Europe*. Paris: OECD Publishing.
29. OECD/EU/EBRD/ETF/SEECCEL 2019. *SME Policy Index: Western Balkans and Turkey 2019: Assessing the Implementation of the Small Business Act for Europe*. Paris: OECD Publishing.
30. Parker, S. C. 2006. 'Entrepreneurship, self-employment and the labour market.' *Oxford handbook of entrepreneurship*, 435-60.
31. Shah, S. K. & Pahnke, E. C. 2014. 'Parting the ivory curtain: understanding how universities support a diverse set of startups.' *The Journal of Technology Transfer*, 39:5, 780-92.
32. Van der Sluis, J., Van Praag, M. & Vijverberg, W. 2005. 'Entrepreneurship selection and performance: A meta-analysis of the impact of education in developing economies.' *The World Bank Economic Review*, 19:2, 225-61.
33. Wilson, F., Kickul, J. & Marlino, D. 2007. 'Gender, Entrepreneurial Self-Efficacy, and Entrepreneurial Career Intentions: Implications for Entrepreneurship Education.' *Entrepreneurship Theory and Practice*, 31:3, 387-406.

## CUSTOMER PREFERENCES IN PASSENGER RAILWAY TRANSPORT

**Grazyna Rosa**

*University of Szczecin,  
Faculty of Management and Economics of Services, Poland  
grazyna.rosa@wzieu.pl*

**Izabela Ostrowska**

*University of Szczecin,  
Faculty of Management and Economics of Services, Poland  
izabela.ostrowska@wzieu.pl*

**Agnieszka Tomaszewicz**

*University of Szczecin,  
Faculty of Management and Economics of Services, Poland  
agnieszka.tomaszewicz@wzieu.pl*

### **ABSTRACT**

*The article presents the preferences of travelers in railway transport based on the results of secondary and primary research in comparison with changes in the environment of transport companies, which also give the opportunity to develop passenger rail transport. The research area was passenger rail transport in regions and agglomerations in Poland. This article focuses on the segment of young people in literature included in the group of young adults who, because of continuing education outside their place of residence, taking up a job or for sightseeing reasons, often travel and are considered to be an important target group for railway carriers. The purpose of the article is to indicate the features of passenger rail transport services most preferred by passengers, and at the same time to identify the existing gap in the assessment of these perspectives by travelers. In order to achieve the objective, the method of critical analysis of available results of secondary research and the method of the questionnaire were used, using the questionnaire in primary research. To achieve the goal, the desk research method includes available literature and research results published by the Office of Rail Transport and Statistics Poland (GUS), which open new possibilities for carriers to analyze and adapt to the expectations recipients of services, as well as the survey method using the questionnaire in primary research, were applied. The obtained research results indicate the potential of railway passenger transport in Poland, focusing on passenger preferences and their assessment of the performance of services in railway transport.*

**Keywords:** *railway transport, passenger transport, communication behavior*

### **1. INTRODUCTION**

Correct recognition of consumer preferences that shape purchasing behaviors often has a decisive impact on the market position of companies. This results from the fact that the consumer is under the influence of numerous factors of a subjective character, which are difficult to specify as they refer to feelings and experiences which the consumer acquires throughout his life. Feelings of this type are defined as internal preferences which reflect the consumer's likes. Research on consumer preferences can be conducted on the basis of historical observations as well as data describing consumer intentions, included in methods of analysis of expressed preferences. They refer to market behaviors declared by consumers. With this assumption, the basic source of information has the form of data collected by means of indirect and direct surveys thus recording consumer purchasing preferences.

Learning consumer preferences, existing and potential ones, and their purchasing habits allows for the preparation and implementation of an effective program of influencing buyers (Szymańska 2007). Consumer preferences are most often understood as subjective assessments or a system of assessments which is the basis for choices made in the purchasing process (Trojanek 2009, Czarny 2006, Rybicka 2003), that have an impact on consumer behavior. Convictions appear in a situation where a consumer chooses a good or a service from a number of available options and which entails favoring one product over others. Convictions (preferences) may be shaped by buyers on the basis of their opinions, knowledge, emotions or faith. They are a reflection of what the consumer thinks of a given product or brand. They are consumer's subjective feelings which reflect the consumer's tastes. It is worth remembering, that consumers are constantly expanding their knowledge about the market, and therefore their preferences are also changing. Competition activities, especially in terms of increasing customer value, mean that under the influence of these activities, even loyal buyers may consider changing their current service provider (Gracz, Ostrowska 2014). Preferences have the following features:

- they concern specific objects of choice, i.e. tangible or intangible things,
- they appear directly before the purchase or during its course,
- they are very often revealed in the process of making a decision on a purchase and are one of the factors determining the decision on purchasing a specific product,
- their measurement depends on their type (internal and external preferences) (Trojanek 2009, Kaczmarczyk 2006).

The analysis of buyer preferences makes it possible to learn of product features that consumers are guided by when taking a decision about a purchase, yet the weight of the impact of individual factors in taking these decisions is differentiated. Studies of buyer preferences are carried out for this purpose (Rybicka 2003). These studies are a factor determining purchasing decisions also in passenger rail transport. Therefore, identifying these factors is significant in the process of choosing a means of transport. In addition, the structure of preferences reflects the hierarchical structure of possibilities of choice of unrestricted purchases among the market offer of services and demonstrates the order in which consumers reach for individual services. The purpose of the article is to indicate the most important features of passenger rail transport services preferred by buyers. In order to achieve the objective, the method of critical analysis of available results of secondary research was adopted while the survey method, using a questionnaire, in primary research.

## **2. PASSENGER RAIL TRANSPORT**

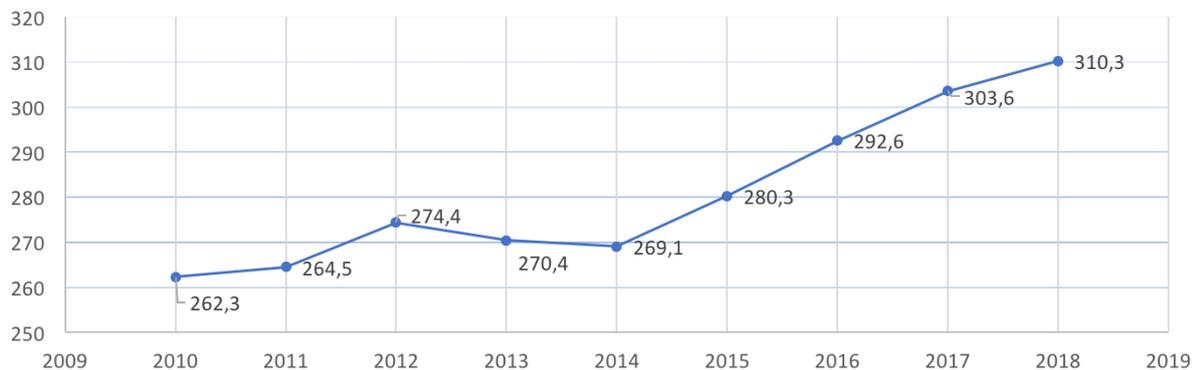
The market of passenger rail transport is very dynamic and is undergoing constant transformations resulting mainly from changes occurring in the transport's environment. In the 1980s rail transport served many more passengers and a car was a much less available means of transport. The situation began to change in the 1990s when rail became to experience the effects of underinvestment and cars became a universally available means of transport. According to Eurostat data, in 2000-2013 the number of cars per 1000 inhabitants in Poland increased from 261 to 504, which means that potential rail transport customer in Poland has a real choice between a passenger car and a train (Rosa, 2018). At present, according to data from Eurostat and Statistics Poland the share of rail transport in passenger transport in Poland is at 7.3 percent. The average of the EU countries for trains is higher by only 0.3 percentage points. The greatest percentage among land means of transport falls for cars, in the EU it is at 81.3 percent, and for Poland at 77.2 percent. However, the percentage of bus and trolleybus transport is higher on the Polish market than the Union average.

*Table 1: Modal split of passenger transport in European Union countries*

Countries	Passenger transport			
	passenger cars	coaches buses and trolley buses	trains	trams and metro
	in % of total passenger-kilometres			
<b>EU-28</b>	<b>81,3</b>	<b>9,3</b>	<b>7,6</b>	<b>1,8</b>
<b>Poland</b>	<b>77,2</b>	<b>13,9</b>	<b>7,3</b>	<b>1,6</b>

Source: Eurostat, Road transport in Poland in the years 2016 and 2017, GUS, Warszawa, Szczecin 2019, s. 164.

Data of the Office of Rail Transport (UTK) shows that the number of passengers in rail transport in Poland reached the level of 310.3 million passengers in 2018, which was an increase by 2.2 percent year by year. General data shows that during the last decade an increase at the level of 6 percent has been observed (in 2008 it was 292.7 million). This evidences the growing importance of rail as a means of transport, both on short as well as long routes. It is estimated, that this increase is the result of travelers returning to modernized railways (Office of Electronic Communications (UKE) 2019).



*Figure 1: Number of rail transport passengers in the years 2010-2018 (standard-gauge transport) (Office of Rail Transport)*

As reported by UTK, the growing number of passengers is proof that Poles use rail transport willingly. Introducing new or modernized trains and routes contributes to shortening travel time, which on longer routes is often much shorter than the time of car travel. In addition, appropriately planned timetables and new, renovated and well-managed railway stations, often better linked with urban public transport, are an additional value for consumers, encouraging to choose this means of transport (<https://www.rynek-kolejowy.pl/wiadomosci/utk-rok-2017-byldla-kolei-najlepszy-od-lat-85530.html>).

*Figure following on the next page*

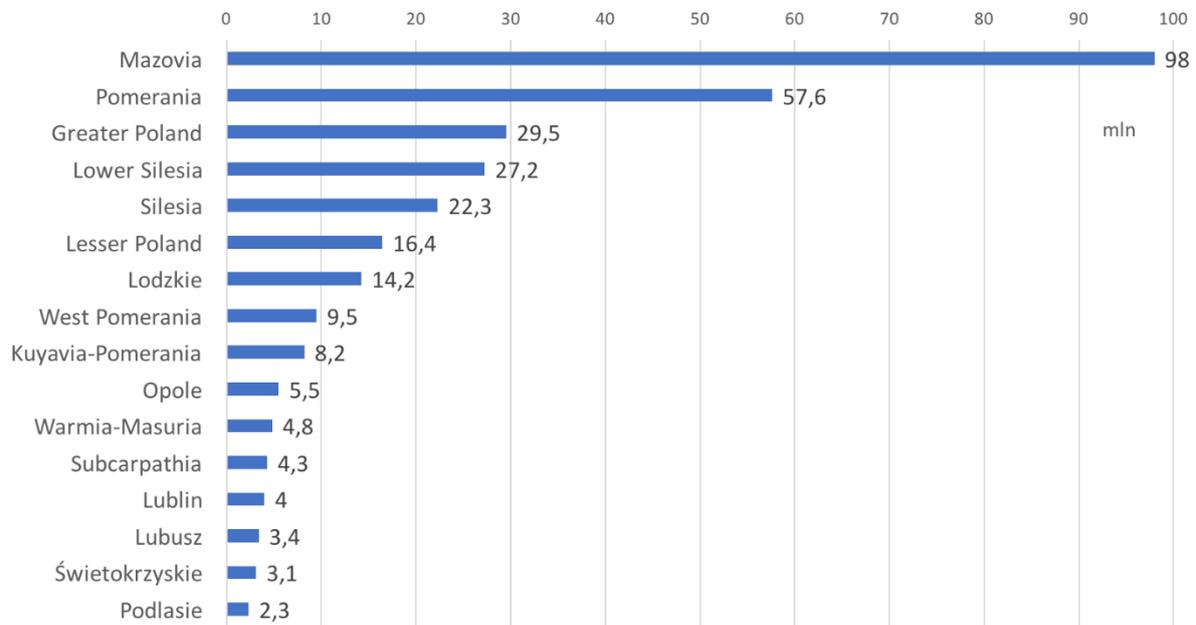


Figure 2: Number (in m) of checked-in passengers in individual voivodships in 2018 (Office of Rail Transport)

According to data on passenger transport made available by the Office of Rail Transport, in 2018 more than 75% of passengers checked in in 5 out of 16 voivodships (Lower Silesian, Masovian, Silesian, Pomeranian and Greater Poland), which was presented in Figure 2. This is due to differences in the level of development and industrialization of individual regions of the country, which is one of the fundamental problems of the modern economy (Wojciechowska-Solis, 2018). The greatest number of passengers was recorded in the Masovian Voivodship, despite the fact that it is lower by 4.3 million compared to 2017. This may result from the fact that currently there are numerous temporary restrictions in the movement of trains in this voivodship. No significant changes compared to the previous year were noticed in the remaining voivodships (UTK). In 2018 trains of passenger carriers travelled 3.2 million km more compared to 2017, performing operational work at the level of 165.5 million train-kilometers (close to 2% more year by year), which in comparison to 2010 results in an increase of 13.6%. The largest Polish regional carrier is Przewozy Regionalne styled as Polregio, whereas PKP Intercity boasts the greatest increase in the number of served passengers, where it is a leader in providing long-distance transport. Within this operator, the number of passengers rose by more than 11.2% (an increase by more than 4.3 million passengers) compared to 2016 (UTK). Analyzing quantitative data and the increase of served customers, one can assume that in order to improve the competitive position of railway undertakings it is most important to:

- use effectively the ever more modern rolling stock and ever better infrastructure,
- adopt a thought-through structure of timetables: appropriately adjusted departure times, cyclicity of timetables and frequency of train runs,
- offer an adequate level of service,
- include a broad offer of a combined ticket for various means of transport.

### 3. PASSENGER PREFERENCES AND THE ASSESSMENT OF PROVISION OF SERVICES IN RAIL TRANSPORT – RESULTS OF PRIMARY RESEARCH

Carrying out research in terms of consumer preferences is often approached in qualitative categories in order to define the impact of subjective factors and it is often associated with the need to identify the strengths of the variables determining them.

However, as pointed out by A. Szymańska (2007) such an angle is unsatisfactory when there is a need to define the strength and intensity of influence of these factors on consumer behaviors. Then, factors that allow specifying consumer behavior in the corresponding quantitative form need to be applied. A preference scale is applied for this purpose, according to which a consumer specifies the order of importance of selected products or their features, or specifies the strength of his opinions. The authors carried out research on the sample of 350 people from all over Poland in the period from October 2017 to March 2018, selected purposefully in terms of age in order for them to present a homogenous sample of “young adults” aged 18-29. Taking into account the fact that individual tourists have dissimilar possibilities of realising their travel interests (among others, due to diverse social and economic conditions), their expectations vary, for example, in terms of the nature and the quality of service. Also their preferences in terms of the distribution of travel services will differ, for example due to the availability of various channels of distribution (e.g. only 15 years ago, Internet distribution channels were not widely available in Poland, and for many customers of the older generation – this is still not a popular distribution channel) (Marciszewska, 2019). The research focused on the segment of young people in literature included in the group of young adults who, because of continuing education outside their place of residence, taking up a job or for sightseeing reasons, often travel and are considered to be an important target group for railway carriers. The obtained results can be generalized for the entire population. The research was carried out on the basis of a questionnaire. The sample of 331 people was then accepted for further compilations and drawing conclusions (error 0.03 and  $\alpha = 0.95$ ). The following were adopted as the aim of the conducted research: obtaining assessment of implementation of features (preferences) by operators providing passenger rail transport services and identifying key attributes of passenger rail transport important to recipients in Poland. Figure 3 contains a compilation of the structure of answers given to a question about the rank of importance of features of passenger rail transport.

*Figure following on the next page*

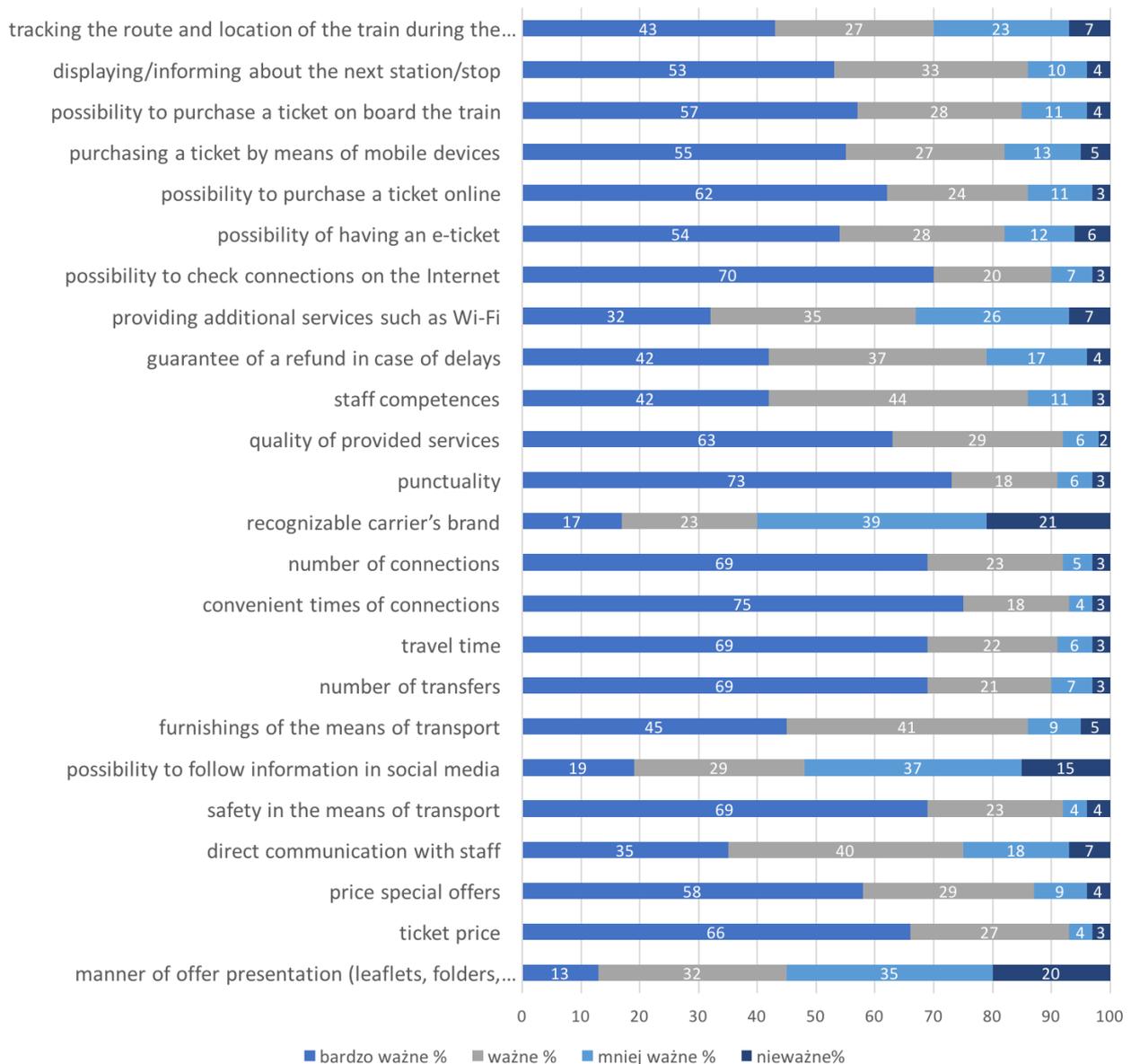


Figure 3: Rank of importance of features of passenger rail transport services (results of author's own research N=331)

The most important feature chosen by respondents that influences purchasing decisions was convenient times of connections, 75 percent of all respondents pointed to it as very important. Slightly fewer people thought this feature involved punctuality (73 percent) and possibility to check connections on the Internet (70 percent). Then, the following were considered most important features of passenger rail transport services (answers: very important and important) by young buyers (recipients):

- number of connections,
- travel time,
- number of transfers,
- safety in means of transport,
- ticket price,
- quality of provided services,
- possibility to purchase a ticket online.

The manner of presentation of the offer and the carrier's brand turned out to be least essential for the passengers (13 and 17 percent, respectively). The assessment of factors forming the entire decision-making process was essential in the process of making purchasing decisions and buyer preferences. Figure 4 presents the distribution of the assessment of implementation of the features of passenger rail transport services that the respondents pointed to as most important.

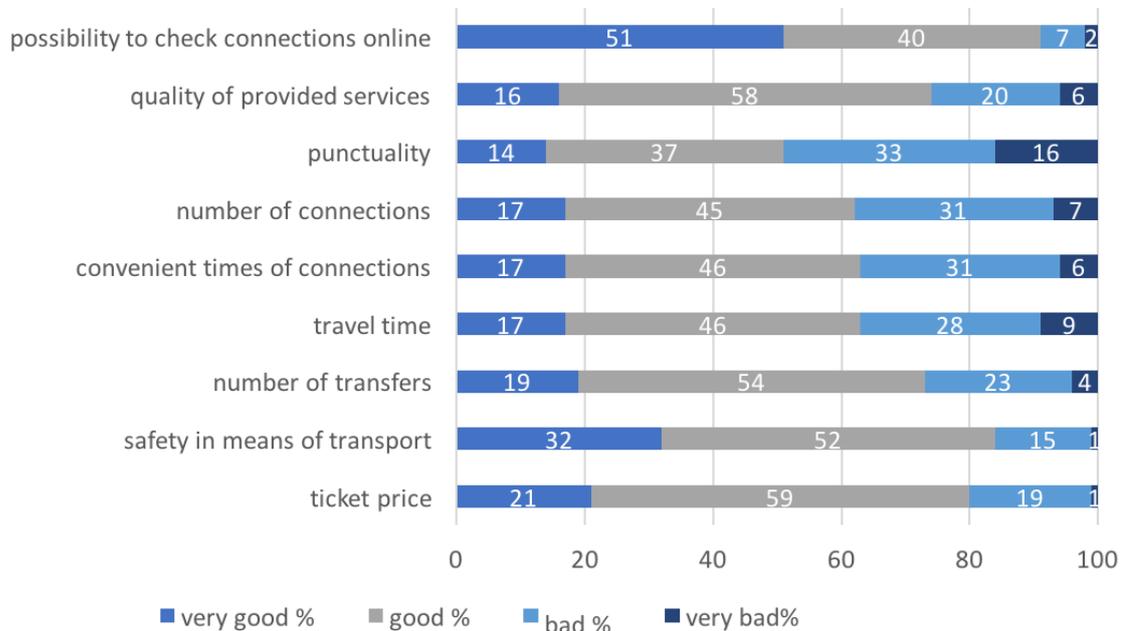


Figure 4: Assessment of implementation of the feature of passenger rail transport services (results of author's own research N=331)

Respondents assessed highest the possibility to check connections on the Internet: as many as 51 percent graded this service as very good. The conducted research shows additionally that the features of passenger rail transport implemented best (answers: very good and good) according to young buyers (recipients) include:

- safety in means of transport,
- ticket price,
- number of transfers.

Whereas the following were assessed as worst implemented features of passenger rail transport services (answers: bad and very bad): punctuality, travel time, convenient times of connections (negative opinion of 37 percent of respondents) and the number of connections.

#### 4. CONCLUSION

Preferences in the purchasing process usually translate into consumer behavior on the market, which can be also applied when choosing transport services. Due to accessibility of online services and informations "a digital traveler" having constantly growing demands and expecting personified service (Nyurenberger, et all, 2019). Appropriate recognition of these preferences may have a decisive impact on the development and market success of an enterprise since it allows companies to learn the motives that decide about the purchase and may contribute to the implementation of an effective program of influencing buyers, which in consequence should lead to increasing the sales volume. Knowledge about results of research on preferences of one's buyers will enable a railway undertaking to take decisions more

effectively in terms of the type and manner of provision of services for passengers. The conducted analysis of preferences of young passengers of railway transport showed that convenient times of connections and punctuality were most significant for the customers. Unfortunately, as also results from the authors' investigation, the assessment of these features was not at a very good level. Knowing this data, railway undertakings should take efforts to improve the recipients' opinions about the implementation of these features of the service. This should lead to passengers' greater satisfaction and as a consequence it should translate into purchasing decisions.

**ACKNOWLEDGEMENT:** *The project is financed within the framework of the program of the Minister of Science and Higher Education under the name "Regional Excellence Initiative" in the years 2019 - 2022; project number 001/RID/2018/19; the amount of financing PLN 10,684,000.00 .*

#### **LITERATURE:**

1. Czarny E., 2006. Mikroekonomia, PWE Warszawa, 20.
2. Gracz L., Ostrowska I., 2014, Młodzi nabywcy na e-zakupach, Placet, Warszawa, p. 24.
3. <https://www.rynek-kolejowy.pl/wiadomosci/utk-rok-2017-byl-dla-kolei-najlepszy-od-lat-85530.html>
4. Kaczmarczyk H., 2006. Zastosowanie badań marketingowych: zarządzanie marketingowe i otoczenie przedsiębiorstwa, PWE Warszawa, 96.
5. Marciszewska B. (2019), INNOVATION IN THE DISTRIBUTION OF TRAVEL SERVICES AND THE USE OF THE INTERNET, (in:) 43rd International Scientific Conference on Economic and Social Development – "Rethinking Management in the Digital Era: Challenges from Industry 4.0 to Retail Management", Eds: Ribeiro H., Costa M., Cerovic L., Aveiro, p. 241
6. Nyurenberger L., Luchina N., Sewruikov I., Tikhomirova G. (2019), "2GO" FORMAT INNOVATIVE TECHNOLOGIES IN TOURISM: AUGMENTED REALITY OF TRAVELLING, (in:) 42nd International Scientific Conference on Economic and Social Development, Eds: Dukic G., Clifford J., Atkinson D., London, p. 318-320.
7. Rosa G. (2018), The concept and assessment of the implementation of an integrated rail ticket on the passenger transport market, European Journal of Service Management Vol. 27/2, p. 364
8. Rybicka A., 2003. Wybrane metody badań preferencji konsumentów, Prace naukowe AE we Wrocławiu, Zarządzanie i Marketing 978, 108, 239.
9. Szymańska A., Metodyczne problemy badań preferencji konsumenckich, Zeszyty Naukowe AE w Krakowie, nr 739, 2007, 2.
10. Trojanek M. 2009, PREFERENCJE NABYWCÓW NA PIERWOTNYM RYNKU MIESZKANIOWYM W POZNANIU, Acta Scientarium Polonorum, Administratio Locorum 8(1), 6,
11. UTK 2019, Rok 2018 w przewozach pasażerskich i towarowych. Podsumowanie Prezesa UTK, Urząd Transportu Kolejowego, Warszawa 2019.
12. Wojciechowska-Solis J. (2018), ASSESSMENT OF THE ECONOMIC DEVELOPMENT OF REGIONS IN POLAND USING MULTIDIMENSIONAL COMPARATIVE ANALYSIS, (in:) 27th International Scientific Conference on Economic and Social Development, Eds: Beros M.B., Recker N., Kozina M., Rome, p.121.

## CHALLENGES AND PERSPECTIVES OF SOCIAL ECONOMY IN SLOVAKIA

**Eva Pongracz**

*University of Economics in Bratislava, Faculty of National Economy  
Department of Social Development and Labour, Slovakia  
eva.pongracz@euba.sk*

### **ABSTRACT**

*The civil society in Slovakia, characterised by enforcement of its own interests even toward the state interests, commenced its formation since 1990. In the space of civil society in the spirit of ethics, humanism and social solidarity, various initiatives are formed to satisfy old and new social needs. New innovative tools to address societal challenges arising from the welfare state crisis, globalization, unemployment, poverty, population aging are currently being sought. In Slovakia a new scientific discipline is being born – social economics and new instrument of social politics in the form of social entrepreneurship. In the field of social economy it seems that activities and organizations have emerged that are similar to examples from Western Europe, but they are characterized by different dynamics and functionality. In this paper we point out the specifics of the development of the social economy in Slovakia. We analyze the social economy entities in the context of the historical development of the third sector, pointing out the differences and common features of the social economy and the non-profit sector. We are currently in a situation where practice precedes theory and there is lack research in this field. In order to develop the concept of social economy, it is necessary to strengthen the dissemination of good practice, public information and the introduction of comprehensive support for social enterprises. It is necessary to support and develop not only working integration social enterprises but also other types of entrepreneurship, that are active in providing goods and services to disadvantaged and vulnerable groups and in the field of environmental protection. We identified weaknesses in the social economy sector and offered recommendations for practice in this field for further progress.*

**Keywords:** *social economy, social entrepreneurship, societal challenges, unemployment, work integration social enterprises*

### **1. INTRODUCTION**

The European Research Network (EMES) has come to a statement that a welfare state is gradually changing into a mixed welfare state, where the responsibility is divided between three economic sectors. Beside public institutions, also classic business entities focused on profit and various third sector entities more and more engage in solving social problems of the society. Also all 3 sectors have an important role in achieving inclusive growth – economy with high employment rate which contributes to economic, social and territorial cohesion. According to the European Union's strategy an increase of social responsibility of companies within the business community is also expected. Except for the third sector more and more companies realise an importance of socially responsible behaviour as an important condition for sustainable and successful business. Gradually we can also perceive new understanding of a company. According to Ch. Handy, „it shall not be an instrument to enrich the owners employing other people as organisational instruments conducive to the realisation of this objective, but rather something like a community with a clear sense of existence” (Gibson, 1998). The aforementioned “new understanding of a company” is approaching the concept of social economics.

## 2. DEFINITION OF SOCIAL ECONOMY AND SOCIAL ECONOMICS

There is various research of application of approaches focused on social economy in progress in Slovakia but also in other countries of the European Union, and sufficient attention is not being paid to the scientific research of social economics. It can be stated that a practice overtakes a theory and theoretical outputs relating to the implementation of its instruments and a feedback as an incentive for further development are missing. Moreover, the terms of social economics and social economy are often confused, especially in their definition after translation from English literature, which causes inaccuracies and inconsistencies. International debates about the importance of social economy have been going on for a long time, and its interpretation is still not clear. CIRIEC International (International Center of Research and Information on the Public, Social and Cooperative Economy) in the summary section of the report drawn up by the European Economic and Social Committee, proposes the following definition of social economy: „It is a group of companies of a private nature organized into a formal framework, which have the freedom to decide and freedom of voluntary membership, and which are connected through market processes for the fulfillment of their needs, for the sake of production of goods, providing services, or related insurance and financing“ (CIRIEC, 2007). Social economics is a branch of science which studies „formation, development, significance and role of the entities of social economy, their relationship with other economic entities“. It is a new economic discipline and multidisciplinary branch looking for correlations and conditionality with other economic, anthropological, political, psychological and sociological theories (Dohnalová, 2006). Social economics represents a framework of possible functioning of social economy and its dimension in each country is given by relevant cultural-historical and economical-political traditions (Slovník sociálnej ekonómie - Dictionary of social economics, 2006). Social economics can be described as an interdisciplinary academic discipline, „which focuses on social stratification of society and by means of social economy realises socially accepted rate of social justice, social inclusion and welfare of an individual in order to improve quality of lifestyle“ (Korimová, 2007). We see social economics as a scientific discipline which studies motives and means of decision taking of the society entities on use of scarce resources to produce goods and services and on their division between individuals and social groups while complying with the principles of social solidarity and social justice in relation to equality of opportunities (Pongrácz, 2015). We consider social economy as a part of economics, whose primary function is to meet social objectives. It is a real phenomenon and an area which successfully expands despite of the fact that no precise definition of this phenomenon exists so far. The European Economic and Social Committee by means of its activities supports development of social economy, and for its characteristics it considers emphasis on social objectives, business activity prioritising core values such as solidarity, social justice, social cohesion, social responsibility, democratic governance, participation of citizens, combination of concern for and regard to public interest. Social economy by means of social entities responds to various inequalities and negative externalities of private and public sector. It is made of social businesses and organisations independent of public administration, preferring objectives of public interest, work from capital, and social objective from profit. „It is microeconomic sectional scientific discipline with consensual socio-economic forecasting, alternative realisation of public interest with its objective to socially integrate disadvantaged or long-term excluded groups“ (Korimová, 2007). In the broadest sense social economy is economy “with people for people”; people and economy serve also purposes other than profit. In the strict sense we see it as economy where „associated work employs and controls capital.“ In the basic understanding we can express social economy as an instrument of modernisation of the welfare state and as its partner (Hunčová, 2007). We can also see social economy as a factor of building and development of social capital, through economic activity of the associated citizens.

Social economy also develops and strengthens social networks in alternation of the activities of the third and public sector and in consensus with them.

### **3. CHARACTERISTICS AND TYPES OF SOCIAL ECONOMY ENTITIES IN SLOVAKIA**

The civil society in Slovakia, characterised by enforcement of its own interests even toward the state interests, commenced its formation since 1990. Some organisations gradually transformed into more modern type of non-profit organisations capable to survive in democratic conditions. However, completely new non-governmental organisations were established, which defended interests of different groups of population, regardless of their political affiliation. Many church organisations stood out from illegality and worked for the benefit of their members and clients in public (Pongrácz, 2015). This process of development of civil society continues today. The feel of freedom to decide for themselves, the community, lead people not only to formation of many political parties but also to formation of non-governmental organisations. The activity of the third sector entities is based mostly on humanism, ethics, social justice and social solidarity. „People in globalising world react to global and local changes through new or stronger association. This “association revolution” is the basis for strengthening of social bonds and establishment of reciprocally shared norms and values” (Dohnalová, 2006). In the space of civil society in the spirit of ethics, humanism and social solidarity various initiatives are formed to satisfy old and new social needs. Also in Slovakia new scientific discipline is being born – social economics and new instrument of social politics in the form of social economy. Formation of social companies does not consider replacement of the third sector organizations. It rather tries to clarify the concept of social economy and to vindicate the concepts of the third sector, thus to discover the powers inside social economy and non-profit sector. Entirely new social businesses are born, as well as some third sector entities will gradually transfer into this new innovative model of business. However, it should be noted that many already existing organizations operating in the third sector can be considered as part of social economy as they fully respect its principles. With respect to common historical roots of the third sector and social economy, competence of their entities in some cases is very difficult to determine. Conception of the third sector entities and conception of social economy have many common characteristics; however, we see significant differences especially in the following criteria:

- Criterion of non-profit;
- Criterion of democratic organization;
- Criterion of providing services to people (CIRIEC, 2007; Defourny, Nyssens, 2010).

We supplement the comparison stated by additional criterion which will help us distinguish between the conception of the non-profit sector and the conception of social economy. It is the criterion of active participation of citizen which we also regard as the basic principle of new social politics. While the non-profit sector provides services to citizens as an expression of one-way solidarity, social economy activates human, i.e. it turns a passive recipient into an active participant of the process. In general, social enterprises can be characterised as follows: they have social, community and ethical focus; their activities are subject to commercial business model; they do not focus on profit for the individual but for the enterprise; the social objective is prioritised over profit gain; democratic management and decision making applies; they are formed as a reaction to unsatisfied demand arising from the community; they offer solutions of social problems of the community; they create new jobs; they encourage people to active civic attitudes; they build strong and cohesive communities; they contribute to creation of social capital; they assist social integration and, ultimately, also improvement of life quality. Social economy is formed by extremely diverse entities, including social enterprises, legal and natural persons, local self-governments and the state:

1. Social enterprises – include social cooperatives, cooperative societies, mutual companies, unions, foundations, charitable organisations etc.;
2. Legal and natural persons – organisations respecting principles of social economy and incorporating those into their business decisions with the emphasis on preferring social objective from profit gain;
3. Local self-governments – with respect to the fact, that the initiative, the idea to set up the social economy entities emerges from the community, also the local self-government can join this process as a founder, a partner or a coordinator;
4. State administration – enters the process by creating legislation, financial support as a sponsor and coordinator (Korimová, 2007).
  1. We cannot forget a significant economic power of volunteers and the church – we add the following entities of social economy:
  5. Volunteers – also join the activities of enterprises of social economy where cooperation of salaried employees and volunteers may take place. Handicapped people are also often employed in these companies with the aim of their social integration. Reduced level of work productivity may be a problem for a social company, which can be compensated also by participation of volunteers on the activities of the company.
  6. The church – no less important is also presence of the church in solving social problems of the society, in particular by joining provision of charitable and social services. Also its spiritual mission and education for displaying solidarity, fellowship and ethical values are important.

Based on the way of meeting the social objective or social mission of social business in Slovakia we distinguish:

- Social enterprises which provide services with the aim to solve social problems of society (they can be found especially in the area of the third sector) and
- Social enterprises of work integration which employ disadvantaged persons in the labour market (instruments of active politics of the labour market),
- Social enterprises that are active in the field of environmental protection.

#### **4. HISTORY AND DEVELOPMENT OF SOCIAL ECONOMY IN SLOVAKIA**

Many voluntary and self-assistance organisations operated on the territory of former Czechoslovakia already in the past, whereas the period between the two world wars can be considered the era of the hugest expansion of association. Many clubs and foundations for various purposes were established, they were mainly social and health associations, support associations, Jewish associations in social area, food and agricultural cooperatives, professional, trade, fire-fighting and sport clubs, cooperatives providing banking services – so called “kampelicky” (credit unions). The following political situation disrupted continuity of development of civil society. The only source of financing of the activity of community organisations grouped before the year 1989 in the National Front was, beside member contributions, subsidy from the state budget. Thus, they were fully dependent on the state politics. Non-governmental and non-profit organisations in Slovakia were fully developed only in the conditions of democratic process after the revolution in 1989. The third sector in the Slovak Republic is formed by the organisations with different legal forms and their establishment and activity is regulated by various laws. The following are the most represented and represent the largest economic power in Slovakia:

- Civic associations;
- Foundations;
- Non-investment funds;
- Non profit organisations providing generally beneficial services.

Some third sector entities function in compliance with principles of social economy, they react to the community problems through innovative solutions, cover wide range of services which they provide mainly to disadvantaged persons, marginalised groups or citizens associated for purposes of common social objective. This includes various activities with no formalised and institutionalised form. On the other hand, it has to be stated, that in the space of the third sector there are also elements present, for which non-governmental civil society framework is not characteristic, they are characterised by political orientation and promote the interests of selected privileged group. By approval of the amendment to the Employment Services Act effective from 1st September 2008 social business activity gained legal legitimacy and ranked among the active instruments of labour market politics as “social enterprise” of work integration. Under this Act the social enterprise had to fulfil four basic criteria (Act No. 5/2004):

- In the amount of at least 30% of total number of its employees it employs such citizens, who were, prior to taking up employment, disadvantaged job seekers;
- It helps these employees find employment in the so-called open labour market;
- It uses at least 30 % of its profit, after deduction of all expenditure on the line of business, on creation of new jobs or improvement of working conditions;
- It is registered in the Register of Social Enterprises.

Compliance with the criteria mentioned had to be documented in regular intervals, once a year by providing a Report on the results of one’s own activity to the Central Office of Labour, Social Affairs and Family of the Slovak Republic. Based on the application of legal entity or a natural person and upon fulfilling the criteria the Central Office of Labour, Social Affairs and Family of the Slovak Republic may grant the status of social enterprise. These entities was then kept in the Register of Social Enterprises. With respect to the fact, that sheltered workshops and sheltered workplaces (a workplace where 50% of disabled citizens work) fully accept legally defined criteria for social business, they can be granted the status of social enterprise. In 2017 the Slovak Ministry of Labour, Social and Family Affairs set up a work group to draft the Law on the Social Economy. The new and complex Law 112/2018 on the Social Economy and Social Enterprises entered into force on 1 May 2018. It creates a comprehensive legal environment for the players of the social economy. These are organizations that have positive social impacts by meeting community needs or satisfying public interests. The law defines the social economy as economic activity realized through production, distribution and consumer activity independently from the state organs and/or non-economic activity, the principal aim of which is to achieve a positive social impact. The law defines the subjects of the social economy, the social enterprise, the company that has a social impact and the status conditions of the registered social enterprise. As regards its activity, a registered social enterprise can be:

- an integration enterprise,
- social housing enterprise,
- other registered social enterprise.

The integration enterprise aims to employ people belonging to disadvantaged or vulnerable social layers, in at least 30% of the total number of employees, by selecting the following alternatives:

- disadvantaged jobseekers make out at least 30% of the total number of employees,
- people belonging to the vulnerable social layers make out at least 30% of the total number of employees,
- disadvantaged jobseekers and people belonging to the vulnerable social layers make out at least 40% of the total number of employees (Pongrácz, 2019).

## 5. CONCLUSION

Big problem and barrier to the development of social economy in Slovakia is incomplete and fragmented statistics of the third sector, volunteering and social business. Prerequisite for precise reporting statistics relating to subjects of social economy is its harmonisation (also with the aim to quantify the economic power through which it contributes to the GDP (Gross Domestic Product) formation. It is desirable to develop opportunities for cooperation with other sectors of economy with emphasis on strengthening the motivation of business entities in engaging in partnerships. In relation to the above it is necessary to establish system of financial assistance to support the activity of social economy also focused on solving various social problems of the community (not only on creating jobs), with possible connection to the active politics of the labour market and system of social assistance. Furthermore, we suggest highlighting the support of local initiatives in the community development, which are formed as a reaction to the unmet demand emerging from the community. For the purpose of effective implementation of the initiatives of social economy it is necessary to reinforce personal responsibility of representatives of the local self-government, namely in the process of providing potential financial instruments and control of compliance with the conditions. The results of social entrepreneurship are not sufficiently visible. They lack nationwide publicity in the mass media, when this issue is discussed quite sporadically. Public administration on a local and regional level is not aware of the development potential that social entrepreneurship has for regional development. It is, therefore, not even a part of their concepts, strategies and policies. The social economy and its actors are not sufficiently mapped out, even though social enterprises have been mapped in the context of already completed projects that dealt with social entrepreneurship. It is necessary to raise awareness of social economy and its instruments, support research and exchange of good practice. With respect to the fact that social business follows the principles applied in public but also in the third sector, new model of business is created, importance of which continues to grow, due to growing social problems. For the above reason it would be appropriate to include teaching of this subject into curricula at the universities of economic focus. It is very important to raise awareness of social economy and draw attention to related terms that are often incorrectly confused. The point is the definition of the content of social economics, social economy, social enterprise, business entity providing services in social area, company social politics and socially responsible business. Europe is not only common economic unit but also community seeking balance between solidarity and competitiveness, capital and work, market and the state, performance and social tactfulness. Based on the assessment of existing experience, different approaches to social business and concept of social economy in the individual member states of the European Union, the question arises, which direction of further development of this area will be more acceptable for Slovakia. This paper is an output of the science project of the Scientific Grant Agency (VEGA) 1/0367/17 „Economic, legislative and institutional preconditions and perspectives of social and solidarity economy in the V4 countries in relation to the promotion of social inclusion“

## LITERATURE:

1. CIRIEC (2007). *The social economy in the European Union: A summary report* drafted by CIRIEC for the European Economic and Social Committee. CIRIEC, 2007.

2. Defourny, J., Nyssens, M. (2010). Conceptions of Social Enterprise and Social Entrepreneurship in Europe and the United States: Convergences and Divergences, *Journal of Social Entrepreneurship*. Retrieved 13.08.2019 from [https://www.researchgate.net/profile/M\\_Nyssens/publication/238106607\\_Conceptions\\_of\\_Social\\_Enterprise\\_and\\_Social\\_Entrepreneurship\\_in\\_Europe\\_and\\_the\\_United\\_States\\_Convergences\\_and\\_Divergences/links/0046352d67c1952264000000/Conceptions-of-Social-Enterprise-and-Social-Entrepreneurship-in-Europe-and-the-United-States-Convergences-and-Divergences.pdf](https://www.researchgate.net/profile/M_Nyssens/publication/238106607_Conceptions_of_Social_Enterprise_and_Social_Entrepreneurship_in_Europe_and_the_United_States_Convergences_and_Divergences/links/0046352d67c1952264000000/Conceptions-of-Social-Enterprise-and-Social-Entrepreneurship-in-Europe-and-the-United-States-Convergences-and-Divergences.pdf)
3. Dohnalová, M. (2006). *Sociální ekonomika v evropském kontextu*. Brno: CERM, 2006.
4. GIBSON, R. (1998). *Nový obraz budoucnosti*. Praha: Management Press.
5. Hunčová, M. (2007), Smysl sociální ekonomiky a její podstata. In *Sociální ekonomika, sociální podnik a sociální kapitál*. Ústí nad Labem: UJEP in Ústí nad Labem, 2007.
6. Korimová, G. (2007). *Předpoklady rozvoja sociálnej ekonomiky*. Banská Bystrica: UMB, EF in Banska Bystrica in cooperation with OZ Ekonómia.
7. Pongrácz, E. et al. (2015). *Sociálna ekonomika – Social economy*. Bratislava: Vydavateľstvo EKONÓM.
8. Pongrácz, E. (2019). The role of social economy in local development in Slovakia. *Perspectives of local governments in Central-Eastern Europe common learning and innovations*. Budapest: Belügyminisztérium Önkormányzati Koordinációs Iroda.
9. Slovník sociálnej ekonómie - Dictionary of social economics. (2006). In *Nové podnikateľské modely pre rozvoj sociálnej ekonomiky* [CD-ROM]. Banská Bystrica: APRR BBSK, n. o.
10. The Act No. 5/2004 Coll. on employment services and on amendments of certain acts.

## DEVELOPMENT OF WAGES IN THE SLOVAK REPUBLIC – NATIONAL AND REGIONAL VIEW

**Eva Rievajova**

*University of Economics in Bratislava, Faculty of National Economy  
Dolnozemska 1, 852 35 Bratislava, Slovakia  
eva.rievajova@euba.sk*

**Roman Klimko**

*University of Economics in Bratislava, Faculty of National Economy  
Dolnozemska 1, 852 35 Bratislava, Slovakia  
roman.klimko@euba.sk*

### ABSTRACT

*The paper is focused on the evaluation of wage development in the Slovak Republic. The object of the investigation is the average gross monthly wage in the national economy, the minimum wage and wage differences according to regions in the monitored period in 2008-2018. This period also includes the post-global crisis, which has brought many negative labour market fluctuations. Wages are the result of the functioning of the labour market, and at the same time we can also consider it to be a form of agreement between employer and employee. At the same time, through its policy, the state seeks to provide workers with a basic standard of living and the right to a dignified life through setting a minimum wage. Wage developments are an important economic indicator that has a significant impact on the competitiveness of micro-economic enterprises and on the macroeconomic stability of the entire economy. One of the problems of low wage levels in Slovakia as compared to many EU countries is the disproportionate distribution of generated wealth among employees and employers, with only about 44% of the produced value being employees and 56% employers. Wages are in many enterprises the most important component of costs, the most accurate planning of which is important in any strategic decision. Therefore, monitoring and forecasting of wage developments in the economy and / or region is essential information. Despite labour productivity growth, the average wage does not grow at a pace and is regionally differentiated significantly. Slovakia is one of the countries with the highest regional disparities in basic macroeconomic indicators, when substantial differences in the west-east direction of the country are manifested. In the Slovak Republic, the growth and the level of the minimum wage is a topic of political negotiations, and there are long-standing problems among employees' representatives - trade unions and employers in reaching a consensus on increasing the minimum wage.*

**Keywords:** *Average wage, Labour market, Minimum wage, Regional differences, Wage development*

### 1. INTRODUCTION

Wage plays an important role in the life of every person. It is a means of satisfying basic life needs and should be remuneration for the work of an employee. Wage, work, employment or unemployment are concepts that people come across nearly every day. From the early existence of humanity a wage has played an important role in people's lives. In the oldest times people were rewarded with a natural wage, which provided them with food and served as a resource for exchange in trade. As time went by, work began to be appraised with money, but the value of money changed over time, as did the value of work, and the economy developed continuously. The price of food, property or energy is constantly increasing; therefore, if wages remained on the same level, people would not have the resources needed for subsistence

or other items for increasing their standard of living. In a market economy a wage arises by virtue of the supply and demand for labour forces, and we understand it as remuneration of a worker for work done, or in the broader sense the price for the worker's labour. A wage represents the result of a functioning labour market and at the same time we can also see it as a certain form of agreement between an employer and an employee. At the same time, the state tries through its policies to secure working citizens a basic living standard and a claim to a dignified life through the setting of a minimum wage. Because it is workers who with their incomes influence to a great measure the development of the economy through their share in the GDP (Bucevska, 2011). At present a great problem is the unwillingness of some people to work for a minimum wage, because they prefer to register with the labour office and collect some form of state support. On the other hand, a large group exists who would like to work even for a minimum wage but who cannot find work and live on the margins of poverty. Before entry to the labour market it is important to know the present state of wages in the Slovak Republic and the influences that affect wage levels. Several factors influence wage development, such as the situation on the labour market, inflation, work productivity, technology, globalization, financial markets and labour market institutions, as do age, sex, education, work experience, region; in addition, the diverse nature of work or exceptional capabilities and skills of individuals also play a part. The global financial crisis left the most significant impact on the labour market in Slovakia after 2008 and the following 5 years, although the situation was more evident here than in other affected countries. The aim of the contribution is to create a relevant image of wage development in Slovakia, its regions and sectors, to assess the impact of individual factors on the amount of wages and also to predict the possible trends of future development.

## **2. DEVELOPMENT OF THE AVERAGE AND THE MINIMUM WAGE IN THE SLOVAK REPUBLIC**

Table 1 shows the favourable development of labour market parameters which we can monitor in the previous two years. Continuing growth in the measure of employment versus 2017 (by 1.3 percentage points) was accompanied by a decrease in the number of unemployed (by 19.9%), a decline in the measure of unemployment to an historical minimum (6.6%), an increase in the number of jobs available (sectors of industrial production showed more open jobs by a third), or additional acceleration of growth of the average wage (4.4% growth and real wage growth). Furthermore, the result of this favourable development was declining pressure on public finances in the area of volume of unemployment allowances paid out or higher tax revenues. From the broader macro viewpoint higher employment, together with rising wages, enabled the end household consumer to persist in the position of the driving engine of economic growth (Morvay et al., 2018).

*Table following on the next page*

*Table 1: Development of the labour market parameters between 2017 and 2018 (own processing based on the Statistical Office of the Slovak Republic)*

	<b>2017</b>	<b>2018</b>
<b>Minimum wage (€)</b>	435	480
<b>Average wage (€)</b>	954	1013
<b>Inflation (%)</b>	1.31	2.51
<b>Number of unemployed (thousands)</b>	224	179.5
<b>Unemployment (%)</b>	8.1	6.6
<b>Employment rate (%)</b>	71.1	72.4

A wage is one of the most important elements of incomes for citizens of Slovakia and also makes up the largest portion of costs for employers. From the viewpoint of each employee, a wage is an important factor, because it has a significant impact on his prosperity and quality of life. The position of employees in a company and their possibilities for personal growth at work and in the social sphere is determined by a wage. Higher wages depend on many factors, such as education achieved, practice, job position, work experience, work tasks, age, sex and the sector and region where we work. Average wage is one of the most monitored statistical indicators. The Statistical Office each year publishes data on the average wage for the whole economy of the Slovak Republic as well as summaries or in parts divided by various criteria (e.g. according to sector, education, regions, etc.). The concept of an average wage means the arithmetic average of all wages in Slovakia. It typically applies that 70% of people earn less than the average wage in the national economy (the portal: [minimálnamzda.sk](http://minimálnamzda.sk), 2019). Wage development is caused by the oscillation of various parameters of economic development. Whether this is a change in the rate of inflation, GDP or unemployment, these facts are always reflected in the level of wages, which increased during each year of the monitored period. Wage development in Slovakia in the monitored period between 2008 and 2018 is shown in the following table.

*Table 2: Development of average monthly wage in the Slovak Republic between 2008 and 2018 (own processing based on the Statistical Office of the Slovak Republic)*

<b>YEAR</b>	<b>AVERAGE WAGE (€)</b>	<b>YEAR-ON-YEAR CHANGE (€)</b>	<b>YEAR-ON-YEAR CHANGE (%)</b>
<b>2008</b>	723	54	7.47
<b>2009</b>	745	22	2.95
<b>2010</b>	769	24	3.12
<b>2011</b>	786	17	2.16
<b>2012</b>	805	19	2.36
<b>2013</b>	824	19	2.31
<b>2014</b>	858	34	3.96
<b>2015</b>	883	25	2.83
<b>2016</b>	912	29	3.18
<b>2017</b>	954	42	4.4
<b>2018</b>	1013	59	5.82

Table 2 shows that the overall trend of average monthly wage development during the past 10 years has shown a growing trend. A growth in wages was recorded each year, namely ranging from 2.16% to 7.47% (17 € - 54 €).

In 2008 we see the largest percentage year-on-year growth in the average monthly wage for the entire period, specifically 7.47% (54 €). From 2009 a notable decline appears in the year-on-year change in wages, by a percentage value of 2.95% (22 €); this was caused mainly by the global financial crisis, which had an unfavourable impact on the overall performance of the economy. In 2011 the year-on-year change in wages showed its lowest value, only 2.16% (17 €). This period also witnessed a slowing of economic growth even though employment was rising; the slower growth in the economy was caused by a slowing growth in work productivity. A positive change took place in 2014 and the following years, when the average monthly wage showed a climbing tendency. In 2018 the average monthly wage crossed the 1,000 € mark for the first time. In 2018 we see an effort to make wages more attractive with a 13th and 14th monthly payment, which permitted the employer to choose this form of motivation for employees as a benefit without increasing the basic wage. According to economists (Štefanides, 2019) the estimated average monthly wage for 2019 is 1,063 €, which will represent 5.82% growth versus 2018. We can assume that lower growth may also be caused by increasing surcharges for work through the weekend, holidays and at night, which from May 2019 came into the 2nd phase of growth. Mandatory contributions for recreation are also a newly introduced benefit for employees (Grófová, 2019). The average wage in Slovakia for the past 3 years achieved stronger growth, but Slovakia still remains among the lower rungs on the ladder of all EU countries. Only 6 states in the European Union have a lower average wage. Romanians and Bulgarians, now traditionally, earn the least (portal [minimálnamzda.sk](http://minimálnamzda.sk), 2019). A minimum wage is the lowest work income by which an employee is ensured a living standard at a minimally acknowledged social level. The government of the Slovak Republic each year sets the amount of the minimum wage with a resolution in euro per worked hour or per month. For 2018 a legal minimum wage was stipulated by law in 22 out of 28 EU Member States, with the highest legally stipulated minimum wage in Luxembourg and the lowest in Bulgaria. Countries such as Finland, Sweden, Denmark, Italy, Austria and Cyprus do not have a minimum wage guaranteed by law (Eurostat, 2019). Opinions vary on the importance and meaning of a minimum wage in economy. On one hand, a minimum wage guarantees a working person the certainty that their income will not fall below the set level; however, on the other hand, it makes the labour market less flexible. At present, the minimum wage is set nationwide, that is, it does not take into consideration the differences between the sexes, professions, and sectors in which employees work or even geographical aspects. When adjusting the amount of the monthly minimum wage, the overall economic and social situation in the country is taken into account over the two calendar years preceding the calendar year for which the minimum wage is to be set, especially the development of employment, consumer prices, the life minimum (Act No. 663/2007 Coll. on the Minimum Wage) and average monthly wages in the Slovak economy (Rievajová and Pogány, 2013). When determining the amount of the monthly minimum wage the assumption is that the relevant social partners (representatives of employers and unions) will agree on its amount. If the social partners do not agree on the amount of the minimum wage, then the Ministry of Labour, Social Affairs and Family proposes its amount. The government decides on the definitive amount for the following calendar year no later than on 20 October. The resolution of the government on a change in the minimum wage is published in the Code of Laws of the Slovak Republic no later than by 1 November of the calendar year of the year preceding that for which the minimum wage is set. At the same time, legislation sets the equation which is used to calculate minimum wage growth for the following calendar year – this is set at least in the amount of the product of the minimum wage valid in the current calendar year and an index of year-on-year growth of the average monthly nominal wage of an employee in the Slovak Republic for the preceding calendar year. This data is published by the Statistical Office of the Slovak Republic. We identify with the opinion of several economists (Staněk, Chovanculiak, and Kubová) that the minimum wage is a purely political category.

Its increasing has nothing in common with economic reality. It would be more suitable to return to the idea from the 1990s about an automatic mechanism for setting the minimum wage on the basis of development of relevant statistical indicators, e.g. the average wage and inflation. Data on the amount of the minimum wage for the monitored period between 2008 and 2019 are presented in Table 3.

*Table 3: Development of the minimum wage in the Slovak Republic between 2008 and 2019 (own processing based on the Statistical Office of the Slovak Republic)*

<b>YEAR</b>	<b>MW (€)</b>	<b>YC (€)</b>	<b>YC (%)</b>	<b>MW/AV (%)</b>	<b>CPI (%)</b>
<b>2008</b>	268.87	0	0	37.19	4.6
<b>2009</b>	295.5	26.63	9.01	39.69	1.62
<b>2010</b>	307.7	12.2	3.96	40.01	0.96
<b>2011</b>	317	9.3	2.93	40.33	3.92
<b>2012</b>	327.2	10.2	3.12	40.65	3.61
<b>2013</b>	337.7	10.5	3.11	40.98	1.4
<b>2014</b>	352	14.3	4.06	41.03	- 0.08
<b>2015</b>	380	28	7.37	43.04	- 0.33
<b>2016</b>	405	25	6.17	44.41	- 0.52
<b>2017</b>	435	30	6.9	45.6	1.31
<b>2018</b>	480	45	9.38	47.38	2.51
<b>2019</b>	520	40	7.7	48.92	2.24

*MW - minimum wage*

*YC - year-on-year change*

*MW/AV - share of the minimum wage in the average wage*

*CPI - consumer price index*

The minimum wage set from October 2007 was valid until the end of 2008. As we can see in Table 3, the minimum wage was subsequently raised only from 1 January 2009. For this reason its level was the same in 2007 and 2008, that is, the year-on-year rise was at 0%. In 2009, after the introduction of the euro currency, the minimum wage grew by 9.01% (26.63 €). After the outbreak of the global financial crisis, it was raised in 2010 by only 3.96% (12.20 €). After parliamentary elections in 2010 right-wing parties came to power, which predicated changes in the business environment and an effort to change the labour code. We can monitor the greatest growth in 2018, when versus 2017 it increased by 9.38% (45 €), which represents 44% (211.13 €) growth compared with 2008. For 2019 the minimum wage is set at 520 €, which represents 7.7% (40 €) growth versus the preceding year. Over the past 10 years the minimum wage has grown by 251.13 €. Opinions differ on the increasing of the minimum wage. While trade unionists promote the growth of the minimum wage, employers asked that it not be raised or only by a lower amount. If we compare the growth of the minimum wage with the development of inflation, we find that minimum wage growth has not copied inflation developments over the whole period covered. Over the monitored 10-year period only in the post-crisis years of 2011-2012 was year-on-year growth in the minimum wage lower than the year-on-year rise in inflation; the opposite trend in favour of minimum wage growth was recorded from 2014 up to the present. The greatest difference was in 2018, when year-on-year growth in the minimum wage was 9.38% and inflation was on a level of 2.51%. When monitoring the development of the minimum wage determining its share in the average wage in the economy is an important

aspect. On the basis of recommendations of the European Committee of Social Rights, the minimum wage should achieve at least 60% of the average wage in a national economy; without the existence of such a guarantee there is the danger of generating a higher risk of working poverty and its dependence on the social system. When monitoring the share of minimum wage in the average wage from Table 3, we can say that the minimum wage achieves approximately 40% of the average wage for almost the whole monitored period. The lowest value for the share of the minimum wage in the average wage in Slovakia occurred in 2008, at 37.19%. In 2004 it had the highest share in the average wage – at 41.10% – when the average wage was higher than the minimum wage by 309.24 €. For recent years the value of the share has oscillated around 40% and only in 2018 did it reach 47%. In 2019 the share of the minimum wage in the average wage is expected to be 49%. The share is approaching the recommended value, and in recent years the dynamic pace of growth in the minimum wage in Slovakia has been faster than the year-on-year growth in average wages. For a comparison, we present in the following Table 4 the percentage share of the minimum wage in the average wage in 2018 in the selected countries of European Union.

*Table 4: Comparison of the share MW/AW in selected EU member states in 2018 (own processing based on Eurostat)*

	<b>Minimum wage (€)</b>	<b>Average wage (€)</b>	<b>Share of MW/AW (%)</b>
<b>Germany</b>	1,498	3,775	39.68
<b>France</b>	1,498	3,200	46.81
<b>Luxembourg</b>	1,999	4,682	42.7
<b>Belgium</b>	1,563	3,949	39.58
<b>Netherlands</b>	1,614	4,164	38.76
<b>Slovakia</b>	480	1,013	47.38
<b>Czech Republic</b>	479	1,141	41.98

From Table 4 it is evident that France had the highest share of minimum wage in the average gross monthly wage. In Germany, Belgium and the Netherlands the percentage share of the minimum wage in the average wage moved around 39%. Likewise, the Czech Republic and Luxembourg had a similar percentage share, and the amount of minimum and average wage in Luxembourg is approximately 4 times higher than in the Czech Republic. According to economist R. Sulík (TASR, 2017) no country in the EU has a minimum wage on the level of 60%, and he is convinced that if such an obligation exists, then it is a bad one and it's necessary to cancel it. At the same time he warned that many other parameters, for example, bankruptcy proceedings or bonuses for local councillors, are linked to the minimum wage. He also pointed out that a minimum wage cannot be raised by 15%, because this causes great financial problems for employers. The analyst Chovanculiak (TASR, 2017) says that increasing the minimum wage by more than 8% is very dangerous. This may cause a major problem, mainly in the poorer parts of Slovakia, which have a continuous problem with unemployment. According to B. Ondruš, state secretary from the Ministry of Labour, Social Affairs and Family of the Slovak Republic, low wages chase people from specific sectors, such as the tourism industry or agriculture, and for a minimum wage today people don't want to go to work. He noted that it's not possible to eliminate jobs by raising the minimum wage, because employers are unable, even with low-paying jobs, to find workers. B. Kollár, a Member of the National Council of the Slovak Republic (TASR, 2017), says that regulation and decisions of the state, for example, high prices for energy, prevents employers from increasing wages. According to several economists, increasing minimum wages does not cause a problem for wealthy regions, such as

in the west of the country, because companies almost never pay minimum wages here. However, raising the minimum wage by more than 8% can cause problems for companies in the east of the country, areas with high unemployment. Small businesses in particular will have their labour costs increased (Kollárová, 2018).

### **3. WAGES IN THE INDIVIDUAL SECTORS OF THE ECONOMY**

One opinion found in professional circles is that 3 to 4% unemployment is the ideal situation in a country. Three regions in Slovakia met this target in December 2017, the Bratislava, Trnava and Trenčín Regions. Another two regions, (Nitra and Žilina) just barely missed this arbitrary threshold by less than a full percentage point. The remaining three regions, Banská Bystrica, Prešov and Košice Regions, more than doubled the optimum rate of unemployment. In order to determine actual development, it is appropriate to focus on the recorded level of unemployment over the long-term. As is clear from Table 1, all the regions have recorded a decreasing trend in the recorded level of unemployment over the long-term. The largest decreases over the monitored period were recorded in the Prešov Region (9.39 percentage points) and in the Banská Bystrica Region (9.31 percentage points). The national average was a decrease of 7.36 percentage points. The first five of the reported regions report unemployment that is lower than the national average: Bratislava, Trnava, Trenčín, Nitra and Žilina Regions. Unemployment in the other regions (Banská Bystrica, Prešov and Košice Regions) is higher than the average in Slovakia. The reason for low unemployment in the Bratislava Region is the fact that most enterprises and companies operating across the broadest range of industries have their head offices there. There is a large quantity of enterprises with high added value which are also concentrated there and the region functions as the technological leader in Slovakia. One of the lowest rates of unemployment is connected to the highest salaries. One of the criteria for monitoring the development of average wages is monitoring by individual economic activities (sectors). Until 2008, individual sectors were listed in the Statistical Branch Classification of Economic Activities (OKEČ). Gradually, the Statistical Office of the Slovak Republic has moved to a revised classification of sectors, SK NACE Rev. 2, which is derived from the European version of NACE Rev. 2. The reason for the classification revision was to provide comparable of economic statistics on both European and international levels. This also means taking into account technological and structural changes in the economy. Since this classification has been used since 2008, we decided to monitor the development of the average wage by individual sections of the classification from that year (SO SR, 2007). The Table 5 shows how the average wages for individual sectors of the Slovak economy changed from 2008-2018. Differences in the amount of average wages by sectors were to a great measure influenced by the different demand for employees in selected economic activities. Employees in the information and communication sectors earned the highest wages in 2008 (1,689 €). Employees in the financial and insurance sectors, those working in the supply of electricity, gas, steam and cooled air as well as professional, scientific and technical activities earned more than € 1,000 on average. For the entire monitored period, the lowest average wages, from € 540 to € 750, were in the accommodation and dining services sectors. After 2008, the financial crisis manifested itself in certain sectors as a decline of average wages. After recovery of the economy, from 2010 on, average monthly wages began to grow in every sector. In the 3rd quarter of 2018 we can see that the highest wages were maintained in the same sectors as at the beginning of the reporting period, namely information and communication, suppliers of electricity, gas, steam and cooled air supply, as well as financial and insurance activities. The lowest wage remained in accommodation and dining services and administrative and support services, as it was at the beginning of the monitored period. According to Zuzana Rumiz, CEO of the Manpower Group in Slovakia, finding suitable candidates to fill jobs, which leads to wage growth and strengthens the need for investment into retraining and employee

development, remains a great challenge. According to a survey by the Manpower Group in 2019, employers in the processing industry are planning to take on the most employees, with an Index of +20%. Favourable labour market conditions are also available for the finance, insurance, real estate and other business services sectors, with an Index of +18%; to the transport, storage and communications sectors with +14%; to the agriculture, hunting, forestry and fishing branches with +11%; and to construction sector at +11%. Employers in production and distribution of electricity, gas and water report subdued recruitment activities, with an index of 0%. Compared to the previous quarter, in 2019, there is significant index growth in the agriculture, hunting, forestry and fisheries sectors by 21 percentage points (pp). The construction and accommodation and dining sectors report growth by 11 pp. A decline in the index appeared mainly in the production and distribution of electricity, gas and water – by 4 pp. In a year-on-year comparison, the index dropped significantly in agriculture, hunting, forestry and fisheries sectors (by 16 pp) and in the mining sector (by 8 pp). Recruiting plans have been strengthened mainly in the construction sector (by 6 pp). On the basis of business size, the largest companies – those with more than 250 employees – have the most positive outlook, with an index of +26%. Medium-sized businesses expect a stable recruitment environment with an Index of +13%, and also small businesses, which report an index of +12%. Micro-enterprises – those with fewer than 10 employees – are the most cautious in hiring new workers, at +6%. According to a survey by the Grafton Slovakia agency (2018), the reasons for the increased growth in wages will be a record-breaking low unemployment rate and a price battle for workers. The employment of foreigners will be standard. The role of wages as the most powerful tool for retaining talent will strengthen. While companies have thus far tried to attract and maintain employees more with benefits and improved working conditions, today no other recourse remains to them than to work with the level of pay.

*Table following on the next page*

Table 5: Wage development in individual sectors of the economy, 2008 – 2018 (€) (own processing based on the Statistical Office of the Slovak Republic)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 3Q
<b>Slovakia total</b>	788	803	828	853	881	891	957	993	1034	1095	1144
<b>Agriculture, forestry and fishing</b>	617	587	608	703	727	740	776	815	848	903	990
<b>Total industry</b>	798	780	854	889	911	933	992	1036	1067	1146	1213
<b>Mining and extraction</b>	836	829	855	937	922	932	986	1030	1107	1117	1156
<b>Industrial production</b>	765	747	826	867	890	916	974	1021	1054	1135	1195
<b>Supply of electricity, gas, steam and cold air</b>	1240	1306	1393	1366	1385	1396	1475	1534	1613	1672	1826
<b>Water supply, wastewater treatment and drainage, waste and waste disposal serv.</b>	714	724	779	801	813	824	862	872	889	972	990
<b>Construction</b>	791	807	814	791	835	815	851	881	921	949	1143
<b>Wholesale and retail trade, repair of motor vehicles and motorcycles</b>	802	799	778	764	808	830	915	938	971	1032	1060
<b>Transport and storage</b>	744	761	770	793	803	319	364	896	917	996	1036
<b>Accommodation and catering services</b>	540	504	509	505	545	557	530	593	617	652	751
<b>Information and communication</b>	1689	1810	1891	1624	1611	1646	1791	1856	2015	1983	2090
<b>Financial and insurance activities</b>	1459	1472	1571	1514	1527	1427	1627	1670	1736	1760	1758
<b>Real estate activities</b>	772	777	758	796	868	898	973	982	1167	1104	1095
<b>Professional, scientific and technical activities</b>	1219	1278	1230	1062	1102	1153	1271	1286	1225	1357	1638
<b>Administrative and support services</b>	513	551	539	640	644	651	669	696	751	814	783
<b>Public administration and defence, compulsory social security</b>	926	880	867	987	974	916	986	1012	1077	1157	1238
<b>Education</b>	599	637	650	695	717	746	807	837	875	950	889
<b>Health and social assistance</b>	627	673	732	766	830	866	924	973	1014	1060	1044
<b>Arts, entertainment and relocation</b>	600	634	611	662	705	658	732	758	787	851	897
<b>Other activities</b>	597	619	601	652	691	665	721	703	724	768	824

#### 4. WAGES IN THE INDIVIDUAL REGIONS OF SLOVAKIA

One of the most important criteria in monitoring wage developments in the national economy is monitoring the wages by region. The current territorial-administrative arrangement by region was established in 1996. Since then, 8 administrative regions have comprised the Slovak Republic: Bratislava, Trnava, Trenčín, Nitra, Žilina, Banská Bystrica, Prešov and Košice, which are shown in Figure no. 1.



Figure 1: Map of Slovakia by regions (<https://slovakregion.sk/slovensko>)

The best way to observe and compare wage differences in the economy of the Slovak Republic is to compare the average wage by region. When comparing the average wage by individual region, we see how wage differences between regions are manifested and how they are deepening (Rajčáková and Švecová, 2018). Table 6 shows the wage levels in the individual regions and their development in the Slovak Republic in the monitored period, 2008 - 2018. The highest average wages are maintained throughout the entire monitored period in the Bratislava region. Employees in Trnava and Košice regions earn the second highest average wage, and the average wages in these two regions are close to the national average. The lowest average wages from 2008 - 2012 were found in the Prešov region. It is no surprise that the Bratislava region is also the most productive region in the country. This is because it is the region with the highest concentration of jobs available in Slovakia. A great many companies are based here, and therefore, as the capital city, Bratislava is an attraction for people from other regions, who see here more opportunities to find work. The average gross monthly wage in Bratislava not only exceeds the national average, but also the other regions. The Trnava Region is among those, where average wages have remained slightly below the national level. Based on a comparison of the data with the Slovak Republic, wages in the Trenčín region are lower for the whole monitored period. Each year, the difference between wages in this region and national data was a little bit higher. Based on wage development, the Trenčín region can be classified as a region with a medium-high average gross wage. The development of wages since the beginning of the monitored period has been smooth, without larger fluctuations. Throughout the entire monitored period the development of gross wages in the Nitra region have remained low, next to last among the regions. Wages in the Nitra and Banská Bystrica regions are on the same level, with a minimal difference in wages between them. Upon comparison with the national average, wages in the Banská Bystrica and Nitra regions have remained comparable. Wages have remained below the national average throughout the whole monitored period. Development during the monitored period is smooth, with no major fluctuations. The Žilina region can be ranked among the regions with a medium to high average monthly gross wage. It has held a position in the middle of wage development along with the Trenčín region. Wages in the Prešov region have been the lowest from the start and throughout the monitored period. This region is in the last place when compared with the other regions. Its year-on-year increases have been on the level of increases in other regions, and the difference with the national average is not markedly different from the other regions. We rank wages in the Košice region as the second largest in comparison with other regions in Slovakia. This is one of the few regions with wages at levels similar to those of the national average.

*Table 6: Wage development in individual regions of Slovakia, 2008 – 2018 (€) (own processing based on the Statistical Office of the Slovak Republic)*

Region / Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 3Q
<b>Slovakia</b>	<b>792</b>	<b>803</b>	<b>828</b>	<b>853</b>	<b>881</b>	<b>891</b>	<b>957</b>	<b>993</b>	<b>1034</b>	<b>1095</b>	<b>1144</b>
<b>Bratislava Region</b>	1140	1178	1160	1124	1159	1182	1286	1319	1356	1426	1496
<b>Trnava Region</b>	755	752	787	815	831	841	892	930	965	1050	1074
<b>Trenčín Region</b>	700	688	732	774	797	809	863	902	945	1020	1062
<b>Nitra Region</b>	684	678	707	753	783	782	829	855	908	959	1001
<b>Žilina Region</b>	718	709	759	801	830	820	875	918	950	1018	1054
<b>Banská Bystrica Region</b>	688	675	702	756	783	779	837	861	897	940	977
<b>Prešov Region</b>	632	636	659	697	715	721	767	799	830	875	896
<b>Košice Region</b>	749	761	792	848	851	855	908	945	972	1025	1063

Among the determining factors of the wage level in the Bratislava region is the greater number of investment projects flowing into the capital city, the higher concentration of university-educated people as well as higher labour productivity. Bratislava has a major impact on national GDP, because many people from surrounding districts and even regions, even from the city of Košice in the east, come here for the greater opportunities on the labour market and the higher value of work. At the same time, however, it can be said that the cost of living is significantly higher around the capital than in other regions. Thanks to its geographical location, several large companies, such as Volkswagen and larger investors, have concentrated in Bratislava, because they have branches in nearby Vienna, Budapest and Prague. In the Trnava and Trenčín regions the operating of businesses and the expansion of production by the Peugeot automobile factory in Trnava or several logistics investments have caused growth in average wages. A similar development is to be expected in the Nitra region after the launch of production at the new Jaguar plant. The problems facing underdeveloped areas include a lack of infrastructure, poor connections to major transport routes and the stronger focus on agriculture. Differences are manifested both in the equipping of basic as well as higher infrastructure (transport, telecommunications) and in research and development and workforce qualifications (Rievajová, Klimko, 2018).

## **5. IMPACT OF SELECTED FACTORS ON WAGE DEVELOPMENT**

The level of wages is different in different time periods, for different jobs, in various countries and regions within a country. These differences are caused by economic and social factors that are differentiated in individual countries and regions of the given countries. We can rank the development of GDP, inflation and the labour market situation among the primary economic factors. We assign education and age of employees, standard of living in the given area, differences in the quality of work or the exceptional skills of individuals among the social factors. Likewise, wage levels are also influenced by various global and regional factors, such as globalization, technological changes, financial markets and labour market institutions, economic cycles, the political situation, natural conditions (location) and others. Each of these factors influences in a different way, at different intensities and time horizons, and may occur individually, simultaneously or linked to one another (Pauhofová, 2016). According to Rievajová (2009), among the causes that influence differences in wages are those caused by the fact that different professions, differences caused by the unique skills of individuals, differences between the wage value of a highly qualified labour force and a low qualified force and differences caused as a result of labour market segmentation impose such differences on people. Differences in wages constantly exist; however, if these inequalities arise due to sex, religion, age or race, then they are a sign of discrimination.

## **6. CONCLUSIONS**

Slovakia has undergone great changes in the past 26 years. In 1993 it has become independent from Czechoslovakia, and in 2004 it has become a member of the European Union. Despite the fact that Slovakia is among smaller countries with a low level of average wage, over the past ten years wage development has shown a climbing tendency. The most important element in the incomes of economically active citizens is their wage, which should be fair and should also reflect the true value of work performed. At the same time, however, it should motivate employees to a higher performance. If wages are not sufficiently motivating, this can have as a cause a slowing of social and economic development of a country. Questions on wage levels and development are relevant not only for companies but also for the national economy. Companies are bound by legislation in the remuneration of their employees. From a macroeconomic point of view a wage is an important indicator of economic development and has a big influence on the stability of the whole economy.

Wage levels are influenced in part by external but also by internal factors of an individual nature, such as age, sex, education of the worker, as well as the branch and professions; regional aspects are also of great importance. A wage is a regularly studied indicator of statistical monitoring and is also comparable in the context of transnational observations. Therefore, the monitoring and predicting of wage development in an economy or in key sectors is important information for each employee, manager and leadership of a company. A wage difference can on one hand be considered as beneficial and necessary, and on the other we can see it as a serious problem of the Slovak economy. Thanks to better knowledge about it, acquired by monitoring development for the period 2007 - 2018, we focused and compared in detail data on the level of the minimum wage and the average wage in individual categories. Subsequently, we indicated the factors that influence individual categories, and how these wage differences affect the Slovak economy. Certain factors emerged that a worker may or may not be able to influence in order to secure a higher wage. Mainly the level of his or her education can have an influence, and subsequently work performance as well as the place of work. On the other hand, a factor that a worker cannot influence in any way is his or her age. We also highlighted gender inequality in the contribution, the disparity between men and women in regard to wages. The status of the gender inequality situation is monitored by the Government Council for Gender Equality, in line with EU definitions. The results that we found confirm that men are paid higher wages than women. In recent years the question of education, which should secure a better start for a person's working life and also a better job, which is directly proportional to a higher wage, has come to the forefront. Education ranks among the influential factors clearly having an impact on the wage level of every employee in the economy of the Slovak Republic. We consider the main cause of the deepening wage gap to be the global financial crisis, the consequences of which are still evident in the economic development of many countries still today. From the outbreak of the crisis, we monitor increasing unemployment rates, and this unhealthy economic phenomenon put pressure on lower wages. At a time of demographic aging of the population, a reduction in the number of jobs and increasing unemployment, a higher degree of economic, employment and social policy coordination is necessary on both the EU and national levels. Such an approach should contribute to the support of economic growth, more job creation and overall increase in the quality of life. At the same time, it supports and encourages the efforts of states to secure financial and social sustainability of the applied systems of social protection.

**ACKNOWLEDGEMENT:** *This paper is output of Vega research project no. 1/0001/16: "Present and prospective changes in employment and related processes in the context of meeting the objectives of the European Employment Strategy".*

#### **LITERATURE:**

1. Bucevska, V. (2011). The Role of Remittances in Financial Crisis: Empirical Evidence from Macedonia. In *Economic Research-Ekonomska Istraživanja*, 24(4), 75-90.
2. Grófová, D. (2019). Priemerná mzda na Slovensku je vyššia než 1000 €. Retrieved 04.07.2019 from <https://www.ekariera.sk/magazin/priemerna-mzda-na-slovensku-je-vyssia-nez-1000/>
3. Kollárová, Z. (2018). Firmy a odborári sa zas nezhodli. O minimálnej mzde opäť rozhodne vláda. Retrieved 28.06.2019 from <https://www.etrend.sk/podnikanie/o-minimalnej-mzde-opat-rozhodne-vlada.html>
4. Manpower (2019). Index trhu práce | Slovenská republika. Retrieved 14.07.2019 from [https://www.manpower.sk/manpower/wp-content/uploads/2019/03/ManpowerGroup\\_index\\_trhu-pr%C3%A1ce\\_Q2\\_2019-\\_vysledky\\_prieskumu.pdf](https://www.manpower.sk/manpower/wp-content/uploads/2019/03/ManpowerGroup_index_trhu-pr%C3%A1ce_Q2_2019-_vysledky_prieskumu.pdf)

5. MINIMÁLNA MZDA. (2019). Priemerná mzda v EÚ 2018. Retrieved 01.06.2019 from <https://www.minimalnamzda.sk/priemerna-mzda-v-eu.php>
6. Morvay, K. et al. (2018). Hospodársky vývoj Slovenska v roku 2017 a výhľad do roku 2019. Bratislava: Ekonomický ústav Slovenskej akadémie vied: VEDA, vydavateľstvo Slovenskej akadémie vied.
7. Ondrovič, A. (2015). Vonkajšie faktory prehlbujúce polarizáciu príjmov na Slovensku. Retrieved 12.07.2019 from <http://www.akademickyrepozitar.sk/Adrian-Ondrovic/Vonkajsie-faktory-prehlbujuce-polarizaciu-prijmov-na-Slovensku>
8. Ondruš, B., Štefánková, I., Líška, P., and Kramer, T. (2017). Minimálna mzda – empirické zistenia kontra ideologické mýty. Retrieved 11.07.2019 from <https://www.employment.gov.sk/files/slovensky/uvod/informacie-media/aktuality/analiza-mm.pdf>
9. Pauhofová, I. (2016). Aktuálne prístupy v skúmaní príjmovej polarizácie a nerovnosti na Slovensku. Retrieved 16.06.2019 from [http://www.ekonom.sav.sk/uploads/journals/329\\_wp\\_82\\_pauhofova\\_2016.pdf](http://www.ekonom.sav.sk/uploads/journals/329_wp_82_pauhofova_2016.pdf).
10. Pogány, T., Rievajová, E. (2016). Minimálna mzda – prístupy ku skúmaniu a východiská pre stanovenie. In *Grant Journal: Vědecký Časopis*, 5(2), 54–65.
11. Rajčáková, E., Švecová, A. (2018). Ľudské zdroje – regionálne disparity v kontexte politiky súdržnosti EÚ 2007 – 2013 na Slovensku. In *Geografický Časopis - Geographical Journal*, 70(1).
12. Rievajová, E., Klimko, R. (2018). Regionálne diferencie na trhu práce v Slovenskej republike. In *Grant Journal: Vědecký Časopis*, 7(1), 79–80.
13. Štefanides, Z. (2019). Slovenskej ekonomike by sa malo dariť aj v roku 2019. In *Mesačník Slovenskej obchodnej a priemyselnej komory*: Vol. 28. Obchod, priemysel, hospodárstvo (1st ed., pp. 4–6).
14. TASR (2017). Minimálna mzda by mala tvoriť 60 percent priemernej mzdy. Retrieved 06.07.2019 from <http://www.teraz.sk/ekonomika/b-ondrus-minimalna-mzda-by-mala-tvor/258476-clanok.html>.

## COURT SYSTEM AS ONE OF THE MAIN ECONOMIC ISSUES

**Farouq Al-Shibli**

*Philadelphia University, Jordan*

*Farouqshibli@yahoo.com*

### **ABSTRACT**

*Companies and individuals relied heavily upon traditional method (court system) to resolve disputes, which were expensive whether the disputes were won or lost. In relation to investment disputes, court system also damages underlying relationships between the parties, which require looking for alternative to court system to protect the investments and encourage companies and individuals to invest such matter plays a big role in economy growth. This paper therefore aims to define the concept and disadvantages of court system which will, in turn, allow us to examine its role in resolving disputes of economy. This paper will also try to examine the importance of ADR compared with court system, the different types of ADR, and its advantages.*

**Keywords:** *Court System, Alternative Dispute Resolution (ADR), Economy Issues*

### **1. INTRODUCTION**

When investors decide invest in any country, there are issues which may be brought up by the parties involved regarding the provisions of contract, including: interpretation of the contract's provisions, mistakes, delays, or non-performance of the contract's conditions.<sup>1</sup> Traditionally such disputes were and still are solved by the formal system of dispute resolution (litigation) which was the only mechanism provided by the state to allow for a means of impartial decision making.<sup>2</sup> However, the changing nature of disputes, the parties involved, and cultural values, has led to the search for an alternative method to litigation<sup>3</sup> and a number of people therefore use Alternative Dispute Resolution (ADR). ADR is particularly relevant to disputes that involve the economy in any country, and in particular in poor countries<sup>4</sup> which make efforts to develop its economy. Many countries around the world today are turning to ADR as a way to promote social justice and good governance<sup>5</sup> because ADR is more informal, cheaper, faster and easier than the formal procedures which must be followed in the court litigation system. The main forms of ADR are: negotiation; conciliation; mediation; expert determination; and possibly arbitration.<sup>6</sup>

### **2. COURT SYSTEM AS ONE OF THE MAIN ECONOMIC ISSUES**

Court system (litigation) is a mechanism provided by government to settle disputes between people. However, litigation is avoided because of the slow pace of litigation procedures, the fact that it is a costly process, the limited experience of judges in some cases, and the non-confidentiality of the court system.<sup>7</sup> One of the main reasons is that litigation is a time-consuming and strict system which adheres to formal rules of evidence.<sup>8</sup>

---

<sup>1</sup> Secretary of State for Constitutional Affairs and Lord Chancellor, 'Transforming Public Services: Complaints, Redress and Tribunals', (UK, 2004) at 6.

<sup>2</sup> Weinstein, *Introduction to Civil Litigation* at 1.

<sup>3</sup> It should be mentioned that ADR was used successfully in ancient religions and civilisations before the introduction of the litigation system.

<sup>4</sup> S. Roberts and M. Palmer, *Dispute Processes: ADR and the Primary Forms of Decision-Making (Law in Context)* (Second edn.; UK: Cambridge University Press, 2009a) at 181.

<sup>5</sup> M. Mwenda, *Principles of Arbitration Law* (UK: Brown Walker Press, 2003) at 3.

<sup>6</sup> Grant, *Securities Arbitration for Brokers, Attorneys and Investors* at 13.

<sup>7</sup> M. Weinstein, *Introduction to Civil Litigation* (Second edn.: St. Paul : West Pub, 1986) at 1.

<sup>8</sup> M. Moffitt and R. Bordone, *Handbook of Dispute Resolution* (First edn.; The United States of America: John Wiley & Sons Inc, 2005) at 254.

The opportunity to appeal against an unfavourable outcome (award or procedure) makes many lawsuits long and complicated<sup>9</sup> especially when every advocate knows the ways of the courts and tries to use them to slow down judicial procedures in order to achieve the best advantage for his client.<sup>10</sup> Litigation is also a costly process because of the frequent discovery process and delays which cause extra demands on attorneys' time, it often entails increased costs, including the fees of paralegals, experts, messengers, secretaries, investigators and process servers working on the case, and travel expenses.<sup>11</sup> A number of major reviews of litigation have affirmed these points.<sup>12</sup> For example, according to the Woolf Report (on the civil justice system in England and Wales) the litigation system is considered expensive especially as the costs often exceed the value of the claim; it is time consuming; it lacks of equality between the powerful, the wealthy and the under-resourced litigant; it is too incomprehensible to many litigants since the litigant cannot forecast what litigation will cost and how long the court will take to decide in the disputes.<sup>13</sup> The nature of investment contracts requires that disputes are resolved quickly and effectively in order to save money and carrying out the projects without delay. If a dispute arises, it is important to settle it as early as possible as delays and extra costs can further damage the relationship between the contractors which, in turn, can effect negatively on the economic growth. Therefore, the main disadvantages of litigation - that it is costly and time consuming - are particularly relevant in relation to investment contractual disputes. Such disputes must be settled in a short space of time and the nature of the contract itself will often require that projects are carried out promptly. Furthermore, the limited experience of judges in disputes which include technical and complicated matters may mean that they have to rely on experts' reports in order to issue decisions within a short space of time<sup>14</sup> and this drawback is particularly relevant in the area of investment contracts disputes. Disagreements over damages for delays, the right to stop work and changing the conditions/orders of contract are the types of disputes that need to be settled as quickly as possible without delay. Avoiding the risks of settling investment contract disputes by litigation requires alternatives, and it is assumed that ADR can play an important role in ensuring that services are delivered to people without interruption and can also encourage companies to invest in countries which will effect positively on economic growth. Therefore, the drawbacks of litigation are felt more keenly in investment disputes, particularly in developing countries such ones depend mainly on the private sectors in carrying out the public projects. One of the aims of this paper is to avoid litigation and find a suitable method for settling the disputes of investment contracts. ADR would a better alternative to litigation which requires examining the importance of ADR as a whole system in the next section.

### 3. THE ADVANTAGES OF ALTERNATIVE DISPUTES RESOLUTION (ADR)

ADR can be defined as a process for resolving a dispute between two or more parties other than through formal litigation in a court system. The main forms of ADR are: conciliation,

<sup>9</sup> Ibid. at 345.

<sup>10</sup> R. Stephens, 'Civil Litigation, Arbitration and Adr: Will Adr Take Over?', *International Company and Commercial Law Review*, (1992) at 89.

<sup>11</sup> J. Cooley and S. Lubet, *Arbitration Advocacy* (Second edn.; The United States of America: National Institute for Trial Advocacy, 2003) at 7.

<sup>12</sup> M. Moffitt and R. Bordone, *The Handbook of Dispute Resolution* (USA: Jossey - Bass, 2012) at 25.

<sup>13</sup> The Woolf Report is highly critical of the present state of litigation, its cost, slowness and its frequent failure to dispense justice to the litigation. The problems of civil litigation were summarised in the overview to the report and consequently form the basis of the recommendation for improving access to justice through litigation. See, Lord Woolf, 'Final Report to the Lord Chancellor on the Civil Justice System in England and Wales', (UK, 1996).

<sup>14</sup> There are many cases that come before courts in which the judges have limited experience in the subject of the dispute. These cases include, for example: construction contracts; contracts relating to aircraft; the operation of international markets and exchange; the international carriage of goods; contract relating to ships and shipping; banking instruments and international credit. See, H. Genn, 'Court – Based and Initiatives for Civil Disputes: The Commercial Court and the Court of Appeal', (UK: Faculty of Law - University College London, 2002) at 12.

negotiation, expert determination, mediation and possibly arbitration.<sup>15</sup> With the development of national and international trade, market economies and the increasing number of government contracts, ADR has been widely adopted as a form of settling disputes since it is an effective method of reconciliation than litigation. ADR boards are also set up to maintain the interest of the state in the execution of national plans by encouraging economic cooperation between enterprises.<sup>16</sup> ADR should be used in the investment disputes because of the advantages<sup>17</sup> which will be outlined in the following. First, it is less time consuming than court litigation. ‘ADR can resolve in weeks or months a dispute that would take years in court.’<sup>18</sup> It offers more flexibility in terms of time and procedures. In cases where a dispute needs an urgent resolution, the parties can choose one form of ADR which will act promptly<sup>19</sup> since ADR settles disputes in only one stage (ADR proceeding), while the settlement of disputes through the court litigation system involves more than one stage before a final award is made. For example, the arbitration award has the authority of *res judicata* and is enforced in the same manner as a judgment or order of a court.<sup>20</sup> Therefore, the arbitral award which is issued by one stage (arbitration proceeding) equals an award issued by a court. By diverting cases away from litigation, ADR also reduces pressure on the courts. Recently, court caseloads have increased for a variety of reasons, such as the ease of access to litigation (no win no fee).<sup>21</sup> The enormous rise in the consumption of goods and complex working patterns have increased the scope for disputes and the need for an effective and fast dispute resolution system such as ADR.<sup>22</sup> ADR also gives disputants the freedom to choose the person who will settle their dispute. This has the advantage that the parties can choose the third party with an appropriate degree of expertise<sup>23</sup> and therefore avoid the possibility of having to rely on less experienced and less knowledgeable judges,<sup>24</sup> especially in cases where more expertise is needed in a specific subject matter and where informed decisions are required.<sup>25</sup> In some cases, disputing parties prefer to choose arbitrators or mediators with technical expertise over those with legal knowledge or choose a mixed group of arbitrators/mediators, some of whom may have no legal background. The ability to choose the arbitrator/mediator is clearly important for certain kinds of complex or technical matters, where most judges and juries have limited experience in the subject of dispute.<sup>26</sup> Since most investors think that judges and juries are ill-equipped to decide complex investment disputes,<sup>27</sup> ADR therefore is necessary in the disputes of stock market, construction contracts, supply contracts and public works contracts. Another benefit of ADR is that it provides a wider choice of representation with no restriction upon a party’s choice of representatives, unlike litigation in court where a litigant must be represented by lawyer/s if he does not wish to conduct the case himself.<sup>28</sup>

<sup>15</sup> R. Weil et al., *Litigation Services Handbook, the Role of the Financial Expert* (Fourth edn.; The United States of America: John Wiley and Sons Ltd, 2007) at 77.

<sup>16</sup> P. Feuerle, 'Economic Arbitration in Egypt: The Influence of a Soviet Legal Institution', *Heinoline* (7 J. Int'l L. & Econ, 1972) at 61.

<sup>17</sup> E. Al-Shiek, *The Arbitration in Administrative Contracts* (Egypt: Dar Alnahdah, 2000) at 27.

<sup>18</sup> R. Bales, *Compulsory Arbitration -the Grand Experiment in Employment* (First edn.; The United State of America: Cornell University Press, 1997) at 153.

<sup>19</sup> S. David et al., *Russell on Arbitration* (Twenty third edn.; London: Sweet & Maxwell Ltd, 2007) at 12.

<sup>20</sup> The UK Arbitration Act 1996 S (66/1). And the Jordanian Arbitration Act 2001 S (52).

<sup>21</sup> In some cases, people cannot get financial help to pay expensive legal fees upfront, which they will not get back if they lose their cases. ‘No win, no fee’ is an arrangement between solicitors and clients which means that if a claim is unsuccessful, the solicitor will not be paid for the work they have done. Therefore, no win no fee helps people to get a fair hearing and access to justice, even if they could not normally afford to pay for the services of solicitors.

<sup>22</sup> J. O ‘Riordan, *As Law for Aqa (a Level Law for Aqa)* (First edn.; Great Britain: Heinemann Educational 2002) at 158.

<sup>23</sup> B. Benson, 'To Arbitrate or to Litigate: That Is the Question', *European Journal of Law & Economics*, (1999) at 111.

<sup>24</sup> E. Enobun, 'Arbitration as an Alternative to Litigation: Does It Preserve Party Relationships Post Awards?', *Arbitration*, (2008) at 296.

<sup>25</sup> Internet-arbitration, ‘what is arbitration’ < [www.net-arb.com/what\\_is\\_arbitration.php](http://www.net-arb.com/what_is_arbitration.php)> accessed 20 July, 2019.

<sup>26</sup> S. Bennett, *Arbitration Essential Concepts* (New York: ALM Publishing 2002) at 6.

<sup>27</sup> S. Spear and D. Largent, 'Why Public Owners Need ADR?', *Colorado & Beyond*, (2010) at 68.

<sup>28</sup> Tay, *Resolving Disputes by Arbitration: What You Need to Know* at 22.

One of the great advantages of ADR is the privacy it affords. Unlike courts, ADR (arbitrators/mediators) is not bound by the principle of open justice<sup>29</sup> since it offers the possibility of dispute resolution being carried out in confidentiality.<sup>30</sup> It can prevent damage linked to court cases, such as adverse publicity, disclosure of sensitive information, and loss of flexibility in repairing relationships with the other parties.<sup>31</sup> It may well be that this aspect of ADR is its most attractive feature. ADR is also considered a confidential process and important for government contracts as ADR helps to maintain ongoing business relationships and allows disputes to be settled with minimal disruption<sup>32</sup> especially since the proceeding is known only to the arbitrators/mediators and the disputing parties.<sup>33</sup> It is in the public interest to withhold some details of economic contracts which may prejudice the commercial interests of any contractor, or prejudice competition between renderers or contractors.<sup>34</sup> Most companies also prefer confidential procedures since they are very keen to prevent information related to their business links and operations from being disclosed. In addition, they would not want the potentially negative result of a dispute to become public.<sup>35</sup> However, all individuals or entities that have a direct interest in the case are normally entitled to attend, and other persons may attend by agreement of the parties and with the permission of the arbitrator/mediator, when a necessary party fails to appear in person or through counsel.<sup>36</sup> Another perceived advantage is the impartiality of ADR<sup>37</sup> which achieves a fair and unbiased outcome.<sup>38</sup> The parties' confidence that the mediator or arbitrator will hear and decide with complete impartiality according to their best understanding is the one thing that serves to maintain the integrity of ADR as a process. This advantage is of great relevance in disputes where the government is party to the dispute. In such disputes it may be perceived that courts may be partial towards the government in their decisions, especially since the government sometimes exceeds its authority by putting pressure upon judges and courts to issue decisions which suit its plans. Therefore, ADR is considered one of the main guarantees for investors, in particular investors in developing countries, the mediator or arbitrator, should in principle treat the disputing parties equally and fairly, including when one of those parties is the government or its representative. Finally, one of the main perceived benefits of the ADR process is its flexibility, since most methods used under the umbrella of ADR can be as formulated as required by the concerned parties. ADR provides for a wide variety of settlement techniques capable of meeting the needs of different parties and allows the procedures to be tailored to their particular needs. Therefore, using ADR for settling the disputes enables the parties to choose laws and procedures which suit their contracts and best serve the public interest. In other words, ADR allows what can be termed the "party autonomy" principle.

<sup>29</sup>The benefits of open justice include: that it enables the public to know that justice is being administered impartially; it ensures the appropriate proceedings are applied and followed; and it maintains the public's confidence in the administration of justice. See, J. Jaconelli, *Open Justice - a Critique of the Public Trial* (First edn.; The United States of America: Oxford University Press, 2002) at 2.

<sup>30</sup>In essence, confidentiality is a concept which governs how a person handles another person's private information or an opinion which they have chosen to disclose. See, H. Allen, 'Confidentiality - a Guide for Mediators', (London: CEDR, 2013) at 1.

<sup>31</sup>B. Cremades, 'Can Secrecy, Disclosure and Confidentiality Survive?', *European Lawyer*, (2002) at 46.

<sup>32</sup>C. Tay, *Resolving Disputes by Arbitration: What you Need To Know* (Singapore University Press: 1998) at 22.

<sup>33</sup>J. Feld and K. Carper, *Construction Failure* (The United States of America: New York, 1997) at 468.

<sup>34</sup>Commercial interests might, for example, be prejudiced where disclosure causes damage to business reputation or the confidence of government, customers, suppliers or investors, or would affect the ability of government to obtain supplies or secure finance. It should be also mentioned that the public interest in protecting commercial interests includes the private sector, which also plays an important role in the general health of the economy. See, Ministry of Justice, 'Freedom of Information Guidance - Commercial Interests', (Ministry of Justice, 2000b) at 5,11.

<sup>35</sup>M. Moses, *The Principles and Practice of International Commercial Arbitration* (First edn.; The United States of America: Cambridge University Press, 2008) at 4.

<sup>36</sup>Cooley and Lubet, *Arbitration Advocacy* at 16.

<sup>37</sup>Chung, 'The Rules of Natural Justice in Arbitration', (at 168).

<sup>38</sup>F. Cabrillo and S. Fitzpatrick, *The Economics of Court and Litigation* (Great Britain: Edward Elgar, 2008) at 211.

This means that parties to a contract or transactions are sovereign in a manner which lets them, through mutual agreement; determine the different aspects of their contract and the terms used in resolving any dispute that may arise from it, without having to comply with one particular legal system. They are able to decide on the applicable law(s) to their contract and disputes, and on the forum that would enforce their agreement. As a result, ADR rules thus remain compatible with a large range of cultures and traditions in dispute resolution and are suitable for all types of business disputes and the factual intricacies that accompany them.<sup>39</sup>

#### 4. CONCLUSION

The nature of investment contract disputes means that they need to be settled quickly and effectively, since such contracts are concerned with the economy growth of state. Therefore, this chapter aimed to examine the importance of ADR as alternatives to court system in settling the disputes of investment contracts. This paper has tried to examine the relationship between litigation and ADR by examining the motivations people may have for using ADR instead of litigation and the drawbacks of litigation. This paper has also discussed the advantages of ADR including the fact that it avoids negatives of the litigation system such as slowness in the legal proceedings and prolongation of the span of litigation; that it grants the disputants the freedom to choose the person who will settle the dispute (mediator or arbitrator) and thus avoids the possibility of relying on less experienced judges; that disputants can choose the applicable laws for their dispute; that dispute resolution can take place in private; and that it uses a relaxed rule of evidence.

#### LITERATURE:

1. Allen, H. 'Confidentiality - a Guide for Mediators', (London: CEDR, 2013).
2. Al-Shiek, E. *The Arbitration in Administrative Contracts* (Egypt: Dar Alnahdah, 2000).
3. Bales, R. *Compulsory Arbitration -the Grand Experiment in Employment* (First edn.; The United State of America: Cornell University Press, 1997).
4. Bennett, S. *Arbitration Essential Concepts* (New York: ALM Publishing 2002).
5. Benson, B. 'To Arbitrate or to Litigate: That Is the Question', *European Journal of Law & Economics*, (1999).
6. Cabrillo, F. and Fitzpatrick, S. *The Economics of Court and Litigation* (Great Britian: Edward Elqar, 2008).
7. Chung, C. 'The Rules of Natural Justice in Arbitration', (at 168).
8. Cooley, J. and Lubet, S. *Arbitration Advocacy* (Second edn.; The United States of America: National Institute for Trial Advocacy, 2003).
9. Cremades, B. 'Can Secrecy, Disclosure and Confidentiality Survive?', *European Lawyer*, (2002).
10. David, S. *Russell on Arbitration* (Twenty third edn.; London: Sweet & Maxwell Ltd, 2007).
11. D'ambrumenil, D. *Mediation and Arbitration for Lawyers* (First edn.; Great Britain: Taylor & Francis Ltd, 1997).
12. Enobun, E. 'Arbitration as an Alternative to Litigation: Does It Preserve Party Relationships Post Awards?', *Arbitration*, (2008).
13. Feld, J. & Carper, K. *Construction Failure* (The United States of America: New York, 1997).
14. Feuerle, P. 'Economic Arbitration in Egypt: The Influence of a Soviet Legal Institution', *Heinoline* (7 J. Int'l L. & Econ, 1972).
15. Genn, H. 'Court – Based and Initiatives for Civil Disputes: The Commercial Court and the Court of Appeal ', (UK: Faculty of Law - University College London, 2002).

<sup>39</sup> A. Housz, *Adr in Business. Practice and Issues across Countries and Cultures* (UK: Kluwer Law International, 2011) at 264. Also, D. D'ambrumenil, *Mediation and Arbitration for Lawyers* (First edn.; Great Britain: Taylor & Francis Ltd, 1997) at 8.

16. Grant, A. *Securities Arbitration for Brokers, Attorneys and Investors*.
17. Housz, A. *ADR in Business. Practice and Issues across Countries and Cultures* (UK: Kluwer Law International, 2011).
18. Internet-arbitration, 'what is arbitration'  
< [www.net-arb.com/what\\_is\\_arbitration.php](http://www.net-arb.com/what_is_arbitration.php)> accessed 20 July, 2019.
19. Jaconelli, J. *Open Justice - a Critique of the Public Trial* (First edn.; The United States of America: Oxford University Press, 2002).
20. Lord Woolf, 'Final Report to the Lord Chancellor on the Civil Justice System in England and Wales', (UK, 1996).
21. Ministry of Justice, 'Freedom of Information Guidance - Commercial Interests', (Ministry of Justice, 2000b).
22. Moffitt, M & Bordone, R. *Handbook of Dispute Resolution* (First edn, New York:: John Wiley & Sons Inc, 2005).
23. Moffitt, M. & Bordone, R. *The Handbook of Dispute Resolution* ( Second ed, New York: Jossey - Bass, 2012).
24. Moses, M. *The Principles and Practice of International Commercial Arbitration* (First edn.; The United States of America: Cambridge University Press, 2008).
25. Mwenda, M. *Principles of Arbitration Law* (UK: Brown Walker Press, 2003).
26. Riordan, J. *As Law for Aqa (a Level Law for Aqa)* (First edn.; Great Britain: Heinemann Educational 2002).
27. Roberts, S. & Palmer, M. *Dispute Processes: ADR and the Primary Forms of Decision-Making (Law in Context)* (Second edn.; UK: Cambridge University Press, 2009a).
28. Secretary of State for Constitutional Affairs and Lord Chancellor, 'Transforming Public Services: Complaints, Redress and Tribunals ', (UK, 2004).
29. Spear, S. & Largent, D. 'Why Public Owners Need ADR?', *Colorado & Beyond*, (2010).
30. Stephens, R. 'Civil Litigation, Arbitration and ADR: Will ADR Take Over?', *International Company and Commercial Law Review*, (1992).
31. Tay, C. *Resolving Disputes by Arbitration: What you Need To Know* (Singapore University Press: 1998).
32. The Jordanian Arbitration Act 2001.
33. The UK Arbitration Act 1996.
34. Weil, R. *Litigation Services Handbook, the Role of the Financial Expert* (Fourth edn.; The United States of America: John Wiley and Sons Ltd, 2007).
35. Weinstein, M. *Introduction to Civil Litigation* (Second edn.: St. Paul : West Pub, 1986).

# SPECIAL EVIDENTIARY ACTIONS IN THE CONTEXT OF JUDICIAL CONTROL OF THEIR APPLICATION IN PRACTICE IN THE REPUBLIC OF CROATIA

Nevena Aljinovic

University Department of Forensic Science, University in Split, Croatia

nevena.aljinovic@gmail.com

## ABSTRACT

*The focus of this paper is the institute of special evidentiary actions, its application in practice, and the question to what extent the content component of the investigating judge's order must be justified in order to respond to the challenge of the standard of legal predictability. Proving the existence of certain forms of crime, with elements of conspiracy and latency, would be significantly hampered without the use of special evidentiary actions. The complexity of this challenge is raised to a higher level as it involves certain encroachment into individual human rights that are proclaimed as the highest constitutional values and are the subject of numerous international conventions and documents. Special evidentiary actions are taken latently, or secretly, because otherwise the realization of their very nature and purpose would be thwarted. In the light of this, the main guarantee of the protection of the defendants' rights, as well as other persons, from excessive interventions into their fundamental rights lies precisely in the role of the court. The turning point in Croatian court practice was the decision of the European court for human rights in the case *Dragojević v. Croatia*, successively followed by the decisions in the cases of *Bašić v. Croatia* and *Matanović v. Croatia*, in the field of retrospective statement of reasons for investigating judge's orders, through the application of special evidentiary actions in practice. Such practice of domestic courts, by the decision of European court for human rights, was established as a behavior contrary to Art. 8. of the Convention, which led to a reassessment of the assurance level of appropriate guarantees against various possible abuses by public authorities.*

**Keywords:** *special evidentiary actions, investigative judge's order, statement of reasons for order, court practice, Supreme Court decision, Constitutional Court decision, human rights violations, protection of personal and family life, European Court of Human Rights*

## 1. INTRODUCTION

The organic nature of the Criminal Procedure Act (CPA)<sup>1</sup> has resulted in its perception of "applied constitutional law", as it has a great impact on human rights and has an extraordinary reflection on private, social and political life.<sup>2</sup> Special evidentiary actions in the literature are often terminologically differently called as measures of secret surveillance, special investigative measures, special investigative methods, obscure methods, secret operations, etc., while in essence they represent a certain intensity of interventions into fundamental human rights and freedoms by which the constitutional rights of citizens are temporarily restricted. The application of special evidentiary actions in practice necessary involves the intervention into right to privacy and personal life, the individual rights proclaimed as the highest constitutional values (Art. 35 and 36 of the Constitution of the Republic of Croatia)<sup>3</sup> and which are the subject to numerous international conventions and documents, among which, in particular, the European Convention for the Protection of Human Rights and Fundamental Freedoms

<sup>1</sup> Official Gazette 152/08, 76/09, 80/11, 121/11, 91/12, 143/12, 56/13, 145/13, 152/14, 70/17.

<sup>2</sup> Compare Z. Đurđević: Odluka Ustavnog suda RH o suglasnosti Zakona o kaznenom postupku s Ustavom Hrvatski ljetopis za kazneno pravo i praksu (Zagreb), Vol. 19, No. 2/2012, p. 411.

<sup>3</sup> Official Gazette 56/90, 135/97, 08/98, 113/00, 124/00, 28/01, 41/01, 55/01, 76/10, 85/10, 05/14.

(ECHR),<sup>4</sup> the International Covenant on Civil and Political Rights<sup>5</sup> and the Universal Declaration of Human Rights of 1948.<sup>6</sup> Special evidentiary actions present a special way of obtaining the objects and evidence necessary to establish the facts in the criminal proceedings, which, in accordance with the principle of proportionality, only take action "if the investigation cannot be carried out in any other way or would be accompanied by great difficulties "(Art. 332, para.1 of the CPA).

## 2. MATERIAL AND FORMAL ASPECTS OF APPLICATION OF SPECIAL EVIDENTIARY ACTIONS

Conditions for the application of special evidentiary actions may be identified as material and formal one. The material conditions of the application of special evidentiary actions are related to the types of criminal offense and the probative difficulties that require the use of special evidentiary actions.<sup>7</sup>

*Considering that special evidentiary actions temporarily restrict the constitutional rights of citizens, they can be ordered only if there is no prospect that relevant facts can be determined by other means of proof or would have been possible only with great difficulties. This legally prescribed restriction constitutes a guarantee that the measures are not imposed negligently, irregularly or without due consideration (see ESLJP Klass and Others v. Germany, 6 September 1978, paragraph 24, Dragojević v. Croatia, 50, Series A No. 28, Ekimdzhiiev v Bulgaria , No. 62540/00, § 77, 28 June 2007, Kennedy v. United Kingdom, No. 26839/05, §§ 153, May 18, 2010). (From the decision of the Supreme Court, VSRH No. I Kž-Uš 59/16-5, p.5.)*

The formal requirement for the application of special evidentiary actions also consists two cumulative elements. The first element is the processional initiative of the State Attorney through a written request with a statement of reasons, while the acceptance of such a request of a State Attorney by the investigating judge, in the form of written order with the statement of reasons, for carrying out special evidentiary actions, is the second element of the formal condition.<sup>8</sup>

*The statement of reasons for order is a single entity and therefore it is necessary to consider all its parts carefully in order to make thoroughly assessment of its quality and validity. (From the decision of the County Court in Zagreb No. Kž-435/16-3 and No. Kž-1080/16-3).*

*The circumstance that some orders have more wide statement of reason does not call into question the legality of those orders that are not reasoned in that way, but contain clear and sufficient reasons. (From the Supreme Court's Decision, VSRH No. I Kž-Uš 111/16-7).*

In order for a court to make a decision for the application of special evidentiary actions, the State Attorney has priorly to convince the court, with its request with a statement of reasons, that the conditions prescribed by law for the determination of special evidentiary actions are

<sup>4</sup> International treaties 18/97, 6/99, 14/02, 13/03, 9/05, 1/06, 2/10.

<sup>5</sup> Adopted at the General Assembly of the United Nations on December 16, 1966 (Resolution 2200A /XXI), entered into force on March 23, 1976.

<sup>6</sup> Adopted and proclaimed at the General Assembly of the United Nations by resolution no. 217 / III on December 10, 1948.

<sup>7</sup> If the investigation cannot be carried out in any other way or would be accompanied by great difficulties; the existence of the grounds for suspicion against the person that he committed or has taken part in committing an offence referred to in Art. 334 of CPA/08.

<sup>8</sup> Compare Ignjatović, Đ.; Škulić, M.; *Organizovani kriminalitet*, Beograd, 2010, p. 275.

fulfilled and that the application of special evidentiary actions is indispensable and useful for the purpose of detecting, proving and suppressing criminal offenses.

*The State Attorney's interest is to presents to the investigating judge all the relevant circumstances and facts about the existence of these assumptions, so it is notoriously that he will include, the above mentioned facts, into the content of the request for the determination of special evidentiary actions. Since the special evidentiary actions are limited to those procedures where there is a factual grounds for suspicion that a person, alone or together with other persons, has participated in committing a certain offenses, thus the statement of reasons for order must indicate the existence of the grounds for suspicion as a necessary precondition to carry out these actions, and therefore the statement of reasons for order must be logical and lawful. (From the decision of the Zagreb County Court No. Kž-1080 / 16-3)*

*The fact that the investigating judge, after careful analysis of the contents of the USKOK's<sup>9</sup> request and the documentation submitted to it, has issued the orders referred to Art. 332 para. 1 of the CPA/08 implies that he has accepted the reasons for their issuance from the written request with a statement of reasons of USKOK, which were based on very detailed arguments that encompassed all the prerequisites for their issuance, and all that was corroborated by the documents. Therefore, investigating judge's statement of reasons for order, in which the arguments of the USKOK were mentioned first, and then it was determined that those requirements were substantiated, is a sufficiently comprehensive and fully compliant with the requirements of the USKOK (From the Supreme Court's Decision, VSRH No. Kž-U 3/18 -4). The statement of reasons for order is important for the purpose of concluding whether the investigating judge has thoroughly considered the existence of legally prescribed preconditions for the determination of special evidentiary actions. (From the decision of the Zagreb County Court Kž-1080/16-3)*

In the case of *Kruslin v. France*<sup>10</sup> of 1990, the European Court of Human Rights (ECtHR) took the stand that one of the minimum standards provided by the Convention<sup>11</sup> (ECHR) for the application of special evidentiary actions (telecommunications surveillance) was to provide adequate guarantees against various possible misuse through precise law text. In the aforesaid case, the Court concluded that eavesdropping and other forms of telephone conversation tracking are "serious interference in private life and correspondence" and, as such, must be based on a law that is particularly precise. „The law must indicate the scope of any such discretion conferred on the competent authorities and the manner of its exercise with sufficient clarity ... to give the individual adequate protection against arbitrary interference." (§ 30).

*Art. 8. of the European Convention (ECHR) provides that public authorities may interfere in the individual's right to privacy and family life and correspondence, if this is "in accordance with the law" and if necessary in a democratic society.*<sup>12</sup> (From the Supreme Court's Decision, VSRH No. I Kž-U 131/16-4 p.4)

<sup>9</sup> Anti-Corruption and Organized Crime Prevention Office

<sup>10</sup> *Kruslin v. France*, Application No. 11801/85, Strasbourg judgment of April 24, 1990.

<sup>11</sup> (European) Convention for the Protection of Human Rights and Fundamental Freedoms, International Treaty, Official Gazette 18/97, 6/99, 14/02, 13/03, 9/05, 1/06, 2/10

<sup>12</sup> Art. 8. of the Convention provides that everyone has the right to respect for their private and family life, home and correspondence and that the public authority will not interfere in the realization of that right except in accordance with the law and if it is necessary in a democratic society for the interests of public security, public order and peace or economic well-being of the country, and to prevent riots and crimes for the protection of health or morals or for the protection of the rights and freedoms of others.

*Ordering special evidentiary actions, there was indeed a temporary restriction of the fundamental constitutional rights and freedoms of the defendant. By issuing such orders a inevitable infiltration was occurred into the rights guaranteed by Art. 35 and Art. 36 of the Constitution of the Republic of Croatia, which guarantee the respect and legal protection of personal life and the freedom and confidentiality of correspondence in all forms. However, such a violation of these fundamental rights did not occur without a prior assessment of the existence of the presumption of lawfulness by the investigating judge, as there was no unreasonable and unrestricted state interference in the individual's right to respect for their aforementioned fundamental rights. (From the Supreme Court's Decision, VSRH No. I Kž-U 131/2017-5 p.27; VSRH I Kž-U 165/2017-4)*

### **3. LEGISLATIVE GUIDELINES FOR APPLICATION OF SPECIAL EVIDENTIARY ACTIONS**

The legislator has foreseen precise "guidelines" for the implementation of special evidentiary actions. Non-compliance by those guidelines is resulting in the inadequacy of evidence in criminal proceedings. The 2008 Criminal Procedure Act (CPA/08) sets certain postulates of the proceeding as follows;

- Forms of special evidentiary actions must be strictly defined by legislative provisions;
- The application of special evidentiary actions is allowed only in situations of inability to carried out the investigation in any other way;
- Respectively, it would be possible carried out the investigation by applying other measures, but would be accompanied by great difficulties;
- A certain degree of probability, certainty, in the sense of grounds for suspicion, is required that the person, alone or together with the other persons, has participated in the committing of a catalog listed criminal offense;
- Prior taking of special evidentiary actions, a written statement of reasons for order must be issued by investigative judge;
- Judge order must be initiated by the State Attorney's request with a statement of reasons on the necessity of taking the special evidentiary actions;
- The legislator provides a detailed and precise list of criminal offenses in relation to which special evidentiary actions may be ordered;
- The length of time for which special evidentiary actions may be ordered is limited by the circumstances of the particular case and the legislator, as a prerequisite for its extension, requires that special evidentiary actions are giving good results in their application and that there is a reason to continue with their implementation in order to collect evidence. Respectively, their (further) implementation is necessary to achieve the purpose for which they were ordered.

CPA/08 for orders issued pursuant to Art. 332, as well as all other orders issued in criminal proceedings, does not prescribe the right to appeal.

*The court omission to explicitly state this, in the situation in which, therefore, ex lege there is no right to appeal, has no character of the essential violation of criminal procedure provisions. (From the Supreme Court's Decision, VSRH No. I Kž-U 3/18-4 p.5.)*

### **4. LIMITED TIME APPLICATION OF SPECIAL EVIDENTIARY ACTIONS**

Special evidentiary actions are determined for a period of three months. At the request of the State Attorney, they may be extended for another three months. After passes the peroid of six months, special evidentiary actions may be extended for a further six months, but only for criminal offenses referred in Art. 334 item 1 and item 2.

Exceptionally, for offenses referred in Art. 334 item 1 special evidentiary actions, after expiry of the above mentioned deadlines, may be extended for a further six months if it is necessary to achieve the purpose for which they were ordered. That is, the maximum duration of time application of special evidentiary actions is limited to 18 months. (Art. 335 para. 3 CPA/08). The limited time application of special evidentiary actions is a consequence of the mechanism of criminal law protection against possible misuse and arbitrariness in the conduct of the criminal prosecution body. The carrying out of particular special evidentiary actions requires time involvement of different intensity, and accordingly, given the timing of the implementation of certain special evidentiary actions, we could classify them as:

1. Long-lasting special evidentiary actions, results that are possible and realistic only in the months of implementation and involvement, such as, for example:
  - a) Surveillance and interception of telephone conversations and other means of remote technical communication;
  - b) Interception, gathering and recording of electronic data;
  - c) Entry on the premises for the purpose of conducting surveillance and technical recording at the premises;
  - d) Covert following and technical recording of individuals and objects;
  - e) Use of undercover investigators and informants.
2. Short-term special evidentiary actions, requiring shorter engagement time (eg several days to a month) such as:
  - a) Simulated sales and purchase of certain objects, simulated bribe-giving and simulated bribe-taking;
  - b) Offering simulated business services or closing simulated legal business;
  - c) Controlled transport and delivery of objects from criminal offences.<sup>13</sup>
3. Expeditious special evidentiary actions (urgent, indisputable) requiring urgency of action as they don't tolerate the delay, such as, in some cases, the simulated sale or purchase of objects, eg. purchase of psychotropic substances on the street, accompanied by arrest at the scene of the incident under Art. 107, item 3 CPA/08.

## **5. DIFFERENT TYPES AND SCOPE OF APPLICATION OF SPECIAL EVIDENTIARY ACTIONS**

The Ordinance on the Manner of Conducting Special Evidentiary Actions <sup>14</sup> provides and elaborates a more detailed way of its implementation.<sup>15</sup>

### **5.1. Surveillance and interception of telephone conversations and other means of remote technical communication**

The legislator, by allowing an exception to Art. 35 ( in the Art. 36 para. 2) of the Constitution of the Republic of Croatia,<sup>16</sup> in a very restrictive way, in the forme of law (CPA), had determined when such recording is still permitted and the video/tape itself can be used as

<sup>13</sup> Compare Usporedi Karlović S., *Posebne istražne radnje u krivičnom procesnom zakonodavstvu Bosne i Hercegovine*, p. 30.

<sup>14</sup> Official Gazette 102/09

<sup>15</sup> II. METHODS OF IMPLEMENTATION OF SPECIAL EVIDENTIARY ACTIONS

1) Surveillance and interception of telephone conversations and other means of remote technical communication (Art. 2 to 5);

2) Interception, gathering and recording of electronic data; (Art. 6 to 9);

3) Entry on the premises for the purpose of conducting surveillance and technical recording at the premises (Art. 10 to 15);

4) Covert following and technical recording of individuals and objects (Art. 16 to 19);

5) Use of undercover investigators and informants (Art. 20 to 23);

6) Simulated sales and purchase of certain objects, simulated bribe-giving and simulated bribe-taking (Art. 24 to 27);

7) Offering simulated business services or closing simulated legal business (Art. 28 to 30);

8) Controlled transport and delivery of objects from criminal offences (Art. 31 to 34).

<sup>16</sup> In accordance with Art. 36, para. 2 "Only the law may prescribe the restrictions necessary for the protection of the security of the state or the conduct of criminal proceedings".

legitimate proof. Their significant part, prescribed in Art. 334 CPA/08, refers to the criminal offenses that are only possible in the context of performing certain services or business activities (receiving bribes, giving bribes, misusing positions and powers, trading in influence, etc.).

*It is precisely that the suspicion of committing or preparing criminal offenses is related to the work of a person that is performing certain official or business activities. Since it is always the case of acts concealed within legal or business activities, the legislator has made, precisely for these potential criminal acts intertwined with lawful acts, an exception of the constitutional rule on the protection of "freedom of communication" and allowed, under the legally prescribed conditions, the recording of such a "communication" - even without the knowledge of the person being recorded. (From the Supreme Court's Decision, VSRH No. I KŽ-U 151/15-4 pp. 3 - 4)*

The content of the conversation is crucial for distinguishing the participants roles in commission of the criminal offense<sup>17</sup> as well as the level of their involvement.<sup>18</sup>

### **5.2. Interception, gathering and recording of electronic data**

In its recent decisions ECtHR dealt with search and seizure of computer data. Decisions were concerned with the principle of proportionality in order to prevent abuse and arbitrariness when applying them, as well as to protect the right to privacy. Thus, in one of its decisions ECtHR concluded that the search and examination of all electronic data was "more than was necessary to achieve a legitimate aim, which led to the conclusion that, in this case, Art. 8 of the Convention was violated".<sup>19</sup>

### **5.3. Entry on the premises for the purpose of conducting surveillance and technical recording at the premises**

Entry on the premises for the purpose of conducting surveillance and technical recording at the premises is conducted in a disguised manner that doesn't expose or jeopardize the carrying out of special evidentiary actions, using the necessary tools and electronic gadgets.

Surveillance and technical recording of the premises is carried out using the appropriate technical devices for monitoring, recording and transmission of audio and video signals. Upon expiry or termination of the imposed measures the police, in an appropriate manner, removes the applied technical means from the premises.

### **5.4. Covert following and technical recording of individuals and objects**

During the implementation of this special evidentiary actions, the police use appropriate technical devices for positioning, motion control, transmission and recording of audio and video signals.

*Special evidentiary actions of the monitoring and technical recording of persons and objects were carried out on the basis of the Order of the County Court in Karlovac dated July 2, 2012, No. Kir-5/12. According to it, so-called daily reports from Art. 337 para. 1 CPA/08 were made, which are not unlawful evidence, nor may such reports be equated with an official note of an informed interview. (From the County Court's Decision, VSRH No. I KŽ-434/13-7)*

<sup>17</sup> "By the evidence presented, first of all from the content of conversations between def. M.K. and def. B.G. with the undercover investigator, has been found that there was an agreement between the accused B.G. and M.K. for resale of narcotic drugs, which included a plan for the commission of several future proceeds of the resale." (From the Supreme Court's Decision No. I KŽ - 560/07-5 of December 23, 2008.)

<sup>18</sup> "In spite of the undisputed fact that this accused brought in connection of the defendant A. B. and the undercover investigator, from the listened conversation, by applying the measure from the Art. 180. of the CPA, arises not only that he was present in full agreement but participated in it very actively, suggesting to get half a pound on the first test. (From the Supreme Court's Decision No. I KŽ-U 131/09-6 of January 26, 2010.)

<sup>19</sup> ECtHR Robathin v. Austria, Application No. 30457/06, Strasbourg judgment of July 3, 2012 (final October 3, 2012), § 52

### 5.5. Use of undercover investigators and informants

Application of the measures such as use of undercover investigator or informants should be referred to situations of gathering available evidence, ie. their application should be absent in the situations where their use is a substitute for some ordinary actions such as examination.<sup>20</sup> The specificity of this special evidentiary actions is that it is particularly suitable for detecting and proving criminal offenses that fall into the so called consensual and conspiracy crime. Also, the legislator specifically warns that simulated actions shouldn't be abetting of the defendant for committing a criminal offense (Art. 332 para. 10 CPA). The abetting would exist in the situation where the undercover investigator makes a verbal or some other action in order to put a defendant into position to created or to strengthen his decision to commit a criminal offense. „The use of undercover agents must be restricted and safeguards put in place even in cases concerning the fight against drug trafficking. While the rise in organised crime undoubtedly requires that appropriate measures be taken, the right to a fair administration of justice nevertheless holds such a prominent place (see the *Delcourt v. Belgium* judgment of January 17, 1970, § 25) that it cannot be sacrificed for the sake of expedience. The general requirements of fairness embodied in Art. 6 apply to proceedings concerning all types of criminal offence, from the most straightforward to the most complex. The public interest cannot justify the use of evidence obtained as a result of police incitement“ (*Teixeira de Castro v. Portugal*, § 36).<sup>21</sup> The Guidelines for the application of special evidentiary actions involving undercover investigators are stated in the case *Ramanauskas v. Lithuania*<sup>22</sup> by means of provisions of relevant international law (§35-§ 37).<sup>23</sup> The Court also considers that the situation of reopening of the offer, despite the initial defendant's rejection, (*Ramanauskas v. Lithuania*, § 67) and raising the price above the usual price (*Malininas v. Lithuania*, § 37)<sup>24</sup> are the abetting circumstances. Unlike abetting, "infiltration" in criminal activities doesn't violate the right to a fair trial. For example, the situation „when the police, in order to catch the defendant into action, has provided financial means and technical equipment for recording a conversation with a private person, who had previously complained that the defendant is seeking a bribe“ is not considered as abetting (*Miliniene v. Lithuania*, § 38).<sup>25</sup>

*The use of undercover investigators and informants as well as the simulated sale and purchase of certain objects shouldn't be an abetting to committing a criminal offense. However, as the undercover investigator has expressed the intent to buy drugs, it can not be considered as an abetting to the committing a criminal offense, because the simulated purchase, in its nature, presupposes the need for the undercover investigator to declare himself as a buyer and express his intent to buy. In order to be an abetting, it must be persistent, long-lasting, and as such, represent the main, decisive factor in creating the will to commit a criminal offense. (From the Supreme Court's Decision, VSRH, No. KŽ-Uš 127 / 2017-7)*

<sup>20</sup> Compare Schünemann, Bernd, *Polizei und Staatsanwaltschaft, Kriminalistik*, Vol. 53, No. 3/1999, p. 151.

<sup>21</sup> Application No. 44/1997/828/1034, Strasbourg judgment of June 6, 1998.

<sup>22</sup> Application No. 74420/01, Strasbourg judgement of February 5, 2008.

<sup>23</sup> Council of Europe Corruption Convention on Corruption (ETS No. 173, January 27, 1999), Art. 23

Council of Europe Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime, provides in Art. 4, para. 2 (Special Investigative Authorizations and Techniques)

Council of Europe Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime and on the Financing of Terrorism, CETS No.198, Warsaw, 16/05/2005, Art. 4. (Investigative and Provisional Measures) states that each Party shall adopt such legislative and other measures as are necessary to enable it to identify, trace, freeze or quickly seize the property for which seizure is to be executed.

The use of special investigative techniques such as controlled deliveries in the context of illicit trafficking in narcotic drugs is also provided for in Art. 73 of the Convention implementing the Schengen Agreement of June 14, 1985 on the gradual abolition of checks at a common border signed at Schengen on June 19, 1990. (*Ramanauskas v. Lithuania*, § 37)

<sup>24</sup> Application No. 10071/04, Strasbourg judgment of July 1, 2008 (final October 1, 2008)

<sup>25</sup> Compare Martinović, I., Kos, D.; *Nezakoniti dokazi: teorijske i praktične dvojbe u svjetlu prakse Europskog suda za ljudska prava*, p. 326.

*The simulated purchase requires the undercover investigator first to declare himself as a buyer of a certain type and amount of narcotic drug, before a price agreement is arranged. This does not mean that he has persuaded the co-perpetrator to commit the criminal offense. (From the Supreme Court's Decision, VSRH No. KZ-429/03-7 of September 2, 2003, and Kž 3702-7 of November 23, 2005).*

#### **5.6. Simulated sales and purchase of certain objects, simulated bribe-giving and simulated bribe-taking**

Objects that can be used during the implementation of this special evidentiary actions are the objects temporarily seized in accordance with the provisions of a special law and the objects that are permanently seized on the basis of a final court decision. Simulated purchase of objects may refer to all objects that may be the subject of a criminal offense. Objects obtained through simulated purchase become the property of the Republic of Croatia, while the realized funds become funds of the state budget.

#### **5.7. Offering simulated business services or closing simulated legal business**

Legal entities can be established for the purpose of realizing the implementation of the special evidentiary actions. Funds for the business of the aforementioned legal entities are secured from specially intended means of police or State Attorney's office. Offering simulated business services or closing simulated legal business are carried out by undercover investigators or informants. The funds obtained become funds of the state budget, and the acquired objects become the property of the Republic of Croatia used by the Ministry of Internal Affairs.

#### **5.8. Controlled transport and delivery of objects from criminal offences**

Controlled transport and delivery of objects from criminal offences shall be carried out in a suitable, covert manner that doesn't expose or jeopardize the implementation of special evidentiary actions. During the implementation of controlled transportation and delivery of objects from criminal offenses, the police use appropriate technical facilities for positioning, supervision and documentation.

### **6. THE PRACTICE OF THE SUPREME COURT OF THE REPUBLIC OF CROATIA AND THE CONSTITUTIONAL COURT OF THE REPUBLIC OF CROATIA**

The imbalance between the legislative arrangement of the institute of special evidentiary actions and their implementation in practice has arisen in the domain of the statement of reasons for the investigating judge's order by which their implementation is required. While the standard of legal certainty and predictability requires the concrete circumstances of why investigation couldn't been carried out in any other way (rather than encroaching into fundamental human rights), domestic jurisprudence was only relied to the ascertainment that the general terms of application were realized (by mere specification of the legal statement) without specification of circumstances characteristic for a particular case.

*When an investigative judge is deciding on the State Attorney's request, he must take into consideration general assumptions for issuing an order. However, as an absence of the statement of reasons for order doesn't entail the illegality of the evidence gathered, it means that the very circumstance of issuing an order at request of State Attorney presupposes the existence of these general conditions. (From the Supreme Court's Decision, VSRH No. I-Kž-61/09-3 of February 3, 2009)*

In the following years, the Supreme Court of the Republic of Croatia has revisited its stance as stated in its (recent) decision;

*Such a statement of reasons for order without concretization which facts indicate the grounds for suspicion (that the act was committed), and the legal ascertainment itself that the investigation could not be carried out in other ways or would be accompanied by great difficulties, without giving reasons for this, is (...) incomprehensible and contradictory. (From the Supreme Court's Decision, VSRH No. I-Kž-437/13-4 of August 21, 2013).*

However, the Croatian Constitutional Court in its Decision No. U-III-2781/2010 of January 9, 2014. has accepted the Supreme Court's stance from Decision No. I-Kž-61/09-3 of February 3, 2009, pointing out: *"According to the relevant provisions of the CPA/97, the investigating judge's orders had to contain (a) a valid assessment of "the grounds for suspicion that he committed or has taken part in committing an offence" in one of the offenses referred to in Art. 181 of the CPA/97, b) the assessment that investigation „could not be carried out in any other way or would be accompanied by great difficulties"(...)The Constitutional Court has considered the statement of reasons for Supreme Court's judgment and found that the Supreme Court has correctly applied the aforementioned provisions of the CPA/97, and concluded that, if orders for undertaking special evidentiary actions were without the statement of reasons, they may, under certain conditions, be explained in the statement of reasons of the First Instance verdict or when a ruling is made, in the case when the party suggests that the evidence should be found unlawful.*

In spite of detailed legal regulations for issuing a court order for special evidentiary actions, which requires a detailed statement of reasons for order before its issuance, the Supreme Court's decision, endorsed by the Croatian Constitutional Court, has introduced the possibility of retroactive statement of reasons for order, which was contrary to the standards of legal certainty. With reference to the above-mentioned decisions of the highest instances, the ECtHR, in the case *Dragojević v. Croatia*,<sup>26</sup> has warned of the following; "Although that apparently conflicted with the requirements of the relevant domestic law and the case-law of the Constitutional Court, it appears to have been approved through the practice of the Supreme Court and later endorsed by the Constitutional Court. In particular, the Supreme Court held, dealing with the matter in the context of the admissibility of evidence, that a lack of reasons in the secret surveillance orders, contrary to Art. 182 para. 1 of the Code of Criminal Procedure, could be compensated by retrospective specific reasons with regard to the relevant questions at a later stage of the proceedings by the court being requested to exclude the evidence thus obtained from the case file. This appears to be accepted by the Constitutional Court, which, in its decision no. U-III-2781/2010 of January 9, 2014, held that if the secret surveillance orders did not contain reasons, under certain conditions reasons could be stated in the first-instance judgment or the decision concerning the request for exclusion of unlawfully obtained evidence." (§ 96)

## **7. ECTRH DECISIONS CONCERNING THE VIOLATIONS OF ART. 8. CONVENTION RELATING TO THE IMPLEMENTATION OF SPECIAL EVIDENTIARY ACTIONS**

As the special evidentiary actions are taken latently, or secretly, as otherwise the realization of their very nature and the purpose would be thwarted, the main guarantee of the protection of the defendants rights, from disproportionate interferes into his fundamental rights, lies precisely in the role of the Court. The Court as an impartial body of state authority must determine whether the interference with the right to respect for private life and correspondence was "necessarily in a democratic society" for the „achievement of a legitimate aim“ through the form of a written reasoned order.

<sup>26</sup> Application No. 68955/11, Strasbourg judgment of January 15, 2015.

### 7.1. ECtHR decision in case of *Dragojević v. Croatia*

The ECtHR found in the judgment *Dragojević v. Croatia* (para. §§90-101) a violation of Art. 8 of the Convention, stating that "in spite the fact that the legislature envisaged prior detailed judicial scrutiny of the proportionality of the use of special evidentiary actions, a circumvention of this requirement by retrospective justification, introduced by the courts, can hardly provide adequate and sufficient safeguards against potential abuse since it opens the door to arbitrariness by allowing the implementation of secret surveillance contrary to the procedure envisaged by the relevant law" (§98). „The Court had specially emphasized that the relevant domestic law, as interpreted and applied by the competent courts, did not provide reasonable clarity regarding the scope and manner of exercise of the discretion conferred on the public authorities, and in particular did not secure in practice adequate safeguards against various possible abuses. Accordingly, the procedure for ordering and supervising the implementation of the interception of the applicant’s telephone was not shown to have fully complied with the requirements of lawfulness, nor was it adequate to keep the interference with the applicant’s right to respect for his private life and correspondence to what was “necessary in a democratic society” (§ 101). As ECtHR’s decisions represent a legal source with its explanation in interpreting the question of whether there are violations of the Convention right protected by that Court, in the last decisions of the Supreme Court VSRH (I Kž-U-26/2017 of May 4, 2017 and VSRH I Kž-U-94 / 2017 of July 13, 2017), the previous stands of the Supreme Court VSRH have been revised.

*„It is correct that the order isn't lawful if there is insufficient statement of reasons for order, ie. if it is based solely on the claim that there is a USKOK request and rewriting the legal expression that "investigation of criminal offenses could not otherwise be carried out ..." without further explanation. (From the Supreme Court's decision, VSRH No. I Kž-U-26 / 17-5 of May 4, 2017 and VSRH No. I Kž-U-116/17 of September 5, 2017).*

### 7.2. ECtHR decision in case of *Bašić v. Croatia* and *Matanović v. Croatia*

In the case of *Bašić v. Croatia*<sup>27</sup> and *Matanović v. Croatia*,<sup>28</sup> ECtHR retains the same standards in assessing court decisions affecting personal and family life, protected by Art. 8 of the Convention, referring also to case *Dragojević v. Croatia*. (From the Decision VSRH I Kž-US 2 /2017-5). The Court refers to the general principles relating to the use of the measure of secret surveillance mentioned in the *Dragojević* judgment (*Dragojević v. Croatia*, §§ 78-84, §§86-89). Also, as in the *Dragojević* case, Court notes that „the investigating judge’s orders on the use of secret surveillance measures referred to an application for the use of secret surveillance by the competent State Attorney’s Office and indicated the statutory phrase that “the investigation could not be conducted by other means or that it would be extremely difficult (to do so)”. They did not, however, provide relevant reasoning as to the particular circumstances of the case and in particular why the investigation could not be conducted by other, less intrusive, means“ (*Bašić v. Croatia*, §33; *Matanović v. Croatia*, §113, also see *Roman Zakharov v. Russia*, Application No. 47143/06, Judgment of December 4, 2015, § 260).

## 8. CONCLUSION

In the time of conspiracy and latent forms of criminal offenses, the application of contemporary mechanisms of their suppression, through the forme of special evidentiary actions as a module of intrusive penetration into the most sensitive sphere of individual citizen rights, is inevitable.

<sup>27</sup> Application no. 22251/13, Strasbourg judgment of 25 October 2016.

<sup>28</sup> Application no. 2742/12, Strasbourg judgment of 4 April 2017.

It is also a correct response to the distraction of the realization of the interests of criminal persecution in the context of increasing accent on the protection of individuals' rights. The Croatian criminal justice system has adequately responded to the challenge of detailed legal regulation of special evidentiary actions, but disharmony is detected within the behaviors that are contradictory to the circumstances envisaged by the law, particularly in the situations that requires an effective assessment of whether or not the use of special evidentiary actions was necessary and justified. After the ascertained violation of Art. 8 of the Convention, by a decision of the ECtHR in the *Dragojević v. Croatia* case, certain changes, through revised standing of the highest instances of the Supreme Court, VSRH and the Croatian Constitutional Court, have been made. Not just through the legal texts, but also through realization in practice, through the increased sense of necessity of control with a more detailed approach and a sense of achieving a legitimate goal with the preservation of democratic institutions. Corrective dynamics as a result of this is a positive atmosphere in the domain of such sensitive rights as respect for private and family life guaranteed by Art. 8 of the Convention (ECHR).

#### LITERATURE:

1. Convention implementing the Schengen Agreement of June 14, 1985 on the gradual abolition of checks at a common border signed at Schengen on June 19, 1990
2. Council of Europe Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime and on the Financing of Terrorism, CETS No. 198, Warsaw, 16/05/2005
3. Criminal Law Convention on Corruption ETS No. 173, January 27, 1999.
4. Đurđević, Z.: Odluka Ustavnog suda RH o suglasnosti Zakona o kaznenom postupku s Ustavom Hrvatski ljetopis za kazneno pravo i praksu (Zagreb), Vol. 19, No. 2/2012,
5. European Convention for the Protection of Human Rights and Fundamental Freedoms, Official Gazette 18/97, 6/99, 14/02, 13/03, 9/05, 1/06, 2/10
6. Ignjatović, Đ.; Škulić, M.; Organizovani kriminalitet, Beograd, 2010
7. Karlović S., Posebne istražne radnje u krivičnom procesnom zakonodavstvu Bosne i Hercegovine
8. Martinović, I., Kos, D.; Nezakoniti dokazi: teorijske i praktične dvojbe u svjetlu prakse Europskog suda za ljudska prava
9. The Ordinance on the Manner of Conducting Special Evidentiary Actions, Official Gazette 102/09
10. Schünemann, Bernd, Polizei und Staatsanwaltschaft, Kriminalistik, Vol. 53., No. 3/1999.,
11. The International Covenant on Civil and Political Rights, adopted at the General Assembly of the United Nations on December 16, 1966 (Resolution 2200A / XXI /) entered into force on March 23, 1976
12. The Universal Declaration of Human Rights of 1948, adopted and proclaimed at the General Assembly of the United Nations by resolution no. 217 / III on December 10, 1948.
13. The Constitution of the Republic of Croatia, Official Gazette 56/90, 135/97, 08/98, 113/00, 124/00, 28/01, 41/01, 55/01, 76/10, 85/10, 05/14
14. Criminal Procedure Act, Official Gazette 152/08, 76/09, 80/11, 121/11, 91/12, 143/12, 56/13, 145/13, 152/14, 70/17
15. Bašić v. Republic of Croatia, Application No. 22251/13, Strasbourg judgment of October 25, 2016
16. Delcourt v. Belgium, Application No. 2689/65, Strasbourg judgment of January 17, 1970
17. Dragojevic v. The Republic of Croatia, Application No. 68955/11, Strasbourg judgment of January 15, 2015
18. Ekimdzhev v. Bulgaria, Application No. 62540/00, Strasbourg judgment of June 28, 2007 (final January 30, 2008)

19. Kennedy v. United Kingdom, Application No. 26839/05, Strasbourg judgment of May 18, 2010 (final August 18, 2010)
20. Klass and Others v. Germany, Application No. 5029/7, Strasbourg judgment of September 6, 1978,
21. Kruslin v. France, Application No. 11801/85, Strasbourg judgment of April 24, 1990
22. Malininas v. Lithuania, Application No. 10071/04, Strasbourg judgment of July 1, 2008 (final October 1, 2008)
23. Matanović v. The Republic of Croatia, Application No. 2742/12, Strasbourg judgment of April 4, 2017
24. Milinien v. Lithuania, Application No. 74355/01, Strasbourg judgment of June 24, 2008 (final September 24, 2008)
25. Ramanauskas v. Lithuania, Application No. 74420/01, Strasbourg judgment of February 5, 2008
26. Robathin v. Austria, Application No. 30457/06, Strasbourg judgment of July 3, 2012 (final October 3, 2012)
27. Roman Zakharov v. Russia, Application No. 47143/06, Strasbourg judgment of December 4, 2015
28. Teixeira de Castro v. Portugal, Application No. 44/1997/828/1034, Strasbourg judgment of June 6, 1998
29. Decisions of the County Court in Zagreb; No. I Kž-434/13-7, No. Kž-435/16-3, No. Kž-1080/16-3
30. Decision of the Supreme Court of the Republic of Croatia VSRH; No. I Kž 37/02-7, No. no I Kž-429/03-7, No. I Kž-560/07-5, No. I-Kž-61/09-3, No. I Kž-Uš 131/09-6, No. I-Kž-437/13-4, No. I Kž-Uš 151/15-4, No. No I Kž-Uš 59/16-5, No. I Kž-Uš 111/16-7, No. I Kž-Uš 131/16.-4, No. I Kž-Uš-26/2017, No. I Kž-Uš-94/2017, No. I Kž-Uš 116/17, No. I Kž-Uš 127/2017-7, No. I Kž-Uš 131/2017-5, No. I Kž-Uš 165/2017-4, No. I Kž-Uš 3/18-4
31. Decision of the Constitutional Court of the Republic of Croatia No. U-III-2781/2010

## ECONOMIC DIMENSION OF CHILDCARE IN POLAND IN 2017-2018

**Agata Gomolka**

*Jagiellonian University*

*Faculty of Management and Social Communication*

*Kraków, Poland*

*agata.gomolka@doctoral.uj.edu.pl*

### **ABSTRACT**

*When analysing the situation of women on the Polish labour market, it can be noticed that their lower professional activity may be the result of performing unpaid work for the benefit of the household (among others, childcare). Those who have decided to take a paid job must share their previous responsibilities with obligations arising from the employment relationship. Thanks to the extensive social benefits in Poland (care and maternity benefits, etc.), a working parent may be absent from work to look after the closest family member, but at the expense of basic pay for this period. The employee is entitled to an allowance for such care, but it is paid only to one parent. The aim of the presented study is to answer the question which parent will take care of the child and give up remuneration for this period? The structure of the article is as follows. The first part presents the general characteristics of benefits that are paid to working parents in Poland in case of birth/illness of a child. Then, descriptive analyses of inequalities in the amount of benefits paid to men and women were conducted in particular voivodeships in Poland in 2017-2018. The work ends with a summary. The applied research methods include literature review and data analysis made available by the Social Insurance Institution for the needs of this study.*

**Keywords:** *allowance, parenthood, Social Insurance Institution (ZUS)*

### **1. INTRODUCTION**

The professional position of women in Poland is often dependent on the social roles they perform. In order to encourage them to take up paid work, the state has created a number of legal instruments that are designed to support parents in combining professional and family responsibilities. A parent who has decided to perform paid work may apply for a benefit for the provision of personal care for a child. He/she will not receive basic pay for this period, but he/she can count on the payment of the cash benefit offered by the Social Insurance Institution. In most cases, the benefits can be paid to only one parent. The question arises which parent will give up gainful employment to look after the child at that time? The aim of the study is to analyse the benefits paid to employees in connection with taking care of the offspring, which will allow answering the formulated research question. The following research hypotheses were also formulated:

**H1:** Women more often than men give up work to care for another family member.

**H2:** Women's allowance for caring for another family member is several times smaller than in the case of men's allowance.

In order to verify the hypotheses, the hypothetical-deductive approach will be used. The methods used in this article include the literature studies and the analysis of desk research data collected by Social Insurance Institutions for 2017-2018.

### **2. LITERATURE REVIEW**

Fulfilling the duties of the mother and caregiver (and at the same time the unpaid workload connected with fulfilling these roles) may result in the women giving up the paid work (Zachorowska-Mazurkiewicz, 2016, p. 9).

This may be due to the fact that the cost of raising children disproportionately lies with women (Budig & England, 2011, p. 204). Taking up employment by women – mothers may partly depend on social policy supporting the balance between their personal and professional life. However, the impact of social policy instruments on the position of women on the labour market is not clear (Budig et al., 2010, str. 2). In the literature, you can find examples of studies suggesting that family policy instruments have a positive impact on the position of women on the labour market (Korpi, 2000, Pollmann-Schult, 2017). Zachorowska-Mazurkiewicz (2016) points out that the applied economic policy instruments, which are intended to support both working mothers as well as fathers, in practice deepen inequalities between women and men in the labour market. In turn, Dunstmann & Schonberg (2012, str. 219), indicate that the extension of leave related to the birth of a child is not tantamount to a improving their well-being. In addition, reforms extending maternity leave may worsen the position of mothers on the labour market and reduce their income (Schonberg & Ludsteck, 2014, p. 496). Taking into account the situation in Poland, it should be emphasized that currently there are a number of legal solutions supporting both mothers and fathers (care and maternity benefits). In 2013, parental leave was introduced allowing for a longer absence of one of the parents due to the birth of a child (Act of May 28, 2013 on amending the act – Labour Code and certain other acts (Journal of Laws of 2013, item. 675), art. 183 § 5 and art. 1821a). However, Michalska (2013) indicates that such a solution will cause a deterioration of the situation of women on the Polish labour market. Sielska (2017, p. 118) mentions that social policy instruments concerning women on the labour market during pregnancy and motherhood are often given as the main reason for discrimination against women on the Polish labour market. Therefore, the analysis of available benefits paid to insured parents in Poland and the characteristics of their spatial differentiation will allow verification of the research hypotheses presented in the article.

### **3. CHARACTERISTICS OF BENEFITS PAID BY ZUS TO EMPLOYEES-PARENTS**

The Social Insurance Institution is a state organizational unit that implements provisions on social insurance, including by determining and paying benefits (Act of October 13, 1998 on the social insurance system (Journal of Laws of 2016, item 963, art. 66-79a), among others, those related to the performance of parental functions. A person employed on the basis of an employment contract and at the same time caring for a child may use the benefits offered by ZUS<sup>1</sup>. The list of paid benefits includes care and maternity benefits (corresponding to periods of maternity, parental and paternity leave).

#### **3.1. Care allowance**

Care allowance is regulated by art. 32 of the Act of June 25, 1999 on cash benefits from social insurance in case of illness and motherhood (Journal of Laws of 2019, item 645). An employee is discharged from work due to the need to take care of a healthy child under the age of 8 in case of emergency, a sick child up to 14 years of age or another family member in compliance with the conditions provided for in the Act. The parent may apply for the payment of care allowance for the period of personal care over the child. This benefit is not payable for more than 60 days in a calendar year (this limit applies to the care of a healthy child or a sick one up to the age of 14), 14 days in a calendar year (if the care concerns a child over 14 years of age

---

<sup>1</sup> Due to the availability of data, the article is limited to the analysis of parents employed under a contract of employment. However, it should be emphasized, that a person covered by ZUS medical insurance may benefit from the benefits, namely: employee, member of an agricultural production cooperative and agricultural cooperative, a person performing outwork, a person performing work on the basis of an agency agreement or a contract of mandate or another contract for the provision of services or cooperates with a person who performs such a contract, a person who works on the basis of an activation contract, running a non-agricultural activity or cooperating with one, a person performing work for free, on the basis of a referral to work, during imprisonment or temporary detention, a person performing substitute service, clerics (www.zus.pl, access: 15.07.2019)

or another sick family member) or 30 days in a calendar year (if the care concerns a sick disabled child aged 14-18 or a disabled child aged 8-18 with the assumption of circumstances resulting from the Act) (art. 33 of the Act). The basis for payment of care allowance is the submission of an appropriate medical certificate/statement together with the application for the payment of benefit (art. 61 of the Act). On this basis, the employer or ZUS (depending on the size of the company) verifies the right to unemployment benefit and charges it for each calendar day. The amount of the benefit is 80% of the benefit basis (art. 35 of the Act).

### 3.2. Maternity leave

The next benefit related to the employee's performance of care roles is the maternity benefit. The maternity benefit is payable for periods of both maternity leave, parental leave and paternity leave. Employee rights related to parenthood are regulated by the eighth section of the Labour Code (the Act of June 26, 1974 (Journal of Laws of 1974 No. 24 item 141)). Maternity benefit for the period of maternity leave (hereinafter: maternity leave) is payable at the time of a child's birth (in the case of one child – 20 weeks (140 days), in the case of two children – 31 weeks (217 days), in the case of three children – 33 weeks (231 days), in the case of four children – 35 weeks (245 days) and in the case of five children and more – 37 weeks (259 days) (the Act of June 26, 1974 – Labour code, art. 180 par. 1)<sup>2</sup>. A female employee who has decided to take advantage of maternity benefit may shorten it after 14 weeks (and return to work) provided that the remaining part of the benefit is taken over by the insured parent of the child and will take place immediately after the end of the period of child benefit's entitlement (the Act of June 26, 1974 – Labour code, art. 180 par. 4). The amount of maternity leave for the period determined by the Labour Code is 100% or 80% of the benefit assessment basis depending on the method of using the leave ([www.zus.pl](http://www.zus.pl)). The basis for payment of benefits is a copy of the reduced birth certificate of a child or a medical certificate of the anticipated date of delivery (it is possible to apply for such a benefit up to 6 weeks before the expected date of delivery in accordance with art. 180 par. 2 of the Act of June 26, 1974 – Labour code).

### 3.3. Parental leave

Maternity benefit for the period of parental leave (hereinafter: parental leave) is payable at the moment of the child's birth (or adoption thereof). It can be used, but only directly after using the maternity benefit for the period of maternity leave (the Act of June 26, 1974 – Labour code, art. 182<sup>1a</sup> par. 1). The amount of this benefit is 32 weeks (if one child was born) or 34 weeks (if two or more children were born) (the Act of June 26, 1974 – Labour code, art. 182<sup>1a</sup> par. 1). This benefit can be used by one parent in full, both parents or alternately (once the male and once the female employee), but at most in 4 parts (the Act of June 26, 1974 – Labour code, art. 182<sup>1c</sup> par. 2). The benefit can be dropped at any time (subject to the employer's consent). This benefit can also be combined with paid work (but the size of this work can be up to a half of the full time) (the Act of June 26, 1974 – Labour code, art. 182<sup>1c</sup> par. 1). However, in this case, the period of parental leave is prolonged accordingly (up to 64 weeks in the case of the birth of one child or 68 weeks in the case of the birth of two or more children). The amount of parental leave determined by the provisions of the Labour Code, depending on the method of use, is 100%, 80% or 60% of the benefit assessment dimension ([www.zus.pl](http://www.zus.pl)). Parental leave is granted to employees at their request, which also determines the form of using this leave (the Act of June 26, 1974 – Labour Code, art. 182<sup>1d</sup> par. 1).

<sup>2</sup> Maternity benefit is not always associated with the birth of own child. It can also be granted at the time of adoption for bringing up a child under 7 years of age (or 10 if the child has a postponed schooling obligation) if the employee acts as a foster family (unless it is a professional foster family).

### 3.4. Paternity leave

Maternity benefit for the period corresponding to the period of paternity leave (hereinafter: paternity leave) is granted only to the employee – father of the child on his request up to 2 weeks (14 days) no longer than until the child is 24 months old or until 24 months from the date of the decision of the court adjudicating adoption and no longer than until the child reaches 7 years of age, and in the case of a child for whom a decision was made to postpone the schooling obligation, no longer than until the child reaches 10 years of age (the Act of June 26, 1974 – Labour code, art. 182<sup>3</sup>). The amount of paternity leave is 100% of the benefit assessment basis (www. zus.pl).

## 4. SPATIAL DIFFERENTIATION OF BENEFITS ASSOCIATED WITH PARENTHOOD IN POLAND IN 2017-2018<sup>3</sup>

### 4.1. Care allowance

The average daily amount of care allowance in 2017, as well as in 2018 (regardless of the gender) was the highest in the Mazovia Voivodeship and was, respectively, in 2017 for women PLN 97.2, for men PLN 123.1, and in 2018, for women PLN 100.7, and for men PLN 129.9. The lowest value of the average daily benefit in 2017 for women was PLN 65.4 (in the Holy Cross voivodeship), and for men PLN 77.3 (in the Subcarpathian voivodeship), while in 2018, for women, the average daily care allowance rate was PLN 68.8 (in the Holy Cross voivodeship) and for men PLN 82.2 (in the Subcarpathian voivodeship). In 2018, the average amount of care allowance for both women and men was higher in each voivodeship than in the previous year. The largest difference of the average daily amount of the care allowance for women was recorded in the Pomeranian voivodeship (an increase by almost 5.2%), and the smallest in the Kuyavian-Pomeranian voivodeship (an increase by almost 2.3%). In the case of men, the highest increase compared to the previous year was recorded in the Lesser Poland voivodeship (by nearly 8.5%), while the smallest in the Warmia and Masuria voivodeship (by almost 4.1%). In each voivodeship, both in 2017 and 2018, the average daily rate for men was higher than the women's rate (in 2017 the largest difference was recorded in the voivodeship of Lower Silesia by about 40 %, the smallest in the Subcarpathian voivodeship by about 17%, in 2018 the biggest difference was about 42% in the Silesian voivodeship, and the smallest about 18% in the Subcarpathian voivodeship).

### 4.2. Maternity leave

The average daily amount of basic maternity benefit in 2017, as well as in 2018 (regardless of the gender) was the highest in the Mazovia voivodeship and was, respectively, PLN 97.7 for women, PLN 171.8 for men, and in 2018 PLN 101.5 for women, and PLN 166 for men. The lowest average daily maternity benefit in 2017 for women was PLN 62.3, and in 2018, PLN 65.1 (in the Holy Cross voivodeship), in the case of men in 2017, it was PLN 91.5, and in 2018 PLN 95.2 (in the Lublin voivodeship). In 2018, the average amount of basic maternity benefit for women was higher in each voivodeship compared to the previous year. In the case of men in the majority of voivodeships, the amount of the benefit was higher (except for the Mazovian, Subcarpathian and West Pomeranian voivodeships, where the amount decreased by 3.5%, 0.3%, 2.7%, respectively). The highest increase in the amount of benefits paid to women was about 6% in the Lodz voivodeship, the smallest of about 3.2% in the Lublin voivodeship. In the case of men, the largest increase was recorded in the Podlasie voivodeship (approx. 12 %). In each voivodeship in both analysed years, the average daily rate of basic maternity benefit for men was higher than for women.

<sup>3</sup> Charts illustrating the amounts of individual benefits broken down by gender and voivodeship in given years in Poland have been included in the attachment to this study.

In 2017, the biggest difference was about 45%, in 2018 about 47% (in the Silesian voivodeship), the smallest in 2017 and 2018 was about 30% (in the Lublin voivodeship).

#### **4.3. Parental leave**

The average daily amount of parental leave in 2017 as well as in 2018 (regardless of the gender) was the highest in the Mazovia voivodeship and was, respectively, PLN 90 for women, PLN 151.9 for men, and in 2018 PLN 92.5 for women and PLN 161.7 for men. The lowest average daily amount of parental leave for women was PLN 57 (in 2017) and PLN 59.6 (in 2018) in the Holy Cross voivodeship, and in the case of men it was PLN 67.2 in 2017 in the Opole voivodeship and PLN 71.6 in 2018 in the Lublin voivodeship. In 2018, the average amount of parental leave for women was higher in each voivodeship compared to the previous year. The largest increase was recorded in the Lodz voivodeship (approx. 4.74%), the smallest in the Opole voivodeship (approx. 2.65%). In the case of men, the highest increase was recorded in the Opole voivodeship (approx. 37.21%), while in three voivodeships decreases were noted for the average amount of the parental leave (in the Lublin voivodeship a decrease by approx. 2.14%, in the Lubusz voivodeship by approx. 10.63% and in the Pomeranian voivodeship by approx. 11.97%). In each voivodeship in both examined years, the average daily rate of parental leave was higher for men. In 2017, the largest difference was over 50% (in the Pomeranian voivodeship), in 2018 about 45% (in the Lower Silesian voivodeship). The smallest difference in 2017 was recorded in the Opole voivodeship (9.78%), in 2018 in the Lublin voivodeship (16.42%). Considering the number of days spent on parental leave in each voivodeship in the analysed years, women were the main beneficiaries, about 99.5% of all leave days were used by women, men used this benefit to a minimum degree.

#### **4.4. Paternity leave**

The average daily amount of paternity leave in both analysed years was the highest in the Mazovia voivodeship and amounted to, respectively, PLN 169.8 and 178.3. The lowest average daily amount of this benefit was PLN 98.6 and 105.3 (the Warmia and Masuria voivodeship). In 2018, the amount of this leave was higher in each voivodeship compared to the previous year. The largest increase was recorded in the Silesian voivodeship (approx. 9.46%), the smallest in the Kuyavian and Pomeranian voivodeship (about 4.62%). Taking into account the number of days spent on paternity leave, on average in 2017, 126 100 days of leave were used, in 2018 138 800 days, except that in the Mazovia voivodeship, respectively, 492 000 days were used in 2017 and 530 000 days in 2018, while in the Opole voivodeship 36 600 days in 2017 and in the Lubusz voivodeship 41 100 days in 2018. The analysis of empirical data confirmed the hypotheses put forward in the article regarding the burden of women with the care work for children. The results confirmed the widespread belief that the mother deals with children and the father occasionally engages himself in these duties (Bulleting of the Civil Rights Ombudsman 2015, p. 60). Despite the legal solutions (care and maternity benefits) available to both parents, women are still the main beneficiary of all benefits discussed in the study (apart from the paternity leave, which can be used only by the employee – child's father).

### **5. CONCLUSION**

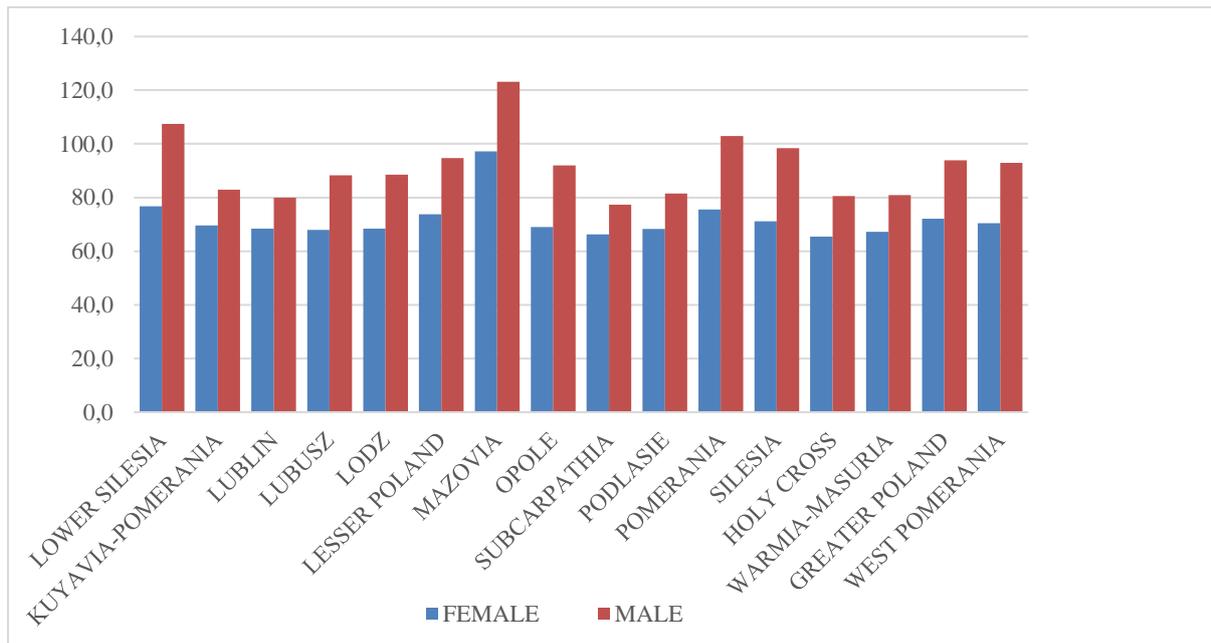
Summing up the results of the conducted research, it can be stated that women-mothers in Poland performing simultaneously paid employment are also mostly burdened with obligations arising from having children. The analysis clearly confirmed the hypotheses that were formulated at the beginning of the study. Women in Poland, who simultaneously provide work on the basis of an employment contract, are the main beneficiary of the maternity benefits. The absence caused by personal care over offspring is several times longer compared to the absence of employees – fathers, despite the fact that both parents have the same rights when using care

allowances and some maternity benefits. In the analysed years, women were more often absent from work (this trend has not changed for several years - see e.g. Gomółka, 2018, p. 55) and received lower benefit for this period (regardless of its type) in each voivodeship in Poland. The use of available parental benefits (offered to both parents) exclusively by women results in prolonging her absence from work, which will negatively affect the remuneration received by women. This may have a negative impact on her professional career and, as a consequence, increase the disparity between women's and men's earnings. Therefore, the results of the conducted research give rise to the need to deepen the analysis to examine the relationship between absences caused by personal childcare and relative wages in Poland.

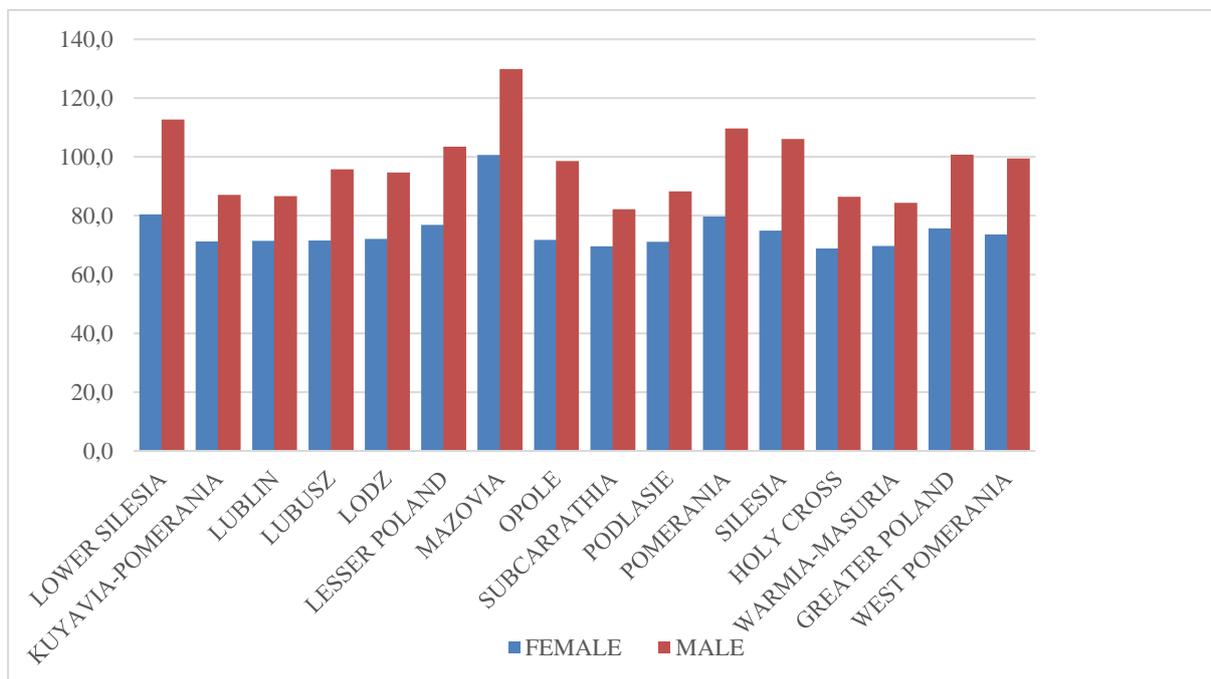
#### LITERATURE:

1. Bulletin of the Civil Rights Ombudsman 2015, No. 7:  
<https://www.rpo.gov.pl/pl/content/zasada-rownego-traktowania-%E2%80%93-prawo-i-praktyka-nr-18-godzenie-rol-rodzinnych-i-zawodowych-rowne>
2. Budig, M., England, P. (2001). The Wage Penalty for Motherhood. *American Sociological Review*, Vol. 66, No. 2, pp. 204-225.
3. Budig, M., Mistra, J., Bockmann, I. (2010). The motherhood penalty in cross-national perspective: The importance of work-family policies and cultural attitudes. *Luxembourg Income Study (LIS) Working Paper Series*, No. 542.
4. Dustmann, Ch., Schonberg, U. (2012). Expansions in Maternity Leave Coverage and Children's Long-Term Outcomes. *American Economic Journal: Applied Economics*, Vol. 4, No. 3, pp. 190-224.
5. Gomółka, A. (2018). Wpływ świadczeń z tytułu rodzicielstwa na wynagrodzenia w Polsce. In Tanaś, V., Welskop, W., *Rodzina w społeczeństwie konsumpcyjnym* (pp. 49-59). Łódź: Wyższa Szkoła Biznesu i Nauk o Zdrowiu w Łodzi.
6. Korpi, W. (2000). Faces of Inequality: Gender, Class, and Patterns of Inequalities in Different Types of Welfare States. *Social Politics*, Oxford University Press, pp. 127-191.
7. Michalska, K. (2013). Dłuższe urlopy macierzyńskie nie uratują naszej demografii, a pogorszą sytuację kobiet na rynku pracy. *Analiza Forum Obywatelskiego Rozwoju (FOR)*, No. 07/2013.
8. Pollmann-Schult, M. (2017). Single Motherhood and Life Satisfaction in Comparative Perspective: Do Institutional and Cultural Contexts Explain the Life Satisfaction Penalty for Single Mothers? *Journal of Family Issues*. Retrieved 31.07.2019 from: <https://doi.org/10.1177/0192513X17741178>.
9. Sielska, A. (2017). *Dyskryminacja instytucjonalna kobiet na polskim rynku pracy*. Warszawa: CeDeWu.
10. Schonberg, U., Ludsteck, J. (2014). Expansions in Maternity Leave Coverage and Mother's Labor Market Outcomes after Childbirth. *Journal of Labor Economics*, Vol. 32, No. 3, pp. 469-505.
11. The Act of June 26, 1974 (Journal of Laws of 1974 No. 24 item 141).
12. The Act of October 13, 1998 on the social insurance system (Journal of Laws of 2016, item 963).
13. The Act of June 25, 1999 on cash benefits from social insurance in case of illness and motherhood (Journal of Laws of 2019, item 645).
14. The Act of May 28, 2013 on amending the act- Labour Code and certain other acts (Journal of Laws of 2013, item 675).
15. Zachorowska-Mazurkiewicz, A. (2016). *Praca kobiet w teorii ekonomii. Perspektywa ekonomii głównego nurtu i ekonomii feministycznej*. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.

**APPENDIX**



*Chart 1: The average daily amount of care allowance (in PLN) paid by ZUS in 2017 to insured with the 01XX insurance code by gender and voivodships<sup>4</sup> (Statistics and Actuarial Forecasts Department ZUS)*



*Chart 2: The average daily amount of care allowance (in PLN) paid by ZUS in 2018 to insured with the 01XX insurance code by gender and voivodships (Statistics and Actuarial Forecasts Department ZUS)*

<sup>4</sup> The group of insured persons with the insurance title code 01XX includes employees, former appointed employees or former civil servants with whom the employment relationship has been terminated, receiving a cash benefit for the period after termination of employment.

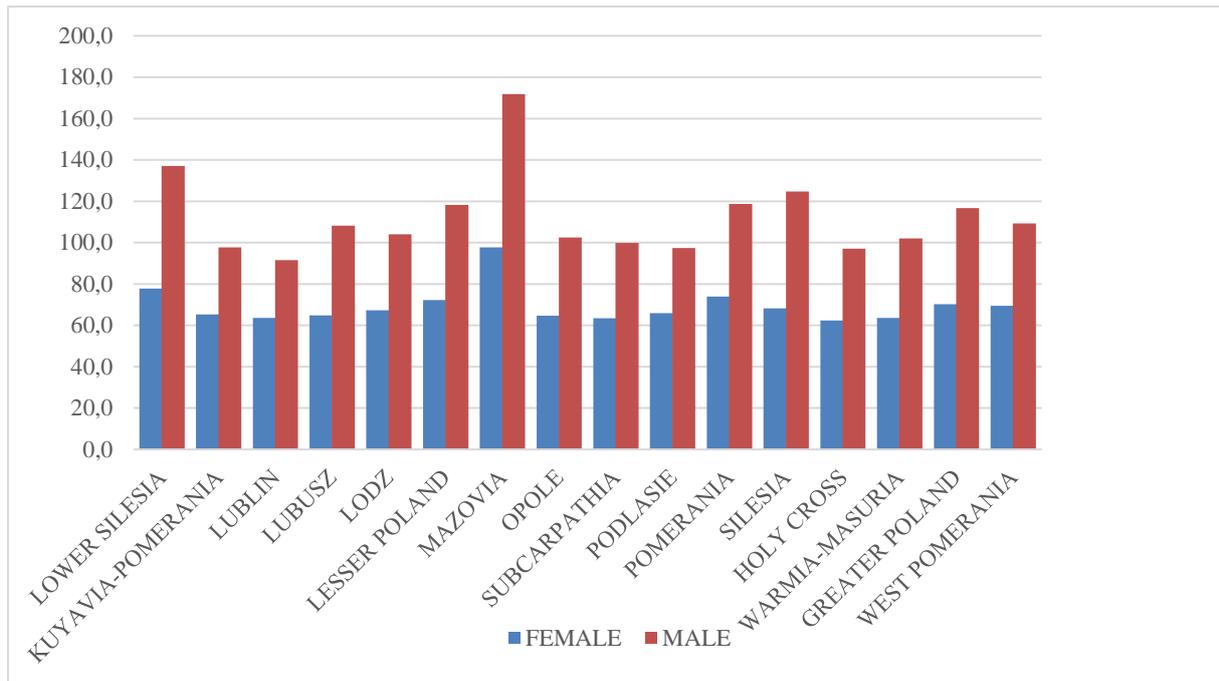


Chart 3: The average daily amount of maternity allowance (in PLN) paid by ZUS in 2017 to insured with the 01XX insurance code by gender and voivodships (Statistics and Actuarial Forecasts Department ZUS)

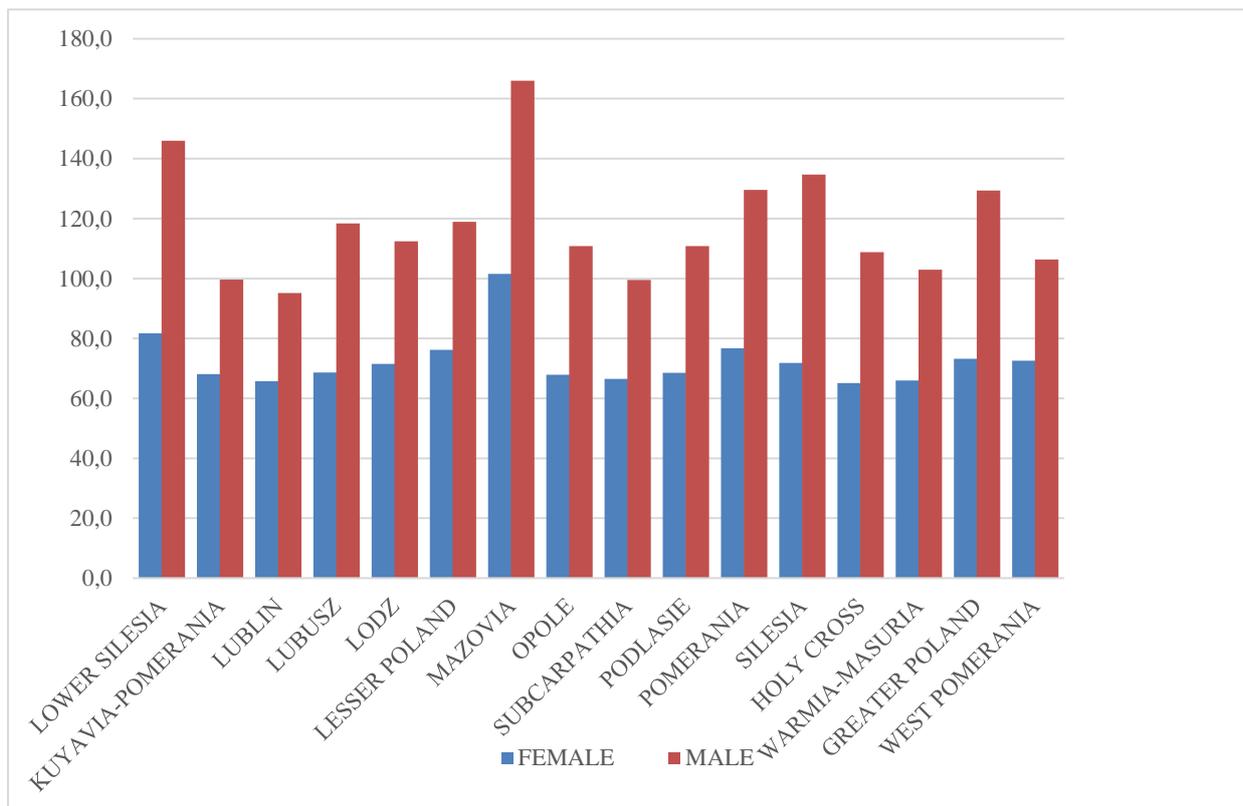


Chart 4: The average daily amount of maternity allowance (in PLN) paid by ZUS in 2018 to insured with the 01XX insurance code by gender and voivodships (Statistics and Actuarial Forecasts Department ZUS)

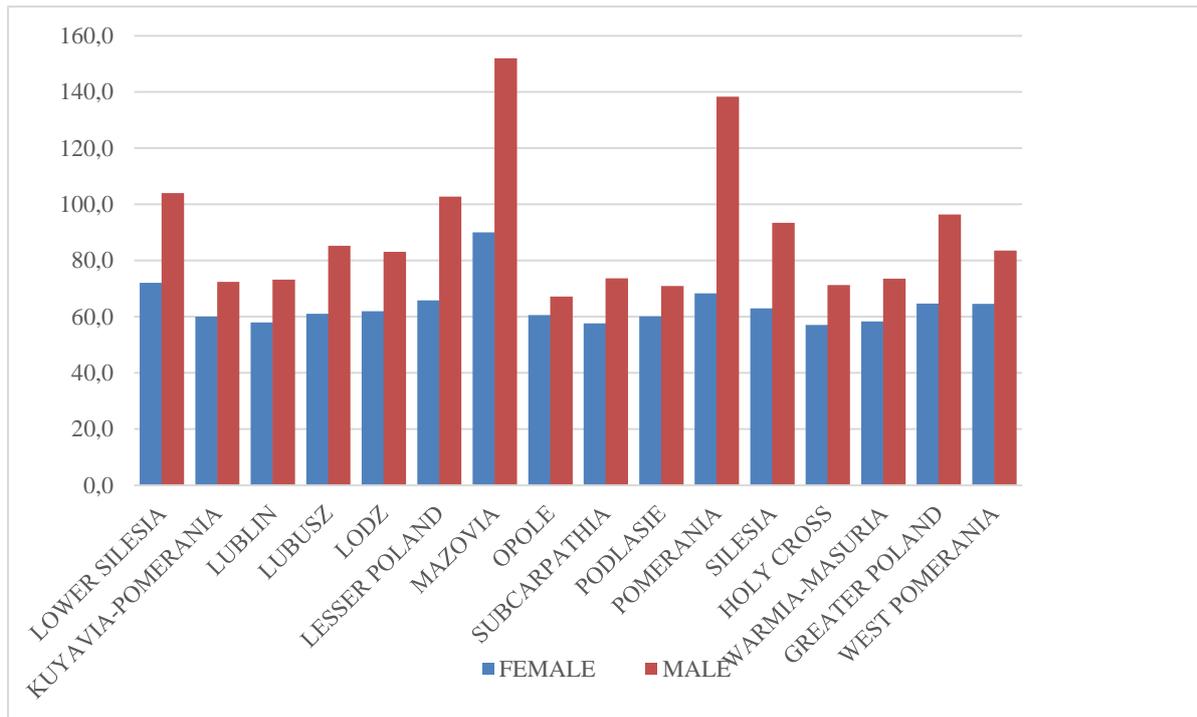


Chart 5: The average daily amount of parental leave (in PLN) paid by ZUS in 2017 to insured with the 01XX insurance code by gender and voivodships (Statistics and Actuarial Forecasts Department ZUS)

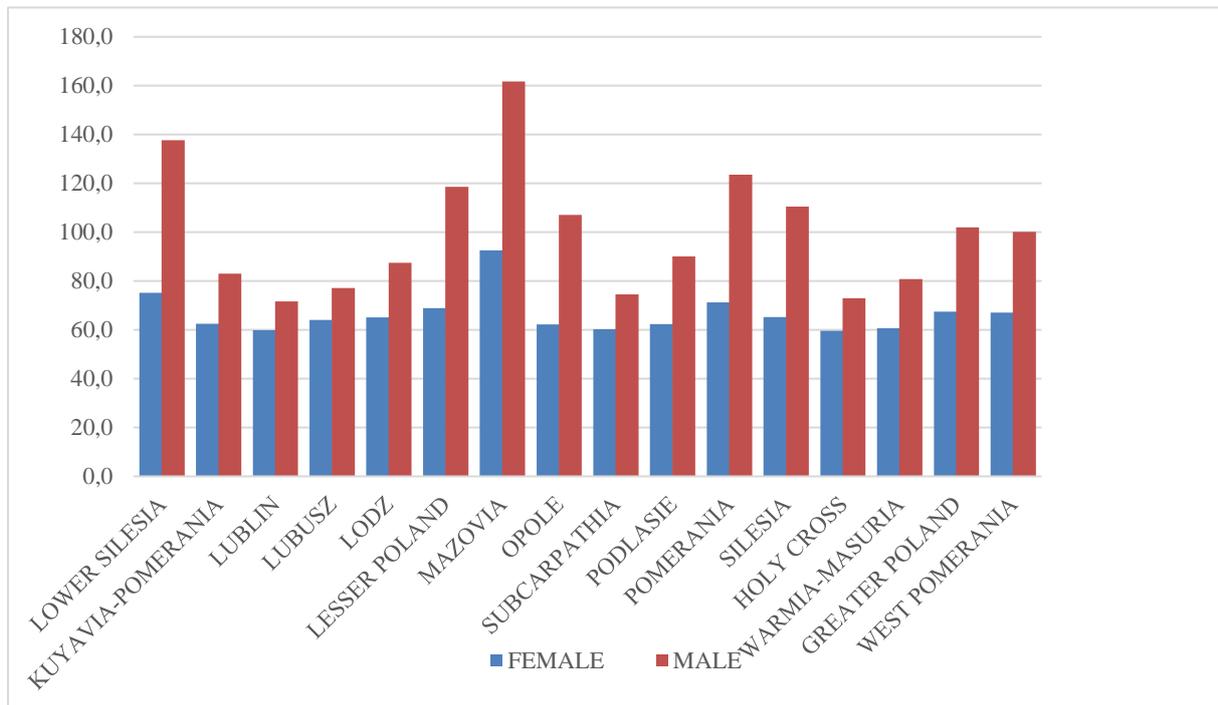
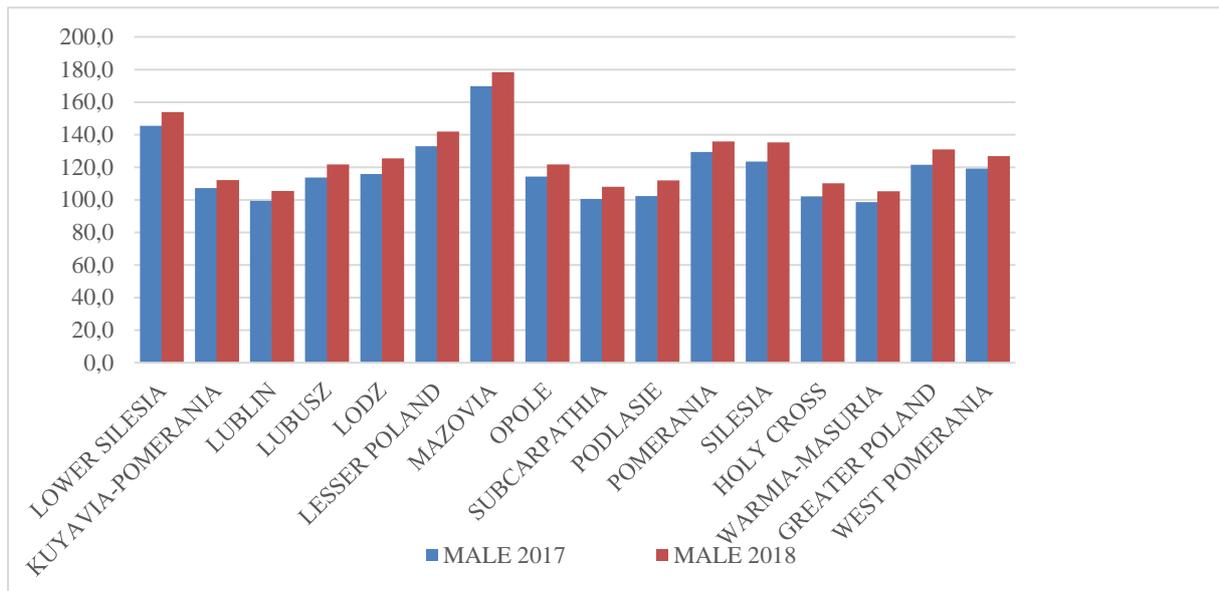


Chart 6: The average daily amount of parental leave (in PLN) paid by ZUS in 2018 to insured with the 01XX insurance code by gender and voivodships (Statistics and Actuarial Forecasts Department ZUS)



*Chart 7: The average daily amount of paternity leave (in PLN) paid by ZUS in 2017-2018 to insured with the 01XX insurance code by gender and voivodships (Statistics and Actuarial Forecasts Department ZUS)*

## GLOBALIZATION AND CLIMATE CHANGE - ARE STATE INTERVENTIONS A SOLUTION?

**Hana Polackova**

*University of Economics in Bratislava,  
Faculty of National Economy, Slovak Republic  
hana.polackova@euba.sk*

### **ABSTRACT**

*Globalization in the economy, on the one hand, has enabled the growth of society's wealth and poverty alleviation, while on the other hand, great economic development has had a negative impact on the environment. Economic growth and international trade have allowed the wealth of society to grow, but human society has parasitized nature and has long depleted natural resources - water, land, forests. In the countries of the former socialist bloc after 1945, such behavior was intensified by ignoring the historical experience of our ancestors and distorted property relations. After the transformation of the economy at the end of the 20th century, these countries also succumbed to global economic pressures and the pursuit of profit at all costs, which accelerated unscrupulous behavior towards the environment. Environmental offenses and environmental crimes are increasing worldwide. We see the consequences in the alarming signals of the changing climate, which can be observed, for example, in increase of the price of agricultural commodities, food and various social threats. The need for environmental protection has therefore already been reflected in the pursuit of international conventions and various environmental projects. The aim of this paper is to describe the possibilities offered by the use of knowledge from economic reality, economic theory and economic history to protect against climate change. Information on this article was drawn from economic, historical, environmental and meteorological sources. In the paper the historical-logical approach and genetic-historical analysis were used.*

**Keywords:** *climate change, market economy, soil drought, state intervention*

### **1. INTRODUCTION**

We all feel the impacts of climate change. Climatologists have been assessing the past 30 years and are very pessimistic. Jean Baptiste Joseph Fourier (1768 – 1830) discovered the greenhouse effect nearly 200 years ago and subsequently, at the end of the 19th century, Svante Arthur Arrhenius (1859 – 1927) brought in the influence of CO<sub>2</sub> on the warming of the Earth. The burning of fossil fuels was found to have an impact on the warming. Later, other factors that influence global warming were also specified, but only after the 1950s were the negative consequences pointed out. Proposed measures for protection of the climate have met with rejection from politicians, businesses and consumers, too, out of the fear of price increases, lowering living standards due to a decline in aggregate demand caused by a reduction in consumption and growth in unemployment. Globalization, the effort to achieve maximum profit and reckless behaviour towards nature have further accelerated the problem. From the international point of view, climate and its change has been under scrutiny since 1979, when on the initiative of the United Nations the World Climate Programme (WCP) was established at the 8th meeting of the Congress of World Meteorological Organization. Since 1990 it has addressed the necessity for a major reduction of CO<sub>2</sub> in the atmosphere. Politicians, despite the great efforts made, are still unable to decide and put the agreement into practice. The result is today's concentration of carbon dioxide on a level that corresponds to the pessimistic scenarios of thirty years ago. Countries with the largest production of greenhouse gas emissions bypass the worldwide agreement. Climate sceptics try to boycott the agreement and trivialize the problem.

We can see this as an effort to maintain the level of consumption and convenience of the era as well as economic pressure of large companies, which could see their profits reduced by various measures. From a global point of view, we perhaps cannot expect a sharp reduction in greenhouse gases in the short term. But we can no longer wait. Perhaps the only solution is to start applying basic environmental protection measures within the country and to behave in a socially responsible way even without existing international consensus. All available modern technologies will need to be used. Of course, while taking into account that the country does not experience major economic disadvantage. In the article we analyse the problems and their economic contexts, and we propose options for partial solutions to mitigate the negative impact of climate change.

## **2. CLIMATE CHANGES AND WHAT MOST INFLUENCES THEM**

In the article *Global Warming, Climatic Changes and Disputed Arguments* (Updated on 4 March 2007) (Lapin, 2007) it is stated that since the organizing of the World Climate Programme in 1979 arguments have been heard from opponents that all climate changes are only of a natural character and the mankind cannot significantly influence them through his activities. Discussions have been conducted on the potential slowdown of economic development, on legislation, technologies and emission quotas, but little about the physical causes of climate change. The Earth's climate system is influenced by natural factors as well as human activities. Significant natural factors include things like a recurrent change in sea currents and temperature fluctuations in the surface waters during a Pacific El Niño and changes in solar activity and volcanic eruptions. The fall of an asteroid would also be a natural factor. Their impact on the Earth's climate is mostly short-term. In contrast to this, the consequences of the negative impact of man on the environment have a long-term character and this impact is still increasing. One of the consequences is global warming, which is caused mainly by emissions of CO<sub>2</sub> and the amount of methane and water vapour in the atmosphere. These are the so-called negative externalities arising as a by-product of human activity. They do not pass through any market, and the one who causes them transfers the costs onto others. This then impedes effective allocation of scarce resources. More than equilibrium amounts are produced, since the side effects of production (additional costs) are not taken into account. A third party bears these costs. In the case of climate changes, we are speaking, for example, about the fossil fuel industry. The extraction of fossil fuels is associated with the release of methane into the atmosphere, and the burning of fossil fuels is a significant source of carbon dioxide. Figure 1 depicts the evolution of the average carbon dioxide content of the atmosphere as reported by the National Oceanic and Atmospheric Administration. The indicator parts per million (ppm) shows an alarmingly rising trend, and according to the latest update on 8 July 2019, it reached a level of 413.92 ppm in June 2019. This is the amount of particles per million, respectively, 0.0413 %. At the beginning of the industrial revolution, the amount of CO<sub>2</sub> in the atmosphere was about 280 ppm. Another significant greenhouse gas is methane (CH<sub>4</sub>). It is released, for example, in cattle breeding, rice cultivation, from wetlands, subsurface landfills and is also ventilated from coal mines. The problem is that it is much more potent than the greenhouse effect of CO<sub>2</sub>, and it is not regulated. The concentration of CH<sub>4</sub> in the atmosphere is increasing significantly. The reasons are not completely clear, but the impact of agriculture is primarily assumed. Figure no. 2 shows the trend of methane in the atmosphere, as presented by the National Oceanic and Atmosphere Administration. The indicator parts per billion (ppb) according to the last update from 5 July 2019 achieved a global monthly average 1866.4 ppb in March 2019. One ppb means that one molecule of each billion molecules in the test sample of air after the removal of water vapour is CH<sub>4</sub>.

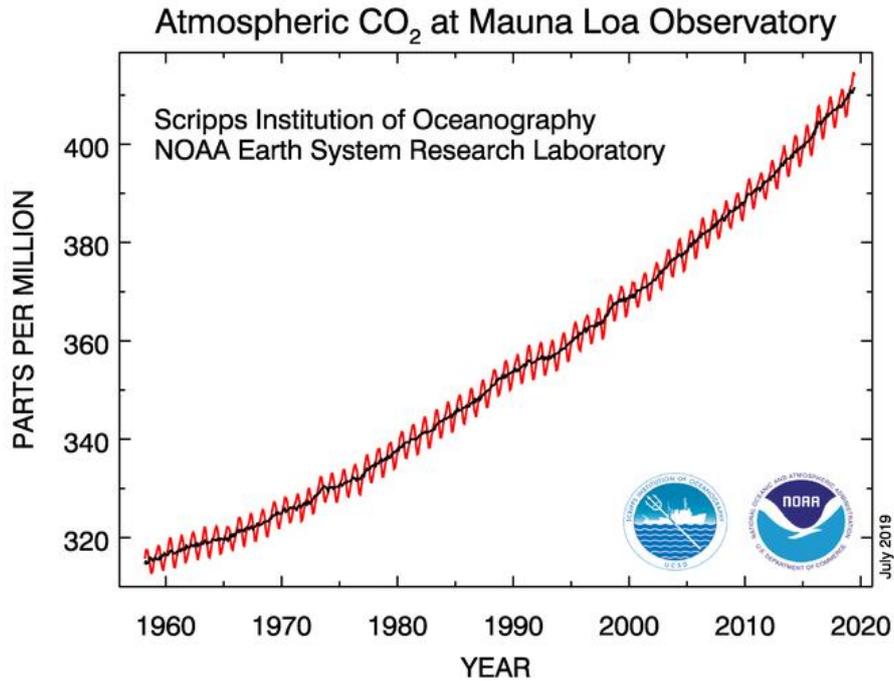


Figure 1: Atmospheric CO<sub>2</sub> at Manua Loa Observatory (<https://www.esrl.noaa.gov/gmd/ccgg/trends/>)

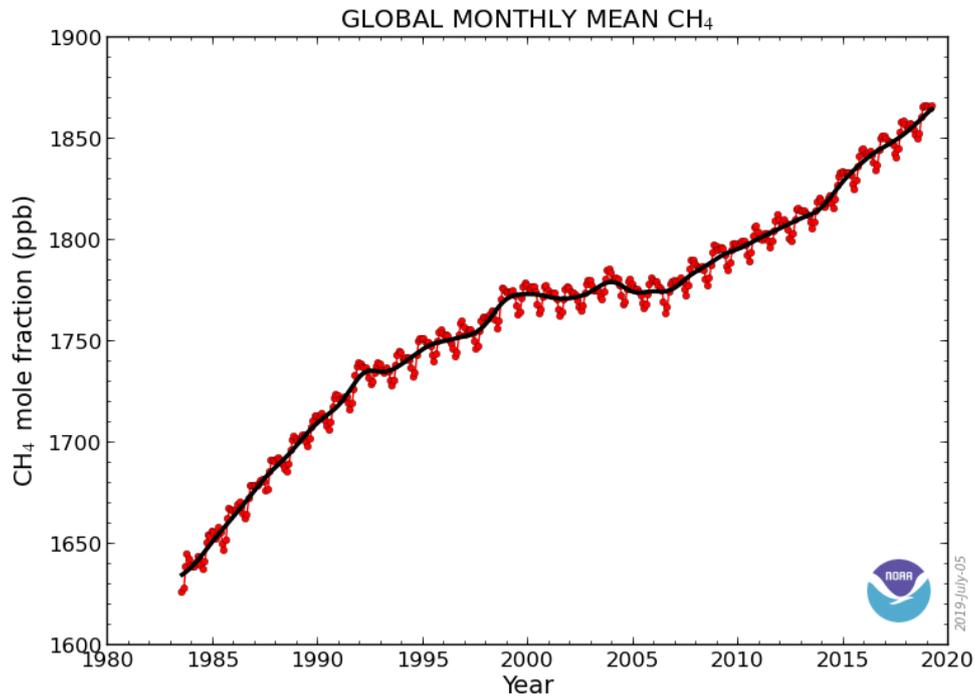


Figure 2: Global Monthly Mean CH<sub>4</sub> ([https://www.esrl.noaa.gov/gmd/ccgg/trends\\_ch4/](https://www.esrl.noaa.gov/gmd/ccgg/trends_ch4/))

Non-renewable energy sources – coal, oil and natural gas – originated over millions of years through photosynthesis and later by the decomposition of living organisms that were chemically modified under the surface of the Earth. Since the beginning of the industrial revolution, i.e. over about the past 250 years, we have rapidly and intensively returned large amounts of CO<sub>2</sub> from fuels into the atmosphere, which nature stored into the ground over hundreds of millions

of years. The releasing of CO<sub>2</sub> and other greenhouse gases is at such a measure that the biosphere is unable to handle them in a natural way. M. Lapin (2007) says that processes cannot develop in the oceans and on the continents that would take up the excessive carbon from the atmosphere in the relatively short period of several decades. And since the average duration of CO<sub>2</sub> in the atmosphere is about 120 years, expanding forests will not solve the problem; a method of returning biomass to underground storage is necessary. It's a vicious circle. Global warming causes a rise in the amount of water vapour in the atmosphere. The water vapour then increases the greenhouse effect still further. Its share in the greenhouse effect is estimated to be as high as two-thirds. The growing greenhouse effect creates potential energy for physical processes in the atmosphere, the circulation of heat and water, the circulation of the atmosphere. Evidence of ongoing global climate change is clear in the long-term, ever more commonly occurring extreme fluctuations in the weather. As worldwide meteorological measurements have run continually since the mid-19th century, this phenomenon is easily demonstrated. And studying the development of weather deeper into the past, from sediments, stalactites, glaciers, archaeological finds, old wood and the like, confirms this. "After 1975 major deviations from climate development up to that point occurred and not only regionally but global average air temperatures also began to rise relatively rapidly. The growth trend in air temperature over the larger part of the Earth, especially on the continents of the northern hemisphere and in the Arctic, has surpassed all existing changes for the entire period of meteorological measurements.... Scientists are in agreement on the fact that such development is to a significant measure influenced by human activities, especially the rapid emissions of greenhouse gases into the atmosphere. Therefore, the need for a reduction of man's influence on the climatic system of Earth began to be spoken of more loudly, especially the lowering of the emissions of greenhouse gases into the atmosphere and the more economical use of the land" (Lapin, 2014). Lapin also states that climate change also took place in the past, too. This had only a local character, however; some places grew warmer while others got cooler. At present, however, global climate change is occurring, and it is running very rapidly. An increase in the climate by 1 °C is not a problem for ecosystems; they are able to adapt. Warming by 2 °C may then cause them great instability, however (Lapin, 2007). "According to the report of the World Meteorological Organization (WMO), which cites the current assessment of global climatological centres (particularly NASA and NOAA), year 2018 was the fourth warmest in the new age history of meteorological measurements, that is since at least 1880. The continuing long-term warming trend of the global climate system, linked with the record high (global) concentrations of greenhouse gases, has led to a very remarkable accumulation of the historically warmest years to the period of the last five years (2014-2018; order of the warmest years: 2016, 2017, 2015, 2018 and 2014). According to preliminary data published on the web page of the European monitoring programme Copernicus (Climate Change Service), the year 2018 ended in Europe as the third warmest, behind years 2014 and 2015, and did so despite the fact that the warm half-year (April to September 2018) was in Europe warmest of all in the last 40 years". (Pecho, Markovič, 2019)

### **3. THE CONDUCT OF SOCIETY FROM THE VIEWPOINT OF ECONOMIC THEORY**

Economists explain such behaviour of society using various theories – for example, the Tragedy of the Commons theory, which says that a common limited resourced (in our case the common global climate) is shared by several individuals (used by various economic subjects) and those try to maximize personal benefit (or profit). This, however, can have as a consequence the irreplaceable depletion of the given resource (permanent damage to the global climate) and to a reduction of the benefit for all (tragedies). Another example can be the game theory – the Prisoner's Dilemma.

The Prisoner's Dilemma describes a situation when it would be optimal for the prisoner's if they cooperated with one another (agreed and maintained the agreement). If, however, they behave only with respect to their own interests (in the fear that the other party will break the agreement and thus benefit), both will violate the agreement and the outcome will be worse for both parties. This then suggests that it is not sufficient for leaders to come to a consensus on taking significant measures for climate protection. Compliance must be ensured, since the country that violates the agreement will temporarily gain an economic advantage. Consequently, all countries will begin to break the agreement, resulting in extremely unfavourable conditions for human life.

#### **4. THE CONSEQUENCES OF CLIMATE CHANGE FOR THE ECONOMY**

The effects of global warming of the planet caused by the greenhouse effect are difficult to predict, given the various factors, but could be disastrous for humanity. Unexpected climatic fluctuations are beginning to occur with alarming regularity in various weather and hydro-phenomena. At current temperature conditions, the long-term deficit in atmospheric precipitation is causing drying up of streams and springs as well as soil drought. In our temperate climate zone, the way of life for centuries has evolved under different climatic conditions, and technological solutions have been built on different conditions. These have changed significantly over the past 30 years, however. The entire economy – including technical infrastructure, the construction of homes, transport – needs to be rapidly adapted to different conditions. A lack of precipitation affects all sectors of the economy. The problem is felt significantly by forestry, water management and farming. Farmers, in particular, are increasingly dependent on irrigation, but the surface and ground water reserves are falling. The result is a rise in prices in food and agricultural commodities. The alternating of floods with very dry seasons has become the norm in recent times. Since farmers can insure their harvest only in the stage of seeding, such climate fluctuations are a disaster for them. Foresters are battling with drying forests due to lack of rainfall and the multiplication of pests, for which optimal climatic conditions have been created. A risk of forest fires has emerged. A major problem also occurs if the industrial economy is based on high water consumption. Since water is an escaping source, if someone draws a lot of water, another's water supply is reduced. Problems arise particularly in regions with a predominantly surface supply of water. Occasional rainfall is torrential, which causes complications with local floods and the flooding of fertile soil. Flood protection measures built in the past did not anticipate the situation today. New pests and exotic diseases are also spreading. Increasing expenditures for food and for eliminating the consequences of extreme weather will affect aggregate supply, reduce GDP and have an upward impact on inflation rates. The consequences of global warming are the decline and disappearance of tundra by melting permafrost, the weakening of the Gulf Stream, an increase in the numbers of cyclones and the spread of certain diseases (such as malaria). Scientists increasingly speak about the imminent flooding of coastal areas due to the melting of ice from the high mountains and the coastal ice of the Arctic, Greenland and Antarctica. (In addition, as mentioned above, water vapour multiplies thermal expansion. Ice, on the other hand, reflects the sun's rays). The threat of flooding relates mainly to fertile river deltas and the densely populated coastal areas of Asia, which, together with increased droughts in sub-Saharan Africa, could cause hunger and great population shifts, so-called ecological migration. To estimate the scenario for the future is very complicated. There are many variables that we do not know of and which have a significant impact on greenhouse gas production: population growth, a rise in consumption (demand is influenced by various factors, for example, fashion and the weather), the development and growth of transport, business conditions, industrial change, policy decisions, technological changes and the like. Even the emergence and use of something like cryptocurrencies leaves behind a carbon footprint.

They are emitted on the basis of a complicated mathematical algorithm using large volumes of computer capacity and their “production” is therefore very energy intensive. In his article on the pursuit for energy (not using the latest technologies to obtain it because they are costly), Alexander Ač states: “The more complex and interconnected a society becomes, the more energy it takes to solve problems. There is necessarily also a decrease in the return (profitability) on the solution of the given problem. At some critical point, we will get into a state where solving problems brings negative gain (energy loss). Then, of course, it is better not to solve the problem, but this is not part of human nature. We want to tackle the problem of an aging population by increasing birth rates, growing indebtedness with even more indebtedness and the lack of oil by its further extraction or with gigantic solar projects. Thus the only way to solve today’s problems is to reduce energy consumption. But this is a problem, because it is in conflict with the principles of endless economic growth.” (Ač, 2010)

## **5. ECONOMIC THEORIES AND THE ISSUE OF CLIMATE CHANGE**

Since current economic theory is based on pre-globalization principles, at present we have no integrated economic theory that would take into consideration and explain all the ongoing economic changes. Therefore, with economic policy it is necessary to suitably combine the knowledge of known theories and at the same time avoid measures which could have a negative impact on global warming. Classic economics came with free enterprise and the theory of comparative advantages and the benefits of international trade. In contrast to previous periods, the economy of countries is today more specialized (Slovakia mainly in the automobile and electronics industries), and economies are open and dependent on international trade. Concentrating on the production of what is relatively lower in cost, however, can cause a problem with food self-sufficiency and the necessity for greater portion of food imports. In the case of crop failures the importing of food may be a problem. Thus, as a consequence of sudden (climatic, political or economic) changes, there is no guarantee that there will be permanent access to adequate nutrition. Another consequence of growth in international trade is the enormous rise in transport. Despite the fact that the majority of international trade is done over water, truck and air transport of goods has risen greatly. This is manifested in a growth in CO<sub>2</sub> emissions. The neoclassic economy is orientated on maximum usefulness of the consumer and maximizing profit. But we cannot afford to prefer maximum profit and maximal use at the expense of the environment. Some developed countries externally proclaim the protection of the environment, while shifting production (especially those with a negative environmental impact) to developing countries due to the low production costs. This does not solve our problem. On the contrary, it makes things worse. In developing countries older technologies are used, and there are often problems in complying with laws and environmental regulations, while finished products must be transported halfway around the globe. And the growth of transport is one of the sources of the rise of CO<sub>2</sub> in the atmosphere. Keynesian theory is based on efficient demand, on influencing the inclination to consume and on governmental expenditures. But growth of consumption cannot come at any price. Supporting consumption may be contrary to environmental protection, since a lot of poor quality products are made, which would mean wasting energy, resources and goods. State interventions and strict legislation for environmental protection could also be one of the solutions with the directing of consumption towards energy-saving technologies. The theory of elections analyses voters, politicians, the election process and bureaucracy. It points to the fact that voters are not well informed and are influenced by many interest groups. To the fact that the social costs of politicians favouring their own interests and their effort to be re-elected are high. That the voting process in elections may be influenced. That a politician should try to find loyal officials whose motivation is not to work much, to expand their own office and to improve the benefits associated with the function.

The problem, however, is that it is politicians deciding on legislation, governing a state and concluding international agreements. Their terms of office are relatively short. Then, in an effort to obtain the support of their political parties and from industry and the fossil-fuel business, they may consider climate change of a few tenths of a degree over a period of one generation (while maintaining the status quo), as given by climate scientists, as insignificant. However, we all feel the impacts of their poor decision-making. Neoconservative conceptions involve economic liberalism and low taxes. From the viewpoint of protecting the climate, however, higher taxes may be an appropriate instrument for influencing the economy in the right direction. Social economy applied in practice above all on the local level could provide a certain solution and help remove some of the disadvantages of the mentioned economic theories. We see social economics as a scientific discipline which studies motives and means of decision taking of the society entities on use of scarce resources to produce goods and services and on their division between individuals and social groups while complying with the principles of social solidarity and social justice in relation to equality of opportunities (Pongrácz, 2015, p. 24). There are social enterprises that provide their services and goods to disadvantaged groups, work integration social enterprises and those that are active in the field of environmental protection.

## **6. SMALL PROPOSALS FOR REDUCING THE IMPACTS OF CLIMATE CHANGES**

As a partial measure for saving energy and retaining water in the soil, consider the possibility of legislatively anchoring the obligation to place car parks when constructing public buildings exclusively on rooftops or underground, so that the ground can soak up rainwater to the maximum and not create thermal islands in cities. Regularly carry out an energy audit of all public buildings (schools and other educational institutions, offices, public administration institutions, hospitals, etc.) and, for example, stimulate using tax relief to achieve the specified energy efficiency requirements. The most important offices and institutions should without exception be located in energy-efficient buildings. The roofs of public and state school buildings, offices, institutions and hospitals should have vegetation (green) or be fitted with photovoltaic solar panels, unless this is prevented by technical or other reasons (e.g. a hospital heliport or roof parking). Due to the warming, experiences and proven elements of architecture from the southern countries – for example, open columned vaulted corridors on the ground floor of the buildings (so-called arcades) – should begin being maximized in the construction of urban buildings. People should be more motivated to care for public green spaces, for example, by using the option to plant or adopt trees on lands in towns and municipalities. The use of concrete, paved or asphalted surfaces should be strongly restricted. To maximize greenery, remove unused pavements and old roads and reclaim the land. For maximum rainwater retention – trap it in containers, construct trenches (saturation pits), loosen soil around trees and in public areas and alter curbs so that water from the sidewalks flows into the green areas and does not drain away immediately through public sewers. Plant new and reasonably large trees to replace old trees in a timely fashion. Plant trees that have a large crown at full growth. With regard to natural conditions, use appropriate sources of alternative energy. Permit the use of modern technologies to sanction producers who cause damage to the environment. From a barcode by means of a mobile application, it is possible to determine how and where a company manufactures a product and whether it behaves in a socially responsible way. Thus, it is possible to create social and economic pressure from consumers who refuse to buy goods (services) from producers who act in breach of the principles of environmental protection.

## **7. CONCLUSION**

Act No. 17/1992 on the Environment, as amended, published in the Collection of Laws of the Slovak Republic, defines the environment as follows: “The environment is everything that creates natural conditions for the existence of organisms, including humans, and is a

prerequisite for their further development. Its components are mainly air, water, rocks, soil, and organisms”. The environment has several important functions in an economy, the main one being life security, because it “provides the biological, chemical and physical systems that make life possible” (Romančíková, 2004, p. 20). Within the European Union, several action plans dealing with the environment have been elaborated since 1973, and EU environmental policy is an integral part of both EU policy and those of individual Member States. However, alongside the current focus of attention on the level of greenhouse gases and renewable sources of energy, improvement of the environment as a whole seems to be a secondary objective. From a transnational point of view, environmental protection policy is complicated by the disunity of environmental issues in states and regions and the varied impacts of individual sectors of the economy on the environment. Global consensus must ensure that countries that do not comply with the agreement do not benefit from an economic advantage. We can no longer wait on a significant reduction of fossil carbon emissions and other environmental measures. Human needs are unlimited and pressure on the environment is growing. It is necessary to begin immediately on the individual, local and regional levels with maximum support from the state and do so both legally and economically. The state and public institutions should set an example. To improve the current situation, it is necessary to select systematic and coordinated use of all possible resources available. A coordinated approach is a given. A poor example of an uncoordinated approach in terms of the environment, for example, is the counterproductive disturbance of railways in the context of the consequent inevitable growth of automobile transport. It is necessary to motivate business owners to take active and proactive approaches in the field of energy saving and environmental protection, for example, by tax relief or benefits with the use of modern and more economical technologies. To support the introduction of new technologies with lower energy requirements while preserving or even increasing productivity. To seek more efficient forms of transport (with lower fuel consumption and energy use). State interventions for environmental protection are therefore a necessary but not a sufficient condition for the survival of our species. It is also necessary to educate, encourage, motivate, reward and punish. To stimulate consumers to use modern, less energy-intensive appliances. To seek solutions for households living at or below the poverty line, so that they are not forced to meet their basic needs at the expense of the environment (e.g. by cutting and burning forests). To raise and motivate children regarding environmental protection in schools, but also with the example of behaviour by adults. To appreciate, support and reward good ideas. To systematically seek out and use small measures – including legislation – that have proven their worth in other countries. But the most important thing is to ensure and strictly monitor compliance with the legislation, without exception. Returning the responsibility for damage and applying potential sanctions – redressing damage and the obligation to restore a situation (if possible) to its original state, imposing fines, public works obligations or even imprisonment. The quality of the environment and the development of weather without extreme fluctuations is a prerequisite for sustainable growth and social well-being. Otherwise, we will have to continue to increase the amount of resources spent on removing the subsequent effects of global warming.

**ACKNOWLEDGEMENT:** *The article was written as part of the project VEGA 1/0367/17 “Economic legislative and institutional prerequisites and perspectives of social economy development in the V4 countries in relation to the support of social inclusion”*

#### **LITERATURE:**

1. Ač, A. (09.05.2010). Ropná katastrofa – špička ľadovca? *Sme: Komentáre*. Retrieved 03.08.2019 from <http://komentare.sme.sk/c/5367040/ropna-katastrofa-spicka-ladovca.html>.

2. Lapin, M. (2007). *Globálne otepľovanie, klimatické zmeny a sporné argumenty (doplnené): Global Warming, Climatic Changes and Disputed Arguments (Updated on March 4, 2007)*. Retrieved 03.08.2019 from [http://www.dmc.fmph.uniba.sk/public\\_html/climate/dezinformacie\\_2.doc](http://www.dmc.fmph.uniba.sk/public_html/climate/dezinformacie_2.doc).
3. Lapin, M. (2014). *Klimatické zmeny stručne: Úvod do problematiky klimatických zmien*. Retrieved 03.08.2019 from <http://www.milanlapin.estranky.sk/clanky/klimaticke-zmeny-strucne/>.
4. National Oceanic & Atmospheric Administration. (2019). *Atmospheric CO<sub>2</sub> at Manua Loa Observatory*. Retrieved 03.08.2019 from <https://www.esrl.noaa.gov/gmd/ccgg/trends/>.
5. National Oceanic & Atmospheric Administration. (2019). *Global Monthly Mean CH<sub>4</sub>*. Retrieved 03.08.2019 from [https://www.esrl.noaa.gov/gmd/ccgg/trends\\_ch4/](https://www.esrl.noaa.gov/gmd/ccgg/trends_ch4/).
6. Pecho, J. Markovič, L. (2019). *Posledné štyri roky boli globálne najteplejšie v histórii*. Retrieved 03.08.2019 from <http://www.shmu.sk/en/?page=2049&id=975>.
7. Pongrácz, E. et al. (2015). *Sociálna ekonomika*. Bratislava: Vydavateľstvo EKONÓM.
8. Romančíková, E. (2004). *Finančno-ekonomické aspekty ochrany životného prostredia*. Bratislava: ECO INSTRUMENT.
9. Zákon SR. (1992). *Zákon o životnom prostredí, 17/1992 Zb.* Retrieved 03.08.2019 from <https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/1992/17/20071001>.

# INCREASE OF RESIDENTIAL REAL ESTATE PRICES AS A THREAT OF SYSTEMIC RISK ACCUMULATION IN CROATIA – NEW CHALLENGES FOR MONETARY POLICY MAKERS

**Suzana Herman**

*University of Applied Science Baltazar Zaprešić, Croatia  
sherman@bak.hr*

**Petra Popek Biskupec**

*University of Applied Science Baltazar Zaprešić, Croatia  
pbiskupec@bak.hr*

## **ABSTRACT**

*The recent developments showed that financial stability and real estate prices are strongly related. Also, boom-bust price cycles in real estate sector have huge impact on systemic risk accumulation and can cause large macroeconomic imbalances. In the period of the recovery of the economy, the central banks have continued with policy of quantitative easing and stimulation of credit cycle upturns. Low interest rate environment and low-cost credit supply could contribute to increase of demand for housing loans. Consequently, the prices in residential real estate sector could increase. This paper analyses the developments in residential real estate sector and explores the possible causes of real estate price changes in Croatia. The correlation analysis confirmed that better financial conditions have strong positive correlation to residential real estate price growth. Also, the average nominal net payment and residential real estate prices have strong positive correlation. The Granger Causality test confirmed that banks' credit activity for house loans, the increase of nominal net payment and better financial conditions can cause residential real estate prices increase. The problem of residential real estate prices could encourage the procyclical behaviour of debtors and creditors, which in the long-run could lead to new systemic risk accumulation and instability of the macroeconomic balance. Due to events in the recent past, the regulators, especially central banks, observe the real estate prices trends. The prices of real estate used as collateral for housing loans have huge importance for monetary policy makers because they can affect the banks' balance sheet and stimulate the multiplication of loans and deposits. From that point of view, the role of residential real estate prices is crucial in the monetary transmission mechanism because of targeting effective monetary strategy.*

**Keywords:** *Financial stability, Monetary policy, Residential Real Estate Market*

## **1. INTRODUCTION**

The expansive monetary policy and low interest rate environment in the period after latest global financial crises contributed to real estate market recovery, especially in the sector of residential real estate. As the residential real estate sector has big impact in the economy, the developments in the residential real estate prices could have strong consequences on financial stability (Duca et al., 2019) Boom-bust cycles in real estate markets and fluctuations in real estate prices have already been major factor in subsidence of systemic risk, so it is necessary for regulators to track changes of residential price developments. (Hartmann, 2015) The problems with real estate bubbles had been already cause for more than 30 systemic banking crises in the past. All these crises were preceded by boom-bust cycles in residential real estate prices. (Praet, 2019) From that point of view, monetary policy, which is responsible for preserving one part of macroeconomic stability - price stability, must therefore also take into account the factors of maintaining the stability of the real estate prices and possible factors that affect the accumulation of systemic risks.

The first signs of changes in the macroeconomic environment that indicate possible rise in systemic risk are: a) growth of credit placements (especially housing and mortgage loans) and b) rise in real estate and property prices. The increase in borrowing and the growth of real estate prices are in mutual interaction. The increase of credit activity affects the growth in real estate prices whose procurement is financed by loans. The increase of real estate prices (where real estate is used as typical collateral for medium- and long-term credit borrowing) has a reversal effect on the growth of housing loans because for the purchase of the same but more expensive real estate, bank needs to approve a larger loan amount. The problem is that creditors do not include the contribution of their individual borrowing to the overall market volatility what increase market procyclicality. Thus, with collateralised borrowing, the value of collateralized assets depends on the state of the economy. If negative effects and financial difficulties occur, the value of collateral will decrease and this will spread negative effects on the overall financial system (Jeanne and Korinek, 2010). The market value of the property has a significant impact on the level of investment. Large fluctuations in property prices that are not realistically based, lead to overestimation or underestimation of a particular asset. Consequently, this leads to a rise or fall in investment. The problem of property prices is reflected in the procyclical behaviour of debtors and creditors, which in the long run leads to boom-bust cycles real estate prices and instability of the financial system. If the price of collateral (real estate, land, securities) is not included in the calculation of the inflation index (consumer price index) counted by the central banks, the effectiveness of monetary policy is limited. In small open economies, like Croatia, monetary policy is focused on conducting foreign currency exchange targeting policies. In times of welfare and positive economic trends, monetary policy was milder and more lenient, while at a time of recession it became more restrictive. The reason for this is the reaction of monetary policy to depreciation pressures when the central bank responds to the contraction of supply of money to defend the stability of the foreign exchange rate. (Lang, Krznar, 2004). Sometimes central bank may tolerate strong credit expansion too long if it doesn't threaten price stability. This phenomenon can result in overheating of the economy, excessive growth of financial institutions' assets, excessive borrowing of all sectors, increase of real estate prices and other assets and other instability factors that are not enough in the focus of the central bank. Because of limitations of monetary policy impacts, many countries, especially small open countries, started to introducing macroprudential measures to solve the problems of price and financial stability. Macroprudential policy, in combination with monetary policy, successfully affect the main drivers of systemic risk; the expansive credit expansion, intensive banking leverage and forming of real estate price bubbles.

## 2. LITERATURE REVIEW

Tobin (1969) raised the problem of real estate prices which until then in monetary theory had not been considered. According to the Tobin's theory, housing suppliers respond to the demands of housing consumers, building more new residential real estate when existing residential real estate prices are high relative to new home prices (Jud, Winkler, 2003). The real estate prices affect the monetary policy through the real estate price channel. Expansive monetary policy increases the amount of available money, which affects the increase in real estate demand. Finally, the increase in demand, affects the rise in real estate prices. Higher real estate prices make this property a better collateral for future borrowing, which increases bank lending activity. Given the fact that banks conduct a secondary money circulation through credit activity, the amount of money in the circulation increases with new borrowings (Ivanov, Lovrinović, 2008). Rise of residential real estate prices affect the economy in two ways: 1) increasing households' net wealth, which increases households' consumption and strengthening banks' balance sheets (because the increase in value of collaterals) and 2) decreasing the credit risk of households and of construction firms (Praet, 2019).

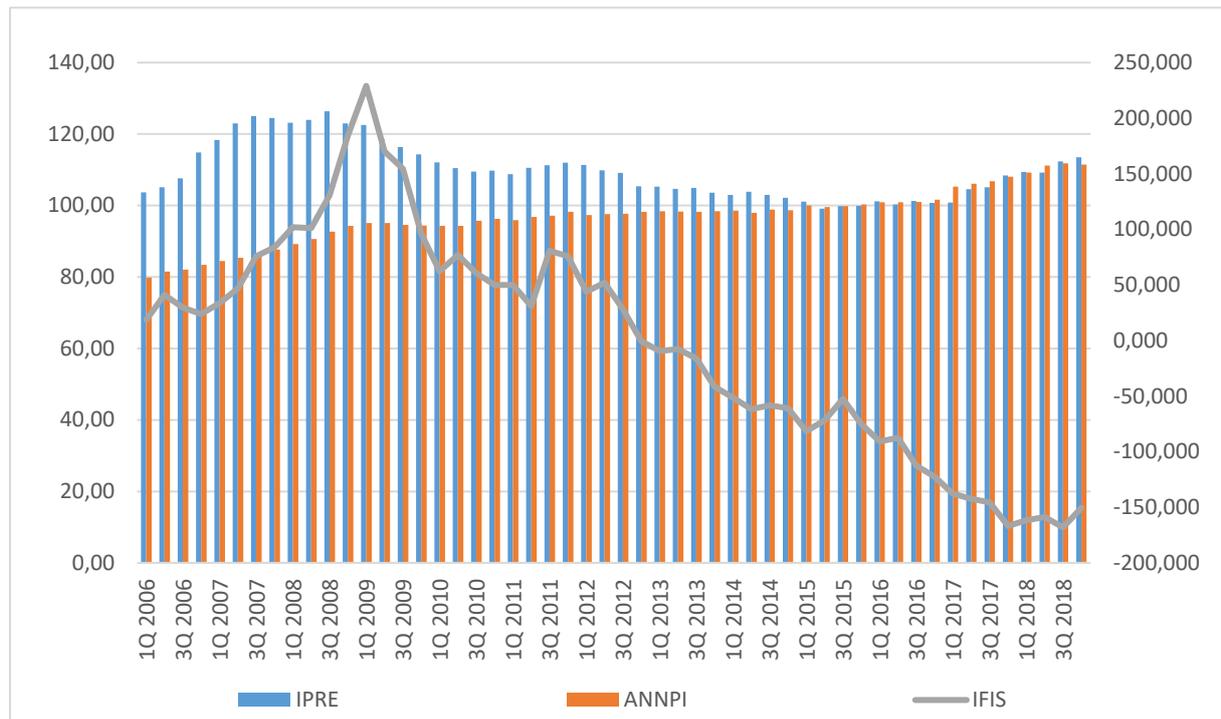
A strong rise in property prices (or other assets) and excessive credit activity of banks are often positively linked to each other, causing an increase in the systemic risk and the long-term instability of the financial system. (Evans, 2000) As the money and credit developments and real estate prices booms and busts are strongly correlated, the economic costs could be very high (as witnessed by the recent financial crisis) (Angello and Schuknecht, 2009). The main driver of credit institutions failures during last financial crises was exposure to the real estate sector. (Antoniades, 2015) Trends that typically preceded the development of financial crisis are a strong rise in real estate prices, a large current account deficit, excessive borrowing and leverage in all sectors (Obstfeld and Rogoff, 2009). In addition, Borio and Disyatat (2011) point out the problem of missing the adequate regulation framework that could prevent the creation of large, unsustainable increases in credit activity and real estate prices, which finally results in financial imbalances. Although in the period of 2000 till 2008, credit growth and growth in the real estate prices were strongly connected, the regulators were neglecting risk of overheating the economy, because of the positive expectation and individual low risk perception. After the last financial crisis, the central banks began to focus on real estate prices, in particular the prices of real estate used as collateral for housing loans. The role of residential real estate prices is crucial in the monetary transmission mechanism because of targeting effective monetary strategy (Bjornland and Jacobsen, 2010). Bjornland and Jacobsen (2010) analysed the impact of residential real estate prices in small open economies. Their research was focused on shock of housing prices that could affect the wealth of owners. When there is increase in real estate prices used as collateral, the availability of credit will increase. Related to Tobin's q-channel, higher housing prices can stimulate the construction sector and increase housing construction. In this case, the shock of housing prices may negatively affect real growth and consumer price. The results of research showed that in the case of monetary shocks and an increase in interest rates by one percentage point, real estate prices will fall by 3-5%. The regulators should response to real estate prices changes, but decision making procedure and choosing the appropriate instruments is often combination of different projections and calculations, within different economic models. The main principles in decision making in order to design the most effective policy toolkit are: 1) to detect the imbalances which can not be affected by traditional monetary measures, 2) to determine the macroprudential instruments that could mitigate destabilizing trends in real estate prices, 3) to complement toolkit to reduce the risk of boom-bust price cycles and to increase financial stability, 4) to coordinate monetary and macroprudential policies with other public policies in order to avoid the impact of demand shocks caused by the special treatment of housing policy (Crowe et al., 2013). Macroprudential toolkit that can efficiently deal with real estate price bubbles are loan-to-value and debt-to-income ratios. Using the certain limitations toward banking system, macroprudential instruments can decrease magnitude of a real estate boom. (Crowe et al., 2013) Loan-to-value ratios, reliance on wholesale funding, and loan maturities are positively correlated. Lower loan-to-value ratios affect residential real estate price and decrease the amplitude of boom-bust cycles on one hand, and decrease credit growth during welfare periods. (Cerutti et al., 2015) Macroprudential policy, among others, refers to regulation that affects the stability of the financial system as a whole, and co-ordination of monetary and macroprudential policies allows the regulation of the financial system globally in order to maintain long-term stability.

### **3. DATA AND METHODOLOGY**

Although the differences of residential real estate prices in advanced and emerging market could be large, in most economies real house prices have significantly increased since 2013. The environment of easy financial conditions could contribute to accumulation of vulnerability in the housing sector and could result in unfavourable cycle between the financial and real economic sectors (International Monetary Fund, 2019).

In order to reach the research objectives, in this study we used the data obtained from the Central Bank of Croatia, European Central Bank, Eurostat and Statistical Bulletin and The Institute of Economics Zagreb. The quarterly data which was used in this paper for the time period of 2006Q1-2018Q4 are:

- Housing loans (HL)
- Country level of financial stress (CLFS)
- Indicator of financial conditions (IFIS)
- Real estate price growing (RE) and
- Average nominal net payment (ANNPI)



*Chart 1: Residential real estate prices, Average nominal net payment, Indicator of financial conditions (Authors' calculation)*

Chart 1 indicates the developments of residential real estate prices, that are affected by increase of nominal net payment and easing financial conditions at financial markets. The correlation analysis is conducted for period after 2014. The analysis indicates the restoration of pre-crisis trends after 2014 in residential real estate prices and other macroeconomic variables what could stimulate new macroeconomic imbalances. The correlation analysis gives information about the magnitude of the association, or correlation, as well as the direction of the relationship. This analysis is the best method of measuring the association between variables of interest because it is based on the method of covariance. Pearson correlation shows the extent to which residential real estate prices are linearly related to the other variables. It is calculated according to the formula

$$r = \frac{\sigma_{xy}}{\sigma_x \sigma_y}$$

where  $\sigma_x$  and  $\sigma_y$  are standard deviations of variables X and Y, and  $\sigma_{xy}$  is covariance. (Pearson, 1920) Correlation coefficients for all variables are presented in Table 1.

Table 1: Pearson Correlation Coefficient (authors` calculation)

	IPRE	HL	CLFS	ANNPI	IFIS
IPRE	1				
HL	<b>0,896807</b>	1			
CLFS	0,559771	0,463177	1		
ANNPI	<b>0,941176</b>	<b>0,956469</b>	0,532608	1	
IFIS	<b>-0,8073</b>	<b>-0,95192</b>	-0,49329	<b>-0,9009</b>	1

The correlation analysis is made for the period of last two years; from 2016 till 2018. The possible problem in recovery period could be accumulation of systemic risk and forming new residential real estate price bubbles. The residential real estate prices have positive and strong correlation with nominal net payment and strong negative correlation with financial conditions. The increase in nominal net payment and easing of financial conditions contribute to increase of residential real estate prices. At the same time, increase of nominal net payment affects the banks` credit activity because of increased housing credit demand. Lower interest rates on loans and deposits, low level of short-term interests on the inter-bank market, and high liquidity of the financial system have positive impact on economy. The negative correlation indicates the easing of financial institutions credit requirements what contributes to upturn in credit cycles. Furthermore, the Granger test confirmed the causality relationship between residential real estate prices and other economic variables. The research is carried out through two fundamental steps by this order, in first step the order of integration was tested by using the Augmented Dickey-Fuller (ADF) unit root tests in order to establish stationarity of the time series. With ADF unit root tests we determined the order of integration of variables that was included in the analyses. Augmented Dickey-Fuller Test Dickey and Fuller (1979) is the simplest single root test and it is most common in economic practice. Table 2 presents the results of ADF Test on selected variables in levels and their first and second differences.

Table 2: Augmented Dickey- Fuller test (authors` calculation)

<i>Variable</i>	<i>Lag Length</i>	<i>t-statistic ADF</i>	<i>p</i>	<i>Test for unit root:</i>
<b>HL</b>	(AIC) 6	-5.784623	0.0000	In level with Intercept
<b>CLFS</b>	(AIC) 1	-3.942984	0.0035	In level with intercept
<b>IFIS</b>	(SIC) 1	-5.915051	0.0000	In 1 <sup>st</sup> difference with intercept
<b>ANNPI</b>	(AIC) 2	-5.270500	0.0001	In 1 <sup>st</sup> difference with Intercept
<b>IPRE</b>	(AIC) 3	-12.31661	0.0000	In 2 <sup>nd</sup> difference with intercept

After model specification, we conducted test for stationarity determination. According to the ADF Test, variables HL and CLFS are stationary in their levels with intercept included while variable IFIS and ANNPI become stationary when they are differentiated once with intercept included. Variable IPRE was stationary in 2<sup>nd</sup> difference also with intercept included in equation. Considering that data used in this research are at quarterly level, it was necessary to determine lag for each variable from 1 to 8. The lag is determined by using Estamet Vector Autoregression Estimates and Lag structure precisely Lag length criteria. According to the Bahovec and Erjavec (2009), Granger Causality Test is a popular method and is often applied in econometric analyses. Although the term causality is most often used in time series analysis, it is a common term in research in other areas of the economy. Although Granger (1969) started from the assumption that the future cannot cause the present or the past, the term causality implies the possibility of a variable to predict the dynamics of another variable. Hoover (2006) states in his paper that Granger Causality is actually the most influential approach to causality

in the economy. The simplest form of the test is performed based on the regression equation defined by the formula:

$$RE_t = \alpha_0 + \sum_{i=1}^n \alpha_i x_{t-1} + \sum_{j=1}^m \beta_j y_{t-1} + \varepsilon_t$$

where RE refers to residential real estate price growth and  $\alpha$  and  $\beta$  refer to variables that predict the dynamics of residential real estate prices trends.

After determining the stationarity of the time series, we created the first probability check with Regressors t-statistics through Vector Autoregression Estimates. The results of Vector Autoregression Estimates and the Granger/Wald Test are presented in Table 3.

*Table 3: Vector Autoregression Estimates and Granger/Wald Test (authors` calculation)*

<i>Dependent Variable IPRE</i>	<i>Vector Autoregression Estimates</i>	<i>Granger/Wald Test</i>
	<i>t-statistics</i>	<i>p</i>
ANNPI	<b>-1.775755</b>	<b>0.0837</b>
CLFS	-1.43470	0.1534
HL	<b>-3.22350</b>	<b>0.0038</b>
IFIS	<b>-1.65465</b>	<b>0.0137</b>

Due to the Vector Autoregression Estimates, the most significant are variable ANNPI, HL and IFIS. The strongest significance was noticed at variable HL with t-statistics -3.2235 which means that the volume of housing loans will have huge impact on residential real estate prices. According to the t-statistics, nominal net payment and financial conditions affect the residential real estate prices developments. Based on the Wald's test and the results obtained, we conclude that financial conditions, nominal net payment and the banks` credit activity toward housing loans affect the residential real estate prices in Croatia.

#### 4. CONCLUSION

New developments in the economy could have negative effect on the macroeconomic balances. The strong residential real estate prices increase contributes to accumulation of systemic risks and may initiate new negative trends in the economy. The correlation analysis for the period after 2015 in Croatia showed the strong positive correlation between residential real estate prices, nominal net payment and banks` credit activity for housing purpose. At the same time there is strong negative correlation between residential real estate prices and financial conditions, what means that in the period of financial conditions easing the residential real estate prices are increasing. The Granger test confirmed that the better financial conditions cause rise in residential real estate prices at the significance of 0,05, and at the level of 0,1 the nominal net payment also causes the rise in residential real estate prices. According to the development that preceded the last global financial crisis, regulators (central banks) should carefully monitor the real estate price developments and introduce appropriate monetary and macroprudential measures for maintain long run stability of the financial and whole economic stability.

**LITERATURE:**

1. Angello, A., Schuknecht (2009). Booms and busts in housing markets. *Working Paper Series No 1071*. European Central Bank.. Retrieved 10.07.2019. from <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1071.pdf?decbcf63d7387972d5767f3f167c3352>
2. Antoniadou, A. (2015). Commercial bank failures during the Great Recession: the real (estate) story. *Working Paper Series No 1779*. European Central Bank. Retrieved 10.07.2019. from <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1779.en.pdf?7edad23ab5613b9693606b94616231eb>
3. Bahovec, V., & Erjavec, N. (2009). *Uvod u ekonometrijsku analizu*. Element.
4. Bjornland, H. C., Jacobsen, D. H. (2010). The role of house prices in the monetary policy transmission mechanism in small open economies. *Journal of Financial Stability*. Volume 6, pp. 218-229
5. Borio, C., Disyatat, P. (2011). Global imbalances and the financial crisis: Link or no link?. *Bank of International Settlements Working papers 346*. Retrieved 16.07.2019. from: <http://www.bis.org/publ/work346.pdf>
6. Cerutti, E., Dagher, J., Dell'Ariccia, G. (2015). Housing Finance and Real-Estate Booms: A Cross-Country Perspective. *International Monetary Fund Staff Discussion Note*. Retrieved 17.07.2019. from [www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2016/12/31/Housing-Finance-and-Real-Estate-Booms-A-Cross-Country-Perspective-42982](http://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2016/12/31/Housing-Finance-and-Real-Estate-Booms-A-Cross-Country-Perspective-42982)
7. Crowe, C., Dell'Ariccia, G., Igan, D., Rabanal, P. (2013). How to deal with real estate booms: Lessons from country experiences. *Journal of Financial Stability*. Volume 9, Issue 3. pp 300-319. Retrieved 16.07.2019. from <https://www.sciencedirect.com/science/article/pii/S1572308913000429>
8. Dickey, D. A., Fuller, W. A. (1979). „Distribution of the Estimators for Autoregressive Time Series With a Unit Root. *Journal of the American Statistical Association*. 74, 427 -431.
9. Donald Jud, G., Winkler, D.T. (2003). The Q Theory of Housing Investment. *The Journal of Real Estate Finance and Economics*. 27: 379. Retrieved 09.07.2019. from <https://link.springer.com/article/10.1023/A:1025846309114#citeas>
10. Duca, M.L., Pirovano, M., Rusnák, M., Tereanu, E. (2019). Macroprudential analysis of residential real estate markets. *Macroprudential Bulletin*. European Central Bank. Retrieved 09.07.2019. from [https://www.ecb.europa.eu/pub/financial-stability/macroprudential-bulletin/html/ecb.mpbu201903\\_03~16f6101896.en.html#toc6](https://www.ecb.europa.eu/pub/financial-stability/macroprudential-bulletin/html/ecb.mpbu201903_03~16f6101896.en.html#toc6)
11. European Central Bank. Eurosystem. Statistical Data Warehouse. Country-Level Index of Financial Stress. Retrieved 12.07.2019. from <https://sdw.ecb.europa.eu/browse.do?node=9693347>
12. Evans, O., Leone, A.M., Gill, M., Hilbers, P. (2000). *Macroprudential Indicators of Financial System Soundness*. International Monetary Fund. Occasional paper 192. Retrieved 10.07.2019. from <http://www.imf.org/external/pubs/ft/op/192/op192.pdf>
13. Global Financial Stability Report April (2019). Chapter 2: Downside Risks to House Prices; April 4, 2019. International Monetary Fund. Retrieved 15.07.2019. from <file:///C:/Users/Korisnik/Downloads/ch2.pdf>
14. Granger, C. W. (1969). Investigating causal relations by econometric models and cross-spectral methods. *Econometrica: Journal of the Econometric Society*, 424-438.
15. Ivanov, M., Lovrinović, I. (2008). Monetary transmission mechanism and behaviour of asset prices: the case of Croatia. *Review of Business Research* (1546-2609), pp. 1-18

16. Jeanne, O., Korinek, A. (2010). Excessive Volatility in Capital Flows: A Pigouvian Taxation Approach, *American Economic Review*. American Economic Association, vol.100 (2), pp. 403-07
17. Hartmann, P. (2015). Real estate markets and macroprudential policy in Europe. *Working Paper Series No 1796*. European Central Bank.. Retrieved 09.07.2019. from <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1796.en.pdf>
18. Hoover, Kevin D. (2001). *Causality in Macroeconomics*. Cambridge: Cambridge University Press.
19. Lang, M., Krznar, I. (2004). *Transmission Mechanism of Monetary Policy in Croatia*. The tenth Dubrovnik Conference, June 23-26 th. Retrived 10.07.2019. from <http://hnbnetra.hnb.hr/dub-konf/10-konferencija-radovi/lang-krznar.pdf>
20. Obstfeld, M., Rogoff, K. (2009). Global Imbalances and the Financial Crisis: Products of Common Causes. *Federal Reserve Bank of San Francisco Asia Economic Policy Conference*. Santa Barbara, CA, October 18-20. Retrieved 16.07.2019. from <http://eml.berkeley.edu/~obstfeld/santabarbara.pdf>
21. Pearson K. (1920). Notes on the history of correlation. *Biometrika* 1, pp 25–45
22. Praet, P. (2019). *On the importance of real estate statistics*. Speech by Peter Praet, Member of the Executive Board of the ECB, at the International Conference on Real Estate Statistics. Luxembourg, 21 February 2019. Retrieved 10.07.2019. from <https://www.ecb.europa.eu/press/key/date/2019/html/ecb.sp190221~09c2b7ac1f.en.html>
23. Tobin, J. (1969). A General Equilibrium Approach To Monetary Theory. *Journal of Money, Credit and Banking*. Vol. 1, No. 1 (Feb., 1969), pp. 15-29

# TOURISM PRODUCT OF KRIŽNICA: ANALYSIS AND FUTURE DEVELOPMENT GUIDELINES

**Ivona Haluzan Bistrovic**  
*Spider grupa d.o.o., Croatia*  
*ivona.haluzan@gmail.com*

**Irena Bosnic**  
*Virovitica College, Croatia*  
*irena.bosnic@vsmti.hr*

## ABSTRACT

*Modern tourism trends form the way people vacation and travel and impose the necessity of researching, planning, forming, and managing the tourism product of a certain area. Križnica as a protected area of nature can offer a high-quality tourist product adapted to the niche segments of tourism consumers, especially to the segment of eco-tourists and adventure tourists. Therefore, the goal of this paper is to determine the characteristics of the tourist product of the Križnica area as one the crucial elements of the marketing mix which has to, without doubt, be properly managed in order to preserve the natural resource base of an area on one hand, and on the other hand in order to achieve an appropriate position in the competitive tourism market. The methods of documentation analysis and interviews were used for collecting the primary data. The contribution of the paper will be shown in defining the characteristic elements of Križnica's tourism product, as well as in suggesting how to improve not only that tourist product but also the overall tourist offer of the area of Križnica.*

**Keywords:** *tourist product, protected nature, Križnica, ecotourism, adventure tourism*

## 1. INTRODUCTION

The universal global trends have a significant impact on the development of tourism, and they are manifested through a more intensive application of technological achievements in the travel industry, greater availability of potential destinations and harsher market competence as well as through changes in potential tourists' behaviours, through the growth of demand of new tourist products and/or experiences and new picturesque destinations. The contemporary tourist feels the need to be included in all the spheres of his vacation – from organizing the vacation itself, to the accommodation as well as additional activities. However, the tourists also feel the need to learn, experience and remember. Taking that into consideration, new tourism products should not be based solely on tourist attractions or resources, but they need to encompass an additional value for the consumer with the emphasis on authenticity, originality and a unique experience. The stakeholders of the tourist offer have to be prepared and open for innovations in accordance with the trends, as well as the needs, wishes and motives of the target consumer. In accordance with the mentioned claims, the goal of this paper is to comment on the opportunities for the development of new tourism products as well as on the promotion of the existing ones on the example of Križnica as a protected nature area, taking into consideration the tourist attraction base of the mentioned area as well as the trends present in the tourist market.

## 2. DEVELOPMENT OF THE TOURIST PRODUCT OF KRIŽNICA

Križnica is a protected landscape located in the area of Pitomača Municipality with a settlement of the same name. It is bounded by the Croatian-Hungarian border as well as by the Drava River. In this area, the Drava makes meanders in large curves in a small area which cannot be seen anywhere from Austria to the estuary of the Drava into the Danube.

This is one of the most developed meanders of the Drava River, easily recognizable by its flower shape which stands as a symbol of this part of the river flow. Križnica is characterized by a diversity and abundance of sandbank birds (common tern, little ringed plover), birds of steep river banks (common kingfisher, sand martin), swamp birds (mallards, mute swans, black storks) and other species (<http://virovitica-nature.hr/zasticene-vrijednosti/kriznica/>). In addition, Križnica also forms a part of the Regional park Mura – Drava as well as a part of the Transboundary Biosphere Reserve of Mura – Drava – Danube established by the UNESCO in 2012, which adds an additional tourist value to the mentioned area.

### **2.1. Research methodology**

The goal of this research is to determine the fundamental tourist resources of Križnica, to determine the current level of supply and demand as well as to determine the stimulating and limiting factors for the development of tourism of this area in order to propose the suggestions for the development of the current tourist supply based on the conducted analyses. In addition to the analysis of the secondary data and in order to achieve the goals set in this paper, it was necessary to conduct a research with the goal of collecting the primary data. The primary data used in this paper form an integral part of the author's primary research which was a part of the final thesis named "Tourism Product of Križnica: Marketing Approach"<sup>1</sup>. The primary data was collected through an interview with the manager of the tourist board of Pitomača Municipality. The interview was conducted on 25/04/2018. The topics of the interview were: tourist demographics, duration of tourist stays, vacation motives (events, natural beauties or others), most significant tourist resources but also the potential resources of that area.

### **2.2. Key features of the tourism product of Križnica**

In order to systematize the data and to enable the optimal use of the data for the purpose of planning the development of tourism in the area of Križnica, the authors have used Kušen's (2002) methodology of classification of tourist resources and attractions for developing the attraction base. In order to determine the crucial tourist resources which will serve as a basis for commenting on the development of the tourism product of Križnica, the authors have undertaken an analysis of fundamental, direct and indirect tourist resources. The data was collected by means of record analysis of the records available on internet pages of Pitomača Municipality and the Tourist Board of Pitomača, as well as by means of analysis of development documents such as "Plan for tourism development of Pitomača Municipality until 2020." Table 1. shows the fundamental tourist resources of Križnica along with the belonging motives and levels of significance of the resource/attraction. The mentioned tourist resources/attractions form the main destinations resources and serve as the starting point for planning the future development of the tourism of the mentioned area.

*Table following on the next page*

---

<sup>1</sup> The final thesis was written under the mentorship of Irena Bosnić, PhD, senior lecturer and defended on 27/09/2018

*Table 1: Fundamental tourist resources of Križnica*

RESOURCE/ATTRACTION	MOTIVES	IMPORTANCE			
		M	N	R	L
The river Drava and Drava's meanders	Fishing, bathing, relaxation, rowing, nature watching, education			+	
Križnica bridge	Nature watching, hiking, adrenaline, adventure				+
Ferryboat	Ferrying, transport				+
Forests	Hiking, nature watching, hunting, education, relaxation				+
Sandy beaches	Relaxation, bathing, sunbathing				+
Protected bird species	Birdwatching, education, photo safari		+		
Gastronomy	Fish specialties				+
Jelkuš	Nature watching, education				+
Širinski island	Bird watching, education, relaxation				+
Old Drava, Graba and Crni jarak	Fishing, nature watching			+	

*Made by authors according to Bakan, Bosnić, 2014 and*

*[https://www.arhiva.pitomaca.hr/images/2016/Dodaci/Strategija\\_razvoja\\_Opcine\\_Pitomaca\\_2015-2020.pdf](https://www.arhiva.pitomaca.hr/images/2016/Dodaci/Strategija_razvoja_Opcine_Pitomaca_2015-2020.pdf)*

The most significant resource of Križnica area is the Drava River and its coast with sandy beaches and natural habitats of numerous protected bird species. A distinctive gastronomic offer was developed based on the richness of the area's fish reserves, which complements the current tourist offer of the area based on the natural beauties of the Drava. Beside the fundamental tourist resources, it is important to understand the attraction motives that play a key role in the implementation of tourist market segmentation, i.e. the segmentation of tourist demand. Relaxation, nature watching, bird watching, photo safari, education, bathing, rowing and tasting of fish specialties are highlighted as main attraction motives for visiting Križnica. The analysis of fundamental tourist resources has also encompassed the analysis of the importance of the resource/attraction on an international, national, regional and local scale. Most fundamental resources are currently of local importance. Protected bird species are an exception for which it can be said to be important on the national scale as well, along with a growing interest of foreign tourists for the activity of bird watching in the area of Križnica. The remainder of tourist resources shown in Table 2 are of key importance for the differentiation of the tourist destination and they contribute to the creation of a special experience for the tourist. In addition to the natural beauties themselves, the gastronomic offer, tourist infrastructure and particularities of the area form the basis for the creation of attractive tourist factors.

*Table following on the next page*

Table 2: Other direct tourism resources

OTHER DIRECT TOURISM RESOURCES	DESCRIPTION
Restaurant “Dravska Iža” (family farm “Ruža”)	Offers traditional cuisine and accommodation for 28 people, as well as a swimming pool
„Ribička klet“ ranch Rengel	Gastronomic and wine offer, traditional setup, swimming pool
Weekend houses and country estates in Križnica	80% of facilities are of excursion-country characteristics, which creates significant opportunities for the creation of accommodation capacities in the future
Tourist Board of Pitomača Municipality	In charge of Križnica region and the area’s tourist offer
Brown signalization	Signalization of important regions in the area
Picnic area on the coast by the ferry	Picnic and gastronomy in nature, volleyball court
Information desk of the Tourist Board of Pitomača Municipality	The information desk in the centre of Pitomača offers relevant information on the municipality’s tourist offer
Canoeing trail	Canoeing trail between Brodić and Križnica. It enriches the tourist offer and supplements the story of adventure activities which are sought to be enhanced in that area.
Educational trails in Križnica along the river Drava	Educational trail “LIFE Old Drava” which includes an interpretation of flora and fauna of the area
Tourist infrastructure	College for Management in Tourism and Informatics in Virovitica and vocational schools in the area
Wine offer	Bilogora slopes abounding in wines of recognizable quality located near Križnica and are significant for the tourism of the overall area which is based on the hedonistic way of life
Paintball polygon	Special experience with addition of adrenaline and adventure

*Made by authors according to Bakan, Bosnić, 2014 and [https://www.arhiva.pitomaca.hr/images/2016/Dodaci/Strategija\\_razvoja\\_Opcine\\_Pitomaca\\_2015-2020.pdf](https://www.arhiva.pitomaca.hr/images/2016/Dodaci/Strategija_razvoja_Opcine_Pitomaca_2015-2020.pdf)*

The analysis of the remainder of special tourist resources has shown that the existing hospitality venues, weekend houses, country estates, picnic areas and educational trails are of a special significance and contribution to the experience of the tourist offer of the area. Moreover, the tourist infrastructure that stands as the key factor for connecting the natural beauties, additional contents and the gastronomic offer into integral products offered to tourists also presents an indispensable part of the analysis of tourist resources. Indirect tourist resources related to environmental protection, geographical and traffic position, utility infrastructure, climate and political stability and safety, which are listed and described in the table, are also highlighted in support of the whole system.

*Table following on the next page*

*Table 3: Indirect tourist resources*

INDIRECT TOURIST RESOURCES	DESCRIPTION
Protected environment	Križnica is a part of the regional park Mura – Drava and the Transboundary Biosphere Reserve of Mura – Drava – Danube
Geographical and traffic position	It is located 5 km away from Podravina main road, on the border with the Republic of Hungary
Utility infrastructure	There is plumbing and electrical infrastructure
Political stability and safety	Croatia guarantees a high level of safety as a member of the European Union and NATO
Climate	The climate is suitable for year-round tourism

*Made by authors according to Bakan, Bosnić, 2014 and*

*[https://www.arhiva.pitomaca.hr/images/2016/Dodaci/Strategija\\_razvoja\\_Opcine\\_Pitomaca\\_2015-2020.pdf](https://www.arhiva.pitomaca.hr/images/2016/Dodaci/Strategija_razvoja_Opcine_Pitomaca_2015-2020.pdf)*

The current tourist offer of Križnica is more of an excursion character and is based on natural beauties, outdoor activities (biking, boat riding, kayaking, walks in the nature and alike), on gastronomic offer and events such as the Canoeing Adventure Race, the European Amazon Day, the “Dani Pečenjakov” event and the bike tour “Bajsom i žlicom”. Tourists generally come to Križnica for one-day trips or for a two-day vacation during the weekend. Local guests – mostly bikers, families with children, pensioners and hunting and fishing groups make up the majority of stays. The season is most pronounced in spring and summer. Taking into consideration the mentioned facts, as well as the analysis of the attraction base and the analysis of the key features of the existing tourist supply and demand, it can be concluded that ecotourism and adventure tourism (especially cyclo-tourism, kayaking and canoeing), along with an educational component, stand as optimal forms of tourism in the mentioned area (Haluzan Bistrovic, 2018, p.34). Therefore, this paper offers a proposition for the development of the ecotourism product of Križnica and the product of adventure tourism. The starting point for the proposal for the future product development comes from the analysis of the attraction base, the analysis of the current state of the tourism product and the analysis of current trends in the tourism market.

### **2.3. Proposal for the future development of the tourism product of Križnica**

The expectations of tourists and potential visitors of tourist destinations are growing. Nowadays tourism is not only relaxation, but it also mostly incorporates an educational component, the integration of the tourist with the local inhabitants as well as the additional content offer and unique experiences within the destination. Diversity, contrast, abundance of content and innovative products based on authenticity and quality prevail when it comes to contemporary tourist’s needs. According to the concept of total products, the tourism product can be defined as “set of tangible, i.e. intangible attributes (material and immaterial) which meet a certain consumer’s need.” (McCarthy, 1971; referenced by Ružić, 2007, p. 150). A tourism product is all that can be offered in the market with the purpose of attracting attention, stimulating purchase, use or consumption, which can meet the desires and needs, and which includes physical objects, services, persons, places of organization and ideas (Kotler, 2006, p. 539). In order to develop a suitable tourism product which will entirely meet the needs of the tourist demand, the particularities of the targeted market segment have to be taken into consideration – the trends that influence the segment’s behaviours as well as the individual preferences of the

tourist. According to Kotler et.al. (2014, p.526; 2006, p. 540), there are five levels to consider when planning the tourism product (basic benefit, basic product, expected product, extended product, potential product), with each level adding value to the consumer and collectively representing a hierarchy of values for the consumer. It is crucial to plan each product level appropriately in order to create a whole that will offer tourists a quality tourism product and a unique experience. The stakeholders of the tourist offer strive to create a set of benefits in each level of tourism product that they believe will be most suitable for the targeted group of consumers. The competition is mainly conducted at the levels of expected and expanded product, where the stakeholders strive to create a unique product that will differentiate it from the competition by means of various additional contents. Consequently, the following chapter of the paper discusses possible levels of the tourism product of ecotourism and adventure tourism for which there is justified potential in the area of Križnica, which arises primarily from the attraction base of the area.

### *2.3.1. Ecotourism product of Križnica*

“Parallel with the acceptance of the concept of sustainable tourism and responsible tourism, the term “eco-tourism” has emerged in tourism, which implies trips to natural areas while protecting the nature and taking care of the well-being of the local population, but also includes tourists staying in areas with a certain degree of protection. (e.g. national parks, nature parks, nature reserves, etc.)” (Vukonić, Čavlek, 2001, p. 84). The competitive advantages for the development of ecotourism in the area of Križnica stem from the particularities of natural and anthropogenic tourism resources. Križnica is a protected landscape and part of the Regional Park Mura – Drava, the ecological network NATURA 200 as well as the Transboundary Biosphere Reserve of Mura – Drava – Danube. It is particularly distinguished by the richness of the ornithofauna, the meanders of the Drava River (specific throughout the river to the estuary in the Danube), the preserved environment, but also the preserved rural environment and the traditional culture. When it comes to ecotourism and ecotourism offer in the Križnica area, it is important to mention the results of two LIFE projects implemented by the Public Institution for the Management of Protected Parts of Nature and the Ecological Network of Virovitica-Podravina County, whose main objective was to improve the ecosystem of the Drava River. The implemented projects have also indirectly contributed to the increase of the recreational value of the area, especially with the new educational trails in the Križnica area which can be reused for the purpose of developing a unique tourism product. An additional tourist value will be insured by the construction of the Križnica Visitor Center - Interpretation Center of the Biosphere Reserve of Mura – Drava – Danube, which will contain multimedia content aimed at interpreting the natural heritage in an educational and modern way. In addition to the construction of the center, there are plans of establishing new educational cycling paths, of equipping a research station and creating additional tourist facilities. In this context, and for the purpose of the further development of ecotourism in the area of Križnica, a product of ecotourism content is proposed, with an emphasis on learning about nature protection and natural habitats. Ecotourism contents would thus be supplemented with educational components through various workshops combined with the content of enjoying the intact protected nature. Consequently, we can define five levels of the ecotourism product of the Križnica area (Halužan Bistrovčić, 2018, p.37-38):

1. The basic advantage includes the experience of a holiday-educational character in a protected area of nature.

2. The basic product consists of an accommodation in a unique diffusion<sup>2</sup> hotel based on a full board stay and the stay in a preserved environment, programs of various workshops, opportunities for sightseeing tours.
3. The expected product consists of comfortable rooms, quality gastronomic offer, quality service and pleasant environment.
4. The expanded product would include additional services and benefits offered to consumers such as birdwatching, paintball, nature biking and walking trails, visits to local events, trips to the countryside, learning about environmental principles and how to act in protected nature areas.
5. A potential product would consist of unexpected benefits and/or unforeseen activities, such as active participation in wildlife protection content for consumers, who would make an ultimate contribution to the nature preservation by sacrificing their time. This can be organized as a certain “tour” that would last for several weeks throughout the year, during which it would be possible to see various stages of the development of flora and fauna and participate in developmental protection and conservation projects. “Survival in the wilderness” would be a very interesting potential product as an educational workshop with field application of a certain duration, several times a year, in different seasons and weather conditions.

### 2.3.2. *Adventure-educational tourism product of Križnica*

The growth of the adventure tourism market has a significant impact on destinations and travel industry. Many tourists are looking for excitement while traveling, they want something new and unusual, i.e. an adventure experience that emphasizes the natural and cultural assets that make the destination different from other destinations (Bosnić 2015, p. 108). Therefore, there is a growth in the number of adrenaline parks, paintball clubs, kayaking and trekking trails, various quad and bike rides and the contents alike. The attractions of Križnica such as the Drava River offer the possibility of various activities that meet the motives, needs and the curiosity of potential adventure tourists. In addition to the natural resources, additional contents such as canoeing and biking trails and paintball courts are also available in the area. Future plans include a project of an adrenaline park whose implementation would further expand the adventure tourism offer and emphasize this area as an area suitable for adventure tourists. Therefore, the adventure-educational product is proposed as an additional significant tourism product of Križnica. In addition to cycling through the forest and/or along the river, it could, for example, offer an educational sphere in terms of learning about protected areas and animals which can be found in the area of Križnica (Haluzan Bistrovic, 2018, p. 39). The adventure-educational tourism of Križnica can also be defined on five levels (Haluzan Bistrovic, 2018, p. 39-40):

1. The basic advantage is the experience of a holiday-adventure-educational character in a protected nature area.
2. The basic product consists of accommodation in huts, camps or tree houses and programs of adventure tourist activities.
3. The expected product includes a suitable and comfortable accommodation, quality gastronomic offer, quality of the service, the equipment necessary for the adventure activities included in the offer, and a comfortable and natural environment.

---

<sup>2</sup> Since 80% of residential facilities are of an excursion character, such as weekend houses and country estates, it is possible to include the potential accommodation capacities into the tourist supply. This can be accomplished through collaboration with the owners of the mentioned facilities by creating a diffuse hotel that allows guests to stay in separate accommodation units (rooms, apartments or houses scattered throughout the area) with a shared hotel reception area where all accommodation units are managed from a single point (Gašpert, 2017).

4. The expanded product would include additional activities such as paintball, canoeing and kayaking on the Drava River, a photo safari, themed cycling tours, participation in local events and themed excursions to the surrounding area.
5. A potential product could include specific activities such as survival in the wilderness as part of an adventure tourism offer.

### 3. CONCLUSION

Križnica is an area of protected nature of exceptional value with the potential of creating specific tourist contents which would meet the needs of modern tourists. The key advantages of this area are certainly the nature and the preserved environment, favourable location and climate, the proximity to the Drava River and the attractions connected to it, as well as the abundance of educational and cycling trails. The seclusion of Križnica from the mainland presents an additional value and particularity of the area, while the forest of Križnica and the protected bird and fish species offer possibilities for developing tourism products based on education and photo safari, as well as on birdwatching and nature. Consequently, two possible tourism products were proposed and described in this paper: an ecotourism product and an adventure-educational one. The mentioned products are in accordance with the trends and needs, desires and motives of the targeted consumers, and they are based on the tourist attraction base of the region. They contain an additional value for the consumer with an emphasis on authenticity, originality and unique experience. The proposed products would considerably improve the existing tourist offer of the area and impact the growth in the number of visitors, but they would also increase the recognizability of the area, expand the knowledge about protected areas of nature, the coexistence with nature as well as the knowledge of sustainable development.

### LITERATURE:

1. Bakan, R., Bosnić, I. (2014). *Glavni plan razvoja turizma na području općine Pitomača do 2020. godine*. Retrieved 08.08.2019. from [http://www.arhiva.pitomaca.hr/images/Dodaci/PDF\\_dokumenti/Plan\\_razvoja\\_tz\\_vsmti\\_1\\_2015.pdf](http://www.arhiva.pitomaca.hr/images/Dodaci/PDF_dokumenti/Plan_razvoja_tz_vsmti_1_2015.pdf).
2. Bosnić, I. (2015). *Marketing riječnog turizma* (doctoral dissertations). Ekonomski fakultet u Osijeku.
3. Gašpert, I. (2017). *Što je to raspršeni ili difuzni hotel?* Retrieved 08.08.2019. from <http://www.hotelijer.hr/sto-je-to-rasprseni-ili-difuzni-hotel>.
4. Halužan Bistrovčić, I. (2018). *Turistički proizvod Križnice: marketinški pristup* (Graduate Thesis). Visoka škola za menadžment u turizmu i informatici u Virovitici.
5. Kotler, Ph., Wong, V., Saunders, J., Armstrong, G. (2006). *Osnove marketinga*. Zagreb: Mate d.o.o.
6. Kotler, Ph., Keller, K.L., Martinović, M. (2014). *Upravljanje marketingom* (14. izdanje). Zagreb: Mate d.o.o.
7. *Križnica*. Retrieved 07.08.2019. from <http://virovitica-nature.hr/zasticene-vrijednosti/kriznica/>.
8. Kušan, E. (2002). *Turistička atrkcijska osnova*. Zagreb: Institut za turizam.
9. *Strategija razvoja Općine Pitomača 2015-2020*. Retrieved 08.08.2019. from [https://www.arhiva.pitomaca.hr/images/2016/Dodaci/Strategija\\_razvoja\\_Opcine\\_Pitomaca\\_2015-2020.pdf](https://www.arhiva.pitomaca.hr/images/2016/Dodaci/Strategija_razvoja_Opcine_Pitomaca_2015-2020.pdf).
10. Ružić, D. (2007). *Marketing u turističkom ugostiteljstvu*. Osijek: Ekonomski fakultet u Osijeku.
11. Vukonić, B., Čavlek, N. (2001). *Rječnik turizma*. Zagreb: Masmedia.

# THE IMPORTANCE OF MARKET POWER IN BANKING: THE CASE STUDY OF THE CZECH REPUBLIC

**Jan Cernohorsky**

*University of Pardubice, Faculty of Economics and Administration  
Studentská 84, Pardubice, Czech Republic  
jan.cernohorsky@upce.cz*

**Lucie Kricenska**

*University of Pardubice, Faculty of Economics and Administration  
Studentská 84, Pardubice, Czech Republic  
lucie.kricenska@student.upce.cz*

## ABSTRACT

*Nowadays, the banking system, as a part of the financial market, is an essential element through which financial resources are redistributed in the economy. This redistribution is affected by the degree of concentration of the banking sector, or the market power of individual banks within the banking sector. Therefore the aim of this article is to analyse the importance of the market power in the banking sector, in the case of the Czech Republic. This paper is based on the research of scientific articles on the given topic and on the measurement of the market power by means of the concentration of three or five of the largest banks. These studies do not have a definite conclusion on the relationship analysed. In addition, this paper uses a correlation analysis to compare the development of the market share and earnings before taxes of six selected banks, which represent three different sizes of banks based on the Czech National Bank's classification - large banks, medium-sized banks and small banks. First, the data are tested for their normal probability distribution. If so, Pearson's correlation coefficient is used, if not Spearman's correlation coefficient is used. (Pokud ano (if so) je tady nejasné. Můj návrh: If the test is positive, Pearson's correlation coefficient is used, if not Spearman's correlation coefficient is used. The volume of the assets is used to measure the market share. It concludes that a relationship between market share and profit development does not exist. However, this conclusion is not unambiguous because in some cases the correlation has been confirmed, both in a positive and a negative sense. The discussion then outlines factors that are likely to result in the more ambiguous conclusions.*

**Keywords:** *banking, concentration, earnings before taxes, market power*

## 1. INTRODUCTION

Banks today play an important role in the markets, or in mixed economies. Banks are an essential condition for a functioning financial redistribution in these economies. Due to the high level of globalisation, the banking sector has had a strong international overlap in recent decades, and economic and legal changes are thus being transferred through links in the banking sector among countries around the entire world, especially in the European Union, where the banking sectors of individual Member States have truly close ownership and economic relations. Studies and research in these sectors is therefore a very important part of economic science today. At the same time, the market power of each bank is important. It expresses, through the use of various indicators, the importance of the bank in the banking market. In general, this is also linked to the possibility of influencing various aspects of the banking business, which should aim to maximise profits. The aim of this article therefore, is to analyse the importance of the market power in the banking sector in the case of the Czech Republic. In this article, we will not examine whether the banking environment of the Czech Republic complies with the monopolistic or oligopolistic theory of competition.

We will deal with the relationship between the development of market power of selected banks from the segment of small, medium and large banks according to the central bank classification and their relationship to the development of their profits. We will be interested in whether small, medium or large banks have a closer link between market share and profit.

## **2. LITERATURE REVIEW**

The paper as a whole is based on already published contributions on the given topic, both theoretically and methodically. In this section we will refer to key contributions and their conclusions. These contributions can be divided into three main groups, depending on what conclusion the authors come to; positive, negative, or no relationship between the development of market power and profit. In the event of a positive relationship, it can be assumed from the arguments of Smirlock (1985) that larger banks are likely to have a higher degree of product and loan diversification than smaller banks, which reduces risk, and because economies of scale can arise from a larger size. Moreover, reduced risk and economies of scale lead to increased operational efficiency. Similar conclusions are reached by Beck, de Jonghe and Schepens (2013), who measured each bank's market power using the Lerner Index. They concluded that an increase in market power was associated with less volatile profits. Similarly, Berger, Klapper and Turk-Ariss (2009) concluded that banks with a higher degree of market power also have a lower risk-prone nature. This means that banks with higher market power may be more profitable in the longer term. In essence, Goldber and Rai (1996) also show a positive correlation between concentration and profit in the banking sector. However, their results are not unambiguous and they themselves state that they have not been able to sufficiently incorporate all the necessary aspects into their models which would clearly demonstrate or disprove the functionality of this correlation relationship. Short (1979) drew on the idea that a high rate of profit will attract industry to the new bank, thus reducing concentration as these banks will seek to gain a larger market share. However, in the short term (such as a three-year period), new banks are unable to acquire a sufficiently large proportion which would lead to profits for them, confirming the causal relationship between concentration and profit. However, in the long run, he confirms this interaction, and at the same time says that relatively large changes in concentration indicate that profit will grow, but at a lesser rate. Similarly, Molyneux and Thornton (1992) have a positive, statistically significant correlation between concentration and pre-tax profit per unit of assets. Studies that demonstrate a negative relationship between the development of the market power of the bank and its profitability are based, for example, on the argument that an extremely large value might show a negative relationship between size and profitability. This is due to agency costs, the overhead of bureaucratic processes, and other costs related to managing extremely large firms (Stiroh and Rumble, 2006). The external environment, namely the financial crisis, as Dietrich and Wanzenried (2011) argue, has had an impact, as large banks in Switzerland were less profitable than small and medium-sized banks during the last 3 years of the financial crisis. The main reasons for this negative relationship between size and profitability are that larger banks in Switzerland had relatively higher loan loss provisions during the crisis and that larger banks were found to have significantly lower net interest margins in times of turmoil than smaller banks. This might also be a consequence of some reputational issues that mainly larger banks in Switzerland faced during the recent crisis. Staikouras and Wood (2004) also conclude on a negative relationship. A significant group is also the studies that do not make a definite conclusion on the relationship between market power and profit. Petria, Capraru and Ihnatov (2015) conclude in their calculations that the size of banks does not matter in the case of return on equity and has a small and weak significant effect in the case of return on assets. Similarly, Casu and Girardone (2006) argue that there is no clear relationship between competition (lower market power) and efficiency (profitability).

They justify this by arguing that a higher level of competition and thus a lower level of market power forces banks to be more efficient and profitable. However, this increased efficiency and profitability does not lead to more competitive European banking systems. Similarly, Athanasoglu, Brissimis and Delis (2008), in their study of a number of bank-specific, sector-specific and macroeconomic determinants, found no correlation between the development of a bank's size and its profit. Gilbert (1984) describes in his article that there are only 27 out of 56 studies where the truth of the relationship was confirmed that the higher the concentration in the banking sector, the greater the profitability of the whole industry. He adds that the problems identified in previous studies are so great that this relationship cannot be unequivocally proven. In addition, there are currently a number of factors that make this relationship unclear - such as the huge growth of financial markets, globalisation, financial innovation, financial and tax optimisation, etc. Given that the conclusions of these studies are not unambiguous, it will be interesting to analyse the relationship in the conditions of the Czech banking sector. A specific feature of the Czech banking sector, with regard to the topic of this paper, is that it is one of the most profitable in Europe, as exemplified by Černohorská (2015).

### 3. DATA AND METHODS

This paper is based on data from the central bank of the Czech Republic - the Czech National Bank - on the amount of earnings before taxes (EBT) and the size of assets of individual banks and the banking sector as a whole for the period of 2008-2017. First, we calculate the concentration rate (according to the size of assets) expressing the share of a certain number of banks with the largest share in the entire industry, according to the standard formula:

$$CR_{\psi} = \frac{100}{Q} \sum_{k=1}^{\psi} q_k \quad (1)$$

Where:

- $\psi$  ... number of banks with the largest share (e.g., 3, 5, ...),
- $Q$  ... volume of the assets of the entire industry,
- $q_k$  ... volume of assets of individual bank  $k$ .

Indicator values range from 0 to 100%. The higher the value, the greater share of the market is covered by the selected banks.

Then we use correlation analysis to compare the development of the market share and earnings before taxes of six selected banks, which represent three different sizes of banks according to the Czech National Bank's classification - large banks, medium-sized banks and small banks. From the group of large banks we will analyse Česká Spořitelna and Československá Obchodní Banka. From the group of medium-sized banks we will analyse Moneta Money Bank and Raiffeisenbank. From the group of small banks we will analyse Equa bank and Sberbank. Banks with total assets greater than 10% of the total assets of the banking sector are considered to be large banks. Medium-sized banks are considered to be banks with a balance sheet total of 2 to 10% of the total assets of the banking sector. Small banks are considered to be banks with a balance sheet total of less than 2% of the banking sector. A correlation analysis expresses whether there is a correlation between the variables. The first step is to test the data to see if it has a normal probability distribution. If so, we use the Pearson correlation coefficient (see equation 2).

$$\rho_{x,y} = \frac{cov(X,Y)}{\sigma_X \sigma_Y} \quad (2)$$

Where:

$cov(X,Y)$  ... covariance of quantities  $X$  and  $Y$ ,  
 $\sigma_X \sigma_Y$  ... standard deviations of  $X$  and  $Y$ .

The Pearson correlation coefficient expresses how the exact line of the data is. If the data does not have a normal probability distribution, its value may be violated. If the data does not have a normal distribution, we then use the Spearman correlation coefficient (see equation 3).

$$r_s = 1 - \frac{6 \times \sum_{i=1}^n d_i^2}{n \times (n^2 - 1)} \quad (3)$$

Where:

$d_i$  ...  $p_i - q_i$ , difference between  $p_i$  and  $q_i$ ,  
 $n$  ... sample size.

The Spearman coefficient monitors only the order of the values, so it is not dependent on the data distribution. Thus we test the hypothesis  $H_0$  – data have a normal probability distribution against  $H_1$  – data do not have a normal probability distribution at a significance level of  $\alpha = 0.05$ . The determination is done by using the Shapiro-Wilk test. Whether we reject or do not reject the hypothesis  $H_0$ , is determined by the following formula:

$$|r_{Sp}| > r_{Sp(\alpha;n)} \quad (4)$$

Where:

$|r_{Sp}|$  ... absolute value of the Spearman correlation coefficient,  
 $r_{Sp(\alpha;n)}$  ... critical value for significance level  $\alpha$ , sample size  $n$ .

In both cases we test the hypothesis  $H_0$ , that there is no linear correlation relationship between the two quantities investigated. For the Pearson correlation coefficient, if the calculated p-value is greater than 0.05, the hypothesis  $H_0$  is not rejected. If the absolute value of the Spearman correlation coefficient is greater than the critical value, then the hypothesis  $H_0$  is rejected. If the absolute value of the Spearman correlation coefficient is less than the critical value, then the hypothesis  $H_0$  is not rejected; i.e., the correlation has not been proven.

#### 4. RESULTS

The following chart provides a better orientation regarding the concentration in the Czech banking sector. It summarises the development of the concentration rate over the period analysed for the 3 or 5 largest banks. The level of concentration is basically stable, with a very slight decline until 2013 and a subsequent very slight increase. However, the share of the three largest banks can be characterised as 50%, the share of the five largest banks slightly above 60 %.

*Figure following on the next page*

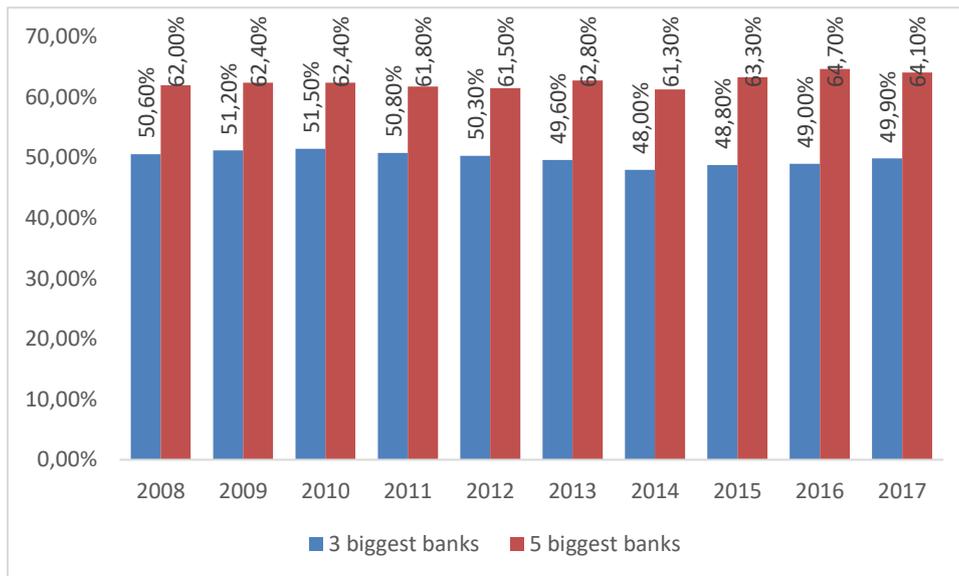


Figure 1: Concentration rate in the Czech banking sector (calculations by the authors based on data from the Czech National Bank, 2019)

The market share of the banks analysed for the period is summarised in the following table.

Table 1: The development of market share of selected banks according assets value (calculations by the authors based on the Annual Report of each bank and Czech National Bank, 2019)

	Česká spořitelna	ČSOB	MONETA Money bank	Raiffeisenbank	Equa bank	Sberbank CZ
<b>2008</b>	18.02	17.46	2.44	4.49	0.08	1.18
<b>2009</b>	17.95	18.38	3.30	4.72	0.10	1.16
<b>2010</b>	18.43	18.60	3.33	4.43	0.11	1.18
<b>2011</b>	17.52	18.44	3.15	4.53	0.14	1.16
<b>2012</b>	17.46	17.81	2.94	4.27	0.19	1.32
<b>2013</b>	16.64	17.90	2.64	3.82	0.35	1.37
<b>2014</b>	15.91	15.87	2.72	4.26	0.52	1.26
<b>2015</b>	16.48	17.02	2.57	4.50	0.68	1.40
<b>2016</b>	16.76	17.67	2.52	5.34	0.74	1.21
<b>2017</b>	18.03	18.36	2.82	4.82	0.72	1.16

The figures show the decisive share of two large banks - Česká Spořitelna and ČSOB. Medium-sized banks are represented by MONETA Money Bank and Raiffeisenbank, whose share fluctuates around 3 or 5 percent. Small banks - Equa bank and Sberbank - occupy approximately 1% of the Czech banking market. When calculating the correlation between the market share of selected banks and their profit, we first test the data for normality.

Table following on the next page

Table 2: Data normality test (authors' calculations)

	<b>p-value</b>	<b>Result of H<sub>0</sub></b>
<b>Market share for České spořitelna</b>	0.4439	not rejected
<b>EBT for České spořitelna</b>	0.0546	not rejected
<b>Market share for ČSOB</b>	0.1585	not rejected
<b>EBT for ČSOB</b>	<b>0.0334</b>	<b>rejected</b>
<b>Market share for MONETA Money Bank</b>	0.6333	not rejected
<b>EBT for MONETA Money Bank</b>	0.0741	not rejected
<b>Market share for Raiffeisenbank</b>	0.3448	not rejected
<b>EBT for Raiffeisenbank</b>	0.6532	not rejected
<b>Market share for Equa bank</b>	<b>0.0365</b>	<b>rejected</b>
<b>EBT for Equa bank</b>	0.4755	not rejected
<b>Market share for Sberbank CZ</b>	0.3454	not rejected
<b>EBT for Sberbank CZ</b>	0.2161	not rejected

The table shows that, except for the pre-tax profit of ČSOB and Equa bank's market share, all data have a normal probability distribution. For Česká Spořitelna, MONETA Money Bank, Raiffeisenbank and Sberbank, we can use the Pearson coefficient. For ČSOB and Equa bank we will use the Spearman correlation coefficient. The following table shows the calculated correlation coefficients.

Table 3: Correlation coefficients for selected banks (authors' calculations)

	<b>Pearson correlation coefficient</b>	<b>p-value</b>	<b>Decision of H<sub>0</sub></b>
<b>Relationship between market share and EBT – Česká spořitelna</b>	-0.5344	0.090	not rejected
	<b>Spearman correlation coefficient</b>	<b>Critical value</b>	<b>Decision of H<sub>0</sub></b>
<b>Relationship between market share and EBT – ČSOB</b>	-0.136364	0.6091	not rejected
	<b>Pearson correlation coefficient</b>	<b>p-value</b>	<b>Decision of H<sub>0</sub></b>
<b>Relationship between market share and EBT – MONETA Money Bank</b>	-0.2192	0.517	not rejected
<b>Relationship between market share and EBT - Raiffeisenbank</b>	0.8010	<b>0.003</b>	<b>rejected</b>
	<b>Spearman correlation coefficient</b>	<b>Critical value</b>	<b>Decision of H<sub>0</sub></b>
<b>Relationship between market share and EBT – Equa bank</b>	0.054545	0.6091	not rejected
	<b>Pearson correlation coefficient</b>	<b>p-value</b>	<b>Decision of H<sub>0</sub></b>
<b>Relationship between market share and EBT - Sberbank</b>	-0.6492	<b>0.031</b>	<b>rejected</b>

The calculated correlation coefficients indicate that there is no linear relationship between Česká Spořitelna, ČSOB, MONETA Money Bank and Equa bank. In the case of

Raiffeisenbank, we reject the null hypothesis that there is no relationship. Since Pearson's correlation coefficient was 0.8010, a strong positive correlation was confirmed. As the bank's market share grows, so does its profit. In the case of Sberbank, we also reject the null hypothesis. However, in this case, the Pearson correlation coefficient turned negative (-0.6492), indicating a strong negative correlation. As the market share of this small bank grows, its profit declines.

## 5. DISCUSSION OF RESULTS

The results achieved essentially correspond to the results of the research studies. Given that the results of the relationship between market power and profit are not unequivocal, it is also not possible to draw a definite conclusion on the relationship of these variables. This confirms the ambivalent results of previous studies, with some having a positive relationship, some with a negative relationship, and many studies having shown no relationship. In our case, in four cases out of six, no relationship was found. Specifically in the group of large banks, one bank in the group of medium and small banks. In the case of Raiffeisenbank, there is a positive relationship between the development of market share and profit. In the case of Sberbank, on the other hand, there is a negative relationship between the development of market share and profit. Therefore, the most common result is the absence of a relationship between the market share and the profit of the bank, regardless of the size and importance of the bank in the banking market. We explain this by the fact that a number of factors affect the bank's profit and the size of its assets in reality. In the period analysed, the profits of large banks generally fluctuate around a certain value and do not evolve similarly to their market share, which declined until 2014, then rose slightly. The explanation is mainly the advent of small banks and their aggressive advertising campaign to draw customers from large banks. In recent years, the situation has relatively stabilised and large banks again have a similar market share as at the beginning of the period in question. This is due to the fact that the newly established banks have focused primarily on retail clients and for large banks, a significant part of their assets constitute business with corporate clients. At the same time, large banks have in recent years focused heavily on increasing productivity and reducing costs without striving to significantly increase market share. Among medium-sized banks, in the case of Raiffeisenbank, we can explain the positive relationship in that it is an established bank in the market that does not need significantly higher costs to increase market share. A more detailed financial analysis shows that it is operating efficiently and therefore its market share is also reflected in the growth in profits. Another reason could be the connection with eBanka and the purchase of Citibank's retail portfolio. As a result, Raiffeisenbank gained a larger market share, including profitable products. In general, medium-sized banks are expected, due to their relative strength, to see a further slight increase in market share, which should also be reflected in an increase in profit. Within the small bank group, Sberbank showed a negative relationship. This bank is not as well established on the market as Raiffeisenbank and therefore its market penetration has consumed considerable funds, which significantly reduces profitability. Generally, it is very costly for small banks to gain client confidence and then increase market position. If we take the findings together, we can say that the Czech banking sector is also dominated by the absence of a relationship between the market shares and profits of individual banks. In addition to the above-mentioned factors specific to the banks analysed, this situation can be further explained by a number of bank-specific and macroeconomic factors. The former includes various approaches to risk management, high interconnection between banks and parent banks, the growing importance of financial innovation, etc. Macroeconomic factors include the rate of inflation falling to zero, leading to abnormally low interest rates, the financial crisis associated with a relatively sharp decline in economic performance and thus financial intermediation. Of course, a factor not to be overlooked is the analysed time series of ten years.

Furthermore, there may be a non-linear relationship of the given quantities. The Czech banking sector is also specific, with the vast majority of its assets being owned by foreign banks. For these reasons, it is certainly appropriate to continue to deal with these relationships and refine the current scientific knowledge in this area.

## 6. CONCLUSION

The results of the study on the relationship between market power and banks' profits in the Czech banking sector are ambiguous, as are the conclusions of the studies in this area. In the case of four banks (two large banks, one medium and one small bank) there was no linear relation of the variables being examined. In the case of one medium-sized bank, we have a positive relationship, in the case of one small bank, we have a negative relationship. We explain this ambiguity both by the effect of a number of factors affecting specifically the banks being analysed, and generally by factors affecting the entire banking sector, broken down by bank-specific and macroeconomic factors. Of course, we are aware that other mathematical-statistical methods can also be used to investigate a given relationship. However, it is appropriate to continue the investigation.

**ACKNOWLEDGEMENT:** *This paper has been created with the financial support of the Czech Science Foundation (project GACR No. 17-02509S - Emerging financial risks during the global low interest rate environment) and the University of Pardubice (project SGS\_2019\_018 - Dynamics of economic aspects of public policies in the context of efficiency and sustainability).*

## LITERATURE:

1. Athanasoglou, P., Brissimis, S., Delis, M. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. *Journal of international financial Markets, Institutions and Money*, 18(2), 121-136.
2. Beck, T., De Jonghe, O., Schepens, G. (2013). Bank competition and stability: Cross-country heterogeneity. *Journal of Financial Intermediation*, 22(2), 218-244.
3. Berger, A., Klapper, L., Turk-Ariss, R. (2009). Bank competition and financial stability. *Journal of Financial Services Research*, 35(2), 99-118.
4. Casu, B., Girardone, C. (2006). Bank competition, concentration and efficiency in the single European market. *The Manchester School*, 74(4), 441-468.
5. Czech national bank. (2019). *Zprávy o výkonu dohledu nad finančním trhem*. Retrieved 03.07.2019 from [https://www.cnb.cz/cs/dohled\\_financni\\_trh/souhrnne\\_informace\\_fin\\_trhy/zpravy\\_o\\_vykonu\\_dohledu](https://www.cnb.cz/cs/dohled_financni_trh/souhrnne_informace_fin_trhy/zpravy_o_vykonu_dohledu).
6. Černohorská, L. (2015). Profitability Analysis of Selected Czech Banks and Their Foreign Owners. In *SGEM 2015: Political Sciences, Law, Finance, Economics and Tourism, vol II: Finance, Economics & Tourism*, Albena, 283-290.
7. Česká spořitelna. (2019). *Výroční zpráva*. Retrieved 09.03.2019 from <https://www.csas.cz/cs/dokumenty-ke-stazeni#/17/Vyrocnizpravy>.
8. Československá obchodní banka. (2019). *Povinně uveřejňované informace*. Retrieved 09.03.2019 from <https://www.csob.cz/portal/csob/povinne-uvarejnovane-informace>.
9. Dietrich, A., Wanzenried, G. (2011). Determinants of bank profitability before and during the crisis: Evidence from Switzerland. *Journal of International Financial Markets, Institutions and Money*, 21(3), 307-327.
10. Equa bank. (2019). *Povinně uveřejňované informace*. Retrieved 09.03.2019 from <https://www.equabank.cz/dulezite-dokumenty/povinne-uvarejnovane-informace>.
11. Gilbert, R. A. (1984). Bank Market Structure and Competition: A Survey. *Journal of Money, Credit and Banking*, 16(4), 617-645.

12. Goldberg, L. G., Rai, A. (1996). The structure-performance relationship for European banking. *Journal of Banking & Finance*, 20(4), 745-771.
13. Moneta Money Bank. (2019). *Hospodářské výsledky*. Retrieved 09.03.2019 from <https://investors.moneta.cz/financni-vysledky>.
14. Petria, N., Capraru, B., Ilnatov, I. (2015). Determinants of banks' profitability: evidence from EU 27 banking systems. *Procedia Economics and Finance*, 20, 518-524.
15. Raiffeisenbank. (2019). *Výsledky hospodaření*. Retrieved 09.03.2019 from <https://www.rb.cz/o-nas/kdo-jsme/vysledky-hospodareni/vyrocni-zpravy>.
16. Sberbank. (2019). *Povinně uveřejňované informace*. Retrieved 09.03.2019 from <https://www.sberbankcz.cz/vyrocni-zpravy-a-hospodarske-vysledky>.
17. Short, B. K. (1979). The relation between commercial bank profit rates and banking concentration in Canada, Western Europe, and Japan. *Journal of Banking & Finance*, 3(3), 209-219.
18. Smirlock, M. (1985). Evidence on the (non) relationship between concentration and profitability in banking. *Journal of money, credit and Banking*, 17(1), 69-83.
19. Staikouras, Ch. K., Wood, G. E. (2004). The determinants of European bank profitability. *International Business and Economics Research Journal*, 3, 57-68.
20. Stiroh, K. J., Rumble, A. (2006). The dark side of diversification: The case of US financial holding companies. *Journal of banking & finance*, 30(8), 2131-2161.

# ZERO MARGINAL COST IN MAGAZINE INDUSTRY: CHANGING OF COST PARADIGM IN „NEW“ MAGAZINE INDUSTRY

**Josko Lozic**

*University North, Croatia*

*josko.lozic@unin.hr*

## **ABSTRACT**

*The aim of this paper is to point to a change in the cost paradigm that has emerged as a direct consequence of digitizing the production and distribution of media content in the production of the magazines. The turn of the century marked dramatic changes within the business system in the media industry. Digitalisation and convergence of the production system as well as the development of the Internet have directly influenced the development and implementation of a new mode of production and distribution of goods in the media industry. The new business model has fundamentally changed the landscape within all categories of the media industry. Changes affecting publishing have quickly resulted in the development of digital editions of books, newspapers and magazines. Digitalisation of production directly influenced the change of the cost paradigm at the level of total cost distribution. The cost of the first copy in the magazine industry did not change much. The changes directly affected the variable costs of each of the following units produced. The transition to digitized production of media content in the magazine industry directly influenced the development of a marginal production cost near to zero.*

**Keywords:** *digital production, magazine industry, marginal cost, media industry, post-industrial production*

## **1. INTRODUCTION**

The traditional media industry has developed along with industrial production and mass market. The production of physical products on which media content was produced and distributed, moving to new media, became an "old" media industry. Digitization of the production system has enabled the development of a "new" media industry that arises in the wake of industrial production. On the one hand, the development of the "new" media industry enabled the digitization of the production process. On the other hand, the changes made by the post-industrial society and the related habits of buying and reading magazines have enabled the digital market to develop rapidly all kinds of publishing industry. Print output is stagnating or declining: from 2015 to 2016 it slowed by 4.5% in the UK, 3.5% in France, and 2% in Germany. Ad revenue is getting lower: print ad income in the UK went down 13% last year. Digital subscriptions are gaining popularity and market share: +20-25% year-over-year growth is commonplace in European markets (Forster 2017). While only some media industries – recording music and as well as newspapers – have faced the bad news of reduced revenue, all media industries experienced good technological news in the form of cost reduction (Waldfogel 2017). Tyler Cowen in the book “Average is Over” emphasizes that the problem is particularly complex in industries that are disrupted by computers. The magazine industry is part of the media industry in the publishing category. It began to develop in the late 19th century as a segment of the media industry that was oriented to the market niche associated with expensive merchandise. During the 20th century, the magazine industry expanded to all social activities. The 1990s and the development of the Internet marked the beginning of the end of the "old" industry of the magazine. Within the media industry, the magazine industry, amongst the first, is affected by the whirlwind of the changes brought with it by digitization of production. The term magazine comes from the term storage and subsequent publication of texts (weekly, monthly, etc.).

Newspapers must adapt to the digital age to remain viable community builders, or else they remain tethered to the fast-fading print-only world of yesterday (Penelope Muse Abernathy 2016). Barthel (2018) points out that in the 2017 daily and weekly newspaper's circulation fell by 11% compared to 2016. In the same period, advertising revenue fell by 10%. All this indicates a steady decline in readership and revenue in the newspaper industry. The Pew Research Centre for the United States has released the results of the circulation of the new magazine, which with 940,000 subscriptions in 2011 fell to 923,000 in 2015. In the same period, subscriptions to digital journals rose from 13,174 in 2011 to 35,964 in 2015. This was an increase in the number of subscriptions to digital editions of 273%. The fall of the sales volume and sales revenue of the magazine should be taken with caution, because when calculating these outcomes, tools are used that are adequate for the "old" media industry. Calculation of number of copies sold, number of readers, or reach is still adjusted to the physical sales metrics. In the context of such a calculation, account should be taken of the effects of new management models in the management of publishing business. In addition, the effects of convergence 3.0 should also be taken into account. All of this is alerted by Wilson pointing out how while the report predicts "magazines" will see revenues decline over the next five years, it doesn't take into consideration revenue from such business lines as events, ecommerce/affiliate commerce, or custom publishing. In other words it's a good representation of the health of the traditional magazine platform but not an accurate representation of the health of publishing overall (Wilson 2018). The development of the Internet has been disruptive in the industry of the magazine in two fundamental directions: a) daily publishing on the Internet brought into question the relevance of the materials that were kept in order to be subsequently published in the magazine; and b) the Internet enabled publishing without having to be part of the publishing industry or anyone could publish information on the Internet. Anyone can post material and anyone can read it, download it, and use it. Of course not everything on the Internet is zero cost, but much of it is, and there are movements to increase to free content (Martin 2015). The development and availability of digital technology went in common with the changes that have emerged as the fruit of the post-industrial society's development. Digital producing has been added to printing on paper media. Such a process did not immediately cause the abolition of the traditional print shop and the digital editions were distributed through special market channels. At the same time, a whole new market of magazines has begun to develop, which did not exist before in the print edition. Publishers who have organized both ways of producing and distributing magazines, both print and digital, have faced a complete change in cost paradigm in these two ways of production. Digitized production and the associated convergence of the system resulted in the emergence of a completely new cost structure. The most dramatic change occurred in the way of calculating the marginal costs. Changing the variable cost structure and the related boundary cost structure directly affected the occurrence of zero marginal costs. All categories of the media industry, including the magazine industry, which uses the effects of zero marginal costs, are included in the "new" media industry.

## **2. TRADITIONAL INDUSTRIAL COST DISTRIBUTION**

The traditional structure of the costs of industrial production included the "old" media industry. During their development, from the onset of publishing to the media industry by the end of the 20th century, media corporations produced physical products to which cost analysis was applied as well as to all other industrial branches.

### **2.1. Fixed, variable and marginal costs of production**

The cost theory is based on production theory. The linkage is so large that practically it is not possible to understand the cost theory if the theory of production is not understood (Pavić et.al. 2006: 301).

We define two basic types of costs as fixed and variable costs. In doing so, we have to emphasize that this is the principle of cost study in a relatively short period of time. In the analysis of long periods, all costs assume the characteristics of variable costs. Fixed costs do not change with production levels, and can only be eliminated by the end of business (Pindyck, Rubinfeld 2005: 206; Sexton 2016: 296). Fixed costs of an enterprise, sometimes called "general" or "overhead" costs [...] have to be paid even if the company does not work at all and will not change if production changes (Samuelson, Nordhaus 1992: 120). Fixed cost is the cost incurred by using a fixed input and which does not depend on the amount of output produced (Pavić et.al. 2006: 303; Gillespie 2007: 118)). Fixed costs are expenditures that have to be paid even if the production volume of a company is zero. Sometimes called "additional" or "non-refundable costs" consist of items such as renting a factory or office space, paying interest on debts, paying permanent employees, and the like (Samuelson, Nordhaus 2010: 126). Total fixed cost is dominant portion of the total cost (Sexton 2016: 297). Fixed costs will be marked with the mark FC or the total fixed cost with the TFC tag. Variable costs are those that change with the change of production (Samuelson, Nordhaus 1992: 121; Sexton 2016: 296). Variable cost is generated using the variable input and changes with the amount of output produced (Pavić et.al. 2006: 306). Variable costs are changing with the change in production levels (Pindyck, Rubinfeld 2005: 206). Variable costs include production materials (such as steel for automotive production), power to run the plant, etc. (Samuelson, Nordhaus 2010: 127). Variable costs are directly related to output. In the traditional publishing model in which subscriptions are paid for access to a paper or electronic journal, fixed costs relate principally to the preparation of the articles which go into the magazine. They remain the same whatever the total circulation of the journal. Variable costs vary according to the number of copies of the journal in circulation (House et.al. 2004). As output increases, variable cost increases as well (Gillespie 2007: 118). Variable costs will be marked with the VC mark or the total variable cost with the TVC mark. Sum of fixed and variable costs makes total business costs. We will mark them with the TC tag. Marginal costs indicate the additional costs of manufacturing an additional product unit (Samuelson, Nordhaus 1992: 122; Gillespie 2007: 143). The change in the total cost resulting from the change in the quantity produced per unit is called the marginal cost (Pavić et.al. 2006: 308). Marginal cost of good is opportunity cost of producing one more unit of it (McTaggart et.al. 2015: 33). The marginal cost is still called incremental expense. Since the fixed cost does not change with the change of production level, the marginal cost is equal to the increase in the variable cost or increase in the total cost incurred by the production of an additional product unit (Pindyck, Rubinfeld 2005: 209). Thus, the marginal cost can be written as follows:

$$\frac{\Delta TC}{\Delta Q} = \frac{\Delta VC}{\Delta Q} = MC$$

Marginal cost is one of the most important concepts in the entire economy. The marginal cost indicates the "extra" or additional cost of production of a product unit (Samuelson, Nordhaus 1992: 123). Marginal cost is defined as the change in Total Cost (TC) over the change in Quantity (Q), or  $MC = \Delta TC / \Delta Q$ . Technically speaking it is the first derivative of the Total Cost function with respect to Quantity; thus MC is the slope of the TC curve (Hyun, Byun 2016: 69). We will mark the marginal cost with MC.

## 2.2. Distribution of production costs of "old" media (magazine)

Those who bring a new work to market typically incur two kinds of costs. The first is the potentially large fixed cost of creating the first copy. In the case of a new novel, this fixed cost includes all of the time and money spent writing, editing, typesetting, and promoting the book. [...] Second are the per-unit, or marginal, costs of production and distribution. For tangible products, these include the costs of printing or pressing, distributing, and selling (Walfogel

2018: 17). For paper subscription journals, fixed costs are editorial costs involved in the selection and review of articles, the manuscript management system, page and illustration preparation and copy editing/rewriting, plus fixed costs unrelated to articles but required by the journal, such as the provision of covers, editorial and news content. Variable costs are the cost of paper, subscription management, licensing, distribution (including postage, packing and shipping costs), sales and some marketing (House et.al. 2004).

*Table 1: Magazine production cost structure (printing)*

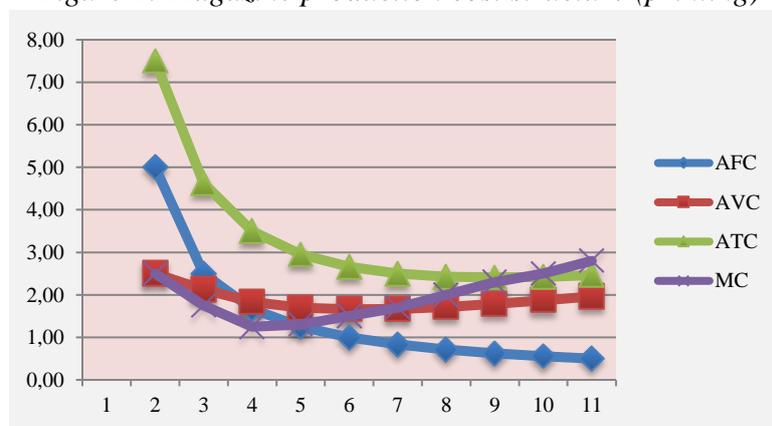
Copies	FC	VC	TC	AFC	AVC	ATC	MC
0	50.000		50000				
10.000	50.000	25.000	75.000	5,00	2,50	7,50	2,50
20.000	50.000	42.500	92.500	2,50	2,13	4,63	1,75
30.000	50.000	55.000	105.000	1,67	1,83	3,50	1,25
40.000	50.000	68.000	118.000	1,25	1,70	2,95	1,30
50.000	50.000	83.000	133.000	1,00	1,66	2,66	1,50
60.000	50.000	100.000	150.000	0,83	1,67	2,50	1,70
70.000	50.000	120.000	170.000	0,71	1,71	2,43	2,00
80.000	50.000	143.000	193.000	0,63	1,79	2,41	2,30
90.000	50.000	168.000	218.000	0,56	1,87	2,42	2,50
100.000	50.000	196.000	246.000	0,50	1,96	2,46	2,80

*Source: Lozić, 2019, 53-59*

Table 1 shows the distribution of the magazine industry's cost to the production model of printed magazine. The model encompasses manufacturing costs for up to 100,000 manufactured copies. Fixed costs represent a constant amount and are the same for the zero level of production as well as for the largest issue. Variable costs grow with increase in output. Average Fixed Cost (AFC), Average Variable Costs (AVC) and Average Total Costs are obtained by dividing individual costs with the volume of publishing. The marginal cost indicates the additional cost of production at an increase in production per unit of product. In our case, the marginal cost indicates the extra cost of production to increase the edition of 10,000 copies. We calculate the marginal cost as follows:

$$MC = \frac{\Delta (TC[n]-TC[n-1])}{\Delta(Q[n]-Q[n-1])}$$

*Figure 1: Magazine production cost structure (printing)*



*Source: Own illustration*

Average fixed cost curve constantly declines approaching but never reaching zero (Sexton 2016: 298). The marginal cost decreases with increasing output to one production level, and then increases. In our example, the marginal cost is lowest for the production of 30,000 copies, and is equal to the initial cost of 90,000 copies. Figure 1 shows graphs of cost curves. The decline in average fixed costs (AFC) decreases with the increase in production. The other three curves, average variable cost (AVC), average total cost (ATC), and the marginal cost curve first fall and then grow. The figure shows that the boundary cost curve touches the total production cost curve at the production level of 90,000 copies of the magazine.

### **3. COST DISTRIBUTION IN DIGITAL INDUSTRIES**

Changing the production model, under the influence of digitization, and convergence of the production process, has inevitably caused a change in cost calculation. For electronic subscription journals the pattern of costs is the same. There is no cost of paper or conventional distribution costs. The cost of maintaining (or renting space on) an appropriate electronic system replaces conventional distribution costs (House et.al. 2004). Digitalization has brought substantial reduction in the cost of production, distribution, and promotion of new products in music, books, movies, and television. As a result, the gatekeeping role of media companies has been democratized (Waldfoegel 2017). In the analysis of cost allocation for the digital industry, one should be careful with the definition of the term digital industry. Beck also warns about the difference between digital optimization and fundamental business transformation. Digital optimization improves efficiency and effectiveness of current business model. Business model transformation is about boldly and dynamically changing the way capital is allocated and deployed by the organization, to generate better returns (Libert, Beck 2018).

#### **3.1. Marginal cost in „new“ media industries**

The production of digitized content and the convergence of the distribution system in the media industry have directly contributed to the development of a new approach to the study of the marginal cost known as the "marginal cost near zero". "Marginal cost near zero" first refers to Rifkin, referring to some forms of distribution of goods and services on the network. Rifkin points out that "every time we use the term "marginal cost near zero" we refer to the marginal costs of distribution of information, green energy and goods and services (Rifkin 2015: 102). The extraordinary success of platforms such as Facebook, Salesforce, Amazon and Instagram offer a preview of this new reality. These were the first examples of the enormous power of these new business models that fully enjoy the benefits of zero marginal cost, infinite scalability, no capital costs and instant deployment (Allmiral 2019). The distribution of goods and services to the media industry as a digitized content is precisely confirmed by the cost concept that limits the marginal costs to the theoretical framework that Rifkin calls - the "marginal cost near to zero". The cost of producing a magazine in a digital format, or a continuous increase in print, corresponds exactly to the "marginal zero cost" model. Albert points out that marginal cost of production is not quite zero, because there are costs of maintaining the infrastructure the site. The IT infrastructure to run a complex or high traffic site costs a lot of money (Albert 2009). Odlyzko was among the first scientists to point out the issue of the marginal cost first copy cost limit. In the total sum of the cost, 70% of the cost of the printed edition is waste on editorial, processing and "first copy" costs. These are all costs before distribution and printing costs. Most of this cost enters fixed costs (Odlyzko 1995). "First-copy costs" is the term used in journal publishing to describe costs incurred in getting a copy of a given article into the state required for it to be published in the journal. They are made up of the fixed costs of article production referred to above: editorial costs involved in the selection and review of articles, the manuscript management system, page and illustration preparation and copy editing/rewriting (House et.al. 2004).

Large input costs require the printing, distribution and sale of large numbers of copies to cover fixed costs and take advantage of the marginal cost effect. There is also a problem of determining the price of the product. Production in the zero marginal cost models implies splitting costs into two core categories. Buytaert defines them as the “setting cost” and the marginal cost of production. The first part is a “set up” cost, which is the cost of assembling the team and tools needed to make the first unit. The second part is called the “marginal cost”, or the cost of producing a single, additional unit (Buytaert 2014). If most publishers print on paper media, most of them have a similar cost structure and the same cost based on the marginal cost price. However, if one of the publishers starts using the advantages of digital publishing, they have a competitive price advantage over all other publishers (Kie-Mason, Riveros 2000). Digital publishing creates competitive advantage for the publisher based on the "first copy" price reduction and the use of the marginal cost effects of the product. One benefit of digitalization when applied to media products is that the marginal cost of serving another consumer falls essentially to zero. When this change is combined with ability of people to access media products on a wide range of home and portable devices, digitalization enables a new range of sophisticated sales and pricing strategies, which at least in theory could bring revenue benefits to sellers (Waldfogel 2017).

### **3.2. Distribution of production costs of "new" media (magazine)**

Chapter 1 presents a "classical" cost allocation that can be found and associated with all forms of industrial production of physical goods. Unlike this mode of production, "new" media industries produce digital content that they distribute as a digital record. The goods are distributed (and / or sold) through the network instead of the classic sales channels developed in the industrial production and distribution of goods. It should be emphasized here that the "old" publishing industry will not disappear overnight. Similar to other classic industries. Taylor (2013) stress there's nothing special about computer technology replacing human labor. Railroads, electricity, plumbing, washing machines, all technology does this. That's the point. What's special about modern software is it scales to hundreds of millions of users at almost no added marginal cost. Amid all the bad news from technological change was the good news of cost reduction. Digital technologies have reduced the costs of producing music, movies, TV shows and books (Waldfogel 2018). In the production of digitized content, the fixed cost remains unchanged because it implies the same categories as the production of physical products. Regardless of the size of the digital print, the fixed cost is immutable. Variable cost benefits completely new features compared to the media industry in the production of physical products. In the first observed interval, for the production of 10,000 copies, we maintained the same level of variable costs. We started from pretending that the preparation for printing and the digitization of materials would have the same cost as if we prepared and printed the material in physical form. The fundamental cost difference, as compared to "old" media industries, is already recorded in the next analyzed interval. While the variable cost of production of physical products increases due to the use of variable inputs, digitized content is rapidly falling because no major investment is needed. Especially this is emphasized in all subsequent increases in publishing. Variable production costs suddenly fall to the limit of maintaining a stable production system.

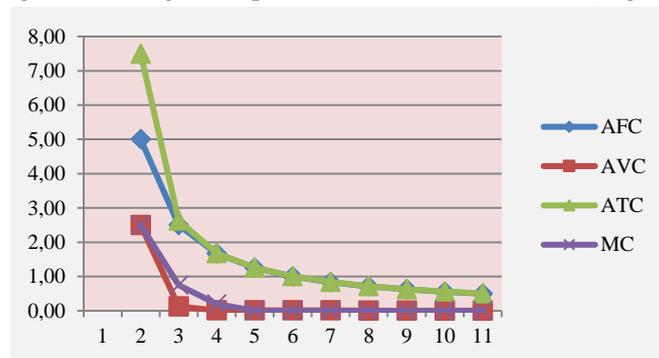
*Table following on the next page*

*Table 2: Magazine production cost structure (digital)*

Digital	FC	VC	TC	AFC	AVC	ATC	MC
0	50.000		50000				
10.000	50.000	25.000	75.000	5,00	2,50	7,50	2,50
20.000	50.000	2.500	52.500	2,50	0,13	2,63	0,75
30.000	50.000	500	50.500	1,67	0,02	1,68	0,20
40.000	50.000	500	50.500	1,25	0,01	1,26	0,00
50.000	50.000	500	50.500	1,00	0,01	1,01	0,00
60.000	50.000	500	50.500	0,83	0,01	0,84	0,00
70.000	50.000	500	50.500	0,71	0,01	0,72	0,00
80.000	50.000	500	50.500	0,63	0,01	0,63	0,00
90.000	50.000	500	50.500	0,56	0,01	0,56	0,00
100.000	50.000	500	50.500	0,50	0,01	0,51	0,00

Source: Lozić, 2019, 53-59

The economics of a digital product are odd because once you are produced product the cost of making copies is near the zero. For example it may cost some fixed money up front to record a song, but once you have got the final track it's nearly zero added cost to make duplicates (Taylor 2013). In Figure 2, cost curves are graphically shown for digitized form of media production. All four curves have a decreasing direction or tendency. Table 2 shows that variable costs drop sharply in the second analyzed interval. The same situation occurs in the third interval, after which variable costs have a symbolic impact on total costs up to the highest level. Given that variable costs have a very small impact on total costs, the curve of average total costs, but in the third trimester of 30,000 copies, overlaps with the average fixed cost curve. Likewise, the curve of average variable costs in the third analyzed interval begins to overlap with the limit of the marginal cost.

*Figure 2: Magazine production cost structure (digital)*

Source: Own illustration

By analyzing the graphical views in Figures 1 and 2, we see the first big difference between the running costs of "old" and "new" media industries. In old industries, average fixed costs are falling continuously, with increasing volume of production, while average total costs fall to one limit and then begin to grow. In "new" media industries, fixed costs fall continuously along with average total costs. The analysis of average variable costs in the "old" industry shows the tendencies of falling to the point at which margins are marginalized, which then increase faster than average variable costs. By analyzing the movements of average variable costs and marginal costs for "new" industries, we have found that they touch and overlap after the point at which the marginal costs are negligible and serve to maintain the system.

#### 4. COMPARISON OF MARGINAL COST OF "OLD" AND "NEW" MEDIA (MAGAZINE)

The underlying goal of this paper is precisely the analysis of the marginal costs with an emphasis on the analysis of the marginal costs of digitized production of media content. Table 3 shows the comparison of the marginal costs from the analyzed example. In the second column, limiting costs for physical products ("pp") are shown, while the third column shows the marginal costs for digital products ("dp"). The analyzed data is taken from tables 1 and 2. The marginal costs of production of physical magazines drop to 30,000 copies, and then the marginal cost increases. The marginal cost of producing digital magazines falls from the interval to the interval, and in the third interval already gets the value that we say is "almost close to zero". The marginal cost of industrial production of physical products is counted as a change in total cost per unit of new product. The total costs consist of total fixed and total variable costs:

$$MC = \frac{\Delta TC}{\Delta Q} = \frac{\Delta TFC}{\Delta Q} + \frac{\Delta TVC}{\Delta Q}$$

Table 1 shows the change in the marginal cost of producing physical products. The marginal cost first decreases, and then increases and is directly dependent on the intensity of changing the variable costs. The mild growth of variable costs with increased production reduces the marginal cost of a new product unit. The sudden growth of the variable cost with the increase in production results in a rise in the marginal costs. The marginal costs of the production of physical goods are directly related and depend on the amount and intensity of changing the variable costs. In the formula for the marginal costs we can ignore the total fixed costs and count the marginal costs according to the formula we have already mentioned in chapter 3.

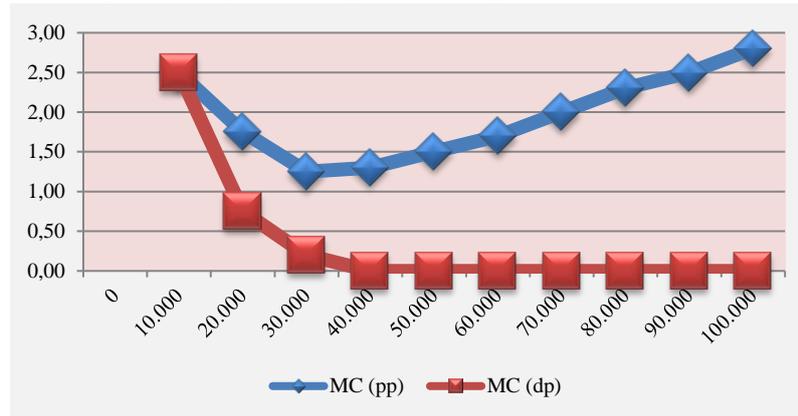
Table 3: Comparison of the marginal cost of the "old" and "new" industries

	MC (pp)	MC (dp)
<b>0</b>		
<b>10.000</b>	2,50	2,50
<b>20.000</b>	1,75	0,75
<b>30.000</b>	1,25	0,20
<b>40.000</b>	1,30	0,00
<b>50.000</b>	1,50	0,00
<b>60.000</b>	1,70	0,00
<b>70.000</b>	2,00	0,00
<b>80.000</b>	2,30	0,00
<b>90.000</b>	2,50	0,00
<b>100.000</b>	2,80	0,00

Source: Lozić, 2019, 53-59

In the production of digital content (products) the cost structure is completely different and hence a completely new paradigm of calculating the marginal cost. The marginal cost of a physical product is directly dependent on changing the variable cost. However, in the production of digitized content, the variable cost drops sharply with the increase in production and the marginal cost is approaching zero. The limiting pricing tendency approaching the minimum value is called "zero marginal cost".

Figure 3: Comparison of the marginal cost of the "old" and "new" industries



Source: Own illustration

In Figure 3, a comparison of the marginal cost curve in the production of physical and digital product forms is shown graphically. In the initial production period, both curves decline. Thereafter, the curve of physical cost curve increases, while the digital cost limit curve drops to zero. The direction and slope of the digital cost limit curve directly depends on the variable cost of system maintenance. What are the costs of maintaining the system lower, the curve ever decreases to zero. That is why we say that the marginal costs of digital products are weaker with zero value, ie they have the value of "almost" zero. The marginal cost is one of the fundamental changes that directly caused digitalization of production processes.

## 5. DISCUSSION

Digitalisation of publishing has directly influenced contemporary business models in the magazine industry. Changing the cost structure of production and distribution of the magazine is most apparent by the emergence of a completely new paradigm of marginal costs. The new business model implies a completely new way of calculating: a) total fixed costs; b) costs associated with the number of subscribers; and c) distribution-related costs due to the long tail effect. By digitizing production, fixed costs also cover some of the costs that could be interpreted as variable costs. Other fixed costs fall into two categories: those associated with the production of the journal [...] and those, over and above product-related costs, which are necessary to keep the company in its current line of business. Examples of the former are comment and news sections, book reviews and review articles plus technical matters such as cover design. Marketing costs, for the journal, would also be included in this category (House et.al. 2004). By setting up of digital production and publishing all forms of operating management move to a digital format. Marketing and promotion of magazine as well as reviews and reader posts become part of a digital business model that supports the concept of zero marginal cost. The total number of subscribers was of particular importance for the profitability of the magazine. Increasing the number of users has directly reduced the impact of variable costs in total costs. By digitization of production, variable costs lose importance, so the number of subscribers is directly related to fixed costs. Since fixed costs do not vary with numbers of copies sold, a bigger circulation will mean that fixed costs can be covered more easily – that is each subscriber will need to pay only a small sum to cover fixed costs compared with the amount which would have to be paid with a low number of subscribers (House et.al. 2004). In addition, the marginal cost of new subscribers is close to zero, and cloud-based digital content production platform have the ability to scale much faster than the printing facilities (Foster 2017). Digitalisation of production and the model of zero marginal cost allowed a reduction in the sales price per unit of production, while production remained in the profit zone.

Digitalisation of production and distribution of media content enabled equal access to media content regardless of the size of the publication or the distance of the consumer. Industrial production has built barriers around the model called the long tail. Digitalization has turned things back to the head. The idea is well-illustrated by a comparison between the welfare consumers derived from, say, 50.000 titles available in their local book stores compared with the 1,000.000 titles available to them from a retailer like Amazon that effectively has infinite space. While each of the additional 950.000 titles has low demand, the sum of the incremental welfare delivered by many small things may be large (Waldfogel 2017). You can find everything out here in the Long Tail. There's the back catalogue, older albums still fondly remembered by long time fans or rediscovered by new ones (Anderson 2014: 22). Installing capacity need to pay fixed costs but each subsequent title put to the system has a marginal cost close to zero. Changing the cost paradigm directly influenced the process of production and process management. The management of installed capacity systems and their optimal use has been replaced by combined management models at zero marginal cost. Taylor (2013) points to the "piggyback strategy" that Facebook took over Instagram. Consider Facebook's acquisition of Instagram. Much of the focus was on how much money changed hands and who got rich. Wrong lesson. The right lesson is getting your head around the crazy fact that piggybacking on modern internet infrastructure allowed 13 employees to scale to millions of users (Taylor 2013). After the acquisition of Instagram, every further publication had marginal cost characteristics close to zero. The cost-related paradigm associated with the zero marginal cost models should nevertheless be taken with caution. Sun (2009) warns of three significant factors that still significantly affect the total cost of production and directly to marginal cost. These are infrastructure costs, energy costs, and system metrics associated with the number of site visitors. Infrastructure costs burden the entire system regardless of the amount of production. Energy costs can vary considerably without affecting the amount of production. The most important objection is that Sun focuses on the metric of the monitoring system and correctly warns that the article's interest or article quality is much more important than its cost of reading or subscribing to content. If the content is uninteresting, the price of production has no impact on sales and revenue that will be achieved through digital distribution. However, this part of the analysis is left for future research.

## 6. CONCLUSION

The digitization of production in the media industry has inevitably caused a change of cost paradigm. Within the media industry, the music industry and the magazine industry, the first were hit by the changed business circumstances. Production of content in digitized form enabled the industry to drastically reduce variable costs. Digitization has had a positive effect on distribution because the costs were closer to zero and at the same time erased the negative effects of the long tail effect. Costs associated with increased subscriptions have almost disappeared as well as distribution costs in remote areas. Costs associated with the increase in production are no longer related to the growth of variable costs and include existing fixed costs. By building production capacity, fixed costs take over part of the total costs of digitized content production. However, the marginal cost of production is not zero and we say that they are close to zero.

## LITERATURE:

1. Albert, Sun (2009) „Marginal Cost Is Not Zero: The Economics of Producing Online Content“, <http://albertsun.info/2009/07/marginal-cost-is-not-zero>, [02.02.2019.]
2. Allmiral, E. (2019) „From Competing On Analytics To Companies As Code“, Forbes, <https://www.forbes.com/sites/esade/2019/01/10/from-competing-on-analytics-to-companies-as-code/#199fb8097af1>, [02.03.2019.]

3. Anderson, C. (2006) *The Long Tail: Why the Future of Business Is Selling Less of More*, Hachette Books
4. Barthel, M. (2018) “5 facts about the state of the news media in 2017“, Pew Research Centre, <https://www.pewresearch.org/fact-tank/2018/08/21/5-facts-about-the-state-of-the-news-media-in-2017/>, [14.04.2019.]
5. Buytaert, D. (2014) „The end of ownership: The zero-marginal-cost economy“, <https://thenextweb.com/entrepreneur/2014/09/06/end-ownership-zero-marginal-cost-economy/>, [14.02.2019.]
6. Cowen, T. (2013) *Average is Over: Powering America Beyond the Age of the Great Stagnation*, Dutton, Publishing by Penguin Group
7. Forster, A. (2017) A looks at digital newspaper's profit margin, <https://www.twipemobile.com/a-look-at-digital-newspapers-profit-margins/>, [14.01.2019.]
8. Gillespie, A (2007) *Foundations of Economics*, Oxford University Press
9. House, E.; Park, V.; Histon, C. (2004) *Cost and business model in scientific research publishing*, SQW Limited, Enterprise House, Vision Park, Histon, Cambridgeshire, [https://wellcome.ac.uk/sites/default/files/wtd003184\\_0.pdf](https://wellcome.ac.uk/sites/default/files/wtd003184_0.pdf), [25.02.2019.]
10. Hyun, C.; Byun, C. (2016) *The Economics of the Popular Music Industry*, Palgrave Macmillan
11. Kie-Mason, J.K.; Riveros, J.F. (2000) „Economics and Electronic Access to Scholarly Information“, (eds.) Kahlin, B.; Varian, H., *Internet Publishing and Beyond: The Economics of Digital Information and Intellectual Property*, The MIT Press, Cambridge, Massachusetts
12. Libert, B.; Beck, M. (2018) „Companies Fail At Digital Transformation By Focusing On Optimization“, *Forbes*, <https://www.forbes.com/sites/barrylibert/2018/01/18/companies-fail-at-transformation-by-focusing-on-optimization/#1e6a19a31efe>, [11.02.2019.]
13. Lozić, J. (2019) “Industrija digitaliziranih sadržaja stvara novu paradigmu teorije troškova: nulti granični trošak u digitalnom izdanju časopisa”, *Polytechnic & Design*, Svezak 7, br.1, 53.-59.
14. Martin, B. (2015) „From capitalism to commons“, *Anarcho-Sindicalist Review*, Issue 64/5, 17.20.
15. McTaggart, D.; Findlay, C.; Parkin, M. (2015) *Economics*, Seventh Edition, Pearson Australia
16. Odlyzko, M.A. (1995) “Tragic loss or good riddance? The impending demise of traditional scholarly journals”, *International Journal of Human-Computer Studies*, 42;71.-122.
17. Pavić, I.; Benić, Đ.; Hashi, I. (2006) *Mikroekonomija*, Drugo izdanje, Sveučilište u Splitu, Ekonomski fakultet Split
18. Penelope Muse Abernathy, Knight Chair in Journalism and Digital Media Economics, *The Rise of Media Baron and the Emerging Threat of the News Desert*, New Center for Innovation and Sustainability in Local Media, University of North Carolina at Chapel Hill, [http://newspaperownership.com/wpcontent/uploads/2016/09/07.UNC\\_](http://newspaperownership.com/wpcontent/uploads/2016/09/07.UNC_), [11.04.2019.]
19. Pew Research Centre, *News Magazines: Digital Subscriptions* (2016), <https://www.journalism.org/chart/news-magazines-digital-subscriptions/>, [21.04.2019.]
20. Pindyck, R.S.; Rubinfeld, D.L. (2005) *Mikroekonomija*, Peto izdanje, MATE
21. Rifkin, J. (2015) *The zero marginal cost society: The Internet of things, the collaborative commons, and the eclipse of capitalism*, Palgrave Macmillan, St. Martin's Press LLC
22. Samuelson, P.A.; Nordhaus, W. D. (1992) *Ekonomija*, Četrnaesto izdanje, MATE
23. Samuelson, P.A.; Nordhaus, W. D. (2010) *Ekonomija*, Devetnaesto izdanje, MATE
24. Sexton, R.L. (2016) *Exploring Economics*, Seventh Edition, Cengage Learning
25. Sun, A. (2009) *Marginal Cost Is Near Zero: The Economics of Producing Online Content*, <http://albertsun.info/2009/07/marginal-cost-is-not-zero>, [11.05.2019.]

26. Taylor, N. (2013) Digital Economics: The Zero Marginal Cost Economy, <https://praxtime.com/2013/01/06/digital-economics-the-zero-marginal-cost-economy/>, [21.02.2019.]
27. Waldfogel, J. (2017) „How Digitalization Has Created a Golden Age of Music, Movies, Books, and Television“, *Journal of Economic Perspectives*, Vol.31, No.3, 195.-214.
28. Waldfogel, J. (2018) *Digital Renaissance: What Data and Economics Tell Us about the Future of Popular Culture*, Princeton University Press
29. Wilson, D. (2018) “PwC’s Global Entertainment & Media Outlook 2018-2022 Reveals Long-Term Trends”, *Publishing Executive*, <https://www.pubexec.com/article/pwcs-global-entertainment-media-outlook-2018-2022-reveals-long-term-trends/>, [25.05.2019.]

## DETERMINANTS OF BANK PROFITABILITY: EVIDENCE FROM THE CZECH BANKS

**Libena Cernohorska**

*University of Pardubice  
Studentská 84, Pardubice 532 10, Czech Republic  
libena.cernohorska@upce.cz*

**Pavla Kotatkova Stranska**

*Czech Technical University in Prague  
Jugoslávských partyzánů 1580/3, Praha 160 00, Czech Republic  
pavla.kotatkova.stranska@cvut.cz*

**Karolina Broklova**

*University of Pardubice  
Studentská 84, Pardubice 532 10, Czech Republic  
Karolina.Broklova@student.upce.cz*

### ABSTRACT

*This paper is focused to construct model to examine the influence of selected determinants of profitability in the Czech banking sector. The goal of composing the simultaneous equation model is to verify and roughly quantify the assumed relationship between profitability in the Czech banking sector and selected determinants (variables) in period 2004–2017, i.e., 481 observations. As a part of the model that was designed, we verified the hypothesis that profitability in the Czech banking sector depends on selected determinants at a 0.05 level of significance. We tested the given data with the goal of verifying the proposed hypotheses on whether profitability (ROA, ROE) in the Czech banking sector is influenced by capital adequacy, balance sheet, taxation rate, the central bank's interest rates and GDP per capita. For verifying the hypotheses, we created a 2–equation model with nine variables. The model is estimation for two stochastically variable. The composed simultaneous equation confirmed influence was also confirmed only for certain determinant. The research question verifies the assumption that the ROE ratio is positively influenced by the inflation rate and the central bank's interest rates. The second equation assesses the mutual ties between ROA ratio and capital adequacy, taxation rate and gross domestic product per capita. The research question verifies the assumption that the ROA ratio is negatively influenced by the taxation rate and GDP per capital. The ROA has the heterogeneous relationship with capital adequacy. All the Czech banks analysed were achieved statistically significant influence of taxation rate on ROA. Using the proposed simultaneous equation model, it is possible to verify and roughly quantify the assumed relationship between the Czech banking sector's profitability and selected determinants.*

**Keywords:** *Czech bank, identifiability, profitability, simultaneous equations*

### 1. INTRODUCTION

The reasoning behind using a system of simultaneous equations is that it has been used in a similar way in scientific studies by Greene (2003), Chow (1960), Aggarwal, Jacques (2001), and Easton et al. (2002), for example. They used simultaneous equations to construct macroeconomic models, primarily in the areas of employment, national ownership, production, and modeling time series. The goal of this paper is to compose a model that examines the influence of selected determinants of profitability in the Czech banking sector during the years 2004–2017 by using a simultaneous equation model with a structural form and while preserving

the economic interpretation and limitations of the model's individual parameter. Empirical studies dealing with banking sector profitability often express profitability as only one equation containing banking, macroeconomic and regulatory ratio. Analysis of the banking sector's profitability is focused only on constructing basic regression models (scientific studies by Maudos, de Guevara, 2004; Bourke, 1989; Huizinga, 2000; Molyneux, Thornton, 1992; etc.); at the same time, the data set comprises data for individual banks and the size of the sampling frame amounted to hundreds of values. A closer look at the individual determinants influencing the banking sector's profitability determines that it is possible to define mutually independent and analytically dependent equation. This means that profitability should be described using a system of simultaneous and mutually dependent equation. This paper begins with the assumption that profitability in the Czech banking sector will be dependent on capital adequacy, balance sheet total, taxation rate, inflation rate, the Czech National Bank's interest rates and gross domestic product per capita. A two-equation model will be created with nine variables. Data for the established period will be entered into the simultaneous equation model, and analysis will be conducted separately for the individually selected bank. On account of data availability for all the years examined, the following banks were included in the model: Česká Spořitelna (CS), Československá Obchodní Banka (CSOB), Komerční Banka (KB), Raiffeisenbank, UniCredit Bank, Citibank, J&T Banka, LBBW and Sberbank. Bank selection further evolved due to the banking sector's heterogeneity concerning the size of the balance sheet total.

## 2. LITERATURE REVIEW CHAPTER

Short (1979) and Bourke (1989) published as first studies which attempted to identify some of the major determinants of bank profitability. There is a large literature dealing with determinants that influence the profitability of banks. The literature divides the determinants of bank profitability into internal and external factors to the bank. Studies on the determinants of bank profitability have typically focused on the returns on bank assets (ROA) and return on equity (ROE). More recent studies have expanded the number of determinants considered. Many studies (e.g. Bikker, Hu, 2002; Abreu, Mendes, 2002; Molyneux, Thornton, 1992; Bourke, 1989; Dietrich, Wanzenried, 2014; Djalilov, Piesse, 2016; Short, 1979; Revell, 1979; Bolt et al. 2012; Petria et al., 2015; Lui, Wilson, 2010) have examined the effect of bank profitability on bank-specific characteristics (i.e. capital ratio, operational efficiency, bank size, ownership and concentration) and macroeconomic characteristics (i.e. inflation and GDP). The empirical studies have focused their analyses either on cross-country evidence or on the banking system of individual countries. The studies by Molyneux, Thornton (1992), Demirgüç, Kunt, Huizinga (1999), Abreu, Mendes (2002); Bourke (1989), Djalilov, Piesse (2016) or Petria et al. (2015) investigate a panel data set. Some of these studies investigated bank profitability determinants for European banks (Abreu, Mendes, 2002; Molyneux, Thornton, 1992; Maudos, de Guevara, 2004; Djalilov, Piesse, 2016). Studies by Dietrich and Wanzenried (2011), Athanasoglou et al. (2008), Horváth (2009); Berger (1995) or Lui and Wilson (2010) focus their analyses on single countries. A number of authors have focused profitability analysis on research on the combination of internal and external determinants of bank profitability, such as balance sheet total (Černohorský and Prokop, 2016), capital size (Smirlock, 1985 or Short, 1979), inflation (Revell, 1979), gross domestic product (Bikker, Hu, 2002) etc. Bank size has been traditionally measured according to balance sheet total. The CNB's method also comes out of this assumption; it divides banks into three groups according to balance sheet total: large, medium and small. Bank size and profitability closely relate to a bank's capital adequacy (Short 1979). Large banks tend to rise cheaper, i.e., foreign capital, and therefore appear to be more profitable. For more information about capital adequacy see Černohorský, Šobotníková, Teplý (2011).

The selection of bank profitability determinants is based on the mentioned above studies and data availability. We classify as dependent variables ROA and ROE. We choose as independent variables capital adequacy, balance sheet total, taxation rate, the central bank's interest rates, inflation rate and GDP per capita.

### 3. METHODOLOGY

The first pioneer of the theory of simultaneous equations was Haavelmo in 1943 (Haavelmo, 1943). Other significant statisticians in this area were Anderson, Rubin and Hurwicz, who primarily dealt with studying the estimate of structural parameter. The first steps in the direction of expanding econometric theory were recorded in the 1960's in the work of Basman (1957), Bergstrom (1962) and Kabe (1963, 1964). In these, the densities of score functions were deduced for the two-stage method of least squares and the ordinary least squares method (LSM) in simple simultaneous equation model. MSR may be explanatory variables and endogenous variable. Differentiation shall be still "predetermined" variable – the explanatory variables uncorrelated on error term into individual equation. Linear SEM (SEM interdependent type) included on  $n$  observations in total  $q$  endogenous variables  $y_1, \dots, y_q$ , next  $p$  predetermination variables  $x_1, \dots, x_p$  and  $q$  error term  $\varepsilon_1, \dots, \varepsilon_q$ , then:

its structural form are obtainable as (1)

$$Y \cdot \Gamma + X \cdot B = E \quad (1)$$

where

$Y = (y_{ij})$  is  $n \times q$  the matrix endogenous variables,  
 $\Gamma = (\Gamma_{ij})$  is  $q \times q$  regular the matrix structural endogenous parameters,  
 $X = (x_{tk})$  is  $n \times p$  the matrix predetermination variables,  
 $B = (\beta_{kj})$  is  $p \times q$  the matrix structural predetermination parameters,  
 $E = (\varepsilon_{ij})$  is  $n \times q$  the matrix error term structural form,  
 $t = 1, \dots, n, i, j = 1, \dots, q$  and  $k = 0, \dots, p$ .

provided of regularity square matrix structural parameters  $\Gamma$  be the solution of the whole system of structural equations (1) to reach the reduced form (2)

$$Y = X\Pi + F \quad (2)$$

Where

$$\Pi_{p \times q} = -B\Gamma^{-1}, F_{n \times q} = E\Gamma^{-1} \quad (3)$$

The term (2) is expressed as an unlimited reduced form. This form of simultaneous equation can be compatibly estimated by the classic LSM. Due to this, it is necessary to check the so-called identifiability of the structural equation for the reason that different sets of structural SEM parameters can correspond with the same set of statistical data. This fact results in the compatibility of one of the model's reduced form equations with various mutually dependent structural equations that are not possible to differentiate from each other, because they contain the same variables, i.e., the same statistical form. Identification is conducted separately for each equation. The model is identified if all its equations are identified. The condition for identifiability in simultaneous equations corresponds to condition (4):

$$k^{**} \geq g\Delta - 1 \quad (4)$$

where

- $g\Delta$ ... the total number of endogenous variable in the model (in all equations)
- $k^{**}$  ... the number of predetermination variables excluded in the equation

The following order identified is:

- $k^{**} > g\Delta - 1$ , the equation is overidentified,
- $k^{**} = g\Delta - 1$ , the equation is exactly identified,
- $k^{**} < g\Delta - 1$ , the equation is unidentified.

If the model is not identified, it is not identified with economic theory. More detail on SEM can be found, for example, in Haavelmo (1943) and Basmann (1957).

#### 4. DATA AND MODEL SPECIFICATION

The data was acquired from the Bankscope database. Because of data availability and the development of the Czech banking sector, only nine banks were selected. These banks were the ones for which it was possible to acquire the selected ratios for the entire period of 2004–2017. We tested the given data with the goal of verifying the proposed hypotheses on whether profitability in the Czech banking sector is influenced by capital adequacy, balance sheet, taxation rate, the central bank's interest rates and GDP per capita. For verifying the hypotheses, we created a 2–equation model with nine variables. The selection of variables entering the analysis is based mostly on the works Maudos - de Guevera (2004), Bourke (1989), Huizinga (2000), Molyneux and Thornton (1992). Prior research result describing their interrelations that researchers have not considered functions to be jointly determined and use for example instrument panel regression. This article provides an integrated analysis of the interrelations among ROA - ROE and balance sheet total - capital adequacy - taxation rate - GDP per capital - inflation rate - the central bank's interest rates. It follows from this argument that panel regression cannot be used, but it used simultaneous equations. The simultaneous equations use in the analyses. The simultaneous equations used for analyses, for example, Spitzer (1977), Tuwaijri (2004) and Jacques (1997). Frequently in economic practice, we are not able to adequately determine endogenous variables with one equation, because the behavior of microeconomic and macroeconomic values is able to be satisfactorily explained only by using a set of mutually dependent relationships. This is seen when the endogenous variable and its observation are determined not only by predetermined variables but also by other endogenous variables.

##### 4.1. Estimation Models of Simultaneous Equations

The model is estimation for three stochastically variable. It includes endogenous variables:  $y_{1t}$ ,  $y_{2t}$  and predetermination variables:  $x_{1t}$ ,  $x_{2t}$ ,  $x_{3t}$ ,  $x_{4t}$ ,  $x_{5t}$ ,  $x_{6t}$  and  $x_{7t}$ . We use as endogenous variables:  $y_{1t}$  ROE,  $y_{2t}$  ROA and predetermination variables  $x_1$  unit vector,  $x_2$  balance sheet total,  $x_3$  capital adequacy,  $x_4$  taxation rate,  $x_5$  Gross domestic product per capita (GDP per capita),  $x_6$  inflation rate,  $x_7$  the central bank's interest rates. The random effects (or error terms) are  $\varepsilon_{jt}$  for  $j = 1, 2, 3$ . The forms models:

$$\begin{aligned} y_{1t} &= \beta_{12}y_{2t} + \gamma_{11}x_{1t} + \gamma_{12}x_{2t} + \gamma_{16}x_{6t} + \gamma_{17}x_{7t} + \varepsilon_{1t} \\ y_{2t} &= \gamma_{21}x_{1t} + \gamma_{23}x_{3t} + \gamma_{24}x_{4t} + \gamma_{25}x_{5t} + \varepsilon_{2t} \end{aligned}$$

Identification of the above equations for the models of simultaneous equations:

$$1. \text{ equation} \rightarrow k^{**} = 3, g_{\Delta} = 2 \rightarrow 5 > 2 - 1 \rightarrow \text{overidentified}$$

All equations fulfill the condition of identifiability. The number “g”, the total number of endogenous variables in the model, is 2. The number “k”, the total number predetermination variables in the model, is 7.

## **5. RESULTS OF THE ESTIMATION OF THE SIMULTANEOUS EQUATIONS FOR THE MODEL OF SELECTED BANKS' PROFITABILITY**

The goal of composing the simultaneous equation model is to verify and roughly quantify the assumed relationship between profitability in the Czech banking sector and capital adequacy, balance sheet total, taxation rate, inflation rate, the Czech National Bank's interest rates and gross domestic product per capita in period 2004–2017, i.e., 481 observations. Only 486 data items go into the actual analysis. Data reduction is caused by treatment of the data in order to meet the basic conditions for simultaneous equations. The reason for data reduction was that all input variables verified for assumption of non-stacionarity. All variables showed non-stacionarity (it was verified by Dickey-Fuller test). The variables transferred to the assumption stacionarity using first-difference model. The model of simultaneous equations verified in terms of residual analysis, determination index, and statistical significance of regression parameters. We used Breusch-Pagan test for testing normality of residual. The null hypothesis was not rejected. The residues fulfill the condition of homoscedasticity ( $p$ -values were 0.1112 - 0.2135). The index of determination value fluctuated around an average of 65–70%, which points to a higher definite level of correlation. For all equations with an unconfirmed statistical significance, the value of the index of determination remains in single digit percentage. The first equation in the model expresses the ROE ratio's dependence with respect to the values for the ROA ratio, balance sheet totals, inflation rate, and the Czech National Bank's interest rate. The second equation assesses the mutual ties between the ROA ratio and capital adequacy, tax rate, and gross domestic product per capita. The two-stage least squares method was used to resolve the simultaneous econometric model with the two equations that was proposed above. Processing took place using SW GRETL. The model's first equation expresses the dependence of the ROE ratio on the value of the ROA ratio, balance sheet total, inflation rate and the Czech National Bank's interest rate. The second equation assesses the mutual ties between the ROA ratio and capital adequacy, taxation rate and gross domestic product per capita. (See Table 1)

*Table following on the next page*

Table 1: Parameters of individual simultaneous equations for selected the Czech Bank's - without absolute term (own calculation)

Bank			$\beta$	$\gamma$			
Large banks	CS	1. equation	<b>13.75410</b>	<b>-0.00002569</b>	0.45896	<b>0.45987</b>	
		2. equation		-0.011256	<b>-0.03256</b>	<b>-2.6879</b>	
	CSOB	1. equation	<b>11.6878</b>	<b>-0.00002568</b>	0.25891	<b>0.6362</b>	
		2. equation		-0.0032569	<b>-0.05689</b>	<b>-3.59787</b>	
	KB	1. equation	<b>7.66515</b>	<b>-0.000000289</b>	0.002099	<b>1.25697</b>	
		2. equation		-0.0011096	<b>-0.06785</b>	<b>-3.56987</b>	
	UniCredit	1. equation	<b>11.256</b>	<b>-1.98756</b>	0.616737	<b>0.35645</b>	
		2. equation		-0.20237	<b>-0.089765</b>	<b>-2.49554</b>	
	Middle banks	J&T Banka	1. equation	<b>4.1256</b>	<b>-0.000002101</b>	0.129302	<b>0.554877</b>
			2. equation		<b>0.15771</b>	<b>-0.05698</b>	<b>-3.72245</b>
		Raiffaisen	1. equation	<b>12.7689</b>	<b>4.37149</b>	0.1598	<b>1.58975</b>
			2. equation		0.0473318	<b>-0.78798</b>	-0.0002569
Sberbank		1. equation	<b>7.5689</b>	<b>2.69887</b>	0.13415	<b>0.265405</b>	
		2. equation		0.03689	<b>-0.2569</b>	-0.00001897	
Small bank	LBBW*	1. equation	<b>1.0526</b>	<b>-0.000001199</b>	0.69875	<b>2.71623</b>	
		2. equation		-0.02569	<b>-0.08975</b>	-0.0002156	
Branches of foreign banks	Citibank	1. equation	<b>15.5876</b>	<b>-0.00000835</b>	0.01258	<b>1.8779</b>	
		2. equation		-0.25648	<b>-0.02569</b>	-0.025698	

Note: \*LBBW Bank CZ a. bank exist from 17. 9. 2008. Until the bank was called BAWAG Bank CZ a. (in Czech banking market). Since 1.9. 2008 100% shareholder is the third largest bank Landesbank Baden–Württemberg (LBBW).

The parameters in bold type in above were indicated as statistically significant in terms of testing statistical significance at a level of 0.05. Statistical significance was not confirmed for the other parameters; this is most likely caused by the length of the time series or an inappropriately selected function type, i.e., the selected linear function was not the most appropriate. The equations with statistical significance demonstrated for most parameters showed the value of the index of determination fluctuating at an average of 65–70%, which points to a higher definite level of correlation. For the equations with unconfirmed statistical significance, the index of determination's value remains in single digit percentage.

### 5.1. Economic Interpretation of the Proposed Model's First Equation

We have verified the first research question using the model that was composed – i.e., that there is statistically significant relationship between the ROE ratio and the group of independent variables not only with the expression of a quantified relationship but also with the verification of statistical significance. The research question verifies the assumption that the ROE ratio is positively influenced by the inflation rate and the central bank's interest rates.

Next the ROE has positive relationship with the ROA ratio. The ROE has the heterogeneous relationship with the balance sheet total ratio (Table 2). LBBW took a conservative approach to maintaining a strong capital base and liquid position in 2010. The bank was forced to make certain difficult decisions concerning managing the loan portfolio – mainly in the sector of corporate banking. This resulted in increasing provision. This accounting measure had significant impact on the bank's profitability and lead to them showing net loss.

*Table 2: Summary of economic interpretation of the results of regression parameter model's first equation - for dependent variable ROE (own calculation)*

	<b>ROA</b>	<b>Balance sheet total</b>	<b>Inflation rate</b>	<b>The central bank's interest rates</b>
<b>CS</b>	SV/positive	SV/negative	SN/positive	SV/positive
<b>CSOB</b>	SV/positive	SV/negative	SN/positive	SV/positive
<b>KB</b>	SV/positive	SV/positive	SN/positive	SV/positive
<b>UniCredit</b>	SV/positive	SV/negative	SN/positive	SV/positive
<b>J&amp;T Banka</b>	SV/positive	SV/negative	SN/positive	SV/positive
<b>Raiffaisen</b>	SV/positive	SV/positive	SN/positive	SV/positive
<b>Sberbank</b>	SV/positive	SV/positive	SN/positive	SV/positive
<b>LBBW</b>	SV/positive	SV/negative	SN/positive	SV/positive
<b>Citibank</b>	SV/positive	SV/negative	SN/positive	SV/positive

*Note: SV ... statistically significant at the level 0.05; SN ... statistically insignificant at the level 0.05; positive ... direct relationship; negative ... inverse relationship*

A statistically significant positive influence of balance sheet total on ROE, the same as shown by Smirlock (1985), was confirmed for Raiffeisenbank. J&T Bank achieved the same positive influence, but statistically significant. For CS, a statistically significant negative influence of balance sheet total on the ROE ratio was confirmed. The same influence was achieved for UniCredit. Furthermore, a positive influence was confirmed for inflation rate when a growing value for inflation level supports the growth of the ROE ratio's value. Bourke (1989) and Molyneux - Thornton (1992), for example, came to the same conclusion. There a negative influence only for KB, i.e., a situation where an increasing inflation rate conversely lowers the ROE ratio value. This conclusion is associated with the conclusions of Revella's study (1989), which warns of the fact that the influence of inflation on bank profitability influences the growth of banks' wages and operating cost. The authors accepted the research question for positive influence for ROA and the central bank's interest rate so determinants on ROE.

## **5.2. Economic Interpretation of the Proposed Model's Second Equation**

We have verified the second research question using the model that was composed – i.e., that there is statistically significant relationship between the the ROA and the group of independent variables (capital adequacy, taxation rate and GDP per capita) not only with the expression of a quantified relationship but also with the verification of statistical significance. The research question verifies the assumption that the ROA ratio is negatively influenced (i.e., an inverse relationship) by the taxation rate and GDP per capital. The ROA has the heterogeneous relationship with capital adequacy. All the Czech banks analyzed were achieved statistically significant influence of taxation rate on ROA (Table 3).

*Table following on the next page*

Table 3: Summary of economic interpretation of the results of regression parameter model's second equation - for dependent variable ROA (own calculation)

	Capital adequacy	Taxation rate	GDP per capital
<b>CS</b>	SN/negative	SV/negative	SV/negative
<b>CSOB</b>	SN/negative	SV/negative	SV/negative
<b>KB</b>	SN/negative	SV/negative	SV/negative
<b>UniCredit</b>	SN/negative	SV/negative	SV/negative
<b>J&amp;T Banka</b>	SV/positive	SV/negative	SV/negative
<b>Raiffaisen</b>	SN/positive	SV/ negative	SN/negative
<b>Sberbank</b>	SN/positive	SV/ negative	SN/negative
<b>LBBW</b>	SN/negative	SV/negative	SN/negative
<b>Citibank</b>	SN/negative	SV/ negative	SN/negative

Note: *SV ... statistically significant at the level 0.05; SN ... statistically insignificant at the level 0.05; positive ... direct relationship; negative ... inverse relationship*

There was an interesting result for CS; here, a statistically significant negative relationship was confirmed – where an increasing taxation rate lowered the ROA ratio. This fact corresponds with the results of the study by Demirgüç–Kunt - Huizinga (1999). The authors accepted the research question for negative influence for taxation rate and GDP per capital so determinants on ROA.

## 6. CONCLUSIONS

Using the simultaneous equation model, a model was created that explores the influence of selected determinants on bank profitability in the Czech Republic. The simultaneous equation model was composed of two equations. Using the proposed simultaneous equation model, it is possible to verify and roughly quantify the assumed relationship between the Czech banking sector's profitability and capital adequacy, balance sheet total, taxation rate, inflation rate, Czech National Bank interest rates and gross domestic product per capita. Nine banks operating from 2004–2014 in the Czech banking sector were included in the model. The research question verifies the assumption that the ROE ratio is positively influenced by the inflation rate and the central bank's interest rates. Next the ROE has positive relationship with the ROA ratio. The ROE has the heterogeneous relationship with the balance sheet total ratio. The authors accepted the research question for positive influence for ROA and the central bank's interest rate so determinants on ROE. These findings are consistent with economic theory and the conclusions of Smirlock (1995) and Short (1979). The second equation assesses the mutual ties between ROA ratio and capital adequacy, taxation rate and gross domestic product per capita. The research question verifies the assumption that the ROA ratio is negatively influenced (i.e., an inverse relationship) by the taxation rate and GDP per capita. The ROA has the heterogeneous relationship with capital adequacy. All the Czech banks analysed were achieved statistically significant influence of taxation rate on ROA. We can find different impacts between taxation rate and ROA e.g. in conclusions of the authors Demirgüç–Kunt - Huizinga (1999). There are many ways to use the estimated econometric model. Primarily, it is possible to apply it at the macro-level when quantifying and testing economic hypotheses that have been derived from economic theory. The constructed model can be used by banks when predicting their profitability with respect to a change in preset macroeconomic variables. In the proposed model, this means central bank interest rates, GDP, the tax rate, and the rate of inflation. Thanks to the model, which is constructed using three component equations, it is possible to identify the basic determinants of bank profitability and to subsequently influence this profitability using an appropriately chosen tool (i.e., via a monetary authority or agent of fiscal policy).

Employing a time delay, it is possible to observe how the influence of individual bank profitability determinants increases or decreases with respect to the state of the internal and external environments.

**ACKNOWLEDGEMENT:** *The paper has been created with the financial support of The Czech Science Foundation (project GACR No. 17-02509S – Emerging financial risks during a global low interest rate environment) and University of Pardubice (project SGS\_2019\_018 - Dynamika ekonomických aspektů veřejných politik v kontextu efektivnosti a udržitelnosti).*

#### LITERATURE:

1. Abreu, M., Mendes, V. (2002). Commercial Bank Interest Margins and Profitability: Evidence for Some EU Countries. In *CISEP*, no. 830.
2. Aggarwal, R., Jacques, K. T. (2001). The impact of FDICIA and prompt corrective action on bank capital and risk: Estimates using a simultaneous equations model. In *Journal of Banking and Finance* (p. 1139–1160).
3. Athanassoglou, P., Brissimis, S., Delis, M. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. In *Journal of International Financial Markets, Institutions and Money* (p. 121–136).
4. Basmann, R. L. (1957). A Generalized classical method of linear estimation of coefficients in a structural equation. In *Econometrica*, (p. 77–83).
5. Bergstrom, A. R. (1988). The History of Continuous–Time Econometric Model. In *Econometric Theory* (p. 365–388).
6. Bankscope (2018). World banking information source. Bureau Van Dijk CD-ROM.
7. Berger, A. (1995). The profit–structure relationship in banking: Tests of market-power and efficient-structure hypotheses. In *Journal of Money, Credit and Banking* (p. 404–431).
8. Bikke, J. A., Hu, H. (2002). Cyclical Patterns in Profits. Provisioning and Lending of Bank. In *DNB Staff Reports*, 86, no. 1.
9. Bolt, W., De Han, L., Hoeberichts, M., Van Oordt, M. R., Swank, J. (2012). Bank profitability during recessions. In *Journal of Banking & Finance* (p. 2552–2564).
10. Bourke, P. (1989). Concentration and other determinants of bank profitability in Europe, North America and Australia. In *Journal of Banking and Finance* (p. 65–79).
11. CZSO (2016): *Key macroeconomic indicators*. Retrieved 20.11.2018 from <[https://www.czso.cz/csu/czso/hmu\\_cr](https://www.czso.cz/csu/czso/hmu_cr)>
12. Černohorský, J., Prokop, V. (2016). The Relationship of Concentration and Profitability in Banking Markets. In: 15th International Conference on Finance and Banking in Silesian University. [Conference proceedings] Karviná: OPF v Karviné (p. 40–49).
13. Černohorský, J., Šobotníková, P., Teplý, P. (2011). The Challenges of Basel III for the Czech Banking Sector. In: 13th International Conference Finance and Banking the Czech Republic in Silesian University. [Conference proceedings] Karviná: OPF v Karviné, pp. 84–99.
14. Demirgüç-Kunt, A., Huizinga, H. (1999). Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence. In *World Bank Economic Review* (p. 379–408).
15. Dietrich, A., Wanzenried, G. (2011). Determinants of bank profitability before and during the crisis: Evidence from Switzerland. In *Journal of International Financial Markets, Institutions and Money* (p. 307–327).
16. Dietrich, A., Wanzenried, G. (2014). The determinants of commercial banking profitability in low-, middle-, and high-income countries. In *The Quarterly Review of Economics and Finance* (p. 337–354).

17. Djalilov, K., Piesse, J. (2016). Determinants of bank profitability in transition countries: What matters most?. In *Research in International Business and Finance* (p. 69-82).
18. Easton, P., Taylor, G., Shroff, P., Sougiannis, T. (2002). Using forecasts of earnings to simultaneously estimate growth and the rate of return on equity investment. In *Journal of Accounting Research* (p. 657–67).
19. Greene, W. (2003). *Econometric analysis*. New Jersey: Pearson Education.
20. Haavelmo, T. (1943). The statistical implications of a system of simultaneous. In *Econometric* (p. 1–12).
21. Huizinga, H. (2000). Financial Structure and Bank Profitability. In *Policy Research Working Papers*.
22. Horváth, R. (2009). The Determinants of the Interest Rate Margins of Czech Banks. In *Czech Journal of Economics and Finance* (p. 128-136).
23. Chow, G. C. (1960). Tests of equality between sets of coefficients in two linear regressions. In *Econometrica*, (p. 591-605).
24. Jacques, K., Nigro, P. (1997). Risk-based capital, portfolio risk, and bank capital: A simultaneous equations approach. In *Journal of Economics and Business* (p. 533-547).
25. Kabe, D.G. (1963). A Note on the Exact Distributions of the GCL Estimators in Two Leading over Identified Case. In *Journal of the American Statistical Association* (p. 535–537).
26. Kabe, D.G. (1964). On the Exact Distributions of the GCL Estimators in a Leading Three–Equation Case. In *Journal of the American Statistical Association* (p. 881–894).
27. Kořátková Stránská, P., Marek, J. (2015). Simultaneous equations and modelling of new flat demand. In: Proceedings of Hradec economics days 2015 University of Hradec Králové. [Sborník] Hradec Králové: Gaudeamus, pp. 11–16.
28. Lui, H., Wilson, J. (2010). The Profitability of Banks in Japan. In *Applied Financial Economics*, (p. 1851-1866).
29. Maudos, J., De Guevara, J.F. (2004). Factors explaining the interest margin in the banking sectors of the European Union. In *Journal of Banking and Finance* (p. 2259–2281).
30. Molyneux, P., Thornton, J. (1992). Determinants of European bank profitability: A note. In *Journal of Banking and Finance* (p. 1173–1178).
31. Petria, N., Capraru, B., Ihnatov, J. (2015). Determinants of banks' profitability: evidence from EU 27 banking systems. In *Procedia Economics and Finance* (p. 518-524).
32. Revell, J. (1979). *Inflation and Financial Institution*. London: Financial Times.
33. Short, B. K. (1979). The relation between commercial bank profit rates and banking concentration in Canada, Western Europe and Japan. In *Journal of Banking and Finance* (p. 209 – 219).
34. Smirlock, M. (1985). Evidence on the (Non) Relationship between Concentration and Profitability in Banking. In *Journal of Money, Credit and Banking* (). 69–83).
35. Spitzer, J.J. (1977). A simultaneous equations system of money demand and supply using generalized function forms. In *Journal of Econometrics* (p. 117-128).
36. Tuwajri, S. A.A., Christensen, T. E., Hughes, K. E. (2004). The relations among environmental disclosure, environmental performance, and economic performance: a simultaneous equations approach. In *Accounting, Organizations and Society* (p. 447-471).

# THE DYNAMICS OF MUNICIPALITY CONSOLIDATION - COMPARATIVE ANALYSIS OF SUCCESS AND FAILURE CASES

**Marian Kachniarz**

*Wroclaw University of Environmental and Life Sciences*

*Wroclaw, Poland*

*marian.kachniarz@upwr.edu.pl*

## **ABSTRACT**

*Despite rationale arguments, consolidation reforms are very difficult to implement due to the deep-rooted attachment to the existing borders. Meanwhile, urban functional areas usually extend beyond the city's administrative boundaries, which raises a need of coordinating effective public service provision between the city and its suburbs. A review of world experience shows that two institutional solutions are usually applied here – intercommunal cooperation or adaptation of administrative borders to the scope of the functional zone. The objective of the paper is to compare the processes of municipal consolidation in two cities: in Princeton (USA) and Lubin (Poland). Princeton is an example of successful administrative consolidation of the city with the surrounding rural commune, while in Lubin, unfortunately, such a project was not implemented. In the conclusion was found that intercommunal cooperation does not provide sustainable solutions and is exposed to cadenza changes of decision-makers. The most effective seems to be the consolidation of individuals, but its success depends on a very well prepared and transparent procedure.*

**Keywords:** *urban functional area, administrative consolidation, public services, intercommunal cooperation*

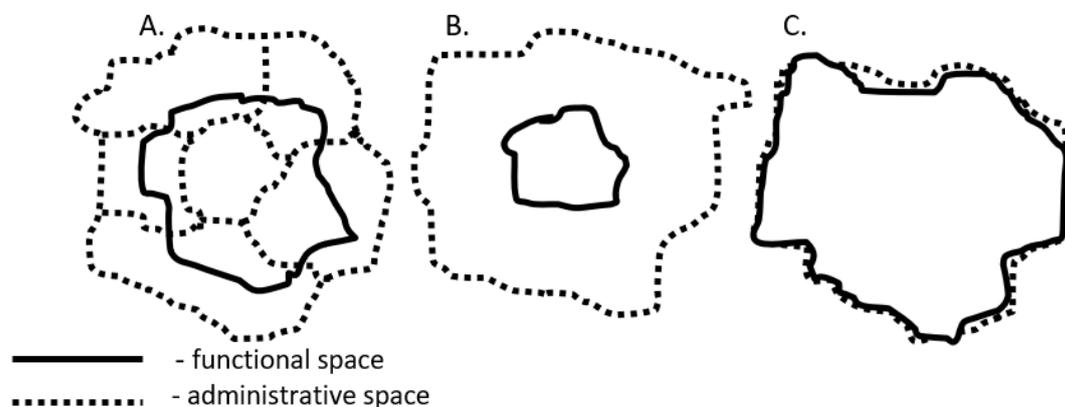
## **1. INTRODUCTION**

Administrative borders do not usually coincide with the functional impact zone of the cities. Urban functional areas extend beyond the administrative boundaries of the city. This situation has an impact on the organisation of public services. The structure of these services and their quality should be continuous throughout the functional zone. As a result, there is a problem of coordination of effective public service provision between the city and its suburbs. Management in closed administrative boundaries of areas does not correspond to the real needs of the inhabitants and thus interferes with the regularity of the city development process. Therefore, there is a need for solutions that would eliminate these dysfunctions. A review of international experiences shows that two institutional solutions are usually used here - inter-municipal cooperation or the adaptation of administrative borders to the scope of a functional zone. However, the research so far has not provided a clear answer to the question of which method is more effective. The aim of the study is to compare the processes of adaptation of administrative borders to urban functional areas on the example of two cities. One of them is Princeton in New Jersey (USA), which is an example of successful administrative consolidation of the city with the surrounding rural municipality. The second example is the Polish city of Lubin, where inter-communal cooperation was developed and the initiative to consolidate two administrative units has not yet been implemented. The analysis of these two separate cases, although they originate from other continents and countries, should prove the universal regularities that accompany the processes of managing functional zones. Declarative inter-municipal cooperation is able to eliminate many problems and adapt the scope of tasks to the developing functional zones. However, in practice there are few effective and stable examples of such actions. Sub-optimal solutions dominate, and their sustainability is largely based on leaders' personalities rather than institutional solutions. This results in a research hypothesis of this article expressing the conviction that uniform management of the entire functional area

fosters efficiency and institutional sustainability of public service provision. Due to the fact that inter-communal cooperation does not provide sustainable solutions and is exposed to cadence changes of decision-makers, the most effective seems to be consolidation of entities. In practice, this means that the changes in administrative boundaries should follow the changes in the functional zone. It is worth noting, however, that due to the inertia of administrative divisions, carrying out consolidation projects is not easy - their success often depends on a well-prepared procedure, long-term consultations and transparency in presenting the results.

## 2. BACKGROUND

The nature of many public tasks performed by local government units (LGU) often exceeds their administrative boundaries. These issues were dealt with in detail by Bennett (1997), distinguishing between administrative and functional space. Defining the relationships between these types of space, he distinguished three model situations, which are presented in figure. 1.



*Figure 1: The models of relations between administrative and functional space (Bennett 1997)*

In the first model (A) small administrative structures divide a uniform functional space, in the second (B) the functional structure is entirely contained in the administrative unit and is much smaller than it is, and in the third model (C) administrative boundaries are adapted to social, economic and environmental functions. In practice, the third type of relationship is very rare, where there is a good relationship between administrative boundaries and gravitational zones. In the case of agglomeration systems, this is usually the first type where a smaller administrative space is included in a wider functional area. In this case, more efficient and effective provision of public services requires coordination of activities, institutional forms of cooperation, or changes in administrative boundaries. A functional area is a geographically, spatially and economically coherent zone of city influence, based not only on the existence of functional links but also on advanced urbanisation processes (Śleszyński, 2013). According to the OECD, urban functional areas are considered in terms of population density, which allows to determine the city core and flow streams (a daily mobility variable) defining a suburban zone (Definition... 2013). In other words, it is a compact urban settlement system (core) and a functionally linked urbanised zone. This complex, economically, socially and spatially coherent area allows for the coordination of flows shaping the quality of life of residents (Yanqiang, 2014; Przybyła, Kachniarz, 2017, Hansen, 1959). The scope of these flows therefore determines the cohesion limit of a given functional area. Its effective management requires an integrated and horizontal territorial approach. It optimizes costs, increases efficiency and rationalizes the prices of services provided, ensuring an efficient management process. Such a research problem is the subject of many discussions, polemics and research concepts.

Representatives of the traditional school of metropolitan reforms, such as Stephens and Wilkstrom (2000), tend to favour formal solutions, i.e. LGU consolidation. Coomunalists, such as Ostrom, Tiebout and Warren, (1961), based on the theory of public choice, believe that the situation can be controlled through intercommunal cooperation. Looking at global trends over the last few decades, we can see a clear trend towards increasing the size of LGUs through their consolidation. In Europe, for example, this was diagnosed by Swianiewicz (2015), while in the USA, Faulk & Hicks (2011). However, the results of research on the effects of these consolidations are not unambiguous. The assumed effect of scale and reduction of operating costs of LGU in ex-post studies is very difficult to demonstrate. Tavares (2018) carried out a broad review of the results of such studies. The results of recent research undertaken in the USA (Caprio & Pfeiffer, 2014; Bel & Warner, 2015), the Netherlands (Allers & Geertsema, 2016), Denmark (Blom-Hansen et al. 2016) and in Poland (Kachniarz 2014) recommend cautious expectations rather than unbridled optimism, which often results from government reports. The effects of intercommunal cooperation are assessed in a similar way. Research conducted in the Netherlands (Allers & de Greef, 2018), France (Frère, Leprince and Paty, 2014) and the USA (White, 2002) has shown that theoretical assumptions rarely bring results in practice. As Swianiewicz (2018) notes, such a shape of results may result from the fact that most of the reforms are forced in nature. There are relatively few bottom-up consolidations, voluntarily initiated by local authorities and communities. In such a case, conformism may be smaller and thus more beneficial. Swianiewicz points to a research gap concerning such projects, which this article tries to fill, albeit in part.

### **3. MATERIALS AND METHODS**

In order to achieve this goal, in the first part of the research the source materials were searched in order to reconstruct the history of spatial structure formation in Princeton (USA) and Lubin (Poland). In this way, the functional dynamics of cities were identified, along with the identification of the causes of these processes. In the second part, the literature and source materials concerning the process of designing and implementing consolidation projects in both cities were analysed using the desk research method. On this basis, the course and nature of decision-making processes, which were the basis of these undertakings, were reconstructed. Particular attention was paid to the role of communication and consultation elements with local leaders and residents in the achievement of key decisions. All these elements were subjected to comparative analysis in order to sublimate the characteristics of each of the processes, which could become good universal practices. A number of different primary and secondary sources have been used in these studies. These were mainly statistical databases aggregated in the Central Statistical Office's Local Data Bank (BDL GUS), City Data and New Jersey State Data Center (NJSDC). A great deal of information was also obtained from analyses and reports prepared in both cities to justify consolidation projects. In Princeton, it was primarily a study by the Consolidation Committee entitled: "Borough of Princeton and Township of Princeton Joint Consolidation/Shared Services". (Summary Report, 2011). In Lubin, in turn, the basis for the expert report was the "Functional and spatial conditions of Lubin's development". (Czamara et al. 2019). The basis for the evaluation of the effectiveness of these projects was the analysis of studies and evaluation reports prepared by various bodies. It included materials created by self-government executive boards, studies by independent experts and scientific analyses. In order to determine the moods accompanying these projects, a media analysis of press publications (e.g. New Jersey Monthly and Gazeta Wrocławska), information portals (e.g. njspotlight.com; lubin.pl) and radio and television programmes (e.g. PCTV; NJTV; TVP3; Radio Wrocław) was carried out.

#### 4. RESULTS AND DISCUSSIONS

The first subject of analysis is Princeton - a city and borough's located in New Jersey, USA. Princeton's municipalities had roughly similar demographics. The township's population of 16 200 was comparable to the borough's 12 300. Princeton's municipalities had roughly similar demographics. The township's population of 16 200 was comparable to the borough's 12 300. The town and the surrounding residential areas, by the age, race, income, and average household size, were comparable. The functioning of Princeton University, a leading university in the USA, makes the city stand out from other areas of New Jersey in many ways. The structure of employment is dominated by creative class - in terms of population holding Master's and PhD degrees, Princeton is ranked 4th in the entire United States. It is also one of the leading American cities with the highest percentage of the population working in educational professions and in the field of science. For this reason, average earnings, the value of real estate or property tax revenues are also higher in this area. The power of attraction is manifested in daily migrations - commuters and service users account for almost 100% of the local population. The characteristic feature is that the urbanised functional zone developed independently of the historically shaped borders. An example was the university campus, which until the moment of consolidation was crossed by the border of these two communes. The second subject of our analyses is Lubin - a city in the Lower Silesian Voivodship in south-western Poland. Lubin is the capital of the Copper Basin, with a large dominance of industrial functions (copper mining and metallurgy). With a population of around 80,000 and a rural municipality of 15,000, the city is a much larger centre than the surrounding rural areas. The urban sprawl processes diagnosed here are typical of many similar centres, so this case study can be representative of many European cities. In the case of Lubin, strong external suburbanisation processes were defined, in which the city loses its inhabitants to the benefit of the neighbouring communes. This is related to spatial effects ("spill-over" of the city), economic effects ("taxpayer relocation") and social effects ("elution" of active social groups from existing urban structures). The consequence is, clearly defined, difficulties in integrated management of this functional area. After 1988, despite the expansion of the functional zone, management remained within the former administrative boundaries. Earlier, along with the process of spatial development of Lubin, its borders were also extended. As a result, the former rural areas underwent significant changes not only in terms of infrastructure, but also in social terms. They constitute Lubin's residential base and their inhabitants are connected with the city by both work and daily migrations in order to fulfil their life functions. In both cases, therefore, the influence of the city is in fact wider than the administrative boundaries, which in many places seem rather random. Both in Princeton and Lubin, the LGU layout resembles boroughs doughnut hole, which was fully surrounded by the township. Therefore, the question arises about the effectiveness of logistics of the entire functional area, which is the basis for its development processes. From the point of view of urban and social logistics, it is an area which allows for long-term shaping and coordination of appropriate organization of public services. Neither a city separated from its suburbs nor suburban areas separated from the city are able to meet such a condition. Only a coherent management of a functional zone can combine these two potentials. It can take place in the form of cooperation between two local governments or administrative consolidation. In both cases, attempts at joint management of services can be identified. In the case of Princeton the municipalities already had many shared serviced (thirteen in all). Among the shared services were animals control, common social service agency (The Corner House), the Fire Department, first aid and rescue, the Health Department, recreation, planning and the library. In addition, the two municipalities shared the same school district and the Open Space Found. The sharing services had a wide scope and a long tradition here. The situation in Lubin was very different. Although cooperation was undertaken in many areas (e.g. education, communication, economic development, planning, municipal management), the

practices of service sharing turned out to be surprisingly unstable. Many services were combined, then distributed, and after the next elections they were combined again. These decisions were clearly influenced by cadences and the lack of mutual trust between the authorities. Many coordination initiatives have not avoided sub-optimal solutions, not only in terms of costs, but also in terms of the quality of services offered to citizens. Therefore, it can be concluded that the initiative to consolidate communes in the case of Princeton appeared thanks to long-term cooperation in providing services, whereas in Lubin it was exactly the opposite - the problems in cooperation led to the idea of merger. In both cases, however, the goal of consolidation was the same - elimination of problems of coordination of activities in the areas which were previously under different jurisdictions. It should be stressed that, despite the different circumstances of the consolidation decision, in both cases it was a bottom-up decision that originated in the directly concerned LGUs. This is an important remark, as many consolidation reforms in the world are forced by central governments. In this case, the role of governments was limited to stimulating the process only. In the case of Princeton, the state of New Jersey declared to cover a significant part of the costs of the merger, while in the case of Lubin, the government provides a systemic incentive in the form of a financial bonus (5% more share in PIT for a period of 5 years). The proposals for consolidation in both cases were to be the same - through the amalgamation of two communes and the establishment of one LGU. However, the process itself proceeded differently, which is why we are now dealing with different effects of the process. In Princeton, such proposals were not new - the first time the consolidation question appeared on Princeton ballots was in 1953, when the proposal was soundly rejected in both the borough and township. Another consolidation referendum in 1979 passed in the township and was narrowly defeated in the borough. And in 1996, one more consolidation proposal failed by a thin margin in the borough while winning strong support in the township (Summary Report, 2011). In the case of Poland, self-governing communes were established as a result of the reform in 1990. The first concrete proposals of the city concerning the merger appeared in 2003, unfortunately they were unambiguously rejected by the rural commune. Again, the proposal was submitted by the city in 2011, after the change of authorities in the rural commune, and in 2015. Unfortunately, the commune reacted negatively to both proposals by creating a media narrative that the city wants to "annex" the rural commune. As you can see, Princeton's experiences were similar to those in Lubin, but the second case had a much shorter time horizon. The key decisions to merge the two Princeton municipalities were taken in 2009, when Borough and Township's governing bodies initiated a process to explore the potential benefits of consolidating into a single municipality. A Commission of Borough and Township representatives was formed to examine the issue in depth. The Commission has produced several transparent reports presenting different versions of the solutions. Great emphasis was placed on reaching the citizens directly with objective information. It was like an election campaign. As a university town, Princeton boasts an abundance of intellectual capital, producing an unusually active and involved citizenry. This made it easier to staff the various volunteer commissions studying, promoting and enacting consolidation. For example one of typical consolidation study group held about 70 public meetings over 16 months, first to gather feedback and later to explain how consolidation would work (Municipal Consolidation, 2013). Throughout the whole process, expert support - Center for Governmental Research (CEG) - was also used. Following nearly a year of intensive study, and working closely with consultant (CGR), on 25 May 2011, the Commission adopted a resolution on the consolidation. In November 2011, voters in both the township and the borough decisively approved consolidation ballot questions. This past Jan. 1 2013, after a 13-month implementation process led by a transition task force, a new mayor and council took office and the new Princeton came into being (figure 2).

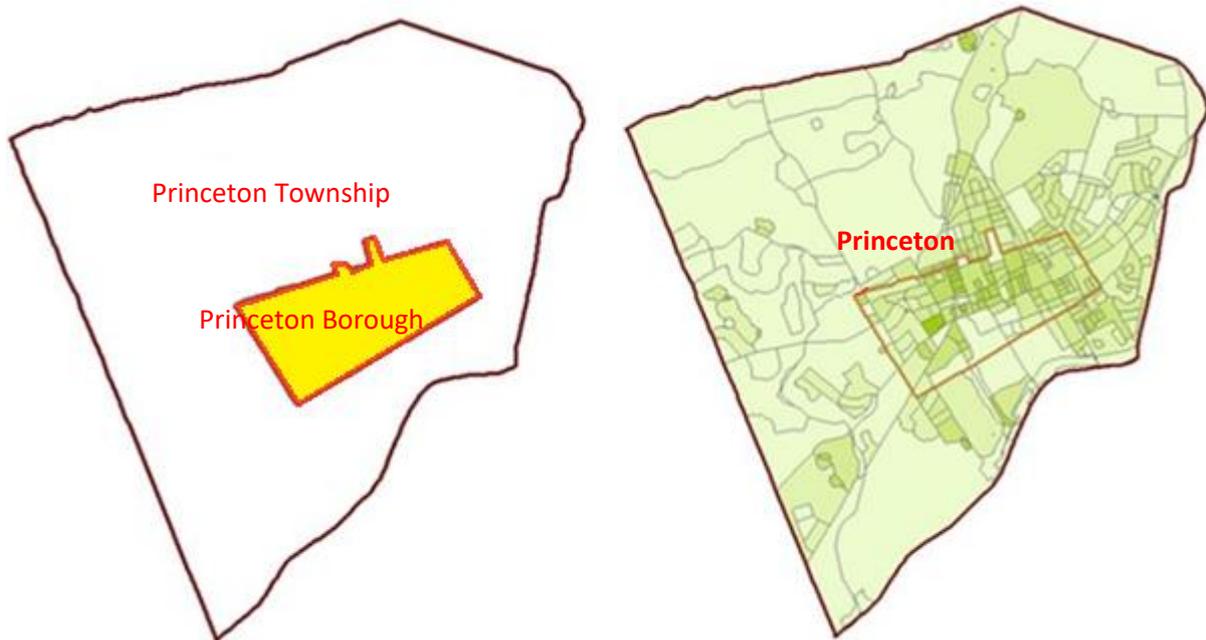


Figure 2: The Princetons, pre- and post- consolidation (Summary Report, 2011)

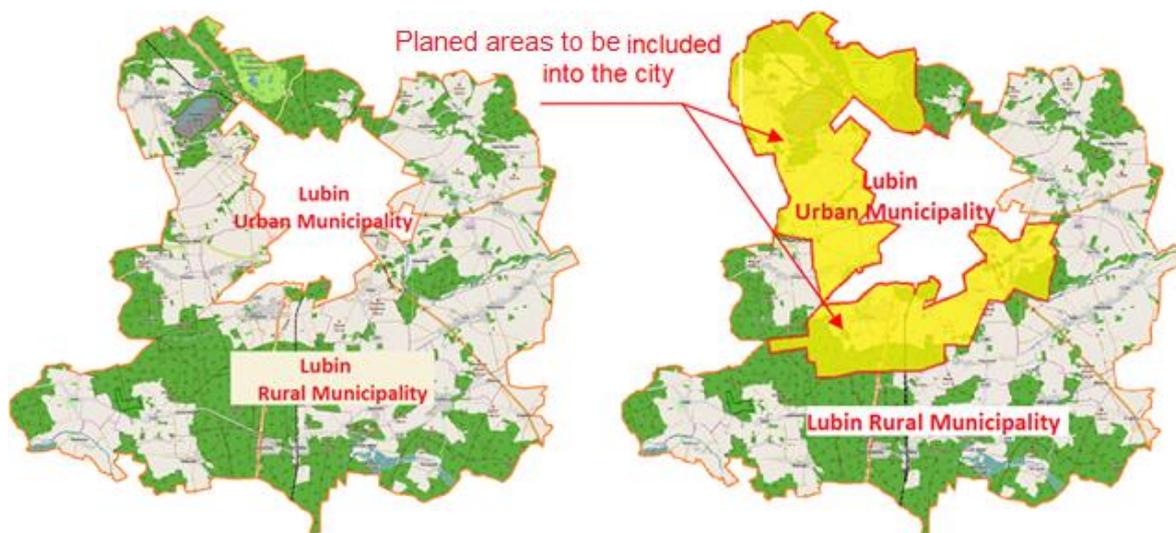


Figure 3: Lubin, pre- and post- consolidation (Author's elaboration)

In the case of Lubin, the city submitted a proposal to merge the two communes in 2015, but the lack of consent of the rural commune authorities made it impossible to continue the process. Therefore, the municipality prepared analyses concerning the functional and spatial conditions of the city's development (Czamara et al. 2019). On this basis, in December 2018, the city council unilaterally adopted a resolution on including a part of the rural commune in the city (see: figure 3). As you can easily guess, it caused a protest of the rural commune authorities, which would lose the most urbanized areas. They activated its inhabitants, who expressed their opposition to such a solution in consultations. There were also many demonstrations and a media campaign based on emotional accusations and not on factual arguments. In similar polls, the city residents were in favor of including these areas. Despite this atmosphere, in March 2019 the city authorities applied to change their borders. According to the procedure in force in Poland, the final decision in such cases is taken by the central government. Thus, the game of changing borders has moved to the level of central politics, and more important than the opinions of local residents becomes the game of interests of major political parties.

Unlike Princeton, where local decision-makers were very keen to support the residents, political power in Lubin counts in reaching the ear of the president of the ruling political party.

## 5. CONCLUSIONS

Neither a city separated from its suburbs nor suburban areas separated from the city are able to meet condition the long-term shaping and coordination of appropriate organization of public services. Only a coherent management of a functional zone can combine these two potentials. It can take place in the form of cooperation between two local governments or administrative consolidation. The cities that have been analysed here are cases where problems of coordination in the functional zone have been solved through inter-communal cooperation. Both cases had different experiences, but both in Princeton and Lubin, it did not bring satisfactory results. Therefore, the research hypothesis adopted in the introduction that intercommunal cooperation does not provide sustainable solutions and is exposed to cadention changes of decision-makers, has been confirmed, which makes the consolidation of entities seem to be the best solution. In practice, this means that the changes in administrative boundaries should follow the changes in the functional zone. Therefore, the initiative to consolidate the municipalities in the Princeton case appeared despite the longstanding cooperation in the provision of services, whereas in Lubin it was exactly the opposite - short-term problems with cooperation led to the idea of a merger. In both cases, however, the objective of consolidation was the same - to eliminate coordination problems in areas that were previously located in different jurisdictions. In the article a comparative analysis of two such consolidation projects was carried out, adapting administrative borders to urban functional areas. In this way, the objective of the work, as set out in the introduction, was achieved. The results of the conducted works also allow to formulate a few basic conclusions. Firstly, in the light of the studies presented here, a more effective solution to the dilemma of using soft (communal cooperation) or hard instruments (changes in administrative borders) seems the use of the latter. The many years of cooperation at Princeton have not led to fully satisfactory solutions. In the case of Lubin, the cooperation was not sustainable and depended on the authorities cadence. Secondly, consolidation reforms seem to be more effective if they are undertaken from the bottom up. Then there is a greater chance of conciliatory rather than forceful solutions. The former are able to make better use of local conditions, which are often underestimated by top-down solutions. Thirdly, the only way to achieve consensus for consolidation is a very active and transparent social campaign with the ability to reach out to broad groups of stakeholders with reliable information. Otherwise, demagogic propaganda will fill this gap. Fourthly and finally, as the Princeton case has shown, it is worthwhile to involve an objective consultant in the project. His task is to lead the process to success, which requires not only the preparation of documentation but also accompaniment in all stages of project. This case study is a clear signal to governments policy. Taking into account the institutional conditions, it can be assumed that it is even important from the point of view of international considerations concerning the management of functional areas.

## LITERATURE:

1. Allers, Maarten A. & J.A. de Greef. (2018). Intermunicipal cooperation, public spending and service levels, *Local Government Studies* 44 (1): 127-150.
2. Allers, Maarten. A., and Bieuwe J. Geertsema. (2016). The Effects of Local Government Amalgamation on Public Spending, Taxation, and Service Levels: Evidence from 15 Years of Municipal Consolidation." *Journal of Regional Science* 56: 659–682.
3. Bel, Germà, and Warner Mildred E. (2015). Inter-Municipal Cooperation and Costs: Expectations and Evidence." *Public Administration* 93: 52–67.
4. Bennett, Robert J. (1997). Administrative systems and economic spaces. *Regional Studies*, 31(3), 323-336.

5. Blom-Hansen, Jens, Kurt Houlberg, Søren Serritzlew, and Daniel Treisman. (2016). Jurisdiction Size and Local Government Policy Expenditure: Assessing the Effect of Municipal Amalgamation. *American Political Science Review* 110: 812–831.
6. Caprio, Raphael J., Pfeiffer Marc H. (2014). *Size May Not be the Issue: An Analysis of Cost of Local Government and Municipal Size in New Jersey*, Local Government Research Centre, Edward J. Bloustein School of Planning and Public Policy, Rutgers University.
7. Czamara, Włodzimierz, Marian Kachniarz, Szymon Szewrański, Małgorzata Świąder, Magdalena Kalisiak-Mędelska. (2019). *Funkcjonalno-przestrzenne uwarunkowania rozwoju Lubina [Functional and spatial conditions of Lubin's development]*. Expert report, Wrocław.
8. Definition of Functional Urban Areas (FUA) for the OECD metropolitan database. (2013). OECD.
9. Faulk, Dagney and Hicks Michael (2011). *Local Government Consolidation in the United States*. Amherst, NY: Cambria Press.
10. Frère, Quentin., Matthieu Leprince, and Sonia Paty (2014). “The Impact of Intermunicipal Cooperation on Local Public Spending.” *Urban Studies* 51: 1741–1760.
11. Hansen, Walter G. (1959). “How Accessibility Shapes Land-use”. *Journal of the American Institute of Planners* 25: 73-76.
12. Kachniarz, Marian (2014). Kooperatywność samorządów lokalnych [Cooperativeness of local governments]. *Research Papers of Wrocław University of Economics* 339: 36-48.
13. Municipal Consolidation Case Study. An Evaluation of the Princeton, NJ Borough-Township Consolidation Transition Process. (2013). Woodrow Wilson School of Public and International Affairs, Princeton University.
14. Ostrom, Vincent, Tiebout Charles. M., Warren Robert. (1961). The Organisation of Government in Metropolitan Areas: A Theoretical Inquiry. *American Political Science Review* 55: 831–842.
15. Przybyła, Katarzyna., Kachniarz Marian. (2017). The impact of administrative reform on the central functions of larger Polish cities. *Journal of Economic Issues* 51(3): 843-862.
16. Śleszyński, Przemysław. (2013). Delimitacja Miejskich Obszarów Funkcjonalnych stolic województw [Delimitation of Municipal Functional Areas of Voivodship Capitals]. *Przegląd Geograficzny [Geographical Review]* 85 (2): 173-195.
17. Stephens, Ross G., Wikstrom Nelson. (2000). *Metropolitan government and governance: theoretical perspective, empirical analysis, and the future*. New York, Oxford: Oxford University Press.
18. *Summary Report* (2011). Borough of Princeton and Township of Princeton Joint Consolidation/Shared Services Study Commission. Princeton.
19. Swianiewicz, Paweł (2015). Reformy terytorialne – europejskie doświadczenia ostatniej dekady [Territorial reforms – European experiences of the last decade]. *Samorząd Terytorialny [Local Government]* 6: 7-22.
20. Swianiewicz, Paweł (2018). If territorial fragmentation is a problem, is amalgamation a solution? – Ten years later, *Local Government Studies* 44 (1): 1-10.
21. Tavares, António F. (2018). Municipal amalgamations and their effects: a literature review. *Miscellanea Geographica. Regional Studies on Development* 22 (1): 5-15.
22. White, Sammis. (2002). *Cooperation Not Consolidation: The Answer for Milwaukee Governance*. Wisconsin Policy Research Institute Report 15, Milwaukee.
23. Yanqiang, Ma. (2014). *City Logistics in China – An Empirical Study from an Emerging Market – Economy Country*. Darmstadt: Technische Universität Darmstadt.

# THE RATE OF RETURN ON PUBLIC INVESTMENTS INTO ENTREPRENEURSHIP DEVELOPMENT SUPPORT PROGRAMS

**Ranko Markus**

*Youth Employment Project*

*GOPA Representative Office, Bosnia and Herzegovina*

*ranko.markus@yep.ba*

**Mirela Omerovic**

*Youth Employment Project*

*GOPA Representative Office, Bosnia and Herzegovina*

*mirela.omerovic@yep.ba*

## ABSTRACT

*Entrepreneurship is one of the main growth and new employments generators in most of the economies, which is the reason why entrepreneurship is in focus of policy makers in countries of all development stages. For the purpose of fostering entrepreneurship development public institutions as well as other development subjects, which recognized importance of entrepreneurship development for economic growth, create and implement different entrepreneurship development support programs which can have different forms (incentives for business start-up process, development of entrepreneurial infrastructure, entrepreneurship education programs etc). Many efforts are made in order to create entrepreneurship development support program that will have the greatest effect on development of business ventures and thus economic development. However, there is no much research and evidence about effectiveness of these programs, especially in terms of return on investment in entrepreneurship development support programs. In this paper we present one of the ways to measure these effects for certain level of government, through analysis of public revenues in budgets of that level of government. Authors will provide analysis of measuring these effects on example of Business Ideas Incubator, as one of the forms of entrepreneurship development support programs implemented in Bosnia and Herzegovina in 2018. Finally, authors will provide recommendations for future research as well as recommendations for the improvement of future entrepreneurship development support programs for the purpose of their greater efficiency and effectiveness.*

**Keywords:** *entrepreneurship, entrepreneurship development support programs, return on investment, public revenues*

## 1. INTRODUCTION

Onuoha (2007, p.20) defines entrepreneurship as “the practice of starting new organizations or revitalizing mature organizations, particularly new businesses generally in response to identified opportunities. Hisrich (1990, p.209) defined that an entrepreneur is characterized as “someone who demonstrates initiative and creative thinking, is able to organize social and economic mechanisms to turn resources and situations to practical account, and accepts risk and failure”. Schumpeter (1965, p.146) defined “entrepreneurs as individuals who exploit market opportunity through technical and/or organizational innovation”. For Drucker (1970, p.4) “entrepreneurship is about taking risk”. Risk is highly associated with entrepreneurship, given the frequency of failure and closure of businesses due to lack of funds, bad sales decisions, underdeveloped business environment or lack of market demand for the product or service the company offers. Many authors examined the relationship between entrepreneurship and economic development (Carree & Thurik, 2003, Acs and Szerb, 2006, Audretsch 2007) so there is evident wide agreement on the importance of entrepreneurship for economic

development of certain country. This is the reason why entrepreneurship development support programs are in focus of most policy makers which recognized importance of entrepreneurship for economic development. Entrepreneurship development support programs implemented by public institutions can have different forms (incentives for business start-up process, development of entrepreneurial infrastructure, entrepreneurship education programs etc). However, different entrepreneurship development support program can have different impact on entrepreneurship and economic development. This is the reason why policy makers prefer programs with the largest effect on development of business ventures and their growth. However, there is no much research and evidence about efficiency and effectiveness of these programs, especially in terms of return on investment in entrepreneurship development support programs. Integral part of entrepreneurship development support programs are entrepreneurship incubators founded and managed by private or public institutions. These types of programmes are often initiated within universities in order for students to have an opportunity to develop their business ideas. In terms of public interest their main purpose is increase in self-employment and employment rate, and they have an important role in increasing economic growth through enhancing innovation in local communities. For the purpose of establishing systematic support to entrepreneurship development in Bosnia and Herzegovina, the Youth Employment Project (YEP), supported by the Government of Switzerland, in 2018 with the support of local authorities, founded Business Ideas Incubator in 32 local communities. YEP Business Ideas Incubator ensured support to more than a 100 start-ups throughout BiH and a range of other long-term effects are achieved: employment growth, improved offer on the market, reduced public expenditures for active employment measures, increased public revenues and enhanced quality of life in local communities by products/services offered by newly established start-ups, etc. For the purpose of measuring effectiveness of one form of entrepreneurship development support program, in this paper we provide analysis of the rate of return on public investments into entrepreneurship development support program, in this case YEP Business Ideas Incubator implemented in Bosnia and Herzegovina in 2018.

## **2. ENTREPRENEURSHIP DEVELOPMENT SUPPORT PROGRAMS**

Entrepreneurship development support programs differ in relation to phase in which certain entrepreneur/enterprise is. New variants on business incubation have emerged for start-ups and early stage businesses (Schmidt and Brinks, 2017, pg.3), while established entrepreneurs have other needs, mostly referred to improvement of business environment in form of certain tax reliefs, remove of administrative barriers, support to export etc. According to Kaufman Foundation (2019) early entrepreneurship support programs come in various forms, however, there are four main types: accelerators, incubators and coworking spaces, events and competitions, and formal degree or educational programs; they exist across multiple sectors (e.g., public, private, social) and vary widely in quality and scope, which contributes to a mix of research findings about how they impact entrepreneur formation and startup outcomes. Despite great public and policy interest there is no much evidence whether such programs are efficient and effective. Much research has been devoted to assessing and evaluating the extent to which these types of development policies achieve the goal of increased local economic prosperity, often raising questions about their effectiveness (Reese, 2014, p. 628). Most of the research emphasize the role of place-based tax incentives in fostering local economic growth (e.g., Hanson and Rohlin 2011, Reese 2014). OECD (2014) set principles of action for effective public investment across levels of government. However, there is no much research and evidence about effectiveness of entrepreneurship development support programs in terms of return on investment in the program for certain level of government, considered in one new way and that is public revenues in budgets of that level of government in terms of rate of return.

Bosnia and Herzegovina has obligation and need to improve its entrepreneurial capacities and policies in order to fulfil part of its obligations for entering at euro Atlantic integrations. According to the Global Entrepreneurship Monitor (GEM) reports, government entrepreneurship programs in this country are not sufficient or effective (Umihanić et al, 2013, p. 74). However, different institutions and subjects in Bosnia and Herzegovina are trying to develop effective entrepreneurship development support programs. There is a wide range of activities related to this aspect coming from different international donors (UNDP, USAID, EU, embassies), governments (ministries at entity and cantonal level, municipalities), as well as from different NGOs. These entrepreneurship development support programs include incentives for business start up process, mentoring, expert support etc. At the other hand, most of the municipalities and other relevant subjects are trying to develop effective entrepreneurial infrastructure (accelerators, co-working spaces, incubators, entrepreneurship zones etc.). All these efforts are directed towards effective support to entrepreneurship development in Bosnia and Herzegovina. The innovative approach of the Youth Employment Project (YEP) was establishment of YEP Business Ideas Incubator in cooperation with local communities in Bosnia and Herzegovina. This entrepreneurship development support program merged funds from international donor (YEP) and municipalities. Business ideas incubator supports potential and existing entrepreneurs by organizing training, support in market analysis, business plan development and its presentation to potential investors, seed capital in form of grants, continuous mentoring, and other forms of support tailored to suit individual needs of entrepreneurs (e.g. digital marketing). It presents an overall support instrument to potential entrepreneurs or those in start up phase. The key idea of the YEP Business Ideas Incubator, as comprehensive support system for entrepreneurship development, was to create synergy of efforts made by local communities, public employment services, ministries at different levels, and international donors, with the aim to support young people in starting their own businesses in Bosnia and Herzegovina. A comprehensive support was provided to potential and existing (start-up stage) entrepreneurs through the YEP Business Ideas Incubator. More than 1,200 potential and existing entrepreneurs applied to YEP Business Ideas Incubator with their business ideas, more than 600 ideas were developed, and more than 300 business plans were created and presented. Total of 150 business plans were approved for financing, and by May 2019, more than 100 entrepreneurs received financial assistance, i.e. started or improved their businesses. YEP Business Ideas Incubator has for the first time in BiH shown in practice the potential of a great number of business ideas, using the same methodology throughout BiH in local communities of different sizes and levels of development. It proved that with joint efforts of relevant stakeholders, in this case, of the Youth Employment Project (YEP), local communities and other stakeholders in entrepreneurship can create a synergy effect on entrepreneurship development. This also confirmed the potential to, through proactive approach and cooperation, influence not only individual entrepreneurs, but overall entrepreneurial environment and business ecosystem.

### 3. RESEARCH METHOD

In order to show the effect of investing in entrepreneurship development support programs at local communities' level that is calculating the rate of return on public investments into entrepreneurship development support programs on the example of Business Ideas Incubator, the research was conducted on business and local communities' samples in which the YEP Business Ideas Incubator was implemented. An analysis of business ideas and businesses was conducted in 9<sup>1</sup> out of 32 local communities (28%), 4 in the Federation BiH and 5 in the

---

<sup>1</sup> Banja Luka, Bijeljina, Bugojno, Lopare, Mostar, Trebinje, Ugljevik, Visoko and Živinice.

Republic of Srpska<sup>2</sup>; 54 business ideas were positively evaluated (36% out of 151 positively evaluated business ideas throughout the whole incubation process). Larger local communities, or those with a significant number of registered businesses were involved in the research, hence it could be said that the sample is representative. The rate of return on public investment into entrepreneurship development support program was analysed within this research. It related to the rate of revenue generated from payments made by the Incubator participants into budgets and public funds at different administrative levels, upon registration and during regular business activities, compared to the total amount of financial assistance provided within the Incubator. The formula for calculating the rate of return on investment:

$$\text{The rate of return on public investment =} \frac{\text{Public Revenues generated from payments made by new businesses}}{\text{Investment through the Incubator}} \times 100$$

Into entrepreneurship development support program

For businesses already registered when entered the Incubator (8 of them), the period for return on investment starts from the beginning of the incubation process. These are solely new businesses, existing for several months prior entering the incubation process. Included public revenues into calculation are presented in Table 1.

*Table 1: Structure of public revenues included in the research<sup>3</sup>*

<b>Federation BiH</b>	<b>Republic of Srpska</b>
<b>Administrative fees for the registration of business entity</b>	Stamp duty paid to APIF for the registration of business entity
<b>Publishing registration of business entity in Official Gazette</b>	Publishing registration of business entity in Official Gazette
<b>Issuing ID number</b>	Issuing ID number
<b>Crafts registration fee</b>	Crafts registration fee
<b>Utility fee</b>	Utility fee
<b>Corporate income tax</b>	Republic fee
<b>Personal income tax</b>	Corporate income tax
<b>Regular contributions for pension and disability insurance</b>	Personal income tax
<b>Regular contributions for health insurance</b>	Regular contributions for pension and disability insurance
<b>Regular contributions for unemployment insurance</b>	Regular contributions for health insurance
<b>Regular contributions for special natural disasters protection fee</b>	Regular contributions for unemployment insurance
<b>Regular payments for water charges</b>	Contributions for child protection

<sup>2</sup> Bosnia and Herzegovina has complex administrative structure consisting of two entities (Federation of BiH and Republic of Srpska) and Brčko district BiH.

<sup>3</sup>Under the Rulebook on payment of public revenues and extra-budgetary funds on the territory of the FBiH (Official Gazette of the FBiH, No. 35/13, 53/13, 63/13, 93/2013, 103/13, 11/14, 19/14, 46/14, 60/14, 65/14, 105/14, 20/15, 44/15, 53/15, 73/15, and 96/15) and the Law on Budget System of the Republic of Srpska (Official Gazette of the RS, No. 121/2012, 52/2014, 103/2015 and 15/2016)

Division of public revenues, divided in accordance with the administrative level, is calculated in accordance with:

- Law on the Allocation of Public Revenues in the Federation BiH (Official Gazette of the FBiH, No. (22/06),
- Rulebook on payment of public revenues and extra-budgetary funds on the territory of the FBiH (Official Gazette of the FBiH, No. 35/13, 53/13, 63/13, 93/2013, 103/13, 11/14, 19/14, 46/14, 60/14, 65/14, 105/14, 20/15, 44/15, 53/15, 73/15, and 96/15),
- Law on Budget System of the Republic of Srpska (Official Gazette of the RS, No. 121/2012, 52/2014, 103/2015, and 15/2016).

Having in mind different levels at which the revenues are defined, they differ and are allocated to municipalities, cantons and entities, and the payment is different; in some cases it is a single payment, and in others the payment is done on monthly or annual basis. Table 2 provides an overview of the calculation applied for the administrative level of the Federation BiH.

*Table 2: Overview of public revenue allocation to the administrative level of the Federation of BiH*

<b>Type of revenue:</b>	<b>Time frame of revenue</b>	<b>Administrative level</b>
<b>Administrative fees for the registration of business entity</b>	Single payment	Federation BiH
<b>Publishing registration of business entity in Official Gazette</b>	Single payment	Federation BiH
<b>Issuing ID number</b>	Single payment	Federation BiH
<b>Crafts registration fee</b>	Single payment	Municipality
<b>Utility fee</b>	Annually	Municipality
<b>Corporate income tax</b>	Annually	Canton
<b>Personal income tax</b>	Annually	Municipality: 30% Canton: 70%
<b>Regular contributions for pension and disability insurance</b>	Monthly	Federation BiH
<b>Regular contributions for health insurance</b>	Monthly	Canton (89.8%) Federation BiH (10.2%)
<b>Regular contributions for unemployment insurance</b>	Monthly	Canton (70%) Federation BiH (30%)
<b>Regular contributions for special natural disasters protection fee</b>	Monthly	Municipality (50%) Canton (30%) Federation BiH (20%)
<b>Regular contributions for water charges</b>	Monthly	Canton (45%) Federation BiH (15%) Sava River Basin Agency (40%)

In the Republic of Srpska, like in the Federation BiH, some of public revenues are paid in single payments, and some on monthly, or annual basis.

Unlike the Federation BiH recipients in the Republic of Srpska are municipalities or the entity. Table 3 provides an overview of calculation applied to the administrative level in the Republic of Srpska.

*Table 3: Overview of public revenues allocation to the administrative level of the Republic of Srpska*

<b>Type of revenue:</b>	<b>Time frame of revenue</b>	<b>Administrative level</b>
<b>Stamp duty paid to APIF for the registration of business entity</b>	Single payment	Republic of Srpska
<b>Publishing registration of business entity in Official Gazette</b>	Single payment	Republic of Srpska
<b>Issuing ID number</b>	Single payment	Republic of Srpska
<b>Crafts registration fee</b>	Single payment	Municipality
<b>Utility fee</b>	Annually	Municipality
<b>Republic fee</b>	Annually	Republic of Srpska
<b>Corporate income tax</b>	Annually	Republic of Srpska
<b>Personal income tax</b>	Monthly	Municipality (25%) Republic of Srpska (75%)
<b>Regular contributions for pension and disability insurance</b>	Monthly	Republic of Srpska
<b>Regular contributions for health insurance</b>	Monthly	Republic of Srpska
<b>Regular contributions for unemployment insurance</b>	Monthly	Republic of Srpska
<b>Contributions for child protection</b>	Monthly	Republic of Srpska

#### 4. RESULTS

The input data on payment of public revenues are based on information provided by the Incubator participants from local communities included in the sample, using a questionnaire with categorized items of payments into budgets and funds at different administrative levels up to 15/04/2019. In 9 sampled local communities a total of 119 potential and existing entrepreneurs took part in the training and mentoring/expert assistance process. A total of 54 business ideas for starting and/or developing businesses were approved for further financial assistance within the Incubator, while 44 applied for grants, which implies that on average 38% of the Incubator participants finalized the process of business registration/development of existing business, i.e. the use of financial assistance. Total of 74% (41) of participants out of total number of supported business ideas in local communities registered their businesses; 7% (4) are in the process of registration, whilst 17% (9) participants withdrew from the financial assistance in form of grants. It should be noted that 8 participants, out of 41, with registered businesses entered the incubation process with already registered businesses, which implies that 33 new businesses were registered within incubator in 9 local communities. The approach in the YEP Business Ideas Incubator implementation was pooling the YEP and local communities' resources. Local communities invested BAM 15,000, except for several smaller local communities which implemented the Incubator jointly. Such was the case with Ugljevik and Lopare municipalities, which invested BAM 9,000 each. Approximately BAM 1,500 was invested in each of the participants who attended intensive entrepreneurial training and mentoring/expert assistance programme for business plan development and market research. In addition to that, all positively evaluated business ideas could use seed capital, i.e. financial

assistance amounting to BAM 5,000, under the principle of refund after the registration for entrepreneurs who entered the Incubator without registered businesses. In accordance with previously defined obligations of contracting parties (YEP and local communities) a total of BAM 123,000 was invested by the 9 local communities included in the research, and BAM 336,423.94 was invested by the YEP, out of which BAM 157,923.94 was intended for financial assistance, i.e. seed capital. Total investment in the YEP business ideas incubators in these 9 local communities (YEP plus local communities) was BAM 459,423.9, including financial assistance and investment in entrepreneurial training and mentoring/expert assistance for business plan development. The analysis has shown that 41 businesses in 9 local communities, in the period from 01/02/2018 - the beginning of incubation - to 15/04/2019 - when the analysis was conducted, paid BAM 193,610.65 into funds at different administrative levels, out of which 92.6% was paid into entity/cantonal funds/budgets, and 7.4% into town/municipal funds/budgets. Table 4 provides an overview of public revenues at different administrative levels in BiH (entity, cantonal and municipal) paid by registered businesses (41) in 9 sampled local communities.

*Table 4: Overview of public revenue payments made by registered businesses from the YEP business ideas incubators in 9 local communities*

<b>Local community</b>	<b>Number of businesses</b>	<b>Municipal revenues</b>	<b>Entity revenues funds/cantons</b>	<b>Total</b>
<b>Banja Luka</b>	4	1,675.87	30,590.88	32,266.75
<b>Bijeljina</b>	5	854.00	40,188.07	41,042.07
<b>Bugojno</b>	3	1,407.10	7,095.97	8,503.07
<b>Lopare</b>	5	1,238.75	6,919.43	8,158.18
<b>Mostar</b>	7	4,705.82	51,621.11	56,326.93
<b>Trebinje</b>	6	1,588.00	8,039.85	9,627.85
<b>Ugljevik</b>	2	355.48	6,032.96	6,388.44
<b>Visoko</b>	6	1,640.01	15,783.86	17,423.86
<b>Živinice</b>	3	883.28	12,990.22	13,873.50
<b>Total</b>	41	14,348.31	179,262.34	193,610.65

The analysis findings suggest that, on average, one business over the observed period of 13.5 months paid BAM 4,722.21 into budgets at different levels. Period of public revenues payment refers to the period after the business registration or after the start of incubation for those participants who entered the Incubator with already registered businesses. Average period of conducting business activities, i.e. public revenue payment by the Incubator participants is 9 months. Analysis showed that, on average, public revenue payments made by limited companies are 2.5 times higher compared to those paid by crafts. If we consider total investment in implementation of Incubator made by YEP and 9 sampled local communities, the rate of return on investment in all administrative levels for the observed period is 42%. Since the focus of this paper is return on investment made by local governments, further analysis presented includes invested amount in implementation of this entrepreneurship development support program made only by local authorities from 9 sampled towns/municipalities. In line with that, if we only consider the investments of local communities and generated public revenues at all administrative levels, the rate of return is 157% (Table 5).

*Table 5: Return on investment of local communities based on public revenue payments made by the registered yep incubator participants in 9 local communities*

<b>Local community</b>	<b>Investment by local community</b>	<b>Paid public revenues - all administrative levels</b>	<b>Return on investment - all administrative levels</b>	<b>Paid public revenues – level of local community</b>	<b>The rate of return on investment - level of local community</b>
<b>Banja Luka</b>	15,000.00	32,266.75	215%	1,675.88	11%
<b>Bijeljina</b>	15,000.00	41,042.07	274%	854.00	6%
<b>Bugojno</b>	15,000.00	8,503.07	57%	1,407.10	9%
<b>Lopare</b>	9,000.00	8,158.18	91%	1,238.75	14%
<b>Mostar</b>	15,000.00	56,326.93	376%	4,705.82	31%
<b>Trebinje</b>	15,000.00	9,627.85	64%	1,588.00	11%
<b>Ugljevik</b>	9,000.00	6,388.44	71%	355.48	4%
<b>Visoko</b>	15,000.00	17,423.86	116%	1,640.01	11%
<b>Živinice</b>	15,000.00	13,873.50	92%	883.28	6%
<b>Total</b>	123,000.00	193,610.65	157%	14,348.31	12%

It should be noted that registration of the Incubator participants in local communities Trebinje and Ugljevik started in the third quarter of 2018, in Bugojno in the second quarter of 2018, and this is the reason for slightly lower the rate of return on investment in these local communities compared to those in which the Incubator participants registered their businesses earlier. Taking into consideration public revenues allocation in accordance with the regulations in the Federation BiH and the Republic of Srpska, return on investment related directly to local/municipal level is lower. The analysis findings imply that the rate of return on public investment generated by the YEP Business Ideas Incubator in 9 local communities is 12%. Multiple effects in local communities, often not included in analyses, are even greater. Primarily, all salaries are spent in local communities, hence stimulate local community spending and growth, i.e. production and service activities which the salaries are directed to. Having the aforementioned in mind it can be concluded that investing in support to starting new and developing existing businesses at the local community level is certainly justified.

## **5. RECOMMENDATIONS**

Based on the findings in the present study, overview of recommendations for improvement of further entrepreneurship development support programs in Bosnia and Herzegovina as well as for further research are provided below. YEP Business Ideas Incubator showed that only a comprehensive support system (feasibility analysis for the business idea, entrepreneurship training, mentoring and expert support) can make a positive impact - survival of start-ups on the market and their further development by developing production/service processes, international expansion and increase in number of employees. This overall support program is the practice that can be multiplied in every country, especially in factor driven and efficiency driven economies. Although entrepreneurship is in focus of policy makers, in case of very low budgets at municipal but all other levels of government in Bosnia and Herzegovina, investments in entrepreneurship development support programs are low, after the obligatory payments from budgets (salaries, social payments etc.). For the purpose of raising awareness of government officials and policy makers about benefits of investing in entrepreneurship development support programs, measurement of effectiveness of these programs should be conducted regularly and their findings promoted.

All the relevant stakeholders in Bosnia and Herzegovina are trying to find the best possible solution for addressing high unemployment rates. However, often in practice parallel entrepreneurship development support programs as well as employment programs are being implemented, with different methodologies, and under condition that their beneficiaries do not take part in other programs, which often causes confusion with potential beneficiaries, and reduces the effects of individual programs. One of the positive practices that can be used is creation of local employment and entrepreneurship plan harmonised with local development strategy, created and adopted by local community, which can be used as basis and rule for all the donors that would like to invest in development of entrepreneurship or employment programs in certain town/municipality. In this way all activities will be harmonised, focused on priority activities in local community, and confusion of potential beneficiaries will be reduced. Research on additional effects of public investments in entrepreneurship development support program can include savings in the employment programs implementation, conducted by entity employment services as well as savings for unemployment contributions, projections of the rate of return of public investment in these kinds of programs, including paid VAT etc.

## 6. CONCLUSION

The YEP Business Ideas Incubator has, through its innovative model of support to entrepreneurship development and by pooling resources with local communities, shown efficiency of different stakeholders cooperation (in this case - local communities and the YEP) in encouraging the start, as well as survival and development of existing businesses. In addition to the direct result visible through the rate of return on public investment into this kind of program i.e. generated public revenues, additional effects can be increase in revenue of other businesses in local communities through business cooperation with a start-up - a new company or a craft as well as increase in spending in local communities by spending available income of new companies, employees in new companies and business associates of new companies. The study showed that the rate of return on public investment in entrepreneurship development support program is significant already after one year from the start of the incubation process. Although the rate of return on investment related directly to local/municipal level is lower than the one at higher administrative levels (cantons/entity) local communities experience additional multiple positive effects from implementation of entrepreneurship development support program such as employment growth, decreased labour emigration of the youth, increased quality of life in local communities as a result of employment growth, available new products and services and further increase in public revenues, by increase in spending. The study showed that investment in entrepreneurship development support programs, although often perceived as such, is not a cost. By investing in these programs, the governments invest and have a return on investment through public revenues at different levels. This approach of analysis of effects of investment in entrepreneurship development support programs is valuable way how to measure effectiveness of these programs for the local community and country as itself.

## LITERATURE:

1. Acs Z.J & Szerb L. (2006). Entrepreneurship, Economic Growth and Public Policy. *Small Business Economics*, Volume 28, Issue 2–3, 109–122.
2. Audretsch, D.B.(2007). *The Entrepreneurial Society*. Oxford, UK: Oxford University Press.
3. Carree, M. A., & A.R. Thurik. (2003). *The Impact of Entrepreneurship on Economic Growth*, in Z.J. Acs and David B. Audretsch (eds), *Handbook of Entrepreneurship Research*, Boston, MA, Dordrecht, The Netherlands: Kluwer Academic Publishers.
4. Drucker, P. (1970). Entrepreneurship in Business Enterprise. *Journal of Business Policy*, Vol: 1., Issue 1,

5. Hanson, A. & Rohlin, S. (2011). The Effect of Location-Based Tax Incentives on Establishment Location and Employment across Industry Sectors. *Public Finance Review* 39(2), 195–225.
6. Hisrich, R.D. (1990). Entrepreneurship/Intrapreneurship. *Am Psychol* 45(2), 209–222
7. Holcombe G.R. (2003). The Origins of Entrepreneurial Opportunities. *The Review of Austrian Economics Volume 16*, Issue 1, 25–43.
8. Kaufman Foundation. *Early stage entrepreneurship support programs*, Retrieved 23.07.2019. from <https://www.kauffman.org/microsites/state-of-the-field/topics/entrepreneurial-support-programs>
9. Law on Budget System of the Republic of Srpska (Official Gazette of the RS, No. 121/2012, 52/2014, 103/2015, and 15/2016).
10. Law on the Allocation of Public Revenues in the Federation BiH (Official Gazette of the FBiH, No. (22/06).
11. OECD (2104). *Effective Public Investment Across Levels of Government, Principles of Action*. Centre for Entrepreneurship, SMEs, Local Development and Tourism. Retrieved 12.08.2019. from <https://www.oecd.org/effective-public-investment-toolkit/Effective-Public-Investment-Brochure.pdf>.
12. Onuoha G. (2007). Entrepreneurship. *AIST International Journal* 10, 20-32.
13. Reese, L. A. (2014). If All You Have Is a Hammer: Finding Economic Development Policies that Matter. *American Review of Public Administration* 44(6), 627–655.
14. Rulebook on payment of public revenues and extra-budgetary funds on the territory of the FBiH (Official Gazette of the FBiH, No. 35/13, 53/13, 63/13, 93/2013, 103/13, 11/14, 19/14, 46/14, 60/14, 65/14, 105/14, 20/15, 44/15, 53/15, 73/15, and 96/15).
15. Schmidt S and Brinks V. (2017). Open creative labs: Spatial settings at the intersection of communities and organizations. *Creativity and Innovation Management* 26, 291-299.
16. Schumpeter J. A. (1965). *Economic Theory and Entrepreneurial History*. In: Aitken HG (ed) *Explorations in enterprise*. Harvard University Press, Cambridge, MA
17. Shane S., Venkataraman S. (2000). The Promise of Entrepreneurship as a Field of Research. *Academy of Management Review* 25, 217–226.
18. Umihanić B., Tulumović R., Omerović M., Simić S. & Markuš, R. (2013). *GEM BiH 2012: Through entrepreneurship education to youth (self)employment*. ISSN 1840-4871, COBISS.BH-ID 17628422, Centre for Entrepreneurship Development Tuzla.

# THE ECONOMIC IMPACT OF THE GROWTH OF HEALTH EXPENDITURE ON HOUSEHOLDS IN SLOVAKIA

**Michaela Novakova**

*University of Economics in Bratislava  
Faculty of National Economy, Slovakia  
michaela.novakova@euba.sk*

## **ABSTRACT**

*The illness and the unhealthy way of life are not only unpleasant and can cause serious consequences or death, but also generate unwarranted expenses for patients and their families. Due to the fact that in Slovakia all of us are entitled to free care and the financial resources are limited, there is a possibility of separability and exclusion from consumption. Increased household spending is essential to achieve general health coverage, with a view to sustainable health development. However, healthcare spending is not a cost, but an investment in reducing poverty, jobs, productivity and healthier, safer and fairer societies. The main reasons for the increase in health expenditure are rising prices of medicines, medical equipment, but also administrative costs. Another reason is investment in science and research or the development of the pharmaceutical industry. This is also due to the demographic composition of the population, civilization diseases and the growing demand for better patient information. The aim of our work is to analyze household expenditures in terms of structure, economic status of households and the number of dependent children. We have analyzed whether income levels affect household spending. We focused on the aging of Slovak citizens, its expected future development, the impact on health expenditure and also the view of the financial burden on the elderly. Last but not least, we focused on disposable income and expenditures of Slovak households and in this context we investigated whether we can label health as luxury goods. The article is the output of the VEGA project 1/0251/19 Investments of households in housing and the possibility of their alternative use as additional income at the time of receiving the pension benefit.*

**Keywords:** *disposable income, economic impact, healthcare spending, household expenditures*

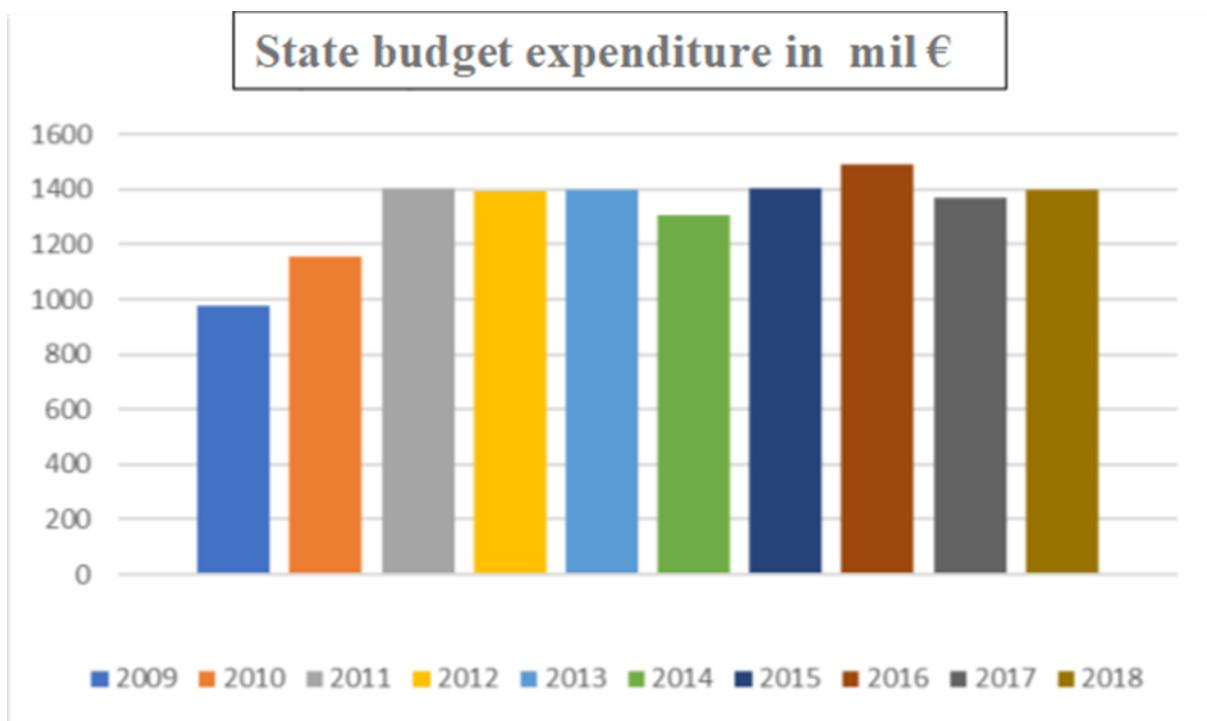
## **1. INTRODUCTION**

The forms of healthcare provision have undergone many changes since the birth of society. At present, healthcare varies from country to country. Compared to developing countries, developed countries have a private sector mixed with the public. At present, healthcare in Slovakia is provided free of charge (with some exceptions), the basic package is covered by public insurance, has selective contracting with flexible pricing and is based, for example, on the principles of universal access to healthcare and compulsory health insurance. As far as health care providers are concerned, most are owned by the state. The private market has almost all outpatient facilities and several private hospitals (Ministry of Health of SR 2019).

## **2. STATE HEALTH EXPENDITURES - SLOVAKIA**

The financing of health care entities is carried out in cooperation with health insurance companies and is controlled by the Health Care Surveillance Authority. Its main objectives are to maintain the financial stability, efficiency and solidarity of the system. If we look at the financing of health care facilities, the service is provided by state budget organizations (which include teaching hospitals, high schools, youth homes, health institutions), state-funded organizations (funded by health insurance companies; science and research funded by the state and own resources), non-profit organizations providing services of general interest (such as founders' deposits, business income, which must be fully used for the provision of services or

even state subsidies), state-owned joint-stock companies and non-state health facilities funded through a contractual relationship with health insurance companies). The largest part of the sources of funding is public resources. Of these, mandatory health insurance contributions are received by three health insurance companies. They receive contributions mainly from employers and employees, self-employed persons, state policyholders (eg pensioners, students), dividends or voluntarily unemployed. Another important source is the funds of the Ministry of Health, which mainly cover the financing of various operating bodies and hospitals. The source of capital investment is approximately 0.1%. They are obtained by self-governing regions and municipalities from hospitals and ambulances. About a quarter of the resources are private, mainly in the form of investments. If we look at real figures, the state budget expenditures on health care in the last ten years have increased by almost half (Graph 1). Otherwise, this will not be the case in 2019, when it is planned to allocate the highest amount of funds in the amount of EUR 5.2 billion.



Graph 1: State budget expenditures in SR. according to the Statistical Office of the SR

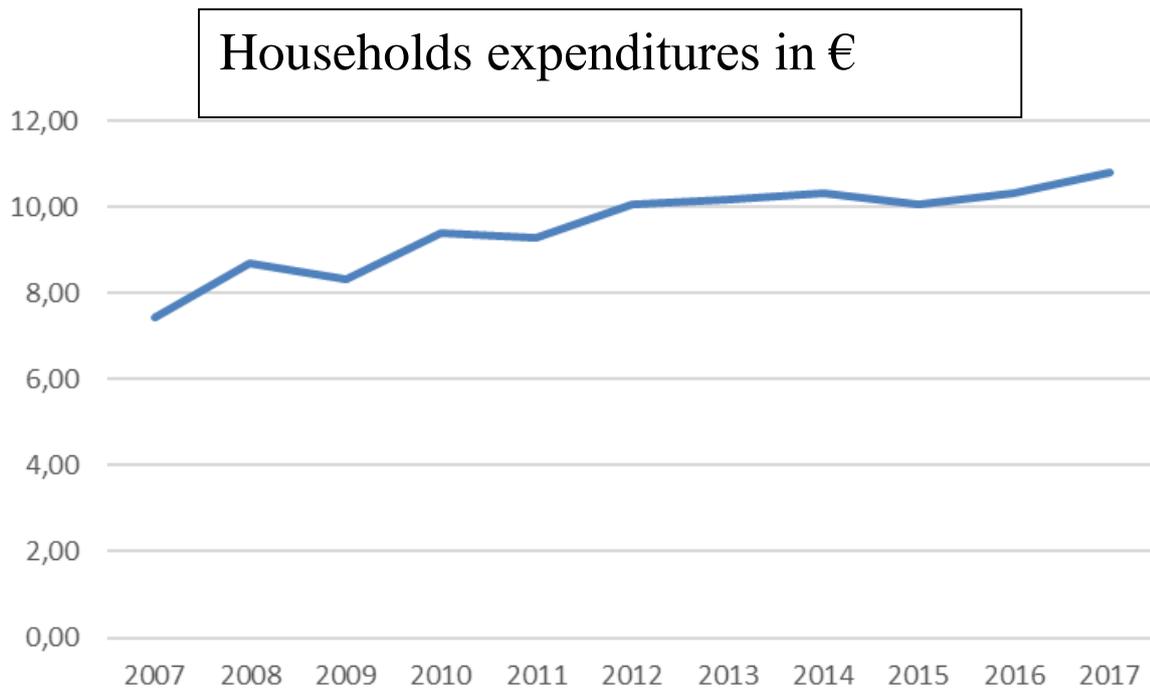
Slovakia is not the only country with rising health expenditure. Rapidly rising global spending in low- and middle-income countries is also particularly evident, with expenditure rising by an average of 6% per year compared to 4% in high-income countries. These expenditures consist of government spending, cash payments (people pay for their own care) and other resources (voluntary health insurance, health programs provided by employers and activities of NGOs). Increased domestic spending is essential to achieve general health coverage and objectives in sustainable development in the field of heal. Looking at the future, Slovakia's health expenditure will grow by 0.8-2.4 billion over the next 50 years. €. At present, the share of population over 80 in Slovakia is one of the lowest in the EU (3%). This share is expected to double by 2038 and to be the highest in the EU by 2080 (16%). "Older age means higher health spending. There are several ways to be not afraid of rising health spending. Firstly, it must be accepted that the health sector generates consumer goods which are subject to the same economic forces as in other sectors. Secondly, it is necessary to limit the health care covered by public health insurance. Third, innovations are unplanned and are based on competition.

The more innovative the system is, the more innovative it will be. Innovation is not only in technology, but also in product distribution. Fourthly, patients need to purchase healthcare legally, which is currently a major problem. And the last advice is that health insurance companies should no longer be 'tax authorities'. They should help patients to purchase health care, ensure their long-term management and resources so that there is no shortage during the crisis (Vlachynský 2018). In 2017, a survey of households' financial burden on health care was carried out. More than half of the EU population reported that the amount their households had to pay for medical care does not represent a financial burden. This was reported by households living in Denmark, Slovenia and Sweden (86%), Estonia (85%) and France (84%). On the other hand, 34% said that health care costs were a moderate financial burden, while 11% said that these costs were a heavy burden for them (Eurostat 2019). In addition to health, social and demographic factors affect health expenditure. Demographic factors also monitor age, which has a significant impact on health spending. As we have already mentioned, one of the reasons for the increase in health expenditure is the aging of the population. The dominant determinant of health care spending is income. If health care is routinely involved in the formation of an individual's health, an increase in health demand will cause an increase in health demand. Assuming that health is a normal good, an increase in income will result in an increase in health demand. While maintaining the ceteris paribus condition, the elasticity of healthcare demand will be directly related to the elasticity of health demand. It is clear that health is a normal good. The question is whether health is a necessity or a luxury good. (Moore, Newmann, Fheili 1992)

### **3. HEALTH EXPENDITURE OF SLOVAK HOUSEHOLDS**

Expenditures of Slovak households on health care include “expenditures on pharmaceutical preparations and products, medical goods, services provided to medical staff in and outside hospitals, incl. services from various therapists. Over the last 10 years, they have increased from € 7.43 to € 10.82 (Graph 2). Interestingly, during the crisis, health spending in 2009-2011 was relatively unstable - they first fell, then rose and then fell again.

*Graph following on the next page*



*Graph 2: Expenditures of households in SR. according to the Statistical Office of the SR*

Net money expenditures of Slovak households on health in € In the years 2012 - 2014 (€ 10.05 - € 10.33) payments from own pocket slightly exceeded the OECD average. These payments include the purchase of medicines and administrative costs not covered by health insurance, the scope of which is not always clearly defined. In addition to co-financing prescribed medicines, direct medicines payments and user charges for various services not included in the basic healthcare package, expenditure also includes requests for medical certificates. The amounts that patients pay vary between doctors. Despite the fact that household expenditures declined in 2015, Slovakia was still among the first third of the countries that paid the most for healthcare expenditures from their own pocket of households. This represented up to 23% of the total expenditure financing, which is every fourth euro. An average Slovak spent € 1031 per year on health care. Of this amount, 75% was paid by public sources, the rest was paid by the Slovaks themselves, but the most was spent on medicines. Despite high household spending, only 1% of Slovaks could not afford to pay for healthcare. The main reason for these rising expenditures are diseases occurring prematurely. Compared to other countries, these diseases occur in men at 55.5 years of age, in women it is 54.6 years of life. With an average life expectancy of 73 years for men and 80 years for women, men survive a quarter of their life in disease and women survive one third. It is often the case that households lose the income affected by a more serious illness, as well as the partial income of the person who cares for it. This represents so-called indirect health expenditure. A more detailed specification of the division of household expenditures into - Of all expenditures, most households spent on medical and pharmaceutical products and therapeutic devices. As well as total health expenditures, these have increased from € 5.74 / month per person to € 8.78 / month per person over the last decade. This component accounted for more than 70% of all expenditure. If we look at these cash outlays in more detail, we will find, according to the economic status of the household's head, that most of the health expenditure was on pensioners (see Figure 1, Graph 3-C). Their expenditure in 2013 was € 18.4 per month per person. That was the most of all years. At least it was in 2007, when their expenses amounted to 12.2 € / per month per person. Most of these expenditures are spent on medical and pharmaceutical products and therapeutic devices and least on hospital services.

This can be explained by the fact that for many medicines, citizens have to pay for themselves, while hospital services are paid by the state. The number of children in the household also affects the amount of health expenditure. It could be assumed that households with children will have higher expenditures than households without children. However, households without children have the highest expenditure. They reach almost the same amount (maximum 15 € / month per person) as pensioners' expenses. If we look at the composition of this household, we find that the average number of pensioners is almost half of the household. Considering the number of children, households with one child have the highest expenditure. The value of household expenditures with children did not exceed 10 € / per month per person. Another way we can analyze household health spending is to look at their financial burden. To obtain this information, an interview with one household member for the year 2017 took place (Eurostat 2019). The most frequent answer to the question of the financial burden was a moderate financial burden (see Chart 14). This response was reported most by households in medicines (71.6%), dental care (49.4%) and least in healthcare (47.7%). They were households with more than two adult members. The second most common answer was no financial burden. This response was most pronounced for healthcare (38.8%), dental care (32.5%) and least for medicines (28.4%). Thus households with two adults and one dependent child also responded to households with at least one person aged 65 years and over. The least frequent response was a high financial burden. This was most felt by households when paying for medicines (21%). Payments for dental care were reported by 18.1% of households as a high financial burden. When paying for healthcare, only 13.5% of the population perceives the high financial burden. The most common were households living in a household with at least one person aged 65+.

*Figure following on the next page*

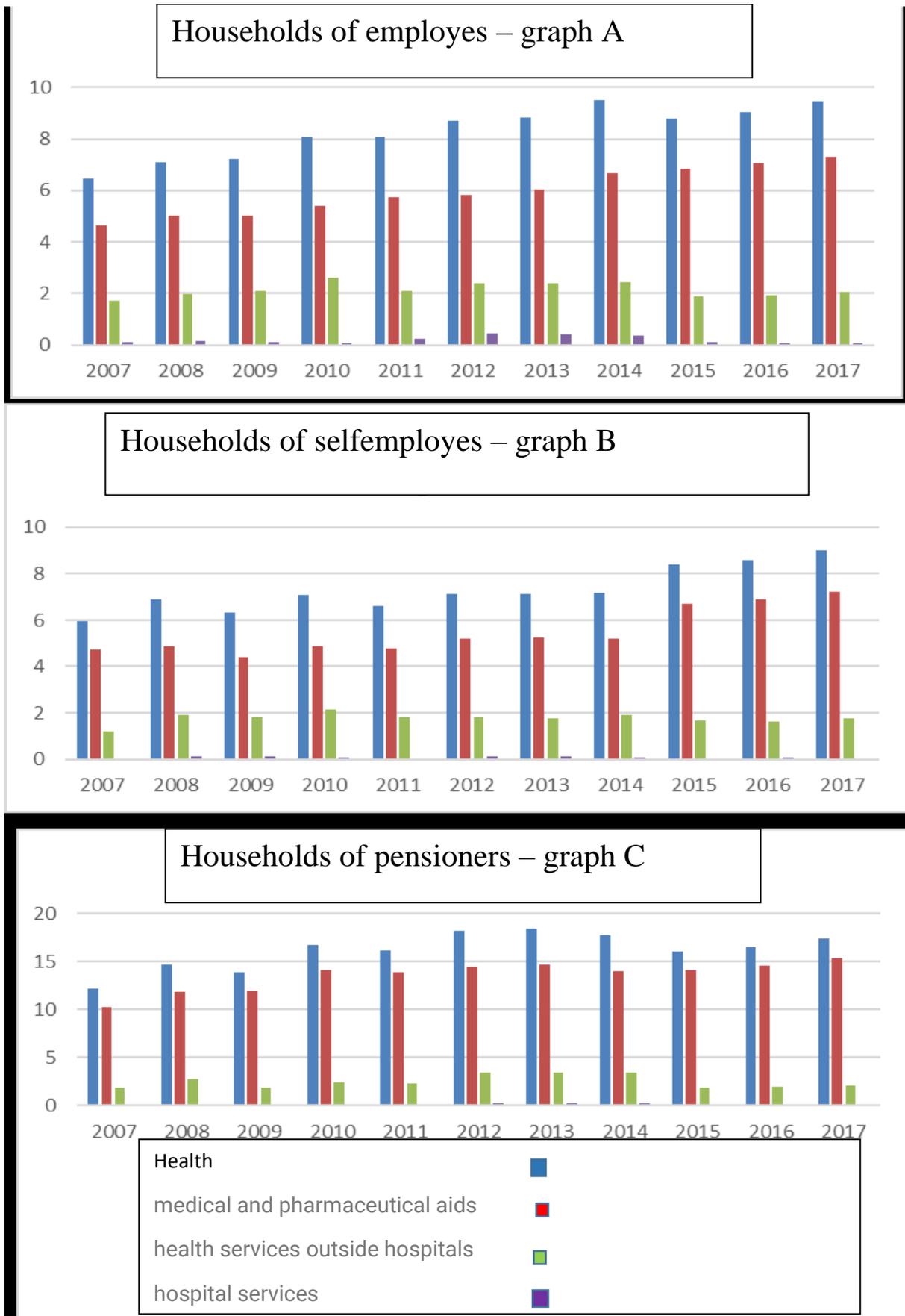


Figure 1: Health expenditure of Slovak households

#### 4. DISPOSABLE INCOME OF SLOVAK HOUSEHOLDS AND HEALTH AS A LUXURY GOOD

The annual disposable gross adjusted income of households in Slovakia represents the redistributed income of government and non-profit institutions serving households, reflecting social transfers. These represent government or non-profit institutions' expenditure on goods and services. In ten years, this household income has grown by nearly \$ 10,000. The highest growth rate was between 2006 and 2007 (13.12%) and the lowest during the crisis period 2010-2011 (0.87%). The annual health expenditure of households per person represents the final consumption of health goods and services, which include health care (medical, rehabilitation, long-term care and ancillary services and goods) or collective services (administration and prevention). These expenditures increased by almost \$ 43 in ten years (Table 2). The highest expenditures are in 2013 (USD 489.8) and the lowest in 2006 (USD 344.2). The growth rate of these expenditures is the highest in 2006-2007 (20.98%) and the lowest in 2013-2014 (-26.52%), when spending decreased by nearly \$ 130. Another major decrease in spending occurred in 2007-2008, when spending decreased by nearly \$ 70. By comparing disposable income and household health expenditure, we can see if health can be considered a luxury farm. In 2007, 2009, 2011, 2012 and 2015, the growth rate of health expenditure was higher than that of disposable income. In these cases, we can argue that health was a luxury good for households. The biggest difference between growth rates occurred in 2009 (16.1%). The smallest difference was in 2015 (0.39%). In 2008, 2010, 2013, 2014 and 2016, the growth rate of health expenditure was lower than that of disposable income. In these cases, we can argue that health for households was not a luxury good, but a necessity. The biggest difference between growth rates was in 2014 (30.47%). In 2008 and 2014, there was a significant drop in household health expenditure as state funding increased. The smallest difference was in 2013 (0.4%)

#### 5. CONCLUSION

Based on our findings, we can see that household spending on health is rising. Most households finance health and pharmaceutical products and medical devices. They pay the least for hospital services. When analyzing expenditures according to the economic status of the household head, we found that the highest expenditures are in the households of pensioners, which is not a surprise given the gradual declining health. However, it is surprising to find that, according to the number of dependent children, households with three or more children have the lowest expenditures and the highest expenditures of households without children. The reason is that, on average, pensioners make up almost half of this household. When comparing the rate of growth of disposable income with that of health expenditure, we found that health as a luxury good can only be talked about in some years

#### LITERATURE:

1. EUROSTAT 2019: *The burden of healthcare on households' budgets*. [online]. In: *ec.europa.eu*. 2019. available on: <https://ec.europa.eu/eurostat/en/web/products-eurostat-news/-/DDN-20190219-1>
2. HASELNITE, William A. *Aging Populations Will Challenge Healthcare Systems All Over The World*. [online]. In: *forbes.com*. 2018. available on: <https://www.forbes.com/sites/williamhaseltine/2018/04/02/aging-populations-will-challenge-healthcare-systems-all-over-the-world/#252a86cf2cc3>
3. MAISONNEUVE, Christine de la – MARTINS, Joaquim Oliveira. *Public spending on health and long-term care: a new set of projections*. [online]. In: *oecd.org*. 2013, no. 6, s. 39. ISSN 2226583X available on: <https://www.oecd.org/eco/growth/Health%20FINAL.pdf>

4. MINISTRY OF HEALTH OF SLOVAK REPUBLIC 2019. *Organization and management*. [online]. In: *Health.gov.sk* available on:  
[http://www.health.gov.sk/Zdroje?/Sources/dokumenty/IZP/pdf/health\\_systems\\_in\\_transiti\\_on\\_slovakia.pdf](http://www.health.gov.sk/Zdroje?/Sources/dokumenty/IZP/pdf/health_systems_in_transiti_on_slovakia.pdf)
5. MOORE, William – NEWMAN, Robert – FHEILI, Mohammad. *Measuring the relationship between income and NHEs*. [online]. In: *ncbi.nlm.nih.gov*. 1992. available on:  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4193321/>
6. PAŽITNÝ, Peter. *OECD data confirm that health is a luxury good*. [online]. In: *hpi.sk*. 2007. available on a:  
<http://www.hpi.sk/2007/08/udaje-oecd-potvrduju-ze-zdravie-je-luxusny-statok/>
7. STATISTICAL OFFICE OF THE SLOVAK REPUBLIC. available on:  
<http://datacube.statistics.sk/>
8. THE ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT – EUROPEAN UNION. *Health at a Glance: Europe 2018: State of Health in the EU Cycle*. [online]. In: *oecd-ilibrary.org*. 2018, s. 215. available on:  
[https://www.oecd-ilibrary.org/docserver/health\\_glance\\_eur-2018-en.pdf?expires=1553438439&id=id&accname=guest&checksum=311665B6ECA62AA4F6762BD7CF51B287](https://www.oecd-ilibrary.org/docserver/health_glance_eur-2018-en.pdf?expires=1553438439&id=id&accname=guest&checksum=311665B6ECA62AA4F6762BD7CF51B287)
9. THE ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT. *Household disposable income*. [online]. In: *oecd.org*. available on:  
<https://data.oecd.org/hha/household-disposable-income.htm#indicator-chart>
10. VLACHYNSKÝ, Martin. *How not to be afraid of rising health spending*. [online]. In: *iness.sk* 2018, roč.10/2018, s. 1-5. available on:  
[http://iness.sk/sites/default/files/documents/pdf/INT/2018/int\\_10-2018\\_ako\\_sa\\_nebat.pdf](http://iness.sk/sites/default/files/documents/pdf/INT/2018/int_10-2018_ako_sa_nebat.pdf)
11. WORLD HEALTH ORGANIZATION. *Countries are spending more on health, but people are still paying too much out of their own pockets*. [online]. In: *who.int*. 2019. available on:  
<https://www.who.int/news-room/detail/20-02-2019-countries-are-spending-more-on-health-but-people-are-still-paying-too-much-out-of-their-own-pockets>

## EXPLAINING CHINESE FDI IN CEE COUNTRIES - A FIXED EFFECTS PANEL DATA ANALYSIS

**Popovici Oana Cristina**

*Bucharest University of Economic Studies*

*Institute for Economic Forecasting, Romanian Academy, Romania*

*oana.popovici@rei.ase.ro*

### ABSTRACT

*China captures a special interest in FDI literature as an emerging country whose outbound foreign direct investment (FDI) surpassed inbound flows in 2015, following the 'opening up' policy applied since 1999. It thus challenges the traditional FDI theory, initially based on developed countries as main providers of capital flows. In this context, the motivation of Chinese investors in different types of countries is still a matter of speculation in the literature. This study investigates the special theoretical framework for explaining Chinese FDI outflows and for establishing the corresponding main FDI determinants in Central and Eastern European (CEE) countries, where Chinese interest became clear once with the entering into force of the 16+1 framework of cooperation and the One Belt One Road Initiative in 2011-2012. The empirical part of the study is focused on building six panel models with fixed effects, encompassing five of the CEE countries which are the recipients of the largest part of Chinese investments in this region (Bulgaria, the Czech Republic, Hungary, Poland and Romania). The panel analysis allows testing for FDI determinants and the major motivations of investors from China during the period 2005-2015. The main results confirm that the dimension of the market has the strongest impact on attracting FDI from China. In addition, Chinese investors are also targeting a certain type of strategic resource – the qualified labour force, which enables them to gain practical information and skills – and are looking for efficiency-seeking locations.*

**Keywords:** *foreign direct investment, China, Central and Eastern European countries, investors' motivation*

### 1. INTRODUCTION

People's Republic of China (from now on China) emerged as an important source of foreign direct investments (FDI) in last years. The literature is abundant in studies for empirically finding the determinants of Chinese outflows of FDI and points to several characteristics that make Chinese FDI special: their home country, which is an emerging one, as compared to the usually developed countries of origin for multinational enterprises (MNEs); the carriers of the investments – large state-owned enterprises or small private companies; their different motivations and conditions under which the internationalization initiative is taken. The lack of data made the empirical studies testing the emerging markets' location determinants of FDI in the Central and Eastern European (CEE) countries generally unavailable. However, in the last period, once with Chinese initiatives in the region, the investments started to flow in a more stable manner, which allows us an empirical analysis meant to cover the gap in the literature. The accelerated expansion of outward Chinese investment was enhanced by the "Go Global" policy, launched in 1999 (Buckley et al., 2007; Simurina, 2016), through a strategy under the coordination of the government. The pace of China's internationalization through outward investments was further energized by the approval for private companies to invest abroad, starting with 2003 (Buckley et al., 2007). As a consequence, in 2015 Chinese outbound FDI surpassed inbound flows (Iqbal, 2019). Still, main Chinese investors are state-owned enterprises (SOE), under the supervision of central or provincial governments. The bounds between China and the CEE region were enhanced in 2011-2012, after the announcement and entering into force of the 16+1 framework of cooperation.

This format allowed for annual summits and cooperation in the areas of finance, infrastructure, culture and education, economy and investments (Goralczyk, 2017). Afterwards, the One Belt One Road (OBOR) Initiative was launched, further strengthening the cooperation with China in the CEE region. The strategy is meant to be implemented in the same time with the 16+1 framework. Although the EU is not keen on responding to this strategy and the CEE countries still confront political uncertainty related to the subject, they tend to be interested in developing their connections with China (Goralczyk, 2017). Notwithstanding the Chinese outward FDI saw an important surge in the last years in the CEE region, Chinese capital is still at low levels (under 1% of each country's GDP, except for Hungary, according to McCaleb and Szunomar, 2017; Jacoby, 2014). Jacoby (2014) accounts for a strong heterogeneity of Chinese investments in these countries, pointing to the strong lead of Hungary in both the volume of investments' stock and the important increase in FDI from China, while neither the largest country (Poland), neither the richest (the Czech Republic) do not have important stocks, and other new EU member state (like Slovakia and Lithuania) do not have Chinese FDI at all. McCaleb and Szunomar (2017) consider that the differences of Chinese investment distribution are related to the Chinese diaspora in these countries and the quality of political relations. A substantial leap in Chinese OFDI in the ten new EU member states could be noticed starting with 2010, when Hungary saw a strong increase of FDI inflows from China. In the following years, Hungary took the lead of these countries as regards FDI stocks, establishing a steady pace of Chinese FDI inflows, to which joined the rest of the CEE countries. The FDI stocks coming from China increased by almost 29 times, from 65.8 million USD in 2005 to 1897.61 million USD in 2015 in the CEE region. The largest part of Chinese FDI stocks in the new EU member states are cumulated in five countries: Bulgaria, the Czech Republic, Hungary, Poland and Romania. These countries' stake in Chinese FDI stocks increased from 89.7% of total Chinese FDI stocks in CEE countries in 2005 to 92.1% in 2015, with a maximum of 96.8% in 2010. McCaleb and Szunomar (2017) explain that the CEE countries drew the attention of the Chinese investors in 2005-2007, once with the access to the larger market of the EU. After that, the interest in this region increased, motivated by both EU adhesion and the low labour costs. In addition, it was only after the economic crisis in 2008 that these countries started to look for other sources of investments, like China, and developed strategies or favourable measures in this area. At present, one of the main obstacles encountered by the Chinese investors when locating in the EU is the need to comply with the regulations of both the European block (Jakobovski, 2015) and of the host country, which makes the institutional framework to be unclear (Ebbbers and Zhang, 2010). Ebbbers and Zhang (2010) also point to the low level of Chinese investments in Europe even as compared to Asia, Africa and Latin America. In this context, the aim of this paper is to establish FDI determinants of Chinese outflows in CEE countries and to identify the main motivations for investing in these countries. Our paper is organized as follows: in the next section, we briefly present the FDI theory as shaped by the specific characteristics of Chinese outward FDI. The following part introduces the data and methodology, while in the subsequent section we present the results in comparison with the outcomes of other similar studies focused on developing economies as host countries. The main findings are provided in the Conclusion section.

## **2. LITERATURE REVIEW**

Due to the fact that FDI are generally associated with positive spillovers in the host economy, having a significant impact on the economic growth and development (Borensztein et al., 1995; Dunning, 1993 etc.), the literature is particularly concerned in identifying the factors that generate FDI flows. The internationalization of production continues to be theoretically best explained by three advantages: ownership (O), location (L) and internalization (I), which describe the framework of the eclectic paradigm proposed by John H. Dunning (Dunning 1980,

1988). The ownership (O) advantage refers to both tangible assets of the firm, such as its natural resources, labour, available capital, and intangible assets: technology and information, managerial and entrepreneurial skills, organizational systems, patents and brand reputation. The internalization (I) advantage depends on the firm's ability to produce and market its assets through its subsidiary network. The location (L) advantage relies in the differences between the host and the home countries in terms of endowment with factors, the structure of the market, the political, cultural and legal environment, etc. However, the literature points to different behaviour of MNEs and various FDI determinants when the investment relationship unfolding on the axis home-host country is between two emerging markets. General theory of FDI cannot automatically be applied to emerging economies, as FDI theory was originally designed for developed countries (Buckley et al., 2007), first for FDI outflows and only later for FDI inflows. On the contrary, emerging countries were originally considered host countries for FDI and later on potential FDI sources (Vasyechko, 2012). This is also the case for China, which was one of the main recipients of FDI inflows until 2014, when became a net exporter of FDI. Related to the emerging markets, there are different characteristic as compared to the advanced countries in either position they would be – as a home or a host country. As a home country, the state support provided for the internationalization of the domestic companies is higher than in the case of developed countries, as pointed earlier. Buckley et al. (2007) resume the main changes imposed by the specific situation of China in three major alterations of the theory: the institutional factors affecting Chinese outward FDI, the ownership advantage and the capital market imperfections. The institutional factors in the home country are considered relevant in shaping the investment decision – starting with its initiation, up to its “amount, direction, and scope” (Buckley et al., 2007, p. 10) and strongly theorized by Yan et al. (2018) on the example of China. In this way, the government control is considered to have strongly influenced the internationalization decision of companies. Its mark is noticed in the support granted to FDI in several specific sectors since 1980 until present. It is widely recognized the interest of FDI in natural-resource endowed locations, in further promoting exports and in channelling investments in advanced sectors, as Child and Rodrigues (2005) emphasize. The method of conducting the economic development – by central planning – is still having a large impact on the activity of the external sector. Zhang and Daly (2011) and Cheung and Qian (2009) admit this system, of interference of authorities in guiding outward FDI for accomplishing their plans in terms of objectives and location. The review of Deng (2012) also points to the fact that such aspect is largely addressed in the literature. On the other side, the constraints – such as too restrictive conditions and their implications for the companies’ profit and development and lack of autonomy, to which uncertainty and complexity of the legal system is added – raised by central and provincial governments – could be a reason for investing abroad, as attested by Child and Rodrigues (2005). The ownership advantage is, in this case, superior to other similar companies from other states due to the dependence on the state resources. The consequence is that the strength of the company lies in the strength of its state. Moreover, MNEs are more prone to pursue the interests of the state than the usual interest of profit maximizing. Therefore, investments in riskier locations are not unusual. The internationalization process of companies from emerging markets is different than in other countries (Jindra et al., 2015). A characteristic of Chinese outward FDI is the “carrier” of such investments, namely the state-owned enterprises (SOE). Cui and Jiang (2012), in defining this special type of enterprise, consider them as assets of the home-country governments, or “political actors” that rather pursue the interests of the home-country than of their own. The government support not only provide resources to the company – usually for compensating for their lack of advantages when investing abroad – but also influence their strategic choices, which could distort their risk perception. Their specific advantage in this case makes them stronger on the market, increasing their resistance to losses.

Secondly, being backed by important financial resources, their strategy is to acquire companies that are already either known in the market, either endowed with strategic or natural resources, rather than developing a greenfield investment (Jakobovski, 2015). This strategy is seen more profitable for the foreign part (which, in this way, could accelerate the development of its competitive advantage) than for the host country. Therefore, such companies have the advantage of being familiar with the distinctive environment of the emerging economy, have experience in being flexible and in economizing resources and capital and rely on the network of relationship developed with other important actors on the market (Buckley et al., 2007). Related to the capital market imperfections, Buckley et al. (2007) identify a special situation of capital being available at below market rates, which could be transformed into strong ownership advantage. This happens due to the extensive presence of SOEs who benefit from government support, an inefficient banking system favourable to outward investors, the inefficiency of the internal capital market which leads to subsidizing FDI and capital provided by family members to family-owned companies. As a host country, emerging markets are confronting different types of problems that make them more inaccessible than developed countries. On one hand, the sustainability of the economic growth should be carefully assessed; the macroeconomic stability could be under pressure; the quality of institutions is under construction, as bureaucracy and corruption are still major problems, both economic and political environments are unstable and hence the higher degree of uncertainty that results in potential risk to the business. Emerging markets require strong investments for the development of their infrastructure or for developing their technological and research and development (R&D) basis. On the other hand, their opportunities and advantages lie in the access to low cost and highly qualified labour, natural resources or large markets. All these characteristics determine different interests of MNEs from emerging markets in the location decision-making process. Duanmu (2012) checks for such different approaches taking into account locations with different development levels. While the author does not find sufficient evidence for distinguishing between the strategic intents of the Chinese MNE according to the type of market (developed or developing), Buckley et al. (2007) emphasized a contrary result, Chinese outward FDI being more oriented towards less-developed and riskier host countries than to developed host countries. Duanmu and Guney (2009) find that, when targeting another emerging market, the interest is in taking advantage of its resources or the dimension of the market. Different motives when investing in Europe are also certified by Dreger et al. (2017), who consider that Chinese investment in Western Europe are dedicated to seeking for advanced technology and recognition (through acquisition of brands), while those in CEE region are made for establishing a platforms for entering the EU.

### **3. DATA AND METHODOLOGY**

The purpose of our investigation is to establish FDI determinants of Chinese outflows in the CEE countries. Due to data constraints, our analysis includes a sample of five countries in the CEE region, members of the EU and the largest Chinese investments' receivers in the last years (Bulgaria, the Czech Republic, Hungary, Poland and Romania). The empirical analysis is carried out for the 2003-2015 period. This justifies the employment of a panel data analysis, which has the advantage of multidimensionality. Table 1 presents the variables used and the data sources. The dependent variable is China's outward FDI stocks to the five host countries in the CEE region. Our variables also allow identifying the major motivations of Chinese investors when deciding to invest in this region: market seeking (GDP), resource seeking (RES), efficiency (LROAD, NULC, ITRL, COR) or strategic asset seeking (LRSH, DPATENT). The descriptive statistics and correlation matrix are presented in Table 2.

*Table 1: Variables used in the empirical analysis*

Variables	Explanation	Data source
<b>LFDI</b>	Logarithm of China's outward FDI stocks to host countries, million USD	MOFCOM
<b>LGDP</b>	Logarithm of GDP at PPP, constant 2011 international USD	World Bank
<b>RES</b>	Host countries exports of raw materials, mineral fuels, lubricants and related materials, percentage of total exports	EUROSTAT
<b>COR</b>	Control of corruption, score from -2.5 to 2.5	World Bank Governance Indicators
<b>DPATENT</b>	First difference of number of patent application for residents.	World Bank
<b>LRSH</b>	Logarithm of the number of researchers in R&D per million people	World Bank
<b>ITRL</b>	Implicit tax rate on labour, %	European Commission
<b>NULC</b>	Nominal unit labour cost based on hours work, Index, 2010=100	EUROSTAT
<b>LROAD</b>	Logarithm of kilometres of motorways	EUROSTAT
<b>DUM</b>	Dummy variable; takes value 1 if the country is an EU Member State and 0 otherwise	

*Table 2: Descriptive statistics and correlation matrix (author's computations)*

	COR	DPATENT	ITRL	LFDI	LGDP	LROAD	LRSH	NULC	RES
<b>COR</b>	1								
<b>DPATENT</b>	0.205534	1							
<b>ITRL</b>	0.651125	-0.12672	1						
<b>LFDI</b>	-0.00536	0.14723	-0.0513	1					
<b>LGDP</b>	0.447474	0.349047	0.082223	0.37391	1				
<b>LROAD</b>	0.611062	0.13647	0.452109	0.566712	0.311929	1			
<b>LRSH</b>	0.53656	0.03285	0.513452	0.19796	-0.00364	0.633276	1		
<b>NULC</b>	0.1738	0.133995	-0.00435	0.585297	0.139361	0.671936	0.52844	1	
<b>RES</b>	-0.81977	-0.11694	-0.8047	-0.12614	-0.5737	-0.53173	-0.41355	-0.08984	1
<b>Mean</b>	<i>0.19379</i>	<i>39.51563</i>	<i>34.18691</i>	<i>3.857137</i>	<i>26.38234</i>	<i>6.473261</i>	<i>7.42393</i>	<i>93.56094</i>	<i>10.27376</i>
<b>SD</b>	<i>0.32598</i>	<i>187.666</i>	<i>5.692231</i>	<i>1.934526</i>	<i>0.661595</i>	<i>0.544558</i>	<i>0.382917</i>	<i>13.44224</i>	<i>6.290405</i>

#### 4. RESULTS AND DISCUSSION

We find that market-seeking is one of the strongest motivations of Chinese investors in the CEE countries (Table 3). The GDP variable is significant in attracting FDI and remains significant in all models, except for Model 3. In this respect, our study is in line with Quer et al. (2017), Zhand and Daly (2011), Kolstad and Wiig (2009), Buckley et al. (2007) etc. The dummy variable indicating if a country is an EU member state or not has a negative and significant impact on Chinese FDI in models 1 and 2. In model 3, if we add the DUM variable, the Adjusted R-squared is lower; in addition, once the LRSH variable is added, the EU adherence is no longer significant for attracting FDI from China. The literature does not provide other empirical results supporting the impact of EU adherence on Chinese investors. However, according to the theory, it is frequently noted that Chinese' interests in the CEE countries are led by the accession to the larger market of the EU (McCaleb and Szunomar, 2017). In our case, it seems that this assumption is not true. Our result would be rather framed in the literature pointing to the difficulties encountered by the Chinese investors when locating in the EU (Jakobovski, 2015), such as the need to comply with the regulations of both the European block and of the host countries, (Ebberts and Zhang, 2010). From a resource-seeking perspective, the coefficient of LRES is significant and with the positive expected sign in two out of the three models where it

is used, pointing to the search for resources of foreign Chinese investors in these countries. A similar behaviour is supported by Quer et al. (2017) and Ramasamy et al. (2012), who identify a positive relationship with the outward FDI from China. Instead, Duanmu and Guney (2009), Kolstad and Wiig (2009), Duanmu (2012) or Zhang and Daly (2011) point to a lack of significance for resource endowed locations. The explanation could be the one provided by Buckley et al. (2007), who state that China ensured its needs of economic growth by accessing countries providing raw materials in early periods and is reorienting towards strategic asset-seeking. In fact, the coefficient of RES turns insignificant once we add LRSH in our model (Model 6), signalling to the importance of researchers for the foreign investors. The variable proves to be even more important than the dimension of the market and the degree of political risk (Model 3), as the coefficients of these variables become insignificant once LRSH is added. Moreover, the NULC variable becomes significant, but with a positive sign, contrary to expectations; in fact, this suggests that Chinese investors are determined to take advantage of the highly-skilled labour force (expressed through the number of researchers), even if the labour cost is higher. The other variable expressing the strategic asset-seeking motivation, the number of patents (DPATENT) is not significant in attracting FDI, although it generally has the expected positive sign (except for Model 5). Our result confirms the previous findings in the literature that the search for strategic assets is a later motivation of Chinese investors (Buckley et al., 2007) and that Chinese investors are attracted rather by the presence of qualified labour force than the existence of advanced technology (Gammeltoft and Fasshauer, 2017). Ramasamy et al. (2012) find a positive and significant relationship between host country's exports of high technology products and FDI projects, but a negative one as regards the number of patents. The authors explain these results by pointing the interest of China for countries where core research (approximated by the number of patents) could be translated into practical knowledge and products, thus emphasizing the pragmatism of the Chinese companies. Given that the efficiency seeking motivations are usually related to cost and China has a competitive advantage in labour cost, Buckley et al. (2007) consider that such type of motivations for Chinese investors are less likely. Still, our results indicate that Chinese investors in the CEE countries grant a high importance to this type of motivation, as the proxies used for this category are significant and usually with the expected sign. The variable related to the dimension of the road transport infrastructure is positive and significant in attracting Chinese FDI in each of the six models, and the results are robust even when the LRSH variable is added to the model (Models 3 and 6). Although studies inspecting the impact of infrastructure on FDI are numerous, they usually are not related to MNE from emerging markets. Li et al. (2018) conclude that countries with high quality of infrastructure, in general, are more attractive for foreign investors, even for those originating in emerging countries. The NULC variable is also an indicator of efficiency-seeking motivation, as it expresses the ratio between the labour costs and productivity. Therefore, the expected relationship between NULC and FDI is a negative one, as a higher value of NULC would point to lower productivity related to costs. We obtain a positive impact of NULC on Chinese outward FDI which, correlated with ITRL, which mainly represents the "average effective tax burden on labour income", could suggest a more interest for the quality of the labour market, than for the taxation level. ITRL is significant only in Model 1 and keeps the negative sign in all three models. Such a result is in line with previous studies which certify that companies from emerging countries such as China could better encounter financial difficulties due to state support. The corruption level has a negative and significant impact on Chinese FDI stocks in CEE countries, pointing that foreign investors are attracted by environments with low levels of risk. Our result is in accordance with Duanmu and Guney (2009), who find that the lower the risk, the higher the volume of attracted FDI in host locations. Usually, the literature emphasizes the tendency of Chinese foreign investors to locate in areas with a high level of risk.

Buckley et al. (2007) explains this behaviour by other motives tracked by the Chinese companies than the profit (as they are following the government aims). Gammeltoft and Fasshauer (2017) consider that, as latecomers, Chinese investors must settle in the remaining available locations, namely those endowed with a high level of risk. The risk tolerance is higher for Chinese companies, as the requirements of accountability and transparency are not as harsh as those in developed locations and the operating environments are similar. Finally, Chinese investors take the risk of weak institutions that is usual for locations with a rich endowment in natural resources. Our result is rather in line with Ramasamy et al. (2012), who state that in the less risky countries, Chinese investors (especially SOEs) search for technology or strategic assets. The results for the redundancy of the fixed effects estimates support the choice of our models, and the significance at 1% of the F-test statistics indicate that regressions models fit well the data (Table 3).

Table 3: Determinants of Chinese outward FDI in the CEE countries (author's computations)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<b>LGDP</b>	9.664987*	9.613898*	3.079501	5.607909*	6.240558**	3.158666***
	3.87568	3.720235	1.501531	2.728005	2.559185	1.873637
<b>COR</b>	-4.23742*	-4.25548*	-0.58507			
	-3.95196	-3.88685	-0.55311			
<b>RES</b>				0.167916**	0.136957***	0.047109
				2.512569	1.923988	0.868302
<b>LROAD</b>	2.047468*	1.965643*	1.540775**	2.119347*	1.644503**	0.835355***
	3.723922	2.775015	2.46464	3.811252	2.542017	1.696886
<b>ITRL</b>	-0.10998***	-0.10101	-0.09101			
	-1.86534	-1.39512	-1.45167			
<b>NULC</b>		0.004135	0.009581		0.028703	0.022545***
		0.212642	0.57753		1.452957	1.680919
<b>DPATENT</b>		0.000165	0.00037		-0.00061	0.00011
		0.245925	0.625298		-0.78623	0.189504
<b>LRSH</b>			4.406403*			5.26969*
			4.595384			6.818051
<b>DUM</b>	-1.1211**	-1.15579**			-0.59518	
	-2.30325	-2.17122			-1.01232	
<b>C</b>	-258.855*	-257.645*	-117.76**	-159.49*	-174.955*	-126.527*
	-4.0482	-3.88615	-2.33384	-3.10895	-2.82978	-3.01723
<b>R-squared</b>	0.829185	0.829534	0.867777	0.72241	0.736236	0.855566
<b>Adjusted R-squared</b>	0.800716	0.793474	0.839807	0.688319	0.687391	0.828819
<b>S.E. of regression</b>	0.863595	0.879148	0.774278	1.072026	1.073621	0.794471
<b>F-statistic</b>	29.12582*	23.00421*	31.02495*	21.19121*	15.07284*	31.98734*
<b>Redundant Fixed Effects Tests</b>						
<b>Cross-section F</b>	12.79383*	11.88761*	19.06756*	13.81738*	12.45326*	33.76414*
<b>Cross-section Chi-square</b>	42.66526*	41.56291*	57.78531*	44.06032*	42.48449*	81.44904*

Note: \*, \*\* and \*\*\* denote 1%, 5% and 10% significance levels, respectively. The values in the parenthesis are the t-statistics values.

## 5. CONCLUSIONS

The research objective of this paper was to establish FDI determinants of Chinese outflows in CEE countries. The main contribution to the literature resides in enlarging the knowledge related to determinants of FDI having China as home country. To our knowledge, this study is among the first ones focused on the five CEE countries members of the EU, which have also a special place in the FDI literature due to their unique situation in building the appropriate institutional infrastructure for the market economy. The empirical model is built for the period 2003-2015 and includes five CEE countries (Bulgaria, the Czech Republic, Hungary, Poland and Romania). The results of our study confirms that the dimension of the market is the main factor for attracting Chinese FDI but, contrary to the expectations formulated in the literature, this is not because these countries provide them an easier access to the larger market of the EU. It would be rather the consequence of qualified labour force. We could notice that a large part of the significant coefficients belongs to the variables shaping the labour market. Therefore, we could state that market-seeking and labour market determinants are the most important factors in attracting Chinese FDI in the CEE countries. In this context, the search for resource endowments is significant only when the models do not include the presence of qualified labour force (which is included in the category of strategic assets). Finally, we fill a gap in the literature related to the less investigated subject of efficiency-seeking motivations. Our findings point to the high importance granted by Chinese investors to the road infrastructure and environments with low corruption.

## LITERATURE:

1. Borensztein, E., De Gregorio, J. & Lee, J.-W., (1995). How does foreign direct investment affect economic growth? *Journal of International Economics*, 45,115–135.
2. Buckley, P. J., Clegg, J., Cross, A. R., Liu, X., Voss, H. & Zheng, P. (2007). The Determinants of Chinese Outward Foreign Direct Investment. *Journal of International Business Studies*, 38 (4), 499–518.
3. Cheung, Y. W. & Qian, X. (2009). Empirics of China's outward direct investment. *Pacific Economic Review*, 14(3), 312-341.
4. Cui, L. & Jiang, F. (2012). State ownership effect on firms' FDI ownership decisions under institutional pressure: a study of Chinese outward-investing firms. *Journal of International Business Studies*, 43, 264–284.
5. Deng, P. (2012) The Internationalization of Chinese Firms: A Critical Review and Future Research. *International Journal of Management Reviews*, 14(4), 408-427.
6. Dreger, C., Schüler-Zhou, Y. & Schüller, M. (2017). Chinese foreign direct investment in Europe follows conventional models. *DIW Economic Bulletin* 14 + 15.2017
7. Duanmu, J. L. (2012). Firm Heterogeneity and Location Choice of Chinese Multinational Enterprises (MNEs). *Journal of World Business*, 47(1), 64–72.
8. Duanmu, J. L. & Guney, Y. (2009). A Panel Data Analysis of Locational Determinants of Chinese and Indian Outward Foreign Direct Investment. *Journal of Asia Business Studies*, 3 (2), 1–15.
9. Dunning, J.H. (1980). Towards an Eclectic Theory of International Production: Some Empirical Tests. *Journal of International Business Studies*, 11(1), 9-31.
10. Dunning, J.H. (1988) The Eclectic Paradigm of International Production: A Restatement and Some Possible Extensions. *Journal of International Business Studies*, 19(1), 1-31.
11. Dunning, J.H. (1993) *Multinational Enterprises and the Global Economy*. Wokingham: Addison-Wesley.
12. Ebbers, H. & Zhang, J. (2010). Chinese investments in the EU. *Eastern Journal of European Studies*, 1(2), 187-206.

13. Gammeltoft, P. & Fasshauer, K. (2017). Characteristics and host country drivers of Chinese FDI in Europe: a company-level analysis. *International Journal of Technology Management*, 74,140-166.
14. Goralczyk, B. (2017). China's interests in Central and Eastern Europe: enter the dragon. *European View*, 16, 153–162.
15. Iqbal, B. A., Sami, S. & Abdul Turay (2019) Determinants of China's outward foreign direct investment in Asia: a panel data analysis, *Economic and Political Studies*, 7:1, 66-86.
16. Jacoby, W. (2014). Different cases, different faces: Chinese investment in Central and Eastern Europe. *Asian European Journal*, 12, 199–214.
17. Jakobovski, J. (2015). China's foreign direct investments within the '16+1' cooperation formula: strategy, institutions, results, OSW Centre for Eastern Studies, 191.
18. Jindra, B., Hassan, S. S., Gunther, J. & Cantner, U. (2015). European Integration and Outward FDI from Central and Eastern Europe – Is There Any Evidence of Knowledge-seeking? *Journal of Common Market Studies*, 53(6), 1248–1267.
19. Kolstad, I. & Wiig, A. (2009). What Determines Chinese Outward FDI? CMI Working Paper WP 2009: 3.
20. Li, X., Quan, R., Stoian, M. C. & Azar, G. (2018) Do MNEs from developed and emerging economies differ in their location choice of FDI? A 36-year review. *International Business Review*, 27, 1089–1103.
21. McCaleb, A. & Szunomar, A. (2017). Chinese foreign direct investment in central and eastern Europe: an institutional perspective, In book: Chinese investment in Europe: corporate strategies and labour relations, Publisher: European Trade Union Institute, Editors: Jan Drahekoupil, 121-140.
22. Quer, D., Claver, E. & Rienda, L. (2017). Cultural distance, political risk and location decisions of emerging-market multinationals: a comparison between Chinese and Indian firms. *Journal of the Asia Pacific Economy*, 1-17.
23. Ramasamy, B., Yeung, M. & Laforet, S. (2012). China's outward foreign direct investment: Location choice and firm ownership. *Journal of World Business*, 47, 17–25.
24. Simurina, J. (2016). China's Approach to the CEE-16, Europe China Research and Advice Network (ECRAN), Short Term Policy Brief 85.
25. Vasyechko, O. (2012). A Review of FDI Theories: An Application for Transition Economies. *International Research Journal of Finance and Economics*, 89, 118-137.
26. Yan, Z. J., Zhu, J. C., Fan, D., Kalfadellis, P. (2018). An institutional work view toward the internationalization of emerging market firms. *Journal of World Business*, 53, 682–694.

## INFORMATION RELATED TO HUMAN RIGHTS IN FINANCIAL REPORTING – THE CASE OF POLAND

**Ewelina Papaj-Wlislocka**

*University of Economics in Katowice  
ul. 1 Maja 50, 40-278 Katowice, Poland  
ewelina.papaj@ue.katowice.pl*

### **ABSTRACT**

*The environment of the 21st century has influenced many changes in reporting. Traditional financial disclosures are not sufficient enough to fulfil the needs of financial statements recipients. Directive 2014/95/EU which have been implemented to the Polish Act of Accounting has to enforce the obligation to disclose non-financial information in the management commentary which is part of the financial statements. The scope of non-financial information disclosures includes, inter alia description of the policies used by the entity in relation to social, employment, environmental issues, respect for human rights and counteracting corruption and bribery, as well as a description of the results of these policies. The aim of the paper is to analyse and evaluate how the regulations of Directive 2014/95/EU in terms of human rights have been implemented by Polish companies. The empirical part will be based on the material from the conference held by the Polish Ministry of Finance in March 2019 and La Strada Organization.*

**Keywords:** *corporate social responsibility (CSR), modern financial reporting, non-financial data*

### **1. INTRODUCTION**

Business environment of 21<sup>st</sup> century experiences many challenges. Nowadays profit is no longer considered as the company's primary goal. The time of economic crisis (beginning in 2007) was an undeniable proof that "profit on paper" is not a guarantee for a company's success. Scientists all over the world have begun to underline other factors such as: increasing work efficiency, continuously implementing innovations, growing the employee's satisfaction and improving the interpersonal relations (Sudoł, 2006, pp.36). As a result, the companies have to change their approach to business philosophy and start acting in accordance with CSR (Corporate Social Responsibility) principles (Vanstraelen, Zarzeski, Robb, 2003, pp. 247-249). It is worth mentioning that the above changes also affect the scope of disclosures presented in financial statements. This paper will be an attempt to present the disclosures related to human rights in Polish accounting system. This is a relatively new area of disclosures since the obligation was introduced in 2017 (according to Directive 95/2014/UE). According to Polish Ministry of Finance's report "Reporting of extended non-financial information in 2017 - first experiences and good practices", Polish companies had the biggest difficulties with disclosures connected to human rights. The article will also present the results of research conducted by the Foundation of Reporting Standards (FSR) and La Strada Organization, which has been dealing with human rights issues in Poland since 1996.

#### **1.1. Human rights in nowadays' business activities**

Holistic approach in defining enterprise goals is gaining increasing popularity among modern companies. Currently, apart from growing the wealth of owners, it is also desirable to find a balance between financial results, the environmental issues as well as social community (Mair, Marti, 2005, pp.36-40). According to J. Elkington (1994, pp.90-100) the company's success is guaranteed by adopting the management concept "Triple Bottom Line". The concept characterises a need to achieve a balance between three spheres: economic, social and

environmental. As a result, companies start to operate in accordance with the concept of sustainable development (CSR). The main assumption of the CSR concept is to build the company's strategy taking into account social interests, environment protection and relations with stakeholders (Dhaliwal, Zhen, Tsang, Yang, 2011, pp. 59-65). Human rights are included in the social sphere of this concept. United Nations Organization is the biggest institution dealing with the implementation of the concept of sustainable development. The reports prepared by the United Nations Organization are guidelines for many companies in the area of CSR. The latest action taken by the UN in implementing the concept of sustainable development is the 17 Sustainable Development Goals adopted by the Member States in 2015. They are presented in figure 1.

Figure 1: 17 Sustainable Development Goals



Source: <https://www.un.org/development/desa/disabilities/envision2030.html> (accessed 09.08.2019)

All of presented goals either directly or indirectly refer to human activity. Human rights are divided into three main generations:

a) Personal rights:

- right to a good life,
- right to freedom of thought, conscience and religion,
- right to express views and opinions,
- prohibition of torture, inhuman or degrading treatment or corporal punishment,

b) Political rights and freedoms:

- right to citizenship,
- right of association,
- right for vote,
- right to engage in public life,

c) Economic, social and cultural freedoms and rights:

- right to health protection,
- right do education,
- right to work,
- right to property,
- right to inherit.

Not all of them relate directly to business activities. However, one should notice that their fulfilment guarantees the provision of proper conditions for human development. As a result, the development of business activity is also visible. Among highly developed economies, the respect for human rights is a priority. It is also an important element attracting potential investors.

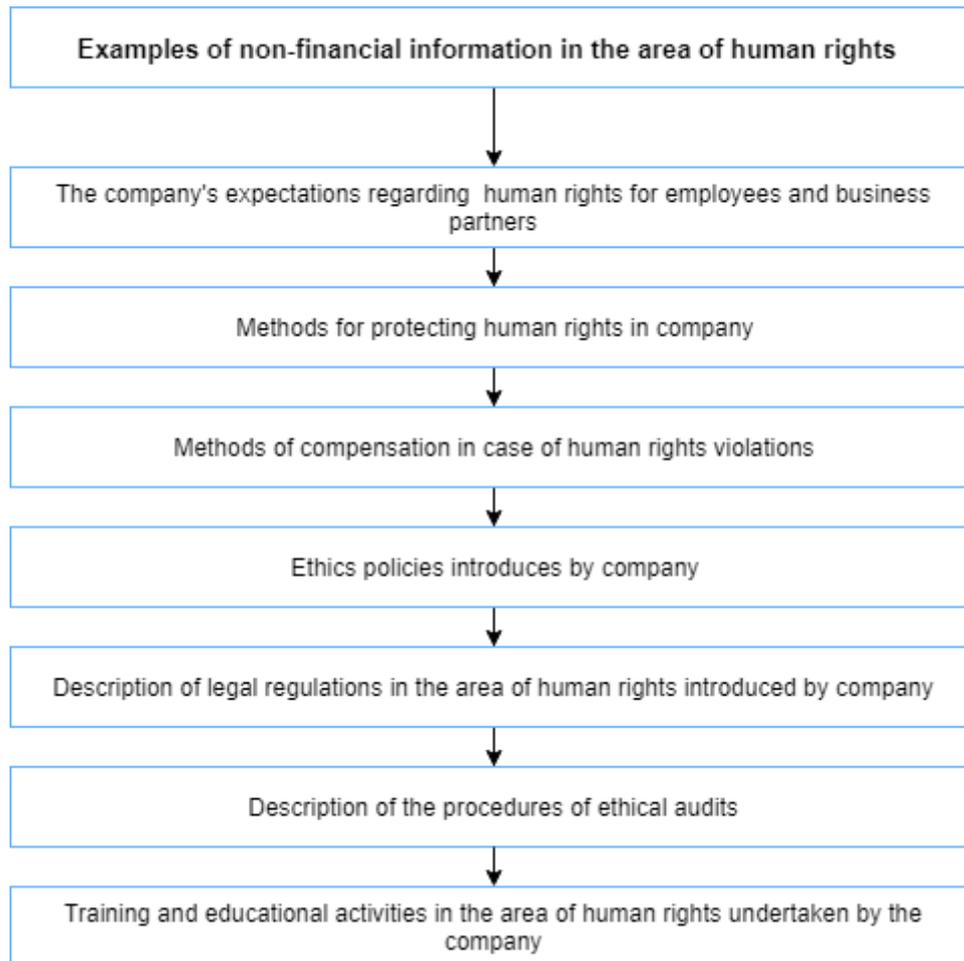
### **1.2. Human rights in financial reporting**

Nowadays, more and more companies start to be interested in the concept of CSR in the area of accounting (Fuente, García-Sánchez, Lozano, 2016, pp.737-750). Investors need more disclosures, connected not only to the traditional financial data but also to nonfinancial information, such as environmental issues, working conditions, research and development strategy (Villiers, Van Staden, 2011, pp. 504-525). Non-financial information disclosures are a response to those needs. The Directive 95/2014/UE, implemented to Polish law (Act of Accounting), imposed on the largest Polish companies the obligation to disclose non-financial data. This includes:

- a) description of business model,
- b) key non-financial performance indicators,
- c) description of policy applied by company in the area of social, employee and environmental relations, as well as human rights issues and counteracting corruption and bribery,
- d) description of significant risks.

As it was mentioned above, one of the areas of non-financial information cover a human rights issues. The Act of Accounting does not directly mention the scope of information that has to be disclosed (Papaj-Wlisłocka, Strojek-Filus, 2019). As a result, the amount of presented data fully depends on the company's decision. Examples of human rights-related information are shown in Figure 2.

*Figure following on the next page*

*Figure 2: Scope of non-financial information in the area of human rights*

*Source: Own elaboration*

Obligation to disclose information related to human rights turned out to be a great challenge for companies. Before the implementation of European Union's Directive (Directive 95/2014/UE) in 2017, such data was rarely presented in the financial statements. The obligation covers the biggest Polish companies which in a financial year and in the previous year, exceeded the following amounts:

- 500 employees - in terms of annual average employment expressed in full time equivalents and
- 85,000,000 PLN - in the total balance sheet assets at the end of the accounting year **or** 17,000,000 PLN - in the net revenue from the sale of goods and materials in the financial year.

## **2. METHODS**

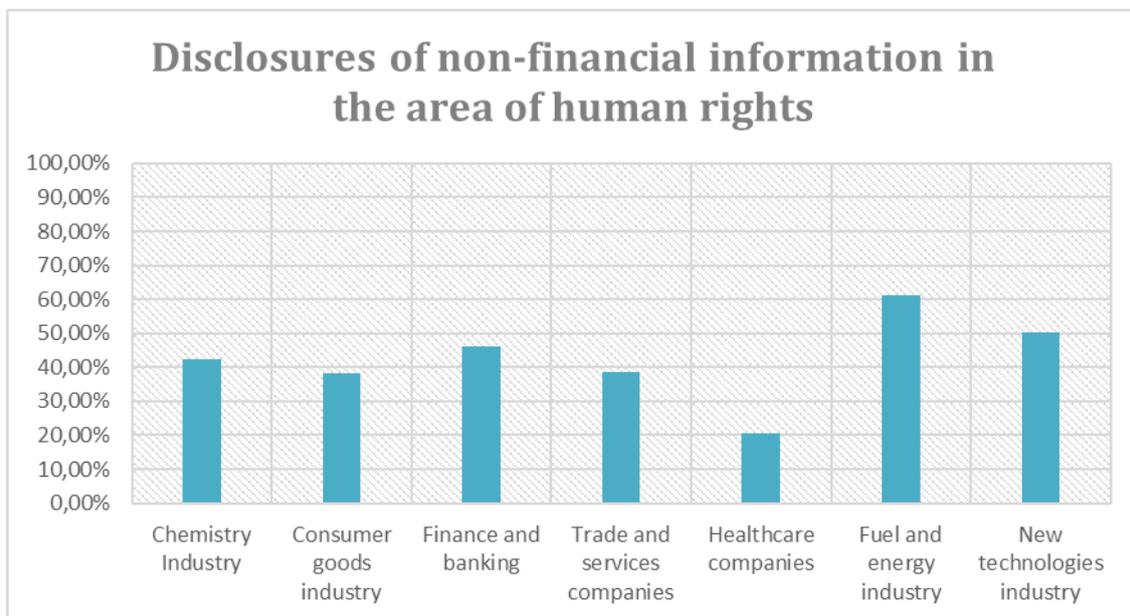
In March 2019, Polish Ministry of Finance has organized a conference devoted to assessing the first year of non-financial information disclosure obligation among Polish companies. The conference was an opportunity to exchange ideas, identify examples of good practices as well as to highlight areas that need improvement. It also featured a presentation of a preliminary research carried out by the experts of the Ministry of Finance and La Strada Organisation. In the report "Reporting of extended non-financial information in 2017 - first experiences and good practices" experts pointed out that undoubtedly, human rights information was the weakest among all non-financial information disclosures. This result was particularly interesting for La Strada Organisation.

Along with Foundation of Reporting Standards (FSR) they conducted a separate research dedicated to human rights-related disclosures. The subject of the research was 149 non-financial information reports published by Polish companies in 2018.

### 3. RESULTS AND DISCUSSION

In the research, selected experts checked the extent to which companies disclose information about human rights in their reports. It should be underlined that such a research method is biased with a certain degree of subjectivism. In general, subjectivism is a common limitation of research related to non-financial information (Healy, Palepu, 2001, pp.405-440), (Elshandidy, Shrivies, Bamber, Abraham, 2018, pp.54-82). What is important, it does not reduce the quality of research, because it is related to the specificity of non-financial data. During the research, companies were divided into sectors of operation: chemistry, consumer goods, finance and banking, trade and service, healthcare, fuel and energy and new technologies. Summary of the results regarding the non-financial information disclosures in the area of human rights are presented in the figure 3.

Figure 3: Disclosure of non-financial information in the area of human rights



Source: Own elaboration according to “Reporting of extended non-financial information in 2017- first experiences and good practices”.

As it has been presented in figure 3, the most information in the area of human rights was disclosed by companies from the industries of fuel and energy (61,10%) and new technologies (50,10%). In these industries, market success is heavily dependent on the human capital. As a result, companies are aware that disclosures in this area may have a positive impact on their image while also attracting at the same time highly qualified employees to the company. Financial issues are another explanation for the obtained results. Wide range of disclosures is associated with the involvement of non-financial disclosures specialists, which generates high costs of remuneration. Fuel and energy and new technologies sectors are examples of very profitable industries with appropriate funds for extended reporting. It is also worth noticing that financial issues may be responsible for low level of disclosures seen among healthcare companies (only 20,50%). The next stage of research was extracting information with the largest and smallest percentage of disclosures.

The obtained results indicate that most commonly disclosed information was related to description of legal regulations in the area of human rights introduced by company. The results are presented in figure 4.

Figure 4: Description of legal regulations in the area of human rights introduced by company



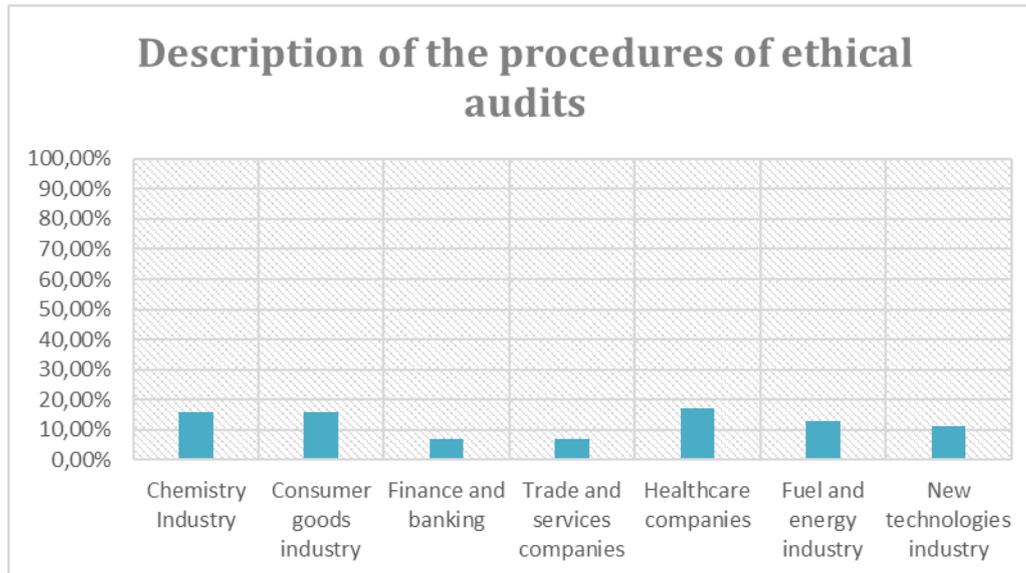
Source: Own elaboration according to “Reporting of extended non-financial information in 2017- first experiences and good practices”.

As it has been presented in figure 4, the most extended scope of disclosures was observed in companies from fuel and energy industry (64%). Subsequently companies from chemistry industry, consumer goods industry and trade and services companies (however in these industries the scope of disclosures was only around 30%). Among the most frequently mentioned legal regulations are:

- code of ethics,
- policy of respecting human rights,
- policy of reporting violations (whistleblowing),
- anti-mobbing policy,
- Universal Declaration of Human Rights,
- International human rights charter,
- ISO 26000.

Research proved that companies also created their own corporate documents regarding human rights. What is more, the concept of human rights as a part of non-financial information did not apply only to employees of a given company, but had a wide reference to local and international community. In turn, the least information was disclosed by companies in the area of ethical audits. The results are presented in figure 5.

Figure following on the next page

*Figure 5: Description of the procedures of ethical audits*

Source: Own elaboration according to “Reporting of extended non-financial information in 2017- first experiences and good practices”.

Results in this category indicate that description of the procedures of ethical audits is clearly an area for improvement. Interestingly, one should pay attention to the high result observed in healthcare companies. This phenomenon may be due to the fact that the majority of companies in this sector represent national enterprises with highly developed procedures. Private companies in Poland have significantly less developed procedures, which may affect the low amount of disclosures. Neither sector’s disclosure rate exceeded 20%.

#### 4. CONSLUSION

The last few years show a very high awareness of financial statements’ recipients not only in the area of financial information but also in terms of non-financial information. Nowadays, besides the classic financial statements, non-financial reports are constantly gaining popularity. Among non-financial information disclosures a significant role is played by information related to human rights. As it was mentioned in the article, disclosures related to human rights in accounting have not been published frequently before 2017. The implementation of Directive 95/2014/UE has changed the situation in this area. However, according to the research conducted by experts from Foundation of Reporting Standards (FSR) and La Strada Organisation, disclosures in this area certainly need improvement. The research results show that in the majority of industries, the scope of human rights disclosures did not exceeded 40%. Only in fuel and energy and new technologies industries the disclosure rate exceeded 50%. A more detailed analysis allowed to notice that companies disclose a lot of information concerning implemented legal regulations in the area of human rights. At the same time insufficient information related to the auditing processes is presented. There is no doubt that information connected to human rights in accounting are in the early stages of development in Poland. This reflections can form a basis for further scientific work.

#### LITERATURE:

1. Dhaliwal D.S., Zhen Li O., Tsang A., Yang Y. G., (2011), Voluntary Nonfinancial Disclosure and the Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting, *The Accounting Review*, Vol. 86, No. 1.

2. Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups, OJ.EU from 15 November 2014
3. Elkington J. (1994). Towards the Sustainable Corporation: Win- Win –Win Business Strategies for Sustainable Development, *California Management Review*, Volume 36, Issue 2.
4. Elshandidy T., Shrivies P., Bamber M., Abraham S. (2018), Risk reporting: A review of the literature and implications for future research, *Journal of Accounting Literature*, Vol. 40.
5. Fuente, J. A., García-Sánchez, I.M. and Lozano, M.B. (2016). The role of the board of directors in the adoption of GRI guidelines for the disclosure of CSR information. *Journal of Cleaner Production*, Vol. 141.
6. Healy P. M., Palepu G. (2001), *Information asymmetry, corporate disclosure and capital markets: a review of the empirical disclosure literature*, *Journal of Accounting and Economics*, Vol. 31, No. 1/3.
7. Mair J., Marti I., (2005). Social Entrepreneurship Research: A source of Explanation, Prediction and Delight, *Journal of World Business*, Volume 41, Issue 41.
8. Papaj-Wlisłocka, E., Strojek-Filus, M., (2019), Forward-looking information disclosure as a risk factor in accounting – the case of Poland , *Multiple perspectives in risk and risk management*. ERRN 8th European Risk Conference 2018, red. Philip Linsley, Philip Shrivies, Monika Wieczorek-Kosmala, Springer Proceedings in Business and Economics.
9. Reporting of extended non-financial information in 2017- first experiences and good practices. Available: [https://www.gov.pl/documents/1079560/1080340/Raport\\_MF.PDF/1b41abe7-a7db-60a8-4641-cbbb0fb35764](https://www.gov.pl/documents/1079560/1080340/Raport_MF.PDF/1b41abe7-a7db-60a8-4641-cbbb0fb35764)
10. Sudoł S.,(2006). *Przedsiębiorstwo*, Polskie Wydawnictwo Ekonomiczne, Warszawa.
11. Vanstraelen A., Zarzeski M., Robb S. (2003). Corporate nonfinancial disclosure practices and financial analyst behavior across three European Countries, *Journal of International Financial Management and Accounting*, Vol. 14.
12. Villers C., Van Staden, C.J. (2011). Where firms choose to disclose voluntary environmental information, *Journal of Accounting and Public Policy*, Volume 30, Issue 6.

# THE APPLICATION OF THE THREE LINES OF DEFENSE CONCEPT IN RISK MANAGEMENT AND FRAUD RISK ON THE EXAMPLE SELECTED LISTED COMPANIES

**Agnieszka Skoczylas-Tworek**

*University of Lodz, Faculty of Economics and Sociology  
ul. POW 3/5, 90-255 Lodz, Poland  
agnieszka.skoczylas@uni.lodz.pl*

## **ABSTRACT**

*Listed companies are entities of particular interest from the point of view of building a positive image free from fraud and economic abuse. Hence, the effectiveness of their solutions in this area is a subject of research interest. The aim of this study is to present the application of the Three Lines of Defense Concept in the area of strengthening the risk management system in the organization, including fraud risk management. The analysis of its application was presented on the example of listed companies included in the Warsaw Stock Exchange Index (WIG20) and Deutscher Aktienindex Index (DAX), Dow Jones Industrial Average Index (DJIA). The basic research method was a quantitative-qualitative analysis. It refers to the verification of information contained in Management Reports and their analysis in terms of the implementation of the Three Lines of Defense Concept in risk management. The popularity of using the model within listed companies and the industries they represent has been verified and the phenomenon of homogeneity in this respect has been discussed. In case of non-application of the model, the implementation of other risk management concepts or guidelines has been analyzed. The publication is a part of a publication cycle in which the author will strive to develop a risk management model focused on fraud risk management as well as indicators that will determine the number and complexity of actions taken by the organization to reduce fraud.*  
**Keywords:** *risk, risk management, fraud, corruption*

## **1. INTRODUCTION**

The phenomenon of fraud and abuse is a problem that evolves along with the developing economy, economic and technological progress. This is evidenced by the spectacular scandals involving such corporations as Waste Management (1998), Enron (2001), Worldcom (2002), Tyco (2002), Healthsouth (2003), Freddie Mac (2003), AIG (2005), Lethman Brothers (2008), Bernie Madoff (2008), Satyam (2009) (Kutera, 2016, pp. 15-17), (Surdykowska, 2012 p. 82). It is worrying that after these events, the scale of fraud has not decreased at all, on the contrary, it is on the upward trend (EY, 2013, pp. 1), (EY, 2018, pp. 37), (Deloitte, 2013, pp.), (PwC, 2018, pp.). The literature on this subject devotes more and more attention to this subject (Reurink A., 2016), (Wells J.T., 2018) both from the point of view of the problem of abuse (Will, 2013, pp. 45-67), (Tombs S., 2013, pp. 14-15), scam scenarios (Stajano F., Wilson P., 2009, pp. 4-9), through the study of their scope and complexity (Matusiewicz, 2015, pp. 12). Taking into account the scale of this phenomenon, economic operators take a number of actions on their own to reduce the risk of fraud (Wells, 2018, pp. 101), however these measures still prove to be insufficient. From the point of view of organizations, the only effective way to combat fraud risk is to anticipate it, i.e. to prevent it from occurring. Hence, the risk and its potential effects should be constantly assessed, but at the same time countermeasures should be taken. This requires constant commitment and vigilance on the part of the organization in relation to the activities undertaken, and thus integration of fraud risk management with risk management in the organization. Fraud is a potential consequence of risk, so it is essential to consider it in relation to the whole risk management system (Ernst and Young, 2007, pp. 37).

This is also indicated by non-sectoral organizations (IIA, AICPA, ACFE, 2012, p.5), which are also involved in this issue. In their published studies they stress the need to include fraud risk in the risk management system and propose various solutions in this respect in the form of models and guidelines (IIA, 2013, pp. 1). These studies are of broad interest to economic operators (Burke, Jameson, 2015, pp.18). The aim of this study is the analysis of the application of the Three Lines of Defense Model, as one of the concepts of non-sectoral organizations proposed for effective risk management among a selected group of listed companies, listed on the Polish, American and German Stock Exchanges, included in the WIG 20, DJIA and DAX Indices. These companies are obliged not only to publish their financial statements, but also to report on their operations and conduct a risk management policy, with the inclusion of actions taken to mitigate the risk, including the risk of fraud in their content. The basic research method is a quantitative-qualitative analysis. It refers to the content of management activity reports and their verification in terms of information on the application of the Three Lines of Defense Model in the architecture of a risk management system or to the use of another concept instead. In this respect, industry literature and descriptions of Stock Exchange Reports of companies included in the WIG20, DJIA and DAX30 Indices were used. Discussion on the popularization of this model in relation to the analyzed groups of stock indices and selected sectors of activity was also undertaken, taking into account the homogeneity of its application. The results of the analysis will constitute a research material within the framework of a publication cycle devoted to the analysis of the phenomenon of fraud in the economy, focusing risk management processes on the detection of fraud and evaluation of their effectiveness in this area.

## **2. FRAUD IN TERMS OF RESIDUAL RISK AND ITS PLACE IN THE RISK MANAGEMENT SYSTEM**

The development of enterprises has accelerated and increasing creativity characterizes the mechanisms of extortion, which is conducive to their growing scale. The phenomenon of fraud has accompanied organizations from the very beginning and concerns not only their external environment, but also organizational structures within which the knowledge of the issues and weaknesses is the greatest. This phenomenon refers to every area of an organization's activity, regardless of its specificity and character. Hence, it is difficult to define it. Terminological dilemmas in relation to the notion of fraud occur not only in the literature on the subject, but also in industry studies (Friedrichs, 2002, pp. 248-249), (Bela, Bolesławska, 2005, pp. 13), (Ernst and Young, 2007, pp. 37). The reasons for this diversity should be sought not only in relation to the field of science, but also in relation to the area of activity and potential effects of fraud on the organization. For example, from a legal point of view, an abuse is a form of crime, from a financial point of view it is interpreted as a fraud (Kraciuk, 2012, pp. 802-803), (Maj, Ambroziak, 2013, pp. 23). The publication does not address terminological considerations regarding the definition of the concept of fraud. It focuses on fraud as a potential effect of risk and the actions taken to mitigate it by including it in the risk management system. Fraud is an act which an organization is exposed to regardless of the environment in which it operates. Hence, actions taken to limit the risk of abuse require from the Management of the organization an extraordinary knowledge of the space and architecture of the enterprise. The risk of abuse is in a sense a natural risk, integrated into the activity of any organization, it is an integral part of its activity, which remains with the organization despite undertaking all possible or all economically justified actions to avoid it. This means that it is not possible to eliminate this phenomenon completely. What is more, the progressive technology, development of knowledge and tools for combating fraud are conducive to the development of this phenomenon. Only when the risk of fraud materializes does it evaluate the intentionality of the organization in terms of the legitimacy of taking different reactions or functioning solutions. Therefore, it is worth considering whether in the era of modern economic and technological progress and the

speed of information transfer the organization's action against the risk of fraud will ever be effective. However, taking into account the impact of the risk of fraud and its macroeconomic scale, institutions should not remain passive towards it, but should manage it by controlling the susceptibility of organizations to this risk (Bernstein, 1996, pp. 3). The effectiveness of fraud risk management depends on the effectiveness of the risk management system in place. Hence, the proper policy of the organization in this respect should become one of the key control mechanisms.

### **3. CONCEPTS AND GUIDELINES IN THE RISK MANAGEMENT SYSTEM**

The architecture of the risk management system should be adapted to the needs and specificity of the organization. Hence, it is not possible to create a universal management system model that will fit into any organizational structure. Heterogeneity of this phenomenon, as well as the growing scale of fraud and corporate abuses contributed to the efforts of non-sectoral organizations to develop certain, generally accepted principles which should be followed by organizations when creating risk management systems to ensure their proper functioning. These principles provide a general framework for the risk management structure and include guidance on the allocation of tasks and responsibilities within the organization. Popular studies in this area include the concept of three lines of defense "The Three lines of Defense in Effective Risk Management and Control" by The Institute from Internal Auditors. It is difficult to unequivocally determine the original source of the concept, but the popularization of the model developed on the basis of the IIA concept has led to its identification with this institution (Wołoszczenko-Hołda, 2017, pp. 496), (PWC, 2016, pp. 5). Its aim is to provide guidance by defining the structure and activities of an organization within risk management, internal control and fraud prevention, which should result in the improvement of its functioning and the reduction of the risk of fraud (Anderson, Eubanks, 2016, pp. 2). It therefore focuses on three aspects: internal control as a management system, risk management and fraud prevention. The concept defines the structure of the Three Lines of Defense Model, which indicates the roles and responsibilities of the Board of Directors, the Management as well as the mechanisms supporting their activities, and the mechanisms supporting the whole system by focusing on risk. The structure of the model is divided into three levels which constitute three lines of defense at the same time. These include: operational management, risk management and compliance function, internal audit. The first one is created by the owners and the Management of the organization. They are responsible for the proper functioning of all processes and their risks, including taking actions on risks so as to strive to reduce them. The second line consists of control mechanisms whose task is to support the first line in effective risk management. These mechanisms include: financial control, safety, risk assessment, quality, inspections, compliance. The second line is supervised by the first one, therefore it is not fully independent, but it is a support tool for the first line. The last, third line of defense is an internal audit, which, through its activities, ensures that the first two lines of action are effective and deal effectively with risk reduction (Anderson, Eubanks, 2016, pp. 4). This concept also subtly highlights the fourth line, which is external audit and legal regulations. The discretion of the fourth line means that it does not depend on the organizational structure of the entity and is not part of it, but can have a significant impact on its formation. Its task is to help the organization to shape an effective risk management system so as to make the right decisions in uncertain and crisis situations, including those with a risk of fraud (IIA, 2013, pp. 1), (Anderson, Eubanks, 2016, pp. 4). The Three Lines of Defense Concept also functions within the scope of the Governance-Risk-Compliance (GRC) Concept. It assumes the adoption of the following three lines within the risk management system: governance, risk management and compliance. Its task is to ensure that the organization achieves its objectives while addressing uncertainty and compliance with

regulations, guidelines and standards. The GRC concept has not been researched, but it is used for literature and industry studies (Saunders, 2015), (Łosiewicz-Dniestrzańska, 2012, pp.528) The two concepts are very similar, the difference between them appears only on the third line, in the case of the IIA Model, it is independence assurance, which should be ensured by internal audit. In GRC, however, the last line is the compliance function, whose task is to ensure the compliance of the first two lines. Investigating both concepts more closely it can be indicated that the GRC Concept has been implemented in the IIA Model, which on the second line takes into account the first two lines of the GRC model, both risk management and compliance, and also introduces an additional line, i.e. internal audit. These concepts are complementary and relate to risk management and limiting the effects of fraud. Each of them refers to the concept of three lines of defense and indicates the need to take action to develop such a balance of power and resources by placing them at appropriate organizational levels to overcome potential threats. Due to the use of all lines of the GRC concept and the implementation of internal and external audit, the IIA model should be considered more comprehensive in terms of the implementation of fraud risk defense mechanisms, although its effectiveness in this respect has not been studied. Therefore, if an organization only uses the GRC model, it is appropriate to implement an internal audit in the organizational structure, which will constitute an additional line of defense and ultimately aim at the IIA Concept. Other popular risk management concepts include the guidelines developed by The Committee of Sponsoring Organizations of the Treadway Commission (COSO) "Enterprise Risk Management - Integrated Framework", so called COSO II. This document indicates the key principles that should be followed in an organization as part of effective functioning of the risk management system, as well as the involvement of the Management Board and employees and defines their tasks in this respect. The document refers to the risk in a positive meaning, i.e. opportunities for the organization, as well as negative ones in the form of threats, including abuses (COSO, 2004). It is worth mentioning here that following the IIA Concept, in the same year COSO developed a document entitled "COSO's application in Three Lines of Defense". It refers to the implementation of elements of the "Internal Control - Integrated Framework" guidelines, so called COSO I in IIA Three Lines of Defense Model (COSO 2013). The application of the described concepts among economic entities was verified in the next part of the publication, assuming that the IIA Model is the dominant concept. In case of its non-implementation, the application of other solutions implemented within the framework of risk management was verified taking into account the described concepts proposed by non-sectoral organizations.

#### **4. THE PRACTICE OF APPLYING THE THREE LINES OF DEFENSE CONCEPT IN THE PROCESS OF RISK AND FRAUD RISK MANAGEMENT ON THE EXAMPLE OF LISTED COMPANIES**

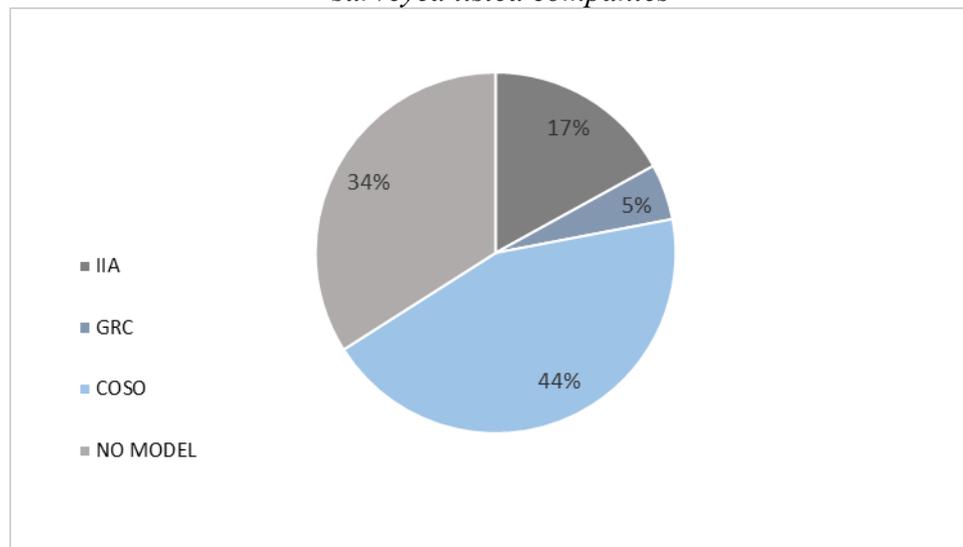
Listed companies, as entities of public interest, should strive to ensure transparent management structures, including risk management and procedures limiting the risk of abuse. Therefore, they should provide this information in published reports containing both financial and non-financial information. In order to diversify the research sample, 80 companies listed on three Polish, American and German Stock Exchanges, covered by WIG20, DJIA and DAX indices, were included in the analysis. Despite the fact that the method of indexing companies is slightly different, WIG20 and DJIA are price type indices and DAX result types, it does not affect the information included in the reports on risk management activities of these corporations. The first WIG20 index covers 20 companies, the second and third DJIA and DAX, 30 each. All companies have been assessed for implementation of Three Lines of Defense Concept on the basis of verification of the information contained in their published Annual Activity Reports. In the frame of the analysis, the direct implementation of the IIA model structure in the risk management system was taken as a starting point.

It was abandoned to include in its structure level 4 of the IIA concept relating to external audit, taking into account the obligation to use this service by all listed companies, primarily in the scope of verification of annual financial statements. In case of insufficient interest in the IIA model among the surveyed entities, the study covered the implementation of the GRC Concept and COSO guidelines. The analysis also covers the reference of the adopted risk management system to the risk of fraud. Taking into account the above assumptions, the verification of 80 companies divided into the studied groups of stock exchange indices and industry groups was carried out with consideration of the following issues:

- direct implementation of the IIA Three Lines of Defense Model, the GRC concept or the application of COSO guidelines into the risk management system structures,
- reference of models, concepts and guidelines adopted in the frame of risk management to the risk of fraud.

The data analyzed in the study were derived from the information contained in Consolidated Annual Reports and Reports on the Activities of Management Boards of researched companies as at 09/07/2019. The implementation of the IIA Three Lines of Defense Model, the GRC concept and COSO guidelines within the surveyed companies is presented in Diagram 1.

*Chart 1: Implementation of the IIA model, the GRC concept and COSO guidelines in the surveyed listed companies*

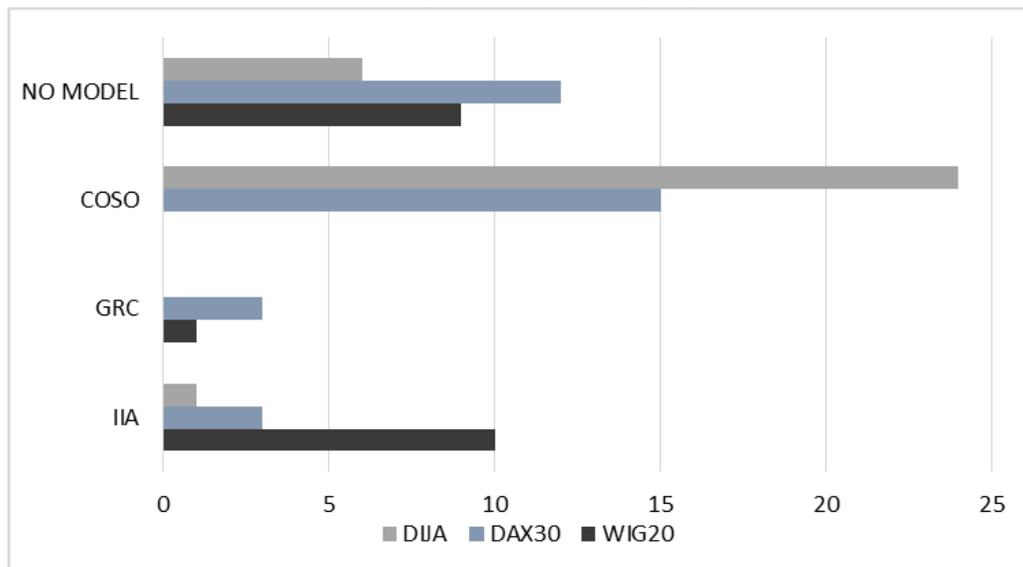


*Source: Authors' own analyses based on Consolidated annual reports and reports on the activities of management boards of companies included in the WIG20, DJIA and DAX30 Indices as at 09/07/2019*

Diagram 2 presents the implementation of IIA Three Lines of Defense Model, the GRC concept or the application of COSO guidelines by the surveyed companies divided into individual stock exchange indices.

*Chart following on the next page*

*Chart 2: Application of the IIA Model, GRC concept and COSO guidelines in the surveyed listed companies by index groups*

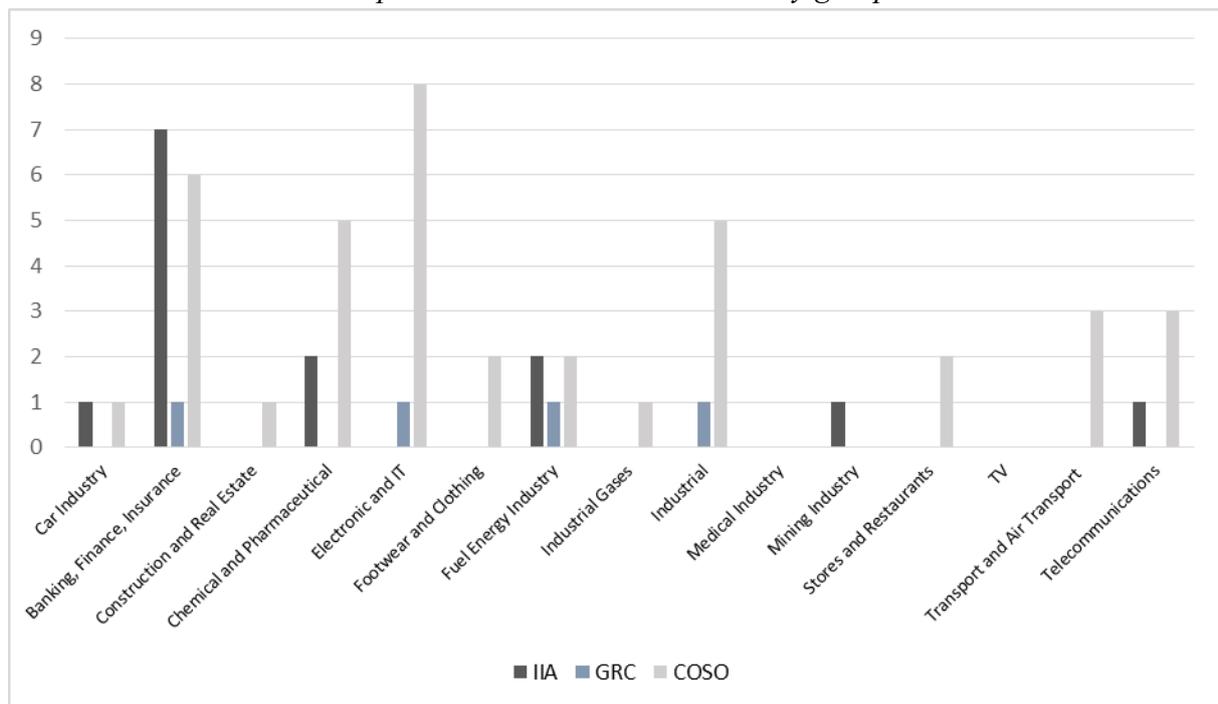


*Source: Authors' own analyses based on Consolidated annual reports and reports on the activities of management boards of companies included in the WIG20, DJIA and DAX30 Indices as at 09/07/2019*

The data presented in Figures 1 and 2 show that among the analyzed companies the IIA Model was directly implemented into the structure of the risk management system by 17% of entities, of which the vast majority, as much as 59% are WIG20 indexed companies. The GRC concept was implemented by 5% of companies, with the majority of companies included in the DAX30 index. The COSO concept, which was implemented by 44% of the surveyed entities, is very successful. The dominant group within the implementation of COSO are the companies included in the DJIA Index (80%) and DAX30 Index (50%). It is worth mentioning that companies listed on the German Stock Exchange using COSO guidelines use the so-called COSO II, while companies listed on the American Stock Exchange use the development of COSO - Internal Control Integrated Framework an implementation Guide for the Healthcare Industry (COSO 2013). Among the surveyed companies, which did not refer to any of the concepts in their Activity Reports (34%), it should be noted that in the description of the organizational governance, organization of some companies, one can find selected elements of the IIA model or the GRC concept, however, this is not related to their implementation in full. From a sectoral point of view, the interest in the concepts is shown in Figure 3.

*Chart following on the next page*

*Chart 3: Implementation of the IIA model, GRC concept and COSO guidelines in the surveyed companies with division into industry groups*



*Source: Authors' own analyses based on Consolidated annual reports and reports on the activities of management boards of companies included in the WIG20, DJIA and DAX30 Indices as at 09/07/2019*

The analysis of the data presented in Figure 3 indicates that each of the stock indices is dominated by a selected sector of activity. In case of the Polish Stock Exchange, the dominant position in the WIG 20 Index is held by banks, which constitute 25% of the entire index, in the DAX30 Index companies from the chemical and pharmaceutical industry are dominating, which constitute 20% of the entire index, in the DJIA companies from the financial, chemical and electronics industry, which constitute 17% each of entire index composition. The banking, financial and insurance industries are particularly interested in the IIA concept, with particular emphasis on banks, mainly those listed on the Polish Stock Exchange. As far as other industries are concerned, the COSO guidelines are the most popular, especially in the electronics and IT, industrial, chemical and pharmaceutical sectors. On the other hand, the GRC model, although it shows a low level of interest, dominates in chemical-pharmaceutical and fuel-energy sectors. Industries that have not shown application of any concept are medical and television sectors. Among the surveyed entities, only some of them referred to fraud risk within the adopted risk management structure based on the IIA Model or the GRC concept. The biggest focus on fraud was shown by the reports of companies included in the DAX30 Index within the implemented compliance functions. In most of the analyzed reports, compliance tasks were very broadly defined and referred to the risk of fraud. It is worth noting that the companies included in the WIG20 and DJIA Indices, despite having the compliance function, did not refer to its tasks so broadly. The least interest in compliance, as the second line of defense against risk, was noted in relation to companies listed on the Polish Stock Exchange. From the point of view of homogeneity of the application of the IIA Model among the companies that implemented it (17%), it should be pointed out that there is a significant uniformity in this respect. The concepts applied by the surveyed companies almost fully reflect the elements of the model. Companies that have not implemented any of the concepts (34%) use selected elements of the described concepts within the risk management system or create their own models based on them.

However, when considering the content of the reports analyzed, it should be noted that some of the companies have little or no reference to fraud risk management. The results of the study show that there is a strong commitment to managing the risk of abuse of the compliance function. As mentioned above, the example in this respect are the companies listed on German Stock Exchange which, despite the lack of a full IIA Model concept (only 10% of companies), use the compliance function for fraud risk management. Justifications for the solutions adopted within a given index group were sought in the stock exchange rules applicable to companies. The following documents defining the principles of organizational governance are in force within the surveyed listed companies: Code of Corporate Governance for publicly companies listed on the US Stock Exchange (SEC, 2016), Corporate governance rules for supervised institutions (KNF, 2014) and the Best Practices of Companies Listed on the Warsaw Stock Exchange (GWP, 2016), German Corporate Governance Code for companies listed on the German Stock Exchange (Regierungskommission, 2017). Taking into consideration the content of the above documents, it should be emphasized that the principles of the German document indicate the development of the compliance system in an organization through the implementation of the Compliance Management System (Regierungskommission, 2017, s. 6), (see: Mintz, 2006, 30-31). In turn, with regard to the risk of abuse, the American document refers to this type of risk to the greatest extent. In addition, the rules of the American Stock Exchange refer to risk management in accordance with the rules of COSO organization. Taking into account the analyzed companies, it should be noted that each of them refers to the adopted stock exchange principles, which is also confirmed by the results of the analysis. Hence, the companies follow the rules binding within the Stock Exchange group.

## 5. CONCLUSION

The study carried out showed that, in the frame of the adopted risk management systems, economic operators apply the IIA Three Lines of Defense. However, the interest in this concept is not as great. Of the 80 companies surveyed, only 17% use the full version of the concept, with the WIG20 index companies dominating. This concept is much less popular among companies listed on the German and American Stock Exchanges, which are more willing to use COSO guidelines. The GRC concept is the least popular, which is certainly due to its complementary nature to the IIA Model. While the IIA Model owes its popularity to a wide spectrum of interest among banking institutions listed on the Polish Stock Exchange, the COSO guidelines are very popular among American Stock Exchange entities. Homogeneity of applied concepts can be observed in relation to particular groups of stock exchange indices. From the point of view of a certain discretion of published non-financial information in the area of risk management, what should be pointed out is its similarity, the scale of which is growing in relation to a given index group and within it an industry group. On the other hand, without considering the distinction by type of index, the dispersion of non-financial information in respect of risk management is considerably greater. The use of concepts developed by non-sectoral organizations in risk management systems is similar. In this case also, there is homogeneity with regard to index groups, including industry groups. However, it is worrying that the amount and generality of information on fraud risk and risk management is significantly low. The research has shown that the greatest interest in this area is demonstrated by companies listed on the German Stock Exchange, which include the risk of abuse as part of their compliance function. Companies listed on the American Stock Exchange, which include COSO guidelines in their risk management system, should also refer to the risk of abuse in their Annual Reports, as these guidelines take them into account. However, the research has shown that not all of them have included this phenomenon in their reports, or have done so only to a limited extent. Among other entities, information on fraud risk and the inclusion of fraud risk management in the risk management system has also been considerably reduced.

To sum up, the results of the study indicated that the surveyed entities do have risk management systems, however, support for their operation with non-sectoral concepts is differentiated depending on the sector of activity and belonging to a given group of the stock exchange index. Especially the implementation of the IIA Concept is not as widespread as it was presumed in the assumption of the publication. The analysis even leads to wondering whether the implementation of the concepts subject to the study does not constitute a specific trend, a certain good practice and whether it was preceded by a broad analysis of the financial, economic and economic situation of the company (see: IIA,2019). On the other hand, taking into account the analyzed phenomenon of the risk of fraud and the inclusion of its management in the risk management system, it is disturbing that too little information on this subject is included in the reports on the activity of entities. The question needs to be asked whether, until the generally binding stock exchange rules refer in more detail to this phenomenon and the way in which it is managed, stock exchange entities will not do it themselves within the framework of published non-financial information.

#### LITERATURE:

1. Adidas Annual Report 2018. Retrieved. 17.07.2019 from [https://report.adidas-group.com/fileadmin/user\\_upload/adidas\\_Annual\\_Report\\_GB-2018-EN.pdf](https://report.adidas-group.com/fileadmin/user_upload/adidas_Annual_Report_GB-2018-EN.pdf).
2. Allianz Group Outperform transform Rebalance. Annual Report 2018. Retrieved. 17.07.2019 from [https://www.allianz.com/content/dam/onemarketing/azcom/Allianz\\_com/investor-relations/en/results-reports/annual-report/ar-2018/en-AR-Group-2018.pdf](https://www.allianz.com/content/dam/onemarketing/azcom/Allianz_com/investor-relations/en/results-reports/annual-report/ar-2018/en-AR-Group-2018.pdf).
3. Anderson D.J., Eubanks G. (2016), Wykorzystanie COSO w trzech liniach obrony. COSO, Instytut Audytorów Wewnętrznych. Retrieved. 17.07.2019 from [https://www.iaa.org.pl/sites/default/files/iaa\\_coso\\_2016\\_www\\_0.pdf](https://www.iaa.org.pl/sites/default/files/iaa_coso_2016_www_0.pdf).
4. Beierdorf (2018), Annual report 2018. Retrieved. 17.07.2019 from <https://www.beiersdorf.com/investors/financial-reports/financial-reports>.
5. Bela A., Bolesławska E. (2005), Oszustwa finansowe. Podręcznik dla audytora, Biblioteka audytora. Infoaudit, Warszawa.
6. BMW Group Annual Report 2018. Retrieved. 17.07.2019 from <https://www.press.bmwgroup.com/global/article/detail/T0293372EN/bmw-group-annual-report-2018?language=en>.
7. Bernstein, Peter L. (1996), Against the Gods, New York: John Wiley and Sons Inc.
8. Continental Networking Annual Report 2018. Retrieved. 17.07.2019 from <https://www.continental-corporation.com/resource/blob/167610/6f107b888fd556412c6b263b67d60075/annual-report-2018-data.pdf>.
9. Daimler Annual Report 2018. Retrieved. 17.07.2019 from <https://www.daimler.com/documents/investors/reports/annual-report/daimler/daimler-ir-annual-report-2018.pdf>
10. Deloitte (2013), Cybercrime in a world of evolving threats. New paths in information security. April. Retrieved. 17.07.2019 from <https://www2.deloitte.com/pl/pl/pages/risk/articles/raport-cyberodpornosc.html>.
11. Deutsche Bank Annual report 2018. Retrieved. 17.08.2019 from [https://www.db.com/ir/en/download/Deutsche\\_Bank\\_Annual\\_Report\\_2018.pdf](https://www.db.com/ir/en/download/Deutsche_Bank_Annual_Report_2018.pdf).
12. Deutsche Borse Group (2018), Annual Report 2018. Retrieved. 17.07.2019 from <https://www.clearstream.com/resource/blob/1317802/f7953188907a2dcca8fa078ff0a394d/gdb-annual-report-data.pdf>.
13. Deutsche Post Annual Report 2018. Retrieved. 17.07.2019 from [https://annualreport2018.dpdhl.com/downloads-ext/en/documents/DPDHL\\_2018\\_Annual\\_Report.pdf](https://annualreport2018.dpdhl.com/downloads-ext/en/documents/DPDHL_2018_Annual_Report.pdf).

14. Deutsche Telekom Combined Management Report 2018. Retrieved. 17.07.2019 from <http://report.telekom.com/annual-report-2018/management-report.html>.
15. E.ON. Annual Report 2018. Retrieved. 17.07.2019 from [https://www.eon.com/content/dam/eon/eon-com/investors/shareholders-meeting/2019/Annual\\_Report\\_2018.pdf](https://www.eon.com/content/dam/eon/eon-com/investors/shareholders-meeting/2019/Annual_Report_2018.pdf).
16. Ernst and Young (2007), Fraud risk management. Retrieved. 17.07.2019 from [www.antykorupcja.gov.pl/download/4/5295/Zarzadzanieryzykiemnaduzy.pdf](http://www.antykorupcja.gov.pl/download/4/5295/Zarzadzanieryzykiemnaduzy.pdf).
17. EY (2013), Navigating today's complex business risks, Europe, Middle East, India and Africa,
18. Fraud Survey 2013, May. Retrieved. 17.08.2019 from <https://ey.media.pl/pr/240948/compiaoty-pracownik-w-polsce-wie-o-manipulacjach-finansowych-swojej-firmy-wynika-z-badania-naduzyz-gospodarczych-ernst-young>.
19. EY (2018), Honesty under the microscope, Future of compliance management, 15th World Survey of Economic Abuses. Retrieved. 17.08.2019 from <https://www.ey.com/pl/pl/services/assurance/fraud-investigation---dispute-services/ey-swiatowe-badanie-naduzyz-gospodarczych-2018>.
20. Fresenius Annual Report 2018. Retrieved. 17.07.2019 from [https://www.fresenius.com/media\\_library/Fresenius\\_Annual\\_Report\\_2018.pdf](https://www.fresenius.com/media_library/Fresenius_Annual_Report_2018.pdf)
21. Fresenius Medical Care Annual Report 2018 Care and Live. Retrieved. 17.07.2019 from [https://www.fresenius.com/media/FME\\_Annual-Report\\_2018.pdf](https://www.fresenius.com/media/FME_Annual-Report_2018.pdf).
22. Friedrichs D.O. (2002), Occupational crime, occupational deviance and workplace crime. Sorting out the difference, Criminal Justice, vol 2(3), London.
23. Giełda Papierów Wartościowych w Warszawie, GWP (2016) Best Practices of Companies Listed on GWP 2016, Retrieved 15.07.2019 from [https://www.gpw.pl/pub/GPW/files/PDF/GPW\\_1015\\_17\\_DOBRE\\_PRAKTYKI\\_v2.pdf](https://www.gpw.pl/pub/GPW/files/PDF/GPW_1015_17_DOBRE_PRAKTYKI_v2.pdf).
24. Group Annual Report 2018 Munich Re. Retrieved 15.07.2019 from [https://www.munichre.com/site/corporate/get/documents\\_E-1382025853/mr/assetpool.shared/Documents/0\\_Corporate\\_Website/Financial\\_Reports/2019/annual-report-2018/302-09122.pdf](https://www.munichre.com/site/corporate/get/documents_E-1382025853/mr/assetpool.shared/Documents/0_Corporate_Website/Financial_Reports/2019/annual-report-2018/302-09122.pdf).
25. Henkel Annual report 2018. Retrieved 15.07.2019 from <https://www.henkel.com/resource/blob/912084/aff0ca8197f3f0c8a277998b70739171/2018-annual-report-data.pdf>.
26. Infineon Technologies AG Annual report 2018. Retrieved 15.07.2019 from <https://www.infineon.com/dgdl/Infineon+Annual+Report+2018.pdf?fileId=5546d461673c11be01673d9d98e40014>.
27. Jednostkowy roczny raport za 2018 LPP SA. Retrieved 15.07.2019 from <https://www.lppsa.com/wp-content/uploads/2019/04/LPP-jednostkowy-roczny-raport-za-2018-rok.pdf>.
28. Komisja Nadzoru Finansowego, KNF (2014) Corporate governance rules for supervised institutions (2014), Retrieved 15.07.2019 from [https://www.knf.gov.pl/dla\\_rynku/.../zasady\\_ladu\\_korporacyjnego](https://www.knf.gov.pl/dla_rynku/.../zasady_ladu_korporacyjnego).
29. Kraciuk J. (2012), Przepięstwa gospodarcze w przedsiębiorstwach i sposoby ich przeciwdziałania, Zeszyty Naukowe Uniwersytetu Szczecińskiego. Finanse, Rynki Finansowe, Ubezpieczenia, nr 690 (51).
30. Kutera M. (2016), Nadużycia finansowe, wykrywanie i zapobieganie, Difin, Warszawa.
31. Linde PLC Annual Report 2018. Retrieved 15.07.2019 from <https://investors.linde.com/-/media/linde/investors/documents/full-year-financial-reports/2018-annual-report-to-shareholders.pdf?la=en&rev=2209b55573c74113bc82ff5daab13120>.

32. Lufthansa Group Striving for Excellence. Annual report 2018. Retrieved 15.07.2019 from <https://investor-relations.lufthansagroup.com/fileadmin/downloads/en/financial-reports/annual-reports/LH-AR-2018-e.pdf>.
33. Łosiewicz-Dniestrzańska E. (2012), Quality management in a bank vs risk of banking business, *Annales H Oeconomia, Universitatis Mariae Curie-Skłodowska Lublin-Polonia*, vol. XLVI, 4. Retrieved. 17.08.2019 from [http://bazhum.muzhp.pl/media//files/Annales\\_Universitatis\\_Mariae\\_Curie\\_Skłodowska\\_Sectio\\_H\\_Oeconomia/Annales\\_Universitatis\\_Mariae\\_Curie\\_Skłodowska\\_Sectio\\_H\\_Oeconomia-r2012-t46-n4/Annales\\_Universitatis\\_Mariae\\_Curie\\_Skłodowska\\_Sectio\\_H\\_Oeconomia-r2012-t46-n4-s527-535/Annales\\_Universitatis\\_Mariae\\_Curie\\_Skłodowska\\_Sectio\\_H\\_Oeconomia-r2012-t46-n4-s527-535.pdf](http://bazhum.muzhp.pl/media//files/Annales_Universitatis_Mariae_Curie_Skłodowska_Sectio_H_Oeconomia/Annales_Universitatis_Mariae_Curie_Skłodowska_Sectio_H_Oeconomia-r2012-t46-n4/Annales_Universitatis_Mariae_Curie_Skłodowska_Sectio_H_Oeconomia-r2012-t46-n4-s527-535/Annales_Universitatis_Mariae_Curie_Skłodowska_Sectio_H_Oeconomia-r2012-t46-n4-s527-535.pdf).
34. Maj M., Abmroziak D. (2013), *Oszustwa i nieuczciwość w organizacjach*, Oficyna a Wolters Kluwer Business, Warszawa.
35. *Managing the Business Risk of Fraud: A Practical Guide* (2012), IIA, AICPA, ACFE. Retrieved. 11.06.2019 from [https://na.theiia.org/standards-guidance/Public\\_Documents/fraud\\_paper.pdf](https://na.theiia.org/standards-guidance/Public_Documents/fraud_paper.pdf).
36. Matusiewicz P. (2015), Nadużycia w działalności przedsiębiorstw. Aspekty międzynarodowe, *Zeszyty Naukowe Wyższej Szkoły Humanitas. Zarządzanie* nr 4.
37. Mintz S. M., A coparison of corporate governance systems in the U.S., UK and Germany, *Corporate Ownership and Control* 3(4):24-34, January 2006 Retrieved 15.08.2019 from [https://www.researchgate.net/publication/298035839\\_A\\_comparison\\_of\\_corporate\\_governance\\_systems\\_in\\_the\\_US\\_UK\\_and\\_Germany](https://www.researchgate.net/publication/298035839_A_comparison_of_corporate_governance_systems_in_the_US_UK_and_Germany).
38. Play Communications SA (2018), *Raport roczny z działalności za rok zakończony 31 grudnia 2018 R.* Retrieved 15.07.2019 from [https://www.playcommunications.com/upload/reports/2018\\_PCSA\\_Consolidated\\_Report\\_PL.pdf](https://www.playcommunications.com/upload/reports/2018_PCSA_Consolidated_Report_PL.pdf).
39. Price Waterhouse Coopers, PwC (2016), *Oswoić ryzyko. Jak odporna jest twoja firma?* Retrieved. 17.08.2019 from <https://www.pwc.pl/pl/pdf/oswoic-ryzyko-raport-2016-pwc.pdf>.
40. Regierungskommission (2017), *Deutscher Corporate Governance Kodex*, 7 February. Retrieved. 16.08.2019 from [https://www.dcgk.de//files/dcgk/usercontent/en/download/code/170214\\_Code.pdf](https://www.dcgk.de//files/dcgk/usercontent/en/download/code/170214_Code.pdf).
41. Price Waterhouse Coopers, PwC (2018), *Pulling fraud out of the shadows. Global Economic Crime and Fraud Survey 2018.* Retrieved 15.08.2019 from <https://www.pwc.com/gx/en/forensics/global-economic-crime-and-fraud-survey-2018.pdf>.
42. *Raport zintegrowany Orange Polska 2018.* Retrieved 15.07.2019 from [http://orange-ir.pl/sites/default/files/2019/ORANGE\\_RAPORT\\_2018\\_PL\\_FINAL\\_www.pdf](http://orange-ir.pl/sites/default/files/2019/ORANGE_RAPORT_2018_PL_FINAL_www.pdf).
43. *Raport roczny za rok obrotowy zakończony 31 grudnia 2018 Grupa kapitałowa Cyfrowy Polsat SA.* Retrieved 15.07.2019 from [http://grupapolsat.pl/sites/default/files/documents/raport\\_grupy\\_kapitalowej\\_cyfrowy\\_polsat\\_s.a.\\_za\\_2018\\_rok\\_f.pdf](http://grupapolsat.pl/sites/default/files/documents/raport_grupy_kapitalowej_cyfrowy_polsat_s.a._za_2018_rok_f.pdf).
44. Reurink A. (2016), *Financial Fraud A Literature Review*, MPIfG Discussion Paper 16/5, Max Planck Institute for the Study of Societies, Cologne. Retrieved. 16.08.2019 from [http://www.mpi-fg-koeln.mpg.de/pu/mpifg\\_dp/dp16-5.pdf](http://www.mpi-fg-koeln.mpg.de/pu/mpifg_dp/dp16-5.pdf).
45. *Roczne jednostkowe sprawozdanie z działalności CCC SA za rok 2018.* Retrieved. 17.07.2019 from <https://www.parkiet.com/assets/pdf/PA288169314.pdf>.
46. *SAP Annual Report on form20-F 2018.* Retrieved. 16.07.2019 from <https://www.sap.com/docs/download/investors/2018/sap-2018-annual-report-form-20f.pdf>.

47. Saunders E.J. Fundacja (2015), Definicja kontroli wewnętrznej per COSO 2013, 12 październik. Retrieved. 16.08.2019 from <http://fejs.org.pl/definicja-kontroli-wewnetrznej-per-coso-2013/>.
48. Securities Exchange Commission, SEC (2016), Code of Corporate Governance for publicly – listed companies, 22 November. Retrieved. 16.08.2019 from [https://www.sec.gov.ph/wp-content/uploads/2016/12/2016\\_memo\\_circular\\_no.19.pdf](https://www.sec.gov.ph/wp-content/uploads/2016/12/2016_memo_circular_no.19.pdf).
49. Siemens Annual Report 2018. Retrieved. 16.07.2019 from <https://assets.new.siemens.com/siemens/assets/public.1552038192.4bfbab10-00d6-4a22-aad2-b50f3f232bfb.siemens-annual-report-2018.pdf>.
50. Skonsolidowany raport 2018 Grupa Lotos SA. Retrieved 15.07.2019 from [http://inwestor.lotos.pl/193/r,2018/raporty\\_i\\_dane/raporty\\_roczne](http://inwestor.lotos.pl/193/r,2018/raporty_i_dane/raporty_roczne).
51. Sprawozdanie zarządu z działalności Grupy Kapitałowej Alior Bank S.A. w 2018 roku. Retrieved. 16.07.2019 from <https://www.aliorbank.pl/dodatkowe-informacje/relacje-inwestorskie/raporty.html>.
52. Sprawozdanie zarządu z działalności Grupy kapitałowej PZU i PZU SA 2018. Retrieved 15.07.2019 from [https://www.pzu.pl/\\_files/itserver/item/1516338](https://www.pzu.pl/_files/itserver/item/1516338)
53. Sprawozdanie zarządu z działalności Dino Polska SA oraz Grupy Kapitałowej Dino Polska SA w 2018. Retrieved. 17.07.2019 from [http://grupadino.pl/wp-content/uploads/2019/05/RS\\_2018\\_Dino\\_Polska\\_Sprawozdanie\\_Zarzadu\\_z\\_dzialalnosci-1.pdf](http://grupadino.pl/wp-content/uploads/2019/05/RS_2018_Dino_Polska_Sprawozdanie_Zarzadu_z_dzialalnosci-1.pdf).
54. Sprawozdanie zarządu z działalności grupy kapitałowej CD Projekt i CD Project SA za rok 2018. Retrieved. 17.07.2019 from [https://www.cdprojekt.com/pl/wp-content/uploads-pl/2019/03/sprawozdanie\\_zarzadu\\_za\\_2018\\_pl.pdf](https://www.cdprojekt.com/pl/wp-content/uploads-pl/2019/03/sprawozdanie_zarzadu_za_2018_pl.pdf).
55. Sprawozdanie Zarządu z działalności Grupy mBanku S.A. w 2018 roku. Retrieved. 16.07.2019 from [https://www.mbank.pl/raport-roczny/2018/wp-content/uploads/2019/06/Sprawozdanie\\_Zarzadu\\_z\\_dzialalnosci\\_Grupy\\_mBanku\\_S.A.\\_2018.pdf](https://www.mbank.pl/raport-roczny/2018/wp-content/uploads/2019/06/Sprawozdanie_Zarzadu_z_dzialalnosci_Grupy_mBanku_S.A._2018.pdf).
56. Sprawozdanie z działalności Grupy Kapitałowej Banku Pekao S.A. za 2018 rok. Retrieved. 16.07.2019 from <https://www.pekao.com.pl/o-banku/stopka/informacje-dla-inwestorow/raporty-finansowe.html?year=2018>.
57. Sprawozdanie na temat informacji niefinansowych Grupy Orlen i PKN Orlen za 2018 rok. Retrieved 15.07.2019 from <https://www.ornlen.pl/PL/RelacjeInwestorskie/Strony/Sprawozdania-Finansowe-PKN-ORLEN-S.A.-za-2018-rok.aspx>.
58. Sprawozdanie zarządu z działalności PGE S.A. oraz Grupy Kapitałowej PGE w 2018 roku. Retrieved 15.07.2019 from <https://www.gkpge.pl/relacje-inwestorskie/Dane-finansowe/2018#tab-Q4>.
59. Sprawozdanie Zarządu z działalności Grupy Kapitałowej PKO Banku Polskiego SA za 2018 rok. Retrieved. 16.07.2019 from [https://www.pkobp.pl/media\\_files/28484565-91b2-48c8-8a3c-f2f2aab39bce.pdf](https://www.pkobp.pl/media_files/28484565-91b2-48c8-8a3c-f2f2aab39bce.pdf).
60. Sprawozdanie zarządu z działalności JSW SA oraz Grupy Kapitałowej JSW SA za 2018. Retrieved 15.07.2019 from <https://www.jsw.pl/relacje-inwestorskie/raporty-gieldowe/raporty-okresowe/raporty-okresowe-2018/>.
61. Sprawozdanie Zarządu z działalności KGHM Polska Miedź SA oraz Grupy Kapitałowej KGHM Polska Miedź SA w 2018 r. Retrieved 15.07.2019 from <https://kg hm.com/pl/inwestorzy/zarzadzanie-ryzykiem>.

62. Sprawozdanie Zarządu z działalności Tauron Polska Energia S.A. oraz Grupy Kapitałowej Tauron za rok obrotowy 2018. Retrieved. 16.08.2019 from <https://www.tauron.pl/tauron/relacje-inwestorskie/raporty-okresowe>.
63. Stajano F., Wilson P. (2009), Understanding Scam Victims: Seven Principles for Systems Security. Technical reports published by the University of Cambridge In: Communications of the ACM 754. Retrieved. 16.08.2019 from <https://www.cl.cam.ac.uk/techreports/UCAM-CL-TR-754.pdf>.
64. Surdykowska, S.T. (2012), Ryzyko finansowe w środowisku globalnej gospodarki, Difin, Warszawa, s, 82.
65. Sutherland E.H. (1949), White Collar Crime, New York: Dryden Press.
66. The Committee of Sponsoring Organizations of the Treadway Commission, COSO (2004) Enterprise Risk Management - Integrated Framework, September. Retrieved. 11.08.2019 from <https://www.coso.org/Documents/COSO-ERM-Executive-Summary.pdf>.
67. The Committee of Sponsoring Organizations of the Treadway Commission, COSO (2013), Internal Control - Integrated Framework, Retrieved. 11.08.2019 from <https://www.coso.org/Pages/ic.aspx>.
68. The Institute of Internal Auditors, IIA (2013), The Three Lines of Defense in Effective Risk Management and Control, January 2013. Retrieved. 11.06.2019 from <https://na.theiia.org/standards-guidance/Public%20Documents/PP%20The%20Three%20Lines%20of%20Defense%20in%20Effective%20Risk%20Management%20and%20Control.pdf>
69. The Institute of Internal Auditors, IIA (2019), Is Three Lines of Defense model still relevant? Retrieved. 11.08.2019 from <https://www.ii.nl/actualiteit/nieuws/is-three-lines-of-defense-model-still-relevant>.
70. Tombs S., (2013), Corporate Theft and Fraud: Business as Usual. In: Criminal Justice Matters 94.
71. Thyssen Krupp Annual Report 2017/2018. Retrieved. 16.07.2019 from [http://www.grupothyssenkrupp.com/archivos/201902/thyssenkrupp\\_ag\\_ar\\_2017\\_2018\\_eng\\_web.pdf?1](http://www.grupothyssenkrupp.com/archivos/201902/thyssenkrupp_ag_ar_2017_2018_eng_web.pdf?1).
72. Venovia Annual Report 2018. Retrieved. 16.07.2019 from <http://reports.vonovia.de/2018/annual-report/report.html>.
73. Volkswagen Group Annual Report 2018. Retrieved. 16.07.2019 from <https://annualreport2018.volkswagenag.com/>.
74. Wells J. T. (2018) , International Fraud Handbook, John Wiley and Sons.
75. Will S. (2013), America's Ponzi Culture. In: Susan Will/Stephen Handelman/David C. Brotherton (eds.), How They Got Away with It: White Collar Criminals and the Financial Meltdown. New York: Columbia University Press.
76. Wołoszczenko-Hołda, Ł. (2017), On "the Third Line of Defense": The Role of Internal Audit in Banks, *Annales H Oeconomia, Universitatis Mariae Curie-Skłodowska Lublin-Polonia*, vol. LI, 6. Retrieved. 16.08.2019 from <https://journals.umcs.pl/h/article/viewFile/5705/4745>.

# DETERMINING THE EFFECTS OF SECTORAL LABOUR PRODUCTIVITY USING DIVISIA DECOMPOSITION METHOD ON ECONOMIC GROWTH OF SELECTED ASEAN ECONOMIES

**Ricardo L. Dizon**

*Polytechnic University of the Philippines, Philippines*  
*rldizon@pup.edu.ph*

## ABSTRACT

*The interrelationship that exist between the economic structure and the level of growth of economy measured through Gross Domestic Product (gdp) growth has been one of the most enduring topic in both historical and cross-section studies. The interrelationship that exist between the structural change and the level of growth of economy measured through Gross Domestic Product (gdp) growth has been one of the most enduring topic in both historical and cross-section studies. The structural transformation refer to the movement of labour and other productive resource from low-productivity to high- productivity economic activities (UNCTAD, 2019). This study aims to investigate the effect of labour productivity due to structural change using Divisia Decompositon Method on the Gross Domestic Product (gdp) growth of Selected ASEAN Economies such as Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam. The quantitative reseach design was employed in the studying using the Panel Regression model to determine the effects of labour productivity due to structural change on gdp growth. Results of the study revealed that both labour productivity in industry and services sector has significant positive effects on the growth rate of the gdp.*

**Keywords:** *Shift-Share, Diversification, Industry, Competitiveness, Panel Regression, Divisia Decomposition Method*

## 1. INTRODUCTION

The advanced and developing countries in current situation are experiencing an struggle to attain an improvement in economic condition of the country. It is said the the structural reforms which aimed at removing the supply-side constraints in an economy that in favour of efficient allocation of resources that contribute to sustain medium to long term economic growth (Marazzo and Terzi, 2017). The interrelationship that exist between the structural change and the level of growth of economy measured through Gross Domestic Product (gdp) growth has been one of the most enduring topic in both historical and cross-section studies. The structural transformation refer to the movement of labour and other productive resource from low-productivity to high- productivity economic activities (UNCTAD, 2019). The structural transformation is both necessary and sufficient condition of economic development (Sen, 2016). Most of the advance economies which are experiencing economic take-off were all able to diversify away from agriculture, production of natural resources, and the production of manufactured goods. The increase in overall productivity and national income is due to productivity enhancement in agriculture, labour, and capital consistently shifting into industry and services sector (UNCTAD, 2019). Most developing countries is characterized heterogenous structure which is characterized by inter-sectoral productivity gaps in which hgi-productivity are few and isolated from the rest of the economy that further result to slow down economic development (UNCTAD, 2019). Developing countries is characterized by limited diversification of industry, thus, reflecting a broad range of market and government failures. This lack of diversification may result in less broad-based and sustainable growth production and exports became concentrated in a particular sector. This impediment results to a low technology spillovers and limited opportunities for productivity growth or quality upgrading.

Moreover, lack of diversification may increase exposure to adverse external shocks and vulnerability to macroeconomic instability. Although diversification is a longstanding ambition of many developing countries, limited knowledge as to which aspects of diversification are important, what drives it, and how to promote it without resorting to the risky and often counterproductive practice of picking winners (Papageorgiou and Spatafora, 2012). In the case of Asian countries, the structural transformation has diversified widely across countries. The developing countries in ASIAN has a slower pace of structural transformation which implies that a large proportion of workers are still employed in agriculture. Compared to developing Europe, Central Asia, Latin America who have a relatively low shares of employment in agriculture, the East Asia and Pacific had large share of employment in agriculture to its total employment ( Sen, 2016). The slow pace of structural transformation in Est Asia and Pacific is associated with poor industrial policy. The industrial policy as defined by UNCTAD (2019) refers to any type of intervention or government policy the attempts to improve the business environment or alter the structure of economic activity towards certain sector, technologies, or tasks that are expected to result to a better prospect of economic growth. Diversification as part of industrial policy is not a new advent, but rather due to globalization, it becomes much more common objectives of each nation. Diversification as part of a country's industrial development strategy means that a country should develop capacities, competencies and competitive advantages in producing a wider range of marketable goods and services. Its advantages include distribution of risks, reward and providing a broader industrial knowledge base and competitive advantage export base, more trading partners, and more opportunities for spin offs and entrepreneurial development in different sectors and regions of the economy (Kiggundu,2002).

## **2. THE PURPOSE OF THE STUDY**

This research paper focused on determining the effects of labour productivity due to the structural change on economic growth of Selected Association of South East ASIAN Nations using the shift-share decomposition method such as Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam. Fagerberg (2000) discussed that the shift-share decomposition otherwise known as Divisia Decomposition Method is a purely descriptive technique that attempts to decompose the change of an aggregate into structural components, reflecting changes in the composition of the aggregate, and change within the individual units that make up the aggregate.

## **3. THEORETICAL AND EMPIRICAL BACKGROUND OF THE STUDY**

The structural transformations have static and dynamic effects. The static effects is the increase in the economy-wide labour productivity due to employment in the more productive sector. Meanwhile, the dynamic gains are due to upgrading of skills and positive externalities as a result of access of workers in technologies (VI UNCTAD, 2019). The Structural Burden Hypothesis stated that the development process is generally accompanied by a shift of labour towards services, there there are lower productivity gains than in industry (Baumol,1967, Baumol et al., 1985). Meanwhile, Kutznets (1979) emphasized that it is impossible to attain high rates of growth without commensurate the substantial shifts in the shares of various sectors. The evolutionary economics school or Schumpeterian approach on structural change relies heavily on the idea that the scope for technological progress depends on the dynamics of structural transformation in an economy (Dosi et. al (2000). It also argues that the comparative advantage are not endowed but rather created. The production and endowment structures are shaped by learning and innovation and successful economies that have relied on government interventions have managed to move production structures towards more dynamic activities, characterized by economies of scale, steep learning curves, rapid technological progress, high productivity growth, and high wages (Salazar-Xirinachs et al., 2014).

Diversification of Industry is very timely and relevant for developing countries especially the least developed, landlocked developing and small countries to generate jobs (Freire, 2017). Because of the promising effect of industry diversification to developing countries, some scholars and researchers become interested to study if it has impact to the country's employment. The study conducted by Anyaehie, M. C. and Areji, A. C. (2015) tackled about the effect of economic diversification to employment in Nigeria. Currently, Nigeria operates mono commodity (petroleum) based economy. It just extracts the oil for export. He found out that diversification of industry provides job for wide spectrum of people and stabilizes the economy of Nigeria against economic fluctuations of commodities, and sustains the developmental prospects of nations. Vietnam have introduced a series of economic reforms called Doi Moi. The Doi Moi enabled private lease of agricultural land, deregulates domestic market, and introduced trade liberalization (Sarma, Paul, and Wan, 2017). The structural reform in Vietnam has led to sustain economic growth where it posted an average increase in the growth of the economy by 5% - 6% annually. Valli and Saccone (2015) analyzed the relationship between structural change, the process of globalization and economic growth in China and India. The study found that when the reallocation of labor is large, it may positively affect the economic growth but too rapid economic growth may hinder a smooth reallocation of labor. In the case of China, the first sub-period from 1987-1991 was characterized by negative or relatively low growth rates of total productivity as determined by a low weighted productivity growth within subsectors and a misdirected reallocation of workers across sectors, partially counterbalanced by a movement of workers, within each sector, from subsectors with lower to higher productivity. The important factors behind the total productivity growth of China is the reallocation of workers towards industry and tertiary sectors. Meanwhile, in the case of India it can be observed that the productivity performance of sectors and subsectors is characterized by more equilibrated but slower path with respect to the case of China. Timme and Szirmai (2000) studied used shift-share decomposition method to account if the return for the scale differ across industries then the contribution of structural change to productivity growth of four Asian Economies such as India, Indonesia, Republic of Korea, and Taiwan. The result of the study revealed that the component of structural change is positive when inputs move to higher-productivity branches, branches whose productivity grows faster. Peneder (2003) pointed in his paper that the increase in shares of technology-driven and human-capital intensive manufacturing exports have a significant and positive effect on the GDP growth. He also pointed that there is a weak effect of structural transformation on services and manufacturing due to positive and negative effects from changes in the structure of the economy.

## **4. DATA AND RESEARCH METHODOLOGY**

### **4.1. Research Design**

This research study used quantitative research design incorporating descriptive and inferential statistics. The descriptive statistics was used to know which among the developing countries in Seven South East Asia has highly concentrated industry as well as determining the behavior of the explanatory and explained variable. The inferential statistics was utilized to investigate the effects of explanatory variable to the explained variable and analyze tests of statistical hypothesis formulated.

### **4.2. Data and Sources**

The study used secondary panel data of Selected ASEAN Countries such as Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam from 2009 to 2017 was gathered from various online database published and maintained by International Labor Organization (ILO) and ASEAN Statistical Yearbook.

Relevant data culled from ASEAN Statistical Yearbook are Gross Value Added, gross domestic product growth rate, and employment by industry

### 4.3. Data and Statistical Treatment

#### 4.3.1. Data Treatment

The Shift-Share Decomposition Method or otherwise known as Divisia Decomposition Method was used to decomposed the change of an aggregate into a structural component. This reflects the changes in the composition of the aggregate, and changes within the individual units that make up the aggregate. Mathematically it is expressed as:  $P = \sum_i P_i S_i$  where  $P_i = \frac{Q_i}{N_i}$  is labour

productivity in industry  $i$ , and  $S_i$  is the share of industry  $i$  in total employment. The growth rate

of labour productivity is written as  $\frac{\Delta P}{P} = \sum_i \left[ \frac{P_{io} \Delta S_i}{P_o} + \frac{\Delta P_i \Delta S_i}{P_o} + \frac{S_{io} \Delta P_i}{P_o} \right]$ , where the first term

refers to the contribution to productivity growth of changes in the reallocation of labour between industries. This is positive if the share of high- productivity industries in total employment increases. The Second term is the interaction between changes in productivity in each industry and changes in labour shares which is positive if the high-productivity-growth industries increase their shares of employment as well. The Third term measures the contribution of productivity growth within industries.

#### 4.3.2. Statistical Treatment

To determine if the structural change significantly affect the economic growth, three approaches of panel regression analysis such as pooled least squares, fixed effect model and random effect model were used. The pooled least square model assumes that coefficients are constant across time and individuals. This is the simplest approach as it disregards the space and time dimensions of the pooled data and just estimates the usual ordinary least square regression. This approach assumes that there is no peculiar characteristics within the cross section (Countries). The model is as follows:

$$\text{GDPg}_{it} = \beta_0 + \beta_1 P_{\text{Agri}} + \beta_2 P_{\text{ind}} + \beta_3 P_{\text{Ser}} + \varepsilon_{it} \quad (2)$$

Equation (2) shows that structural change using shift share method is represented by  $\frac{\Delta P}{P}$ . The percentage change in real gross domestic product is denoted as GDPg,  $i$  refers to specific country,  $t$  represents time. Considering the heterogeneity or individuality among ASEAN country allowing its own intercept value, a fixed effect model approach was utilized. The term fixed effect is due to the fact that the intercept may differ across offices of countries but the intercept does not vary over time which is time invariant. It was used to test whether the unique characteristic of individual affects the dependent variable, performance rating of employee (Gujarati, 2004).

$$\text{PR}_{it} = \beta_0 + \beta_1 P_{\text{Agri}} + \beta_2 P_{\text{ind}} + \beta_3 P_{\text{Ser}} + \partial_2 D_2 + \dots + \partial_{35} D_{35} + \varepsilon_{it} \quad (3)$$

Where Dummy variable for specific offices in the DBM is denoted as  $D$ . To avoid a dummy variable trap, 4 dummy variables were included to account for differentiation in the intercepts. Among the country, the Singapore was made as the comparison country since it recorded the higher real gdp growth throughout the taken years of observations.

Lastly, the random effect model was used to test whether the mean value of intercept,  $\omega$  and the individual differences in the intercept values of each region are reflected in the error term,  $\varepsilon_{it}$ . The equation is given by:

$$PR_{it} = \beta_0 + \beta_1 P_{Agri} + \beta_2 P_{ind} + \beta_3 P_{Ser} + \varepsilon_{it} \quad (4)$$

To Test for the normality of the residual of the model, the Jarque- Bera Normality Test was used using the decision rule that if the p-value is greater than the 5% level of significance, the null hypothesis that the residual of the model will be accepted, otherwise, the null hypothesis will be rejected. To determine which among the random and fixed effect model is more appropriate to use, the hausman test was used. Meanwhile, to determine whether the random effect model is appropriate to use compared to pooled least square, the Breusch Pagan LM test was used.

## 5. EMPIRICAL RESULTS

### 5.1. The Behaviour of Employment, GDP Growth and Gross Value Added of Selected ASEAN Countries

Table 1 presented the distribution of employment and the gross domestic product growth rate of Selected ASEAN Countries such as Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam from 2009 to 2017. It can be observed from the table that the share of workers who are employed in agriculture to total employment across Selected ASEAN Countries had decreased over the observed period. Meanwhile, the share of Industry and Services sector to total employed were increased over the observed period. Over the period from 2009 to 2017, it can be observed that the services sector had the largest share in the total employment of most of the ASEAN countries such as Cambodia (33%), Indonesia (44%), Malaysian (60%), Philippines (53%), Singapore (42%), and Thailand (42%). Meanwhile, Vietnam consistently maintained to employ most of the workers in the agriculture sector with average share of 46%.

*Table following on the next page*

Table 1: Summary of Employment Share and GDP Growth of Selected ASEAN Countries

Country	Year	TOTAL EMPLOYED	EMPLOYMENT						GDP GROWTH
			Agriculture		Industry		Services		
			Number of Employed	% Share to Total Employment	Number of Employed	% Share to Total Employment	Number of Employed	% Share to Total Employment	
Cambodia	2009	7,469,000	4,302,14	58	1,187,571	16	1,979,285	27	0.10
Cambodia	2010	7,673,000	4,158,76	54	1,243,026	16	2,271,208	30	6.00
Cambodia	2011	7,197,416	2,393,16	33	1,816,499	25	2,987,753	42	7.10
Cambodia	2012	7,706,000	3,930,06	51	1,433,316	19	2,342,624	30	7.31
Cambodia	2013	7,951,000	3,872,13	49	1,582,249	20	2,504,565	32	7.36
Cambodia	2014	7,469,000	4,302,14	58	1,187,571	16	1,979,285	27	7.14
Cambodia	2015	8,352,000	3,466,08	42	2,129,760	26	2,747,808	33	7.04
Cambodia	2016	8,608,000	3,130,00	36	2,291,000	27	3,187,000	37	6.91
Cambodia	2017	8,766,000	3,242,00	37	2,300,000	26	3,222,000	37	6.84
Indonesia	2009	107,070.25	43,536.7	41	19,392,726	18	44,140.77	41	4.60
Indonesia	2010	109,589.71	43,243.1	39	20,480,412	19	45,866.19	42	6.20
Indonesia	2011	107,416.30	39,089.8	36	22,880,279	21	45,446.20	42	6.50
Indonesia	2012	112,504.86	39,592.1	35	24,952,190	22	47,960.57	43	6.30
Indonesia	2013	112,761.07	39,220.2	35	23,700,755	21	49,840.05	44	5.60
Indonesia	2014	114,628.02	38,973.0	34	24,763,212	22	50,891.78	44	5.00
Indonesia	2015	114,819.19	37,750.3	33	25,531,956	22	51,536.92	45	4.90
Indonesia	2016	118,411.97	37,773.5	32	25,824,498	22	54,813.95	46	5.00
Indonesia	2017	121,022.42	35,924.5	30	27,799,180	23	57,298.70	47	5.10
Malaysia	2009	10,897,300	1,471,10	13	2,943,800	27	6,482,400	59	- 1.50
Malaysia	2010	11,899,500	1,614,90	14	3,370,600	28	6,914,000	58	7.40
Malaysia	2011	12,351,500	1,421,80	12	3,591,900	29	7,337,800	59	5.30
Malaysia	2012	12,820,500	1,628,20	13	3,662,100	29	7,530,200	59	5.50
Malaysia	2013	13,545,400	1,759,00	13	3,840,900	28	7,945,500	59	4.70
Malaysia	2014	13,852,600	1,694,10	12	3,881,600	28	8,276,900	60	6.00
Malaysia	2015	14,067,700	1,753,90	12	3,870,800	28	8,443,000	60	5.04
Malaysia	2016	14,163,700	1,609,90	11	3,893,000	27	8,660,800	61	4.21
Malaysia	2017	14,450,000	1,631,60	11	4,005,200	28	8,813,300	61	5.90
Philippines	2009	35,061,000	12,044.0	34	5,092,000	15	17,924.00	51	1.10
Philippines	2010	36,035,000	11,956.0	33	5,399,000	15	18,682.00	52	7.60
Philippines	2011	37,192,000	12,267.0	33	5,530,000	15	19,394.00	52	3.70
Philippines	2012	37,600,000	12,093.0	32	5,743,000	15	19,764.00	53	6.70
Philippines	2013	38,118,000	11,835.0	31	5,937,000	16	20,345.00	53	7.10
Philippines	2014	38,651,000	11,801.0	31	6,167,000	16	20,683.00	54	6.10
Philippines	2015	38,741,000	11,294.0	29	6,275,000	16	21,172.00	55	6.10
Philippines	2016	40,998,000	11,064.0	27	7,159,000	17	22,775.00	56	6.90
Philippines	2017	40,334,000	10,261.0	25	7,370,000	18	22,703.00	56	6.70
Singapore	2009	37,706,100	14,692.5	39	7,928,600	21	15,060.20	40	- 0.80
Singapore	2010	38,037,100	14,546.9	38	7,905,300	21	15,560.10	41	15.20
Singapore	2011	38,464,200	14,618.7	38	8,099,200	21	15,708.90	41	6.40
Singapore	2012	38,939,000	15,141.7	39	8,425,700	22	15,348.60	39	4.10
Singapore	2013	39,087,000	15,083.4	39	8,560,200	22	15,231.20	39	5.10
Singapore	2014	38,077,300	12,732.7	33	8,954,200	24	16,329.10	43	3.90
Singapore	2015	38,016,200	12,271.9	32	9,002,400	24	16,678.60	44	2.20
Singapore	2016	37,692,650	11,746.6	31	8,924,338	24	16,943.40	45	2.40
Singapore	2017	37,458,253	11,783.2	31	8,558,253	23	17,030.46	45	3.60
Thailand	2009	37,706,100	14,692.5	39	7,928,600	21	15,060.20	40	- 0.70
Thailand	2010	38,037,100	14,546.9	38	7,905,300	21	15,560.10	41	7.50
Thailand	2011	38,464,200	14,618.7	38	8,099,200	21	15,708.90	41	0.80
Thailand	2012	38,939,000	15,141.7	39	8,425,700	22	15,348.60	39	7.20
Thailand	2013	39,087,000	15,083.4	39	8,560,200	22	15,231.20	39	2.70
Thailand	2014	38,077,300	12,732.7	33	8,954,200	24	16,329.10	43	1.00
Thailand	2015	38,016,200	12,271.9	32	9,002,400	24	16,678.60	44	3.00
Thailand	2016	37,692,650	11,746.6	31	8,924,338	24	16,943.40	45	3.30
Thailand	2017	37,458,253	11,783.2	31	8,558,253	23	17,030.46	45	3.90
Viet Nam	2009	48,011,950	22,830.9	48	10,489,632	22	14,691.39	31	5.40
Viet Nam	2010	49,493,696	24,107.0	49	10,729,538	22	14,657.10	30	6.40
Viet Nam	2011	50,678,617	24,520.9	48	10,788,280	21	15,369.37	30	6.20
Viet Nam	2012	51,422,441	24,357.1	47	10,896,398	21	16,168.89	31	5.20
Viet Nam	2013	52,207,782	24,440.2	47	11,059,290	21	16,708.25	32	5.40
Viet Nam	2014	52,744,545	24,439.5	46	11,311,650	21	16,993.30	32	6.00
Viet Nam	2015	52,840,046	23,258.1	44	12,017,466	23	17,562.17	33	6.70
Viet Nam	2016	53,302,755	22,314.1	42	13,198,219	25	17,787.69	33	6.20
Viet Nam	2017	53,703,362	21,564.8	40	13,843,227	26	18,295.31	34	6.80

In terms of the Annual growth rate of the gross domestic product (gdp) of the selected ASEAN countries, Cambodia managed to have the largest average increase in the gdp growth rate posting 6.20%. This was then followed by Vietnam and Philippines with annual gdp growth rate of 6.03% and 5.78%, respectively.

Meanwhile, the average posted annual gdp growth of Indonesia, Malaysia, Singapore, and Thailand were 5.47%, 4.73%, 4.68%, and 3.19%, respectively.

## 5.2. The Shift Share Decomposition Analysis

The Shift- Share Decomposition Method was employed in the research paper to decompose the change of an aggregate into a structural component which reflects changes in the composition of the aggregate, and changes within the individual units that make up the aggregate (Fagerberg (2000)). This study used formula presented by UNCTAD (2019) in computing the growth rate of labour productivity using the shift-share decomposition method, this formula is written as:

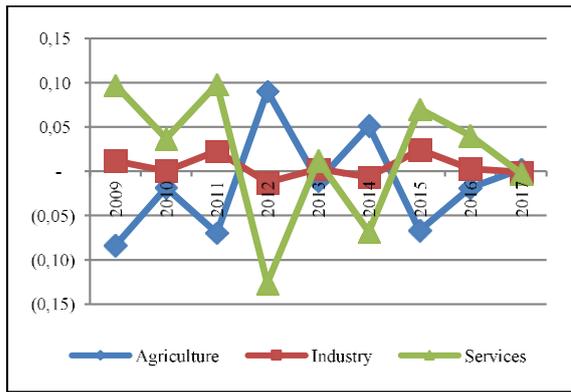
$$\frac{\Delta P}{P} = \sum_i \left[ \frac{P_{io} \Delta S_i}{P_o} + \frac{\Delta P_i \Delta S_i}{P_o} + \frac{S_{io} \Delta P_i}{P_o} \right] \quad (5)$$

The  $\frac{\Delta P}{P}$  reflects the total change in the labour productivity,  $\frac{P_{io} \Delta S_i}{P_o}$  is the contribution to productivity growth of changes in the reallocation of labour between industries which is positive if the share of high- productivity industries in total employment increases. The  $\frac{\Delta P_i \Delta S_i}{P_o}$  is the interaction between changes in productivity in each industry and changes in labour shares which is positive if the high-productivity-growth industries increase their shares of employment as well. Meanwhile, the  $\frac{S_{io} \Delta P_i}{P_o}$  measures the contribution of productivity growth within industries.

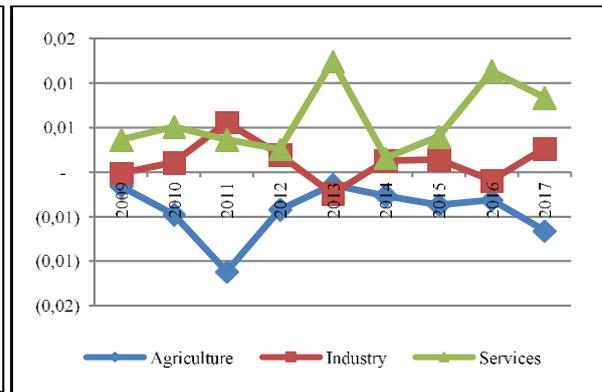
### 5.2.1. The Contribution to Productivity Growth of Changes in the Reallocation of Labour Between Industries

The role of changes in the reallocation of different sectors of employment in the productivity growth of seven ASEAN countries is shown in Figure 1. On the average, the Figure 1 shows that there is positive contribution in total productivity of the change in share of Industry and Services sectors to total employment in the countries such as Cambodia, Indonesia, Philippines, Singapore, Thailand and Vietnam. Meanwhile, the agriculture sector has negative contribution to the total productivity of the change in share of Industry and Services sectors to total employment across the selected seven countries in ASEAN. In the case of Malaysia only Services sector had a positive contribution in total productivity. Further, it can be observed that in all period of observations, the agriculture sector of the Philippines and Indonesia show a decline in the contribution to the total productivity. Also, it can be observed that the only source of employment of Singapore are either Industry and Services Sector. Singapore had transform top contributing sector in the total productivity of the country from industry to services sector.

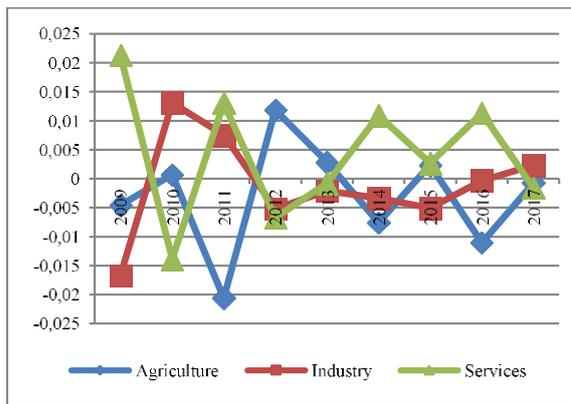
*Figure following on the next page*



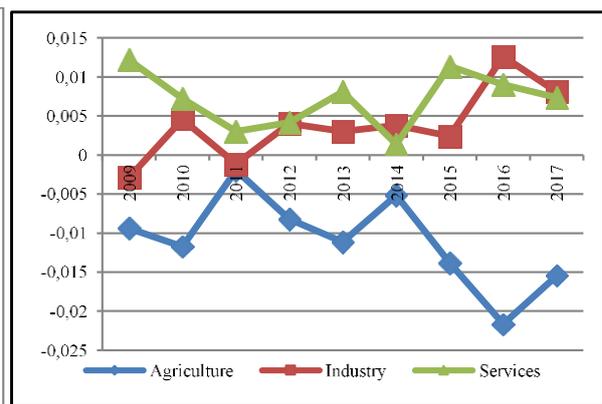
Cambodia



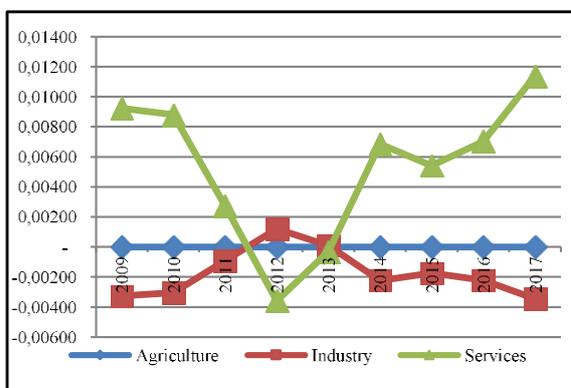
Indonesia



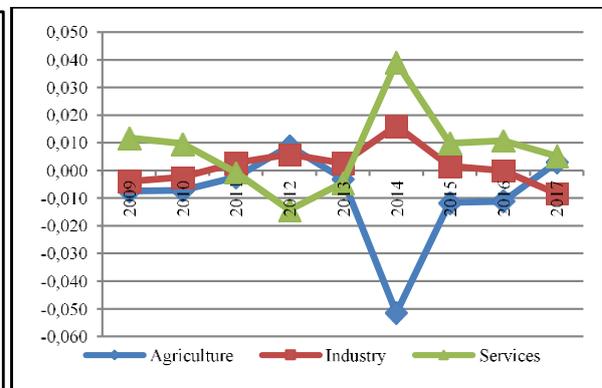
Malaysia



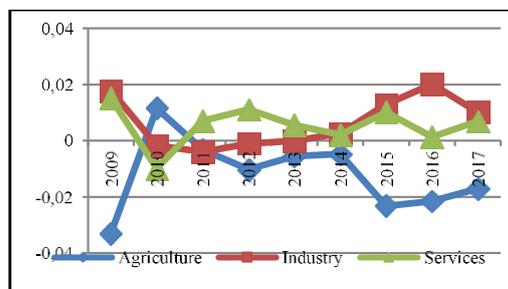
Philippines



Singapore



Thailand



Vietnam

Figure 1: Contribution to Productivity Growth of Changes in Reallocation of Labour Between Industries

### 5.2.2. Interaction Between Changes in Productivity in Each Industry and Changes in Labour between Industries

The second term of the equation 5 of the shift share decomposition analysis reflects the interaction between changes in productivity in each industry and changes in labour between industries, as shown in Figure 2. The positive value indicates that the productivity of the sector increases and as well as the share of sector employment to total employment. Cambodia's employment share and labour productivity of the services and industry sector to the total employment and total productivity respectively decreases over time. Contrary, the employment share and productivity of Cambodia's agriculture sector considerable improved overtime posting a slight increase. Meanwhile, the productivity of the agriculture sector in Indonesia increases despite of the decline in the employment share of agriculture sector to total employment. On the average, the share of services sector to total employment increases and as well as sector's labor productivity. Despite of the increase in the share of industry sector to total employment, the labour productivity decreases over the observed period. The productivity share of services sector in Malaysia increase over the observed period while the change in employment share decreases. Moreover, there is a slight improvement in the share of agriculture to total employment, however, productivity share decreases. In the case of the Philippines, despite of the decrease in the productivity of industry sector, the change in employment share increases. Moreover, the productivity in services sector and as well its employment share increases over time. The changes in employment share of industry sector to total employment in Singapore decreases as a consequence of the increase in the share of services sector. The productivity of Thailand's industry and services sector continues to increase overtime, however, the increase in the employment share of industry and services sector to total employment decreases overtime. In contrary, there is improvement in the employment share of agriculture sector to total employment in Thailand and also shows a slight improvement in the productivity of agricultural sector. In the case of Vietnam, the share of agriculture sector to total employment continues to decline overtime, inspite of its stable increase in its productivity. Likewise, the industry sector remains to have a large increase in the employment share, however, its productivity shows a declining behaviour.

### 5.3. Pearson Correlation Results

The Pearson correlation results show that Labor Productivity of Industry (LP\_Ind) (p-value = 0.000, correlation = 0.441) and Labor Productivity of Services (LP\_Ser) (p-value = 0.000, correlation 0.472) have significant and moderate positive linear relationship with the gdp growth. On the other hand, the labour productivity of agriculture (LP\_Agri) (p-value = 0.931, correlation = -0.11) has no significant negative linear relationship with the gdp growth (Table 2).

Table 2: Pearson Correlation Results

Statistics	LP_Agri	LP_Ind	LP_Ser
Correlation	-0.11	0.441*	0.472*
Probability	0.931	0.000	0.000

\*Significant at 5% Level.

Figure following on the next page

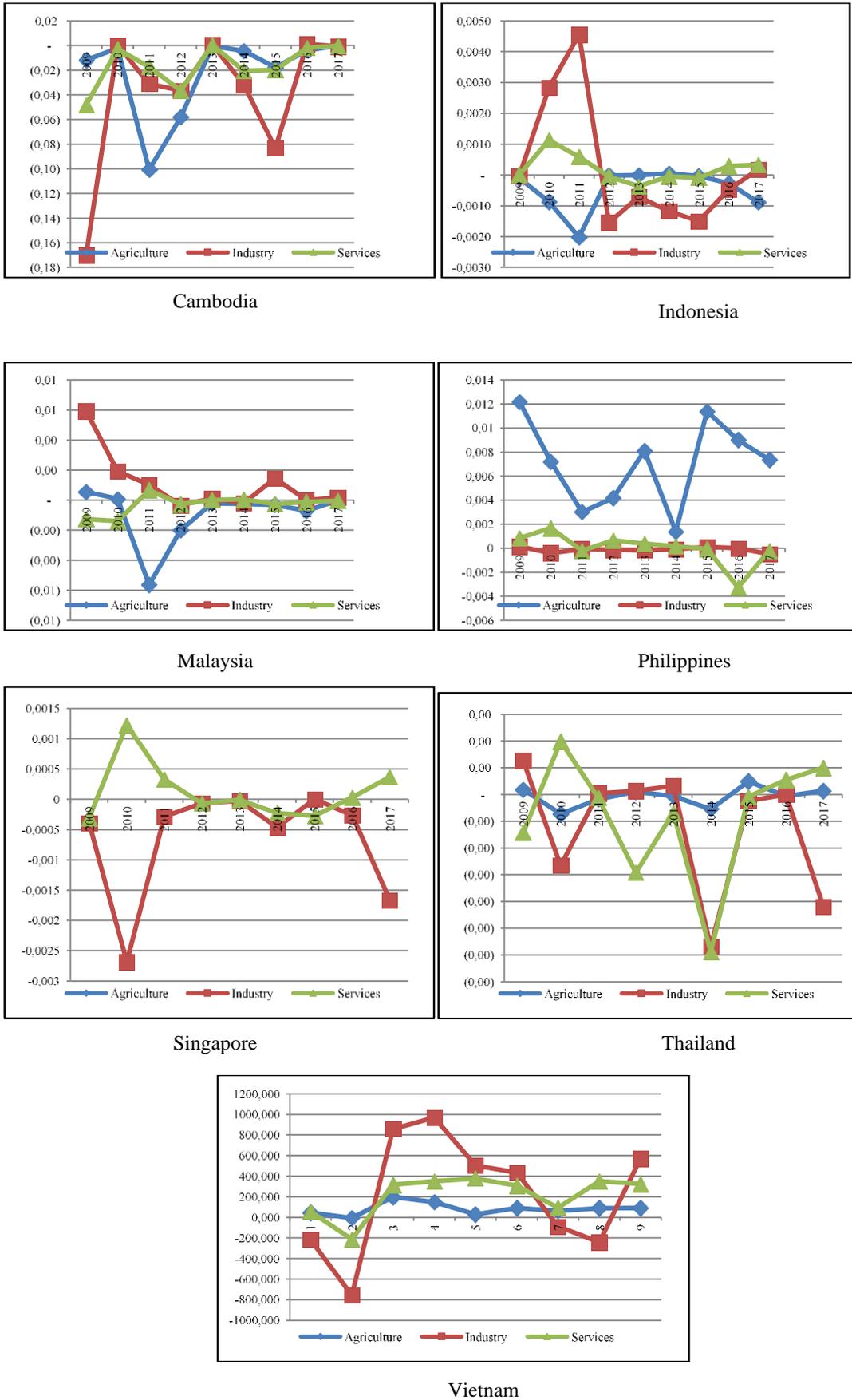


Figure 2: Selected ASEAN Interaction Between Changes in Productivity in Each Industry and changes in Labour between Industries

The regression results of the three approaches of Panel Regression such as Pooled Least Squares Regression (t-stat = 2.10), Fixed Effect Model (t-stat = 7.03), Random Effect Model (t-stat = 2.61), revealed that the productivity of services sector was statistically significant on growth of the economy of Selected ASEAN Countries at 5 percent level since its corresponding t-statistics is greater than the critical t-value (1.9600). This means that an increase in the productivity share of services sector increases the growth of the economy in the Selected ASEAN Countries (Table 3). This is consistent with structural burden hypothesis that the growth of the economy is dependent on structural change diverting into services sector. Moreover, the results of PLS, FEM and REM estimation also shows that the increase in the productivity share of agriculture had a significant but has negative effect in the growth of the economy of ASEAN Countries. This means that a percentage decrease in the productivity share of agriculture in selected ASEAN countries due to structural change decreases the growth of the economy. The Productivity of Industry Sector due to structural change has positive and significant effects in the growth of the economy of seven ASEAN countries using the FEM estimation. This is reflected in the t-stat (2.43) which is greater than the critical t-value (2.00) at 5% level of significance.

*Table 3: The Pooled Least Squares, Fixed Effect Model, and Random Effect Model Results*

Variables	Pooled Least Squares		Fixed effect Model		Random Effect Model	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Constant	4.438468	11.72483	3.437686	3.71777*	4.389444	7.87836
Agriculture	-29.6333*	-2.490761	-13.67603	-7.25824*	-21.33178	-1.83426**
Industry	6.4780	0.783762	4.747556	2.43896*	5.161556	0.680448
Services	33.00049*	2.098916	35.44778	7.02876*	38.23946	2.608128*

\* Significance at 5% Level ; \*\* Significance at 10% Level

The restricted F-test in PLS (8.45), FEM (41.60) and REM (11.56) are absolutely high and exceeds the critical F-value (2.53) which means that productivity share of agriculture, industry, and services sector due to structural change collectively has significant effects on economic growth (Table 4).

*Table 4: Statistical Tests Results*

	Pooled Least Squares	Fixed effect Model	Random Effect Model
F-Stat	8.4573	41.6011	11.5683
Adj. R2	0.2652	0.8760	0.3383
DW-stat	1.8759	2.1391	2.2814
JB	0.4540	0.9053	0.7902
Probability			

Using the Dummy variables representing each country using Singapore as based country since it manifest highest growth in gdp, there is significant difference in the growth of gdp between Singapore and Selected ASEAN countries such as Cambodia, Malaysia, Philippines, Thailand, and Vietnam. On contrary, there is no significant difference in the growth of the economy between Singapore and Indonesia. The result of the Durbin Watson and Jarque Bera Normality Tests for PLS, FEM, and REM conform that the model is free from error due to omitted variable bias, wrong functional form, and autocorrelation, thus, the estimator satisfy the three properties of good estimators which are unbiased, consistent, and efficient. On the bases of F-test, expected coefficients, JB Statistical, Adjusted R-Square, and Durbin Watson test, this research

study found that the most suited model for determining the effects of the productivity due to structural change using Divisia Decomposition method is the FEM.

## 6. CONCLUSIONS AND RECOMMENDATIONS

It is recommended that the government of each of the ASEAN Countries such as Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam may look upon the improvement of the agriculture sector since individual may not choose the farming activity over the other industry. The structural change from agriculture. Since the services and manufacturing sectors plays an important role in the development of the growth of the economy of most of the countries in ASEAN Community, it is recommended that ASEAN Community may look upon the possibility of the decline in the productivity in these industries. It is also recommended that the government of each of ASEAN country may look upon the proportional improvement in proportion of the three sectors of the economy such as agricultural, industry, and services such that their relative productivity does not change. Since the most of the ASEAN countries is predominantly 'Agriculture', the government of each country, specifically Philippine, Cambodia, and Vietnam may craft policies and programs to promote farming as a business and may craft policies and laws in order to reduce in the price of shipping, storage, and provision farm machinery by encouraging cooperatives and to lower the cost of production so as the farming sector would generate higher profit. Since the increase in the productivity in industry and services sector due to structural change of the ASEAN countries leads to an increase in the growth of the economy, the ASEAN Community may empower the promotions of the productivity as well as employment share in services sector. The government of each of the ASEAN Countries may empower the productivity of services sector by minimizing the demand of the government in the business leader through maintaining stable macroeconomic environment, not to overregulate business sectors, formulate a stable, cooperative long-term regulatory policies rather than aggressive rules and regulations (Biema and Greenwald, 1997).

## LITERATURE:

1. Anatol, M. (2010). *Survival: The Necessity for Industrial Diversification in Trinidad and Tobago*. Vol.15, No 3/4., p.1.
2. Association of South East ASIAN Statistical Yearbook. Retrieved from [www.asean.org](http://www.asean.org)
3. Anyaehie, M. C., & Areji, A. C. (2015). Economic Diversification for Sustainable Development in Nigeria. *Open Journal of Political Science*, 5, 87-94. <http://dx.doi.org/10.4236/ojps.2015.52010>.
4. Baumol WJ (1967). Macroeconomics of unbalanced growth: The anatomy of urban crisis. *The American Economic Review* 57:415–26.
5. Baumol WJ, Blackman SAB, and Wolff EN (1985). Unbalanced growth revisited: Asymptotic stagnancy and new evidence. *The American Economic Review* 75(4): 806–17.
6. Dosi, G. Winter S., and Nelson RR. (2000). *The nature and dynamics of organizational capabilities*. Oxford University Press. New York.
7. Freire, C. (2017). Economic Diversification: Explaining the pattern of diversification in the global economy and its implications for fostering diversification in poorer countries. DESA Working paper No.150
8. Grech, A. G. (2015). *The Diversification of the Maltese Economy*. CBM Policy Papers from Central Bank of Malta.
9. Gujarati, D.N. (2004). *Basic Econometrics (4th Edition)*. New York: McGraw-Hill/Irwin.
10. Kiggundu, M. N. (2002). *Managing globalization in developing countries and transition economies: building capacities for a changing world*. Westport, CT: Praeger.

11. Kuznets S (1979). Growth and structural shifts. In: Galenson W, ed. *Economic Growth and Structural Change in Taiwan. The Postwar Experience of the Republic of China*. Cornell University Press. London.
12. Marrazzo, P.M. and Terzi A. Structural Reform Waves and Economic Growth. *European Central Bank Working Paper Series 2111*. Europe: European Central Bank.
13. Papageorgiou, C. and Spatafora, N. (2012). *Economic Diversification in LICs: Stylized Facts and Macroeconomic Implications*. (Staff Discussion Note 12/13, International Monetary Fund, Washington).
14. Salazar-Xirinachs JM, Nubler I, and Kozul-Wright R, eds. (2014). *Transforming Economies: Making Industrial Policy Work for Growth, Jobs and Development*. International Labour Organization. Geneva.
15. Sarma, V., Paul, S. & Wan, G. 2017. Structural Transformation, Growth, and Inequality: Evidence from Vietnam. *ADB Working Paper Series*. Japan: Asian Development Bank Institute.
16. Sen, K. (2016). The Determinants of Structural Transformation in ASIA: A Review of the Literature. *ADB Economics Working Paper Series 478*. Mandaluyong: Asian Development Bank.
17. Valli, V & Saccone, D. 2015. Structural Change, Globalization, and Economic Growth in China and India. *The European Journal of Comparative Economics 12(2)*. Retrieved from <https://pdfs.semanticscholar.org/cf22/3865ce2f13715c95cfab7a41975d4e451981.pdf>
18. VI UNCTAD. 2009. The Structural Transformation Process: Trends, Theory, and Empirical Findings. Retrieved from [www.viunctad.org](http://www.viunctad.org)

## FINANCIAL ASPECTS OF DIVORCE PROCEEDING – CASE LAW FINDINGS

**Natasa Lucic**

*Josip Juraj Strossmayer University, Faculty of Law Osijek, Croatia  
nlucic@pravos.hr*

**Katarina Marosevic**

*Josip Juraj Strossmayer University, Faculty of Law Osijek, Croatia  
kmarosev@pravos.hr*

### ABSTRACT

*In 2015 Croatia reformed family law legislation. Among other family law issues, divorce proceedings were changed significantly. This reform was mostly marked with strengthening of procedural rights of a child and simplification of divorce proceedings in situation of mutual agreement of spouses about parental responsibility issues. Croatian legislator introduced different mechanisms to help parents to achieve that kind of agreement, taking into great consideration importance of respect of all procedural rights of a child. These changes reflect notably to the financial costs and the lent of divorce proceeding, thus creating a range of economic issues related to the new legal solutions. Paper will start with the analyses of divorce legal orders in Croatia with special regard to the new mandatory counselling proceeding. Economic issues of divorce proceedings with and without parental responsibility agreement will be discussed indicating financial dilemmas arising from it. Comparison of divorce proceeding case in accordance to Family act 2003 to divorce proceeding case in accordance to Family act 2015 will be conducted in order to bring conclusions about their financial differences. The authors will present the results of empirical research conducted before the municipal court in Osijek, regarding the economic changes that the new regulations undergo. Finally, authors will give their viewpoints about (dis)advantages of new Croatian approach of divorce and directions for further scientific researches in this thematic area.*

**Keywords:** *divorce law, spouses, child, financial analysis, economic impacts*

### 1. INTRODUCTION

Four years have passed since the last changes in Croatian family legislation which gives us enough time to assess first results of its implementation in legal practice. When discussing the legal regulation of a divorce, at first glance we can conclude that the legislator introduced significant changes in this legislative area. These changes should contribute to faster proceedings based on mutual agreement of parties. Although some changes were introduced to simplify and encourage agreements between parties without minor children, in this paper the focus will be on new mechanisms to agreeably solve relations during divorce proceedings for families with minor children. In specific, we will discuss new mechanisms to reach a parental responsibility agreement. One of the main principles of procedural law is certainly the principle of economy of the process.<sup>1</sup> By taking into account the importance of the economy of the entire process regarding closure and length of the process, the legislator devised solutions by which parental responsibility agreements in non-contentious proceedings result in faster and simpler court proceedings in divorces with minor children. In this sense, the aim of this work is to show and analyse legal framework of a divorce (with minor children) in Croatian law and question some segments of its effectiveness when applied in legal practice.

---

<sup>1</sup> The importance of the economy of the process with with minimal costs and within a reasonable time is stated in art. 10. Civil Procedure Act (Zakon o parničnom postupku, Official Gazette no. 53/1991, 91/1992, 58/1993, 112/1999, 88/2001, 117/2003, 88/2005, 02/2007, 84/2008, 96/2008, 123/2008, 57/2011, 148/2011, 25/2013, 89/2014)

This paper starts with analysis of mandatory counselling proceeding. Next, we will discuss divorce court proceedings in contentious and non-contentious proceedings and present the results of an empiric research before Municipal court in Osijek which should answer some questions about how much are the new legal mechanisms to encourage parental responsibility agreements used in legal practice and what are the results of these new legal solutions with respect to process economy. Finally, authors will give their viewpoints about (dis)advantages of the new Croatian approach to divorce and directions for further scientific research in this thematic area.

## 2. LEGAL REGULATION OF DIVORCE (WITH MINOR CHILD)

In our history legal status of a divorce ranged from a complete ban, over the principle of fault divorce and to the acceptance of disrupted marital relations as a reason for a divorce during the second half of the 20<sup>th</sup> century.<sup>2</sup> Rešetar, B. points out that modern development of family law with respect to legal regulation of divorces happened during times of increased number of divorces and violations of children's right to live with their parents and have parental care after a divorce, particularly the right to have parental care from both parents after the divorce, increase in number of cases of violations of visitation rights, manipulations of children by the parent that children live with, long legal proceedings and failure to enforce decisions concerning parental responsibility as well as not respecting a child's right to state its opinion during divorce proceedings.<sup>3</sup> All these factors were the main reasons for the Family Act reform of 2015, with special attention being given to a divorce involving children. Goals of these reforms<sup>4</sup> were to shift responsibility for decisions concerning parental responsibility and personal relations after the divorce from state to parents while the state retains the option to intervene in those relations that endanger child's well-being through oversight of parental agreements and legal measures to ensure the respect for child's rights and well-being. To accomplish these goals legislators provided new legal mechanisms such as mandatory counselling proceeding, family mediation, parental responsibility agreement (in further text: PRA), financial support Tables and so on. We will discuss these mechanisms further on.

### 2.1. Mandatory counselling proceeding and Parental responsibility agreement

Although the only legal instance for divorce in Croatia is the court, in accordance with the Family Act of 2015<sup>5</sup> (in further text: FA 2015), divorce procedure involving minor children does not begin in court but in the Centre for Social Welfare.<sup>6</sup> The new Family Act clearly puts the focus on children and parental agreements after the divorce. So, the divorce proceedings are preceded by mandatory counselling proceeding in Centre for Social Welfare.<sup>7</sup> During the mandatory counselling proceeding Social Welfare experts, among other things, counsel the

<sup>2</sup> Rešetar, B., *Novi razvod braka u Republici Hrvatskoj pod utjecajem psihologije, sociologije i međunarodnog prava* [New Divorce Law in Croatia under the Influence of Psychology, Sociology and International Law], in: Rešetar, B. *et al.* „Suvremeno obiteljsko pravo i postupak“, Pravni fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, Osijek, 2017., p. 34.

<sup>3</sup> Rešetar, B., *Novi razvod braka u Republici Hrvatskoj pod utjecajem psihologije, sociologije i međunarodnog prava* [New Divorce Law in Croatia under the Influence of Psychology, Sociology and International Law], in: Rešetar, B. *et al.* „Suvremeno obiteljsko pravo i postupak“, Pravni fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, Osijek, 2017., p. 34.

<sup>4</sup> Aras Kramar, S. *Novi pristup uređenju postupka radi razvoda braka u Hrvatskoj* [A new approach to regulation of the procedure for divorce in Croatia], Zbornik Aktualnosti građanskog procesnog prava – nacionalna i usporedna pravnoteorijska i praktična dostignuća., p. 267

<sup>5</sup> Family Act (Obiteljski zakon, Official Gazette no. 103/15)

<sup>6</sup> In accordance with the previous Family Act (Official Gazette no. 116/03., 17/04., 136/04., 107/07., 57/11., 61/11., 25/13. and 5/15) (in further text: FA 2003), the process of a divorce always began in court, regardless of the fact if spouses have minor children or not.

<sup>7</sup> Mandatory counselling proceeding is a form of help to the family members in order for them to reach consensual agreements about family matters, taking special care to protect family relations in which a child is involved, and about consequences of failure to reach an agreement and court proceedings which decide on child's personal rights (art. 321 FA 2015). Other than before a divorce, mandatory counselling proceeding is a process that is conducted before other court proceedings about parental responsibilities and personal relations with the child.

couple about legal and psychosocial consequences of a divorce with respect to them and their children as well as instruct them to consider a child's well-being when resolving disputes regarding family relations.<sup>8</sup> All institutions that provide assistance or decide about family relations have an obligation to encourage their resolution by an agreement.<sup>9</sup> Reasons for this are easy to understand, especially in disputes involving children. To make reaching an agreement about parental responsibilities easier, FA 2015 introduced a new legal mechanism - Parental responsibility agreement (in further text: PRA) which is defined as an agreement by parents about the ways and means to fulfil their parental role when child's parents permanently do not live in the same family anymore (Art.106. p.1.). Mandatory content of PRA is as follows: 1. current address of a child 2. the amount of time the child will spend with each parent. 3. a way to exchange information concerning approval of decisions important for the child and child's well-being 4. the amount of financial support as an obligation of a parent that does not live with the child and 5. methods and ways to resolve any future disputes (art. 106. p. 2.).<sup>10</sup> PRA can be used to settle other matters concerning parental responsibilities when parents think these matters are important for the child.<sup>11</sup> PRA is devised as a temporary and changeable instrument, compared to a court decision which is expected to resolve legal family relations between parents and children from the moment of the divorce until children become legal adults, with the possibility of and exceptional change only in significantly changed circumstances.<sup>12</sup> During the mandatory counselling proceeding Centre for Social Welfare explains the content of the PRA and provides assistance with its creation. Legal practice has shown that during divorce procedures there are often disputes about the amount of financial child support provided by the parent that child does not live with<sup>13</sup>, which resulted in legislator creating another new legal solution – a Table of average needs of an minor child. FA 2015 prescribes the obligation of the minister in charge of social and welfare programs determines Tables of average needs of an minor child with respect to parents' income according to paygrades and average life cost in Croatia once a year, and at the latest until April 1<sup>st</sup> of the current year.<sup>14</sup> Earlier research also revealed that, in legal practice, these Tables became a well-accepted mechanism to reach an agreement between parents about the child maintenance.<sup>15</sup>

<sup>8</sup>Family members participate in mandatory counselling proceeding in person (art. 321. p. 4. FA 2015.).

<sup>9</sup>Solution of family relations and issues by an agreement is a principle prescribed in art. 9. FA 2015.

<sup>10</sup>In order for PRA to be legally enforced it can be submitted to the court for verification and approval (art. 107. p. 1. FA 2015.).

<sup>11</sup>Taking into account that, in all proceedings concerning a child's right or best interest the child has the right to know important facts about the case, get an advice, state his/her opinion and to be notified about possible legal consequences of respecting child's opinion (art. 86. p. 2 FA 2015), it is important that parents provide the child with information about PRA and enable the child to state his/her opinion in accordance with age and maturity as well as to respect child's opinion and well-being. The right of the child to express an opinion is prescribed by art. 12. *Convention on the Rights of the Child* 1989, United Nations, Treaty Series, vol. 1577

More on child's right to express an opinion in divorce proceedings in Lucić N. Protection of the Right of the Child to be Heard In Divorce Proceedings – Harmonization of Croatian Law With European Legal Standards // Procedural aspects of EU law / Duić, Dunja ; Petrašević, Tunjica (ed.). Osijek : Faculty of law Osijek, 2017. p. 391-423.

<sup>12</sup>Rešetar, B., *Novi razvod braka u Republici Hrvatskoj pod utjecajem psihologije, sociologije i međunarodnog prava*, u: Rešetar, B. *etal.* „Suvremeno obiteljsko pravo i postupak“, Pravni fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, Osijek, 2017., p. 43.

<sup>13</sup> A divorce leads to a decrease of financial stability of the whole family, and one of the factors that could decrease psychosocial risks in children with divorced parents is the absence of economic standard of the child. Regular child support payments are not important to the child only as a factor that decreases worsening economic situation of the child, but also have an important role in regular visits and both parents being a part of child's life. Amato and Emery according to Rešetar, B., *Novi razvod braka u Republici Hrvatskoj pod utjecajem psihologije, sociologije i međunarodnog prava* [New Divorce Law in Croatia under the Influence of Psychology, Sociology and International Law] , in: Rešetar, B. *et al.* „Suvremeno obiteljsko pravo i postupak“, Pravni fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, Osijek, 2017., p. 48.

<sup>14</sup>About the application of Table of average needs of an minor child in practice see Lucić N.; Marošević, K. Legal and economic aspects of child maintenance // Interdisciplinary Management research XIII / Bacher, U. *etal.* (ed.). Opatija : Josip Juraj Strossmayer of Osijek, Faculty of Economics in Osijek ; Hochschule Pforzheim University, 2017. p. 926-946.

<sup>15</sup>Results of conducted research before social welfare centers in Croatia lead to conclusion that social welfare centres take Table as the positive legal novelty which helps them in their work when reaching parent's child arrangements for child support. See Lucić, N.; Marošević, K. Legal and economic aspects of child maintenance // Interdisciplinary Management research XIII /

## 2.2. Legal consequences of failure to reach a PRA

If during obligatory counselling parents do not agree on PRA, Social Welfare Centre will refer them to try and reach an agreement through family mediation process.<sup>16</sup> Family mediation has been defined as a process in which both parties try to reach an agreement about family disputes with the help of one or more family mediators (art. 331 p.1 FA 2015). The main point of family mediation process in case of a divorce is to reach a PRA. Also, parties can use the mediation process to reach an agreement about other matters of financial and non-financial nature (art. 331. p. 3. FA 2015). If parents who are getting divorced did not sign a PRA, Social Welfare Centre will notify them that the court will, during divorce proceedings, determine: 1. which parent the child will live with, parental responsibilities, child support and amount of time child spends with the other parent 2. Give the child an opportunity to express its opinion and 3. appoint a special guardian to the child<sup>17,18</sup> Failure to conclude a PRA makes the process of divorce longer and more complicated which has an effect on divorce process economy. If parents do not reach a PRA, or the court does not approve it, they can not get a divorce in non-contention proceeding. In this case, parents can file a lawsuit for the purpose of the divorce (art. 53., art. 56., art. 413. p. 1. FA 2015.). The court decides freely about status issues, parental responsibility issues, personal relations and child upkeep matters, taking into consideration circumstances of the case and the outcome of the procedure. Also, it has to be mentioned that, taking into account parent's attitude about reaching a PRA during mandatory counselling proceeding and/or family mediation, the court can decide that child's special guardian will be paid for by the parents (art. 366. p. 2., art. 327. FA 2015.).<sup>19</sup>

## 3. FINANCIAL QUESTIONS ARISING FROM NEW LEGAL SOLUTIONS

As stated by Woodhouse, V. and Guillen, L., the legal and financial perspectives of a divorce are two distinct views of the same event.<sup>20</sup> From the analysis of the legal framework it can be concluded that legislator's intention behind the latest changes in the FA was to encourage parents to reach an out-of-court agreement about issues related to parental responsibility.

---

Bacher, U. et al. (ed.). Opatija : Josip Juraj Strossmayer of Osijek, Faculty of Economics in Osijek ; Hochschule Pforzheim University, 2017. p. 926-946.

<sup>16</sup>Except in cases when, according to the assessment of a professional team provided by Social Welfare Centre or a family mediator, due to domestic violence equal participation of both parties in mediation process is not possible; if one or both spouses are legally incapable and can not understand the meaning and consequences of the process even with professional help; if one or both parties are mentally incapable of making decisions or if a spouse has unknown residence (see art. 332. FA 2015).

<sup>17</sup>A special child guardian is a lawyer with bar exam passed who is specially educated to communicate with a child in legal matters. For detailed analysis of legal provisions on appointment, powers, duties, responsibilities and dismissal special child guardians, as well as on expenses of special child (and adult) guardians see Aras Kramar, S. *O djelovanju Centra za posebno skrbništvo: rezultati, dvojbe i perspektiva – I. dio* [On the Performance of the Centre for Special Guardianship: Results, Doubts, and Perspectives – Part I] // Hrvatska pravna revija, 17 (2017), 6; p. 22-33 and Aras Kramar, S.; Ljubić B., *O djelovanju Centra za posebno skrbništvo: rezultati, dvojbe i perspektiva – II. dio* [On the Performance of the Centre for Special Guardianship: Results, Doubts, and Perspectives – Part II] // Hrvatska pravna revija, 17 (2017), 7-8; p. 16-25.

<sup>18</sup>Reform of the procedural status of the child, and thus the institute of special guardian on a national level is the result of years of efforts by many family law experts who continually called for upgrade in standard of child protection during court proceedings, who also called for specialized courts, child legal representation licensing, special professional services in courts, the need to professionally equip Social welfare centres and methodical education of experts who take part in court proceedings involving children. Rešetar, B.; Rupić, D. *Posebni skrbnik za dijete u hrvatskom i njemačkom obiteljskopravnom sustavu* // Zbornik Pravnog fakulteta Sveučilišta u Rijeci, 37 (2016) 3, p. 1176.

<sup>19</sup>Failure to agree on PRA can have other consequences connected to legal relations between parents and children. Most importantly, during contentious proceeding, if parents still cannot reach an agreement, the court can entrust the child to only one parent. (art. 105. p. 3. FA 2015.).

<sup>20</sup>Woodhouse, V.; Guillen, L., *Divorce & Money: How to Make the Best Financial Decisions During Divorce*, Nolo, 2016, p. 15.

Bracke, S. notices that because of the rise in the number of divorces, and its growing impact on various aspects of society, economists started paying systematic attention to the family. He states that „applying modelling and econometric techniques closely related to the existing labour economics literature, family economics has become a well-established sub-domain in economics“. Bracke, S. *Empirical Essays on the Economics of Divorce*, Ghent University, Faculty of Economics and Business Administration, 2013., p. 1.

This in turn: a) reduces the length of the process and b) reduces expenses related to court proceedings. After PRA is concluded, parents can start a non-contentious proceeding in order to get a divorce. If these requirements are met and the court has no doubts about PRA being in the best interest of child, it can conclude aspects of the case related to child's rights and divorce itself quickly, respecting the agreement reached by both parties. In other words, solutions such as this one should have a significant effect on reducing duration of the whole process which consequentially reduces expenses for both parents and the state. In situations when parents concluded the PRA there is no need for a special guardian for the child, thus reducing expenses even further. Other than that, it is reasonable to expect that this situation should encourage parents to think about if they even need lawyers if both parties accept terms of the divorce and have agreed on all matters related to their child. So, from an economic perspective the first and foremost question is whether the new legal mechanism – PRA lives in legal practice, or in other words do parents use this instrument as prescribed by legal framework and how often? Second, did new legal solutions decrease the average duration of the court proceedings regarding divorces? Third, did new legal solutions result in decreasing expenses in terms of legal representation? Success of new legal regulations is always the most visible in legal practice, so we tried to find answers to these questions by researching relevant court practice in Municipal Court in Osijek, which we will discuss in the next chapter

#### 4. CASE LAW ANSWERS

In order to search if and how much the latest changes in the FA resulted in success in legal practice, we conducted an analysis of divorce cases in Municipal court in Osijek from January 1<sup>st</sup> 2015 to October 31<sup>st</sup> 2015<sup>21</sup>, and compared those to divorce proceedings in the same court two years later – from January 1<sup>st</sup> 2017 to October 31<sup>st</sup> 2017.

Results are as following:

First, we wanted to compare the number of divorces with and without minor children during aforementioned periods.

*Table 1: Number of divorces with and without minor children*

2015		2017			
WITH MINOR CHILDREN	WITHOUT MINOR CHILDREN	WITH MINOR CHILDREN		WITHOUT MINOR CHILDREN	
		CP*	NCP**	CP*	NCP**
115	59	91	272	121	152

*\*CP - Contentious proceedings*

*\*\*NCP – Non- contentious proceedings*

As shown in Table 1, Municipal court in Osijek had a significant increase in the number of completed divorce proceedings in 2017 compared to 2015. The cause of this increase is mostly the new Areas and Seats of Courts Law<sup>22</sup>, since municipal courts in Beli Manastir, Đakovo, Našice and Valpovo continued working as permanent services belonging to Municipal court in

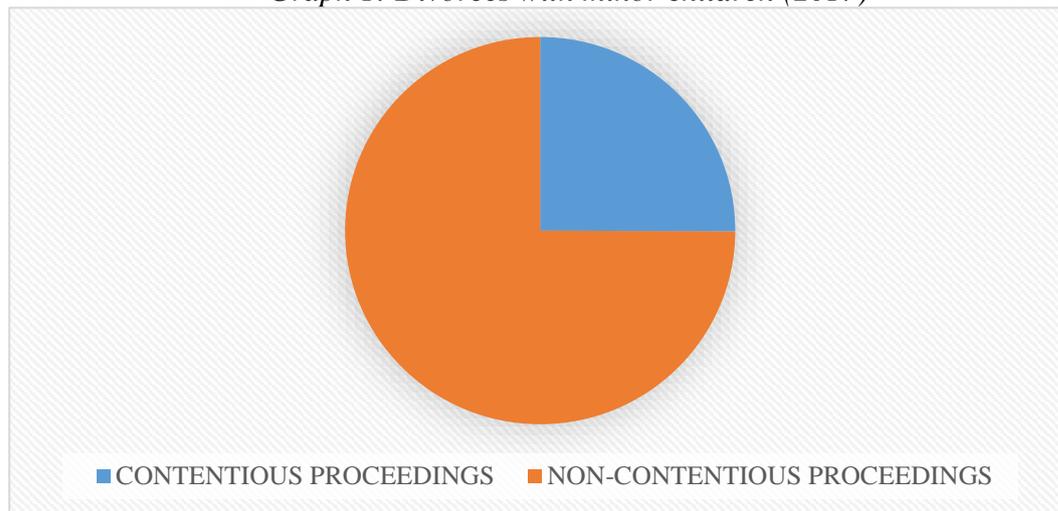
<sup>21</sup>Considering the fact that FA 2015 applies from November 1<sup>st</sup> 2015, we compared judicial practice in the last 10 months of application of FA 2003 in 2015 to ten months of application of FA 2015 (from January until September) during 2015.

<sup>22</sup>Law on Areas and Seats of Courts (Zakon o područjima i sjedištima sudova, Official Gazette no. 128/2014).

On the day Law on Areas and Seats of Courts (Official Gazette no. 67/2018) started applying, Law on Areas and Seats of Courts (Official Gazette no. 128/14) was not applicable any more.

Osijek. This increase can also be partially attributed to the announcement of new legal mechanisms concerning divorces so, according to media reports, a lot of couples decided to get a divorce fearing the new law will be overly complicated.<sup>23</sup> It is very important to point out a large number of non- contentious proceedings for divorces with minor children. Out of 363 finished cases 272 were non- contentious proceedings. This means that 74% of couples getting a divorce agreed on their future relations and parental responsibilities and concluded a PRA before court proceedings. It seems that this new legal mechanism has found its place in legal practice even at the very start of its application.

Graph 1: Divorces with minor children (2017)



Consequently, we have to find an answer to the question whether consensual solution of legal relations concerning parental responsibilities affects average duration of court proceedings in divorces which affect minor children.

Table 2: Average duration of court proceedings in divorces with and without minor children (in days)

2015		2017			
WITH MINOR CHILDREN	WITHOUT MINOR CHILDREN	WITH MINOR CHILDREN		WITHOUT MINOR CHILDREN	
		CP*	NCP**	CP*	NCP**
209	111	214	48	118	47

\*CP - Contentious proceedings

\*\*NCP – Non-contentious proceedings

Table 2 clearly shows a significant decrease in duration of divorce proceedings involving minor children in 2017, compared to 2015. The causal link between the length of time and the cost of conducting court proceedings need not be emphasized.

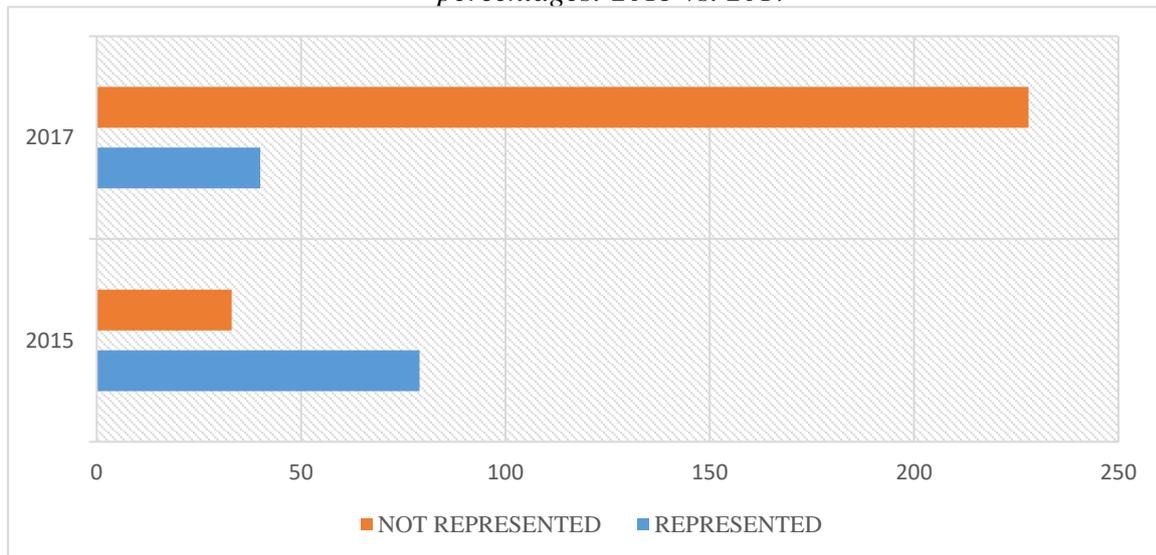
<sup>23</sup> See for example media reports published on Croatian Radiotelevision website, available on <https://www.hrt.hr/306808/vijesti/novi-obiteljski-zakon-mnogi-se-pozurili-rastati-po-starom> (May 20, 2019)

Table 3: Legal representation in divorce proceedings with minor children

2015		2017	
REPRESENTED	NOT REPRESENTED	REPRESENTED	NOT REPRESENTED
79	33	40	228

It is clear that the sum of cases with and without legal representation should match the overall number of cases in observed time periods. However, in 2015 there was three cases difference, and in 2017 four cases. In electronic register three cases in 2015 and four cases in 2017 were listed as „file missing“, which makes up the difference to total number of divorce proceedings involving minor children in those time periods. Table 3 clearly shows that in 2015 71 % of the parties in divorce proceedings had lawyers as legal representatives. On the other hand, in 2017 in non-contentious divorce proceedings parties had legal representation only in 15 % of the cases.

Graph 2: Comparison of legal representation in divorce proceedings with minor children in percentages: 2015 vs. 2017



When we discuss legal representation in divorce proceedings, Table 2. and Table 3. should be observed together. We should keep in mind that cases which result in lengthy court hearings are often more profitable for lawyers than cases which settle early and that, consequentially, lengthy court hearings present more of a financial burden for all parties involved.<sup>24</sup> However, we should also remember that most divorces require settlement of financial and proprietary matters between spouses and that court proceedings for proprietary settlements and court proceedings for divorce are two separated processes so a reduction in legal representation in one process does not necessarily mean reduction in the other.

<sup>24</sup>In literature it is often stated that peaceful and consensual resolution of issues between spouses reduces both duration and the cost of the whole process. See, for example, very interesting scientific analysis in Laura Roach, J. *Divorce in Peace: Alternatives to War from a Judge and Lawyer*, Wheatmark, Inc., 2016.;

Mather, L., McEwen, C. A., Maiman, R. J., *Divorce Lawyers at Work: Varieties of Professionalism in Practice*, Oxford University Press, 2001.

In the report of UK Legal Ombudsman *The price of separation: Divorce related legal complaints and their causes* from 2012 (available at: <https://www.legalombudsman.org.uk/downloads/documents/publications/The-price-of-separation-LeO-report.pdf>, 15.07.2019.) what stands out are findings about the level of customer satisfaction with divorce lawyers: research has found that dissatisfaction levels are higher in divorce cases than for other areas of law.

This topic, legal representation in proceedings which settle proprietary matters between (ex) spouses should be a matter of separate research. However, the analysis of divorce proceedings in Municipal court in Osijek confirms beyond doubt that changes of legal framework affected proceedings in the sense that they were shorter and with less legal representation. Expenses related to professional help to the parents in reaching a parental responsibility agreement are covered by the state which directly influences financial status of the parents by removing the need for legal representation<sup>25</sup> as well as court expenses. This prevents decline of the financial status of the parents and consequently of their child.

## 5. CONCLUSION

In the process of a divorce economic aspect is very important because proceedings present a financial burden for both parties involved – the divorcing parents and the state. Legal analysis of the latest changes in legal framework concerning divorces clearly shows that legislator's intent was to reform this part of legislation in order to encourage parties in the process to reach a mutual agreement, especially in matters involving children. In that respect FA 2015 offered persons that are getting divorced completely new legal instruments to reach a parental responsibility agreement. Thus, PRA has shown itself to be a legal instrument very often used by the divorcing parents in family law legal practice. Research of the legal practice in Municipal court in Osijek in divorce cases that was conducted, clearly points to a conclusion that PRA reduces court proceedings time duration and the cost of the procedure. We can conclude that not only did the latest legal changes contribute to better implementation of the principle of consensual resolution of family relations but also has a positive financial effects in divorce proceedings, in general. Although it is reasonable to expect that research done in other courts would show the same or similar results, to get a definitive answer to the question how much does new legal framework contribute to the economy of the process analysis of relevant court practice in other courts in Croatia is needed. Other than that, it is recommended that another research determines the exact financial cost of a divorce according to both previous and new legal framework, taking into account all financial aspects which make the total cost for the parties as well as for the state. Concerning this, future analyses should in addition certainly include an estimate of the total costs incurred by the mandatory counselling procedure as a form of free professional assistance to parents in divorce caused to the state.

## LITERATURE:

1. Bracke, S. *Empirical Essays on the Economics of Divorce*, Ghent University, Faculty of Economics and Business Administration, 2013.
2. Aras Kramar, S. *Novi pristup uređenju postupka radi razvoda braka u Hrvatskoj* [A new approach to regulation of the procedure for divorce in Croatia], *Zbornik Aktualnosti građanskog procesnog prava– nacionalna i usporedna pravnoteorijska i praktična dostignuća.*, p: 235.-267
3. Aras Kramar, S. *O djelovanju Centra za posebno skrbništvo: rezultati, dvojbe i perspektiva – I. dio* [On the Performance of the Centre for Special Guardianship: Results, Doubts, and Perspectives – Part I] // *Hrvatska pravna revija*, 17 (2017), 6; p. 22-33
4. Aras Kramar, S.; Ljubić B., *O djelovanju Centra za posebno skrbništvo: rezultati, dvojbe i perspektiva – II. dio* [On the Performance of the Centre for Special Guardianship: Results, Doubts, and Perspectives – Part II] // *Hrvatska pravna revija*, 17 (2017), 7-8; p. 16-25.
5. Convention on the Rights of the Child 1989, United Nations, Treaty Series, vol. 1577

<sup>25</sup> Within Legal Representation Law (Zakon o odvjetništvu, Official Gazette no. 9/1994, 117/2008, 50/2009, 75/2009, 18/2011) a Tariff on rewards and expenses reimbursement for legal work has been adopted, which prescribes rewards and reimbursements connected to lawyer's work (Official Gazette no. 142/2012, 103/2014, 118/2014, 107/2015).

6. Croatian Broadcasting Website: <https://www.hrt.hr/306808/vijesti/novi-obiteljski-zakon-mnogi-se-pozurili-rastati-po-starom>
7. Laura Roach, J. *Divorce in Peace: Alternatives to War from a Judge and Lawyer*, Wheatmark, Inc., 2016.
8. Lucić N. *Protection of the Right of the Child to be Heard In Divorce Proceedings – Harmonization of Croatian Law With European Legal Standards* // Procedural aspects of EU law / Duić, D. ; Petrašević, T. (ed.). Osijek : Faculty of law Osijek, 2017. p. 391-423.
9. Lucić, N.; Marošević, K. *Legal and economic aspects of child maintenance* // Interdisciplinary Management research XIII / Bacher, U. et al. (ed.). Opatija : Josip Juraj Strossmayer of Osijek, Faculty of Economics in Osijek ; Hochschule Pforzheim University, 2017. p. 926-946
10. Mather, L., McEwen, C. A., Maiman, R. J., *Divorce Lawyers at Work: Varieties of Professionalism in Practice*, Oxford University Press, 2001.
11. Obiteljski zakon (Official Gazette no. 103/2015)
12. Obiteljski zakon (Official Gazette no. 116/03., 17/04., 136/04., 107/07., 57/11., 61/11., 25/13., 5/15)
13. Report of UK Legal Ombudsman: *The price of separation: Divorce related legal complaints and their causes* (2012) (available at: <https://www.legalombudsman.org.uk/downloads/documents/publications/The-price-of-separation-LeO-report.pdf>)
14. Rešetar, B., *Novi razvod braka u Republici Hrvatskoj pod utjecajem psihologije, sociologije i međunarodnog prava* [New Divorce Law in Croatia under the Influence of Psychology, Sociology and International Law], in: Rešetar, B. et al. „Suvremeno obiteljsko pravo i postupak“, Pravni fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, Osijek, 2017.
15. Rešetar, B.; Rupić, D. *Posebni skrbnik za dijete u hrvatskom i njemačkom obiteljskopravnom sustavu* // Zbornik Pravnog fakulteta Sveučilišta u Rijeci, 37 (2016) 3, p. 1175-1200.
16. Tarifa o nagradama i naknadi troškova za rad odvjetnika (Official Gazette no. 142/2012, 103/2014, 118/2014, 107/2015)
17. Woodhouse, V.; Guillen, L., *Divorce & Money: How to Make the Best Financial Decisions During Divorce*, Nolo, 2016
18. Zakon o odvjetništvu (Official Gazette no. 9/1994, 117/2008, 50/2009, 75/2009, 18/2011)
19. Zakon o parničnom postupku (Official Gazette no. 53/1991, 91/1992, 58/1993, 112/1999, 88/2001, 117/2003, 88/2005, 02/2007, 84/2008, 96/2008, 123/2008, 57/2011, 148/2011, 25/2013, 89/2014)
20. Zakon o područjima i sjedištima sudova (Official Gazette no. 128/2014)
21. Zakona o područjima i sjedištima sudova (Official Gazette no. 67/2018)

## MARKETING OF STEM IN CROATIA BY USING NEW TECHNOLOGIES

**Ante Roncevic**

*University North, Croatia  
aroncevic@unin.hr*

**Kristina Androlic**

*University North, Croatia  
krandrolic@unin.hr*

**Nina Druzinic**

*University North, Croatia  
nidruzinic@unin.hr*

### ABSTRACT

*Abbreviation STEM comes from English and it is an acronym based on first letter four fields: science, technology, engineering and mathematics. There is no ambiguous word in Croatia for STEM but includes more sciences, such as informatics, physics, mathematics, chemistry, biology, engineering in general. STEM as a field is recognized as a potential economic growth initiator in many countries in last few years, so in Croatia as well. Although importance of STEM and willingness for increasing number of high educated and qualitative experts in STEM fields, but demand scholars and future students for education in STEM fields is not significantly enlarged. Despite running school reform in Croatia and high intentions of involving more knowledge and skills for high technologies already in primary school, still there is a lack of feedback for higher demand for entering in high schools and faculties in STEM fields. Based on this information there is a need for more promotion of STEM and education in STEM fields as a desirable to future scholars and students, all for creating high educated experts who will be in future innovation holders, new technology solution experts and initiators of economic growth. This article has an aim to find reasons for lack of demand for entering education programmes in STEM and disproportion between market need and also is trying to answer a question if there is a possibility for better promotion of STEM based on new technology for increasing future students' interest for STEM. At the end there are concrete suggestions for communication channels and marketing options that can be used for approaching STEM to young generations and potential students, for increasing attractiveness of STEM education programmes and faculties to future students. This research includes different sources of information, from strategic document of Republic of Croatia and European Union, published analysis on internet, monitoring some profiles on social networks and finally summed data from origin questionnaire done in one Croatian high school. In this work is also used "Annual research about entering on faculties and first class student's satisfaction in universities" that is done by [www.srednja.hr](http://www.srednja.hr) in 2014 in cooperation with Algebra, High school for computer engineering and is also assigned authors for this work.*

**Keywords:** *education, new technologies, STEM, students*

### 1. INTRODUCTION

Highly developed countries have recognized technological innovation and R&D, high technology and investment in STEM fields, as well as the education of STEM professionals, as drivers of their economic growth. Because of this, they are making significant efforts both in terms of financial resources and marketing activities in order to stimulate the interest of economic operators and professionals in education in STEM areas.

Although Croatia also recognized the importance of all the things mentioned and partly implemented the same in its strategic documents, and additionally initiated a reform of education that incorporated STEM knowledge and skills even into primary education, the demand for education and study within the STEM area among future potential students is very low, i.e. it is insufficient to meet future development needs. There are a number of factors that influence the choice of future profession, namely the selection of high school and, after that, college. This paper does not explore in detail all the factors that could influence decision-making among potential prospective students, but rather examines whether the use of new technologies as channels of communication and marketing activities may stimulate future students' demand in choosing a college. Namely, social media, especially the most used social media platforms in Croatia - Facebook and Instagram represent the "place" where a large number of the target audience whose interest in education and training within the STEM area we want to arouse "resides". Very interesting "transmitters" of information are precisely the various influencers and celebrities who share their opinions with a wide audience on social media platforms, in some way influencing the opinion of the masses. These can be a generator of desired change and contribute to raising the desire for education within the STEM area. High technologies such as virtual 3D technologies can also be used as a channel of communication and information gathering and, of course, as a marketing channel aimed at younger generations who are inclined to use innovative technologies. Designing virtual information centres or virtual colleges are some of the suggestions for using 3D technologies to promote STEM. Properly designed marketing campaigns targeting young prospective students should be able to replace the classic type of advertisement and stimulate a desire in their target audience to explore and look for more information.

## **2. THE IMPORTANCE OF STEM AS A FUTURE DRIVER OF ECONOMIC GROWTH**

### **2.1. The importance of STEM in future economic growth of Croatia**

Although Croatia does not have a formulated strategy for the development of the entire economy, several strategic documents that highlight innovation, research and development as one of the main drivers of the future growth of the Croatian economy have been adopted and implemented. For example, the Industrial Strategy of the Republic of Croatia 2014-2020 emphasizes precisely the importance of investing in high technology as a potential for further development of the Croatian industry. These documents do not explicitly mention or clarify the concept of STEM; however, since the drivers of innovation, research and development are in fact highly educated experts, indirectly, the development of the STEM area is being pointed out as an important prerequisite for the further growth and advancement of the economy. According to the Industrial Strategy of the Republic of Croatia 2014-2020, which is in line with the definition of Erostat, the high-tech activities refer to:

- the manufacture of basic pharmaceutical products and pharmaceutical preparations
- the manufacture of computers and electronic and optical products; and
- the manufacture of other vehicles (manufacture of railway locomotives and rail vehicles, production of military combat vehicles and vehicles for other uses).

It is precisely the highly educated staff, namely the experts and scientists in the field of high technology, who launch new products and services and thus, indirectly, become the drivers of development. Although the areas listed above are much narrower than those the definition of STEM might include, especially if STEM is known to be an acronym for the following words: S – Science, T – Technology, E – Engineering and M – Mathematics; it is not disputed that today, and even more so in the future, the experts in the mentioned fields will be the most important link in the economic growth.

Another strategic document of the Republic of Croatia from 2014, The Digital Agenda for Europe - relaunching the European economy, emphasizes that business and society can be transformed via digital and innovation economy, and while it does not explicitly mention the concept of STEM, it emphasizes the importance of research, development and new technologies and innovations. Since Croatia is a member state of the European Union, most of the strategic documents have been drafted on the basis of, or at least respecting, the documents adopted at the European Union level. One of the main strategic documents of the European Union, dealing with the topics of innovation, technology, research and development, is the Industry 4.0 document from 2016, which analyses in detail the current problems of the European economy, focusing precisely on these topics and strengthening Industry 4.0 and STEM areas as a driver of further economic development of the European Union. Another one of the European documents that also emphasizes the importance of technology, innovation and STEM is Europe 2020. As it was mentioned earlier, although the term STEM (acronym for Science, Technology, Engineering and Mathematics) is not mentioned anywhere in the Republic of Croatia's strategic documents related to development of particular branches of economy, the term is often mentioned in the field of education. Specifically, Croatia tried to integrate the knowledge and skills from the STEM area into the curriculum of primary and secondary schools with the help of education reform, while relying on the strategic document "Strategy of Education, Science and Technology" of the Republic of Croatia, which recognizes education and science as its development priorities, emphasizing the following objectives and measures:

- “Expanding the capacity of part of higher education in the STEM area is a development priority.
- The attractiveness and competitiveness of these studies need to be increased, especially in the areas relevant to economic development (STEM).
- Particular attention should be given to STEM studies, which are underrepresented in analyses conducted in Croatia and other European countries.
- Programs in the STEM area will be encouraged (by stimulating higher enrolment quotas, program contracts, etc.) which will prepare professionals capable of responding to the demands of the modern economy and the public sector. For this purpose, a special system of scholarships for students in studies for scarce occupations will be developed” etc.

In order to generate highly educated staff from the STEM field, measures were taken to encourage student enrolment in STEM study programs. The Ordinance on the conditions and manner of exercising the right of full-time students to receive a state scholarship in STEM fields of science defines the criteria for awarding scholarships in the following areas:

- Natural Sciences
- Biotechnical Sciences
- Biomedicine and Healthcare
- Technical Sciences and study programs for the academic title of Bachelor of Computer Science, Business Computer Science and Information Sciences

## **2.2. Insufficient demand for STEM education**

By stressing the importance of STEM and incorporating it into strategic documents and reforms (especially the education reform), as well as introducing various incentives for enrolment in studies within the STEM area, we seek to encourage future students to enrol in STEM education programs. It can be concluded that on the supply side of STEM education programs, the prerequisites for increasing the number of highly educated population in Croatia are met, with particular emphasis on education within the STEM area. On the other hand, the question arises whether the future students are in fact interested in enrolling in educational programs or colleges in the STEM area.

For the purposes of this paper, two studies were used to test the following hypotheses:

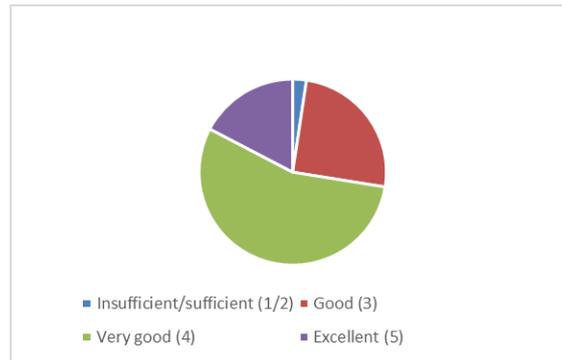
- H0: There is insufficient demand for enrolment in colleges within the STEM area in Croatia.
- H1: New technologies can bring STEM closer to young people and stimulate demand for enrolment into colleges within the STEM area in Croatia.

The first study, whose results were partially provided to the authors of this paper for the purpose of testing said hypotheses, was conducted in 2014 by portal srednja.hr and Algebra, College of Applied Computer Science. Research titled "Annual Survey on College Enrolments and the Satisfaction of Freshmen Enrolled in Higher Education Institutions" was conducted in 2014 with a sample of 1,500 graduates and freshmen, and given the number of respondents, it may be considered relevant for drawing some conclusions. The survey was conducted via Facebook, and the respondents were members of the Facebook groups "High school graduates 2013/2014" and "High school graduates 2013/2012". The survey was conducted in the period from May 5, 2014 to May 20, 2014. The study was conducted on respondents born in years 1993 to 1996, that is, at the time when the study was taking place, they were between 18 and 21 years of age and were either high school graduates or college freshmen. Among the members of the "High school graduates 2013/2012" group, the largest number of respondents, 63.34%, was born in 1994, that is, they were 20 years old at the time. Among the members of the "High school graduates 2013/2014" group, the largest number of respondents, 61.54% of them were born in 1995, that is, at that time they were 20 years of age. By gender, women were slightly more represented, with 58.98% of respondents within the "High school graduates 2012/2013" group, and 64.91% of them within the "High school graduates 2013/2014" group. The largest number of respondents was from the Zagreb area, as much as 16.60% within the "generation of 2014" survey, and as much as 20.30% of the respondents within the "generation of 2013" survey. The other respondents were from other areas of Croatia. However, regardless of gender and location within Croatia, the survey may be considered relevant. Within the generation of high school graduates of 2014, the largest number of respondents, 7.443% of them, cited the Faculty of Philosophy in Zagreb as their first choice. 5.725% of the respondents of the same generation cited the Faculty of Economics in Zagreb as their first choice of faculty, and 4.771% of the respondents cited the Faculty of Education and Rehabilitation (Zagreb) as their first choice. These three colleges in the generation of 2014 are the three most commonly selected ones as the first choice of college. None of these colleges are from the STEM field. The Faculty of Natural Sciences and Mathematics in Zagreb was only in fourth place as the first choice of college within the generation of 2014, selected by 4.389% of the respondents. The situation is not significantly different even within the generation of graduates of 2012, where the most frequent choice of college as the first choice for enrolment was again the Faculty of Philosophy in Zagreb, which was selected by the largest number of respondents, 7.943% of them. The next in line in the generation of 2012 is the Faculty of Electrical Engineering and Computing in Zagreb, which was selected by 5.248% of the respondents as their first choice for enrolment, followed by the Faculty of Law in Zagreb, with 3.982% of the respondents citing it as their first choice. This was followed by the Faculty of Economics in Zagreb, which was cited as the first choice by 3.404% of the respondents, and the Faculty of Science in Zagreb, which was also cited as the first choice by 3.404% of the respondents in the generation of 2012. It is evident that, with the exception of the Faculty of Electrical Engineering and Computing, all other faculties are not, or not primarily, in the STEM field, which does not confirm, but it does indicate that students prefer studies and professions outside the STEM field. When analysing the criteria and factors that influence the choice of study or career, as many as 75.98% of the respondents of the generation of 2012, 80.60% of the respondents of the generation of 2013 and 84.94% of the respondents of the generation of 2014 states that their choice of studies or careers is certainly influenced by personal affinity for the subject of study.

Also, a very high percentage of the respondents, 57.58% of the generation of 2012, 56.17% of the generation of 2013 and 55.41% of the generation of 2014 states that the choice of studies is certainly influenced by the better prospects for employment in their field of profession abroad. Among the important factors cited, between 49% and 53% of the respondents in all three generations of graduates (2012, 2013 and 2014) are the prospects for a good salary, studying with similar colleagues and meeting quality people. Only 5.87% of the respondents within the generation of 2012, 5.23% within the generation of 2013 and 4.94% within the generation of 2014 stated that the factor which certainly influenced their choice of studies and career was the fact that there was no better opportunity to study or work so they enrolled in order to delay unemployment. A very interesting question for the respondents was concerned with the selection of professions in the STEM area when choosing their future studies. Specifically, the respondents were asked: "Why not STEM?" And the following options were given as possible answers:

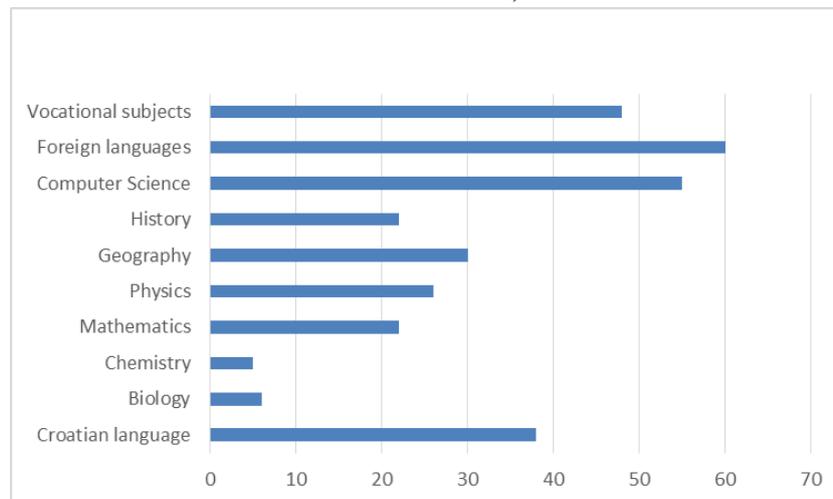
- These are hard studies, and most want a degree without much hassle
- Very few young people have a predisposition for STEM
- Young people are not sufficiently informed about what to do after college
- People who enrol in it have no social life
- It is not cool to be an engineer or a scientist

The very first answer, "these are difficult studies, and most want a degree without much hassle" is the most common choice of all the respondents. Specifically, as many as 54.79% of the respondents from the generation of 2012, 47.84% from the generation of 2013 and 51.88% from the generation of 2014 opted for this answer, suggesting that studying in STEM fields is perceived as difficult or at least more difficult than colleges outside STEM fields. To this same question, 27.39% of the respondents from the generation of 2012, 30.12% from the generation of 2013 and 27.72% from the generation of 2014 responded with the second answer, "very few young people have a predisposition for STEM." The third answer, "young people are not sufficiently informed about what to do after college" was selected by 15.76% of the generation of 2012, 19.80% of the generation of 2013 and 18.42% of the generation of 2014. The answer given is very interesting and points to the fact that prospective students are not sufficiently familiar with the professions in the STEM field, that is, they are not acquainted with the opportunities the completion of studies in the STEM area can offer them. It is likely that the importance of STEM and the opportunities that higher education in this field can provide are not presented to them well. Lastly, below 2.25% of the respondents from all three generations opted for the remaining two answers, "people who enrol in this have no social life" and "it is not cool to be an engineer or a scientist". In order to gather information on how young people are informed about secondary schools and occupations, as well as whether young high school students are familiar with the STEM area, and in order to prove the hypotheses previously stated in this paper, a study was conducted through questionnaires on a sample of 127 high school students. The study was conducted at the Varaždin High School of Mechanical Engineering and Transportation in the period from June 10 to June 14, 2019. The questionnaire consists of 14 closed-ended and open-ended questions completed by 127 respondents, predominantly male - as many as 91.34%. The survey was conducted in all grades of secondary school, so the sample has respondents from 15 to 18 years of age, the most of them being 17 years old (40.16%), followed by 16-year-olds (39.37%), 15-year-olds (13.39%) and finally 18-year-olds (7.09%). Most of the respondents were graded "very good" (55.12%), followed by those graded "good" (25.20%) which can be seen from the chart below.

*Chart 1: How were you graded at school?*

*Source: Author's creation*

The respondents were presented with a multiple-choice question - to choose subjects that interest them or at which they are good, and multiple answers were possible. The largest number of respondents opted for foreign languages, as many as 60, with an additional 38 respondents citing Croatian language as their choice. 55 respondents cited Computer Science as the answer, and the next choice, which meant 48 respondents, were vocational subjects, which is logical given that it is a vocational high school. It is interesting to see that, for example, only 5 subjects opted for chemistry, and only 6 subjects opted for biology. A more detailed view of the respondents' choices is shown in Chart 2.

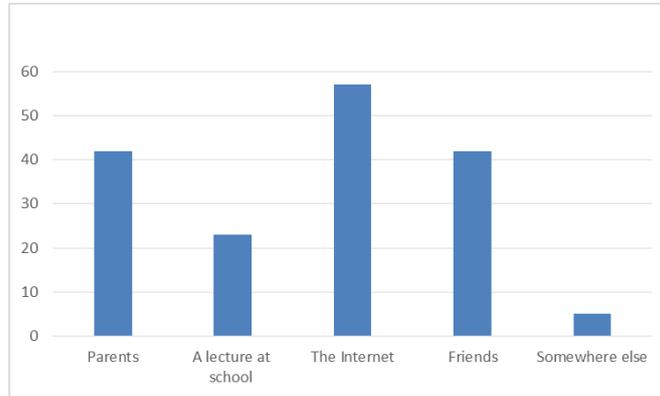
*Chart 2: Which subjects are you good at? What are your favourite subjects (multiple answers can be selected)?*

*Source: Author's creation*

The respondents were asked: "How did you get your information about high schools before you enrolled?" It was possible to select multiple answers. The largest number of respondents, 57 of them, stated that they had been informed online. The above shows that the Internet is an extremely important place for informing and gathering information that serves as a main channel for future high school students and prospective college students which they also actively use when deciding on their future profession. The answers provided make it clear that it is the Internet and information collected over the Internet (although the Internet is used in the broadest sense here, they do not focus in detail on whether information is collected through websites of particular high schools, different forums, social media and channels or something else ) shows that the Internet is the main channel for collecting information on your future occupation or a high school.

However, it is also evident from the responses collected that information continues to be largely collected from parents, selected by 42 respondents from the offered responses, as well as from friends, which was also selected by 42 respondents from the offered responses. 23 respondents were informed about their future occupation and secondary school they will enrol in at their school, and 5 respondents were informed in some other manner, as can be seen from Chart 3.

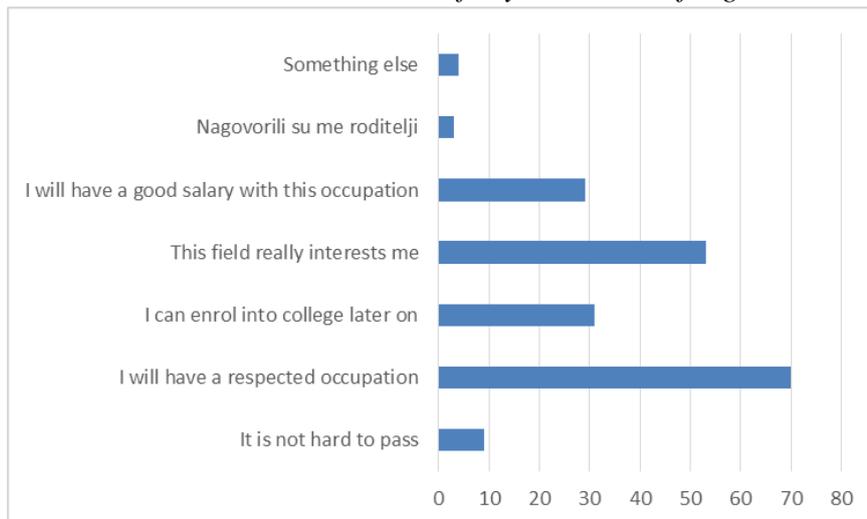
*Chart 3: How did you get your information about high schools before you enrolled?*



*Source: Author's creation*

The main reason for choosing a high school (a question with the possibility of choosing multiple answers) is the belief that after graduating from high school and the chosen stream, they will have a respected occupation, which is the answer chosen by 70 respondents. 53 respondents indicated that they were really interested in the chosen field, and 31 respondents indicated that they could later enrol in college with the selected secondary school. 29 respondents believe that they will have a good salary with their chosen occupation. Nine respondents chose high school because it is not hard to pass, three respondents because they were persuaded by their parents, and four respondents selected "something else" as the answer, which is also shown in Chart 4.

*Chart 4: What is the main reason for your choice of high school?*

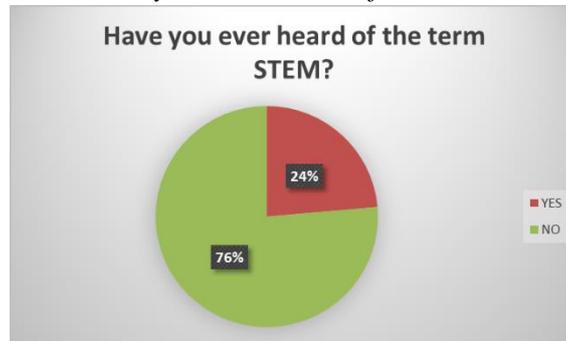


*Source: Author's creation*

Further questions sought to gain insight into whether the concept of STEM is at all familiar to high school students and whether there is room to bring STEM issues closer to them through additional information. Respondents were asked: "Have you ever heard of the term STEM?"

As many as 97 respondents, or 76.38% answered negatively to this question, while only 30 respondents, or 23.62%, were familiar with the term STEM, as shown in Chart 5.

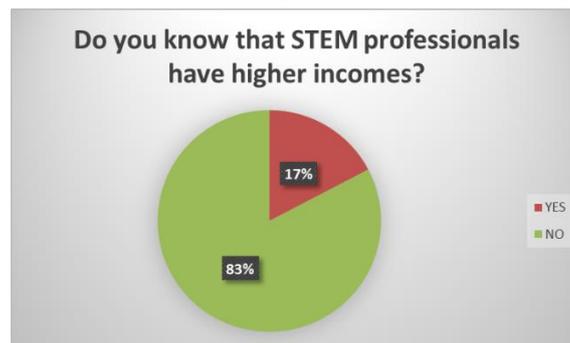
*Chart 5: Have you ever heard of the term STEM?*



*Source: Author's creation*

The next question was: "Do you know that STEM professionals have higher incomes?" to which only 22 respondents answered in the affirmative, i.e. 17.32%, while 105 respondents or 82.68% answered in the negative, which is also shown in Chart 6.

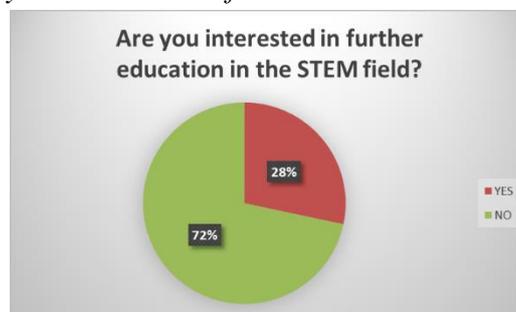
*Chart 6: Do you know that STEM professionals have higher incomes?*



*Source: Author's creation*

36 respondents answered the question "Are you interested in further education in the STEM field?" in the affirmative, which is 28.35%, while 91 responded in the negative, 71.65%, as can be seen from Chart 7.

*Chart 7: Are you interested in further education in the STEM field?*

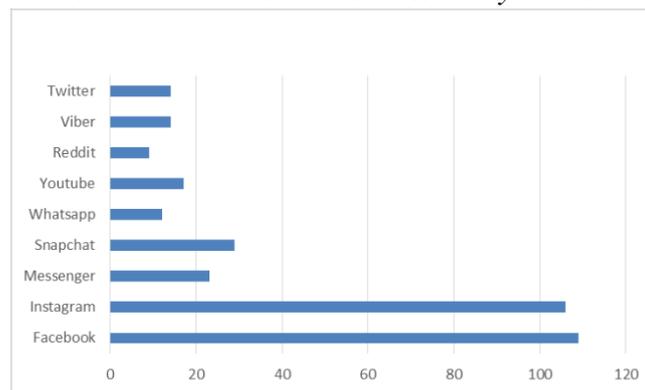


*Source: Author's creation*

Although significant efforts are being made to integrate STEM, both with the curricular reform, as well as through the media, the aim of which is trying to encourage younger generations that are already in elementary schools to become familiar with STEM, the survey responses point

to the fact that current high school students are not, or at least not sufficiently, familiar with both the expression and the concept of STEM, as well as with the opportunities and benefits of further education within the STEM field. These questions partially confirm the previous thesis that the demand for STEM can be increased as it is evident that there is significant room for better information for young people. Also, since the existing methods and channels (media, the public, education and school system) have not produced satisfactory results in informing young people and bringing the concept of STEM closer to the youth, they should be approached via other channels, namely new technologies. A previously presented question from a survey in which high school students stated that they got most of their information from the Internet when they were choosing a high school, confirms the above thesis. The answers to the question from the survey about whether the students use social media or not furthermore confirm the above thesis. It was answered mostly in the affirmative by as many as 126 out of 127 respondents, or 99.21%, which indicates a high prevalence of use of social media in young high school students. The following question was an open-ended one: "If you use social networks, indicate which ones you use". The largest number of the respondents, 109 of them, answered that they use Facebook, 106 answered that they use Instagram, and the other social media (Messenger, WhatsApp, Viber, Twitter, Snapchat, YouTube, Reddit) was mentioned by up to 30 respondents per response, as can be seen from Chart 8.

*Chart 8: What social networks do you use?*



*Source: Author's creation*

The question "Are you planning to enrol in the faculty someday" was answered in the affirmative by 41 respondents, or 32.28%, while 86 respondents or 67.72% answered in the negative. To the open-ended question: "If you are planning to enrol in a college one day, which college are you planning to enrol in?" the largest number (16 respondents) answered that they planned to enrol in mechanical engineering, which is logical given that they are respondents from the Varaždin High School of Mechanical Engineering and Transportation, 5 of them answered that they would enrol in some courses at University North, 10 responded with another faculty (different answers such as "acting"), and 10 responded that they did not yet know which faculty to enrol. The last question to the respondents was open-ended and read "How do you see yourself in 10 years? What will you do?" to which 119 respondents answered. The largest number of responses, 80, which makes 67.23% of the answers can be classified as "I will work in my profession". 16.81% of the answers to this question were "I don't know", and 12.61% of the answers were related to something else, unrelated to the profession for which they are currently studying. An interesting answer that relies on the growing problem of expatriation of young people from Croatia is the fact that 4 out of 119 answers to this question were given in the sense of "I will work abroad", which makes 3.36% of the answers, and which shows that even during secondary education, young people are planning to work abroad i.e. they are studying with the purpose of finding employment outside Croatia.

The preferences of prospective college students when choosing a faculty are also reflected in the enrolment quotas that individual colleges announce. And while it would be logical to expect, given the importance of increasing the number of STEM professionals, that college admission quotas will increase precisely in the STEM area, this is not the case. Maximum increase in enrolment quotas for the academic year 2019/2020 was enacted precisely for the enrolment of students at the Faculty of Economics in Zagreb and the Faculty of Philosophy in Zagreb, which are also the first choice of faculty for the largest number of future college students. At the same time, enrolment quotas for enrolment in biomedical and healthcare studies and technical sciences have only slightly increased, totalling less than 100 places. However, as the demand for enrolment in STEM studies is insufficient, an increase in quotas in the STEM area is unlikely to result in an increase in the number of students enrolled in STEM studies. The analysis of the part of the study provided by the website srednja.hr for the purposes of this paper, as well as the survey conducted by the authors, confirms the thesis that the demand for enrolment into educational programs and faculties within the STEM area in Croatia is insufficient. Furthermore, the thesis that through the use of new technologies the demand for enrolment in educational programs and colleges within the STEM area can be increased is partly confirmed, precisely because the following has been proven:

- When choosing a high school, young people collect most of their information online
- The use of social media among young people is widespread (according to the survey of authors, as many as 99.21% of the respondents use social media)
- Young people are not sufficiently informed about STEM and higher education within the STEM area (as many as 76% of the respondents are unfamiliar with the term STEM, 83% do not know that professionals within the STEM area have higher incomes, and only 28% are interested in further education within the STEM area)
- Information and promotion activities and channels to date (education system through the inclusion of STEM in education and curricular reform, as well as the newspapers, television and other media that have highlighted STEM in the past) have not yielded results in terms of informing young people about STEM and opportunities for education within the STEM area.

The question here is which marketing tools, techniques and approach can best bring STEM closer to young Croatian people who are viewed as potential college students. It is necessary to focus on other channels of information and promotion, primarily those channels that young people are really using and noticing and those are new technologies, which will be the focal point of the rest of this paper.

### **3. NEW TECHNOLOGIES AS A MARKETING TOOL FOR PROMOTING STEM**

#### **3.1. Social media**

Nowadays, the number of social media platforms around the world is large, as is the number of their users, and some of the most famous ones are: Facebook, Instagram, Twitter, WhatsApp, Viber, etc. In certain areas, depending on the preferences of the population, certain social media are represented. The last 2 years have seen a significant increase in Instagram users in Croatia, and Instagram is, after Facebook, a social media platform with the highest number of users in Croatia. According to Arbona, a research and marketing agency, in 2019 the number of active Facebook users in Croatia was 1,900,000, while about 1,100,000 were active on Instagram. The age structure of Facebook and Instagram users in Croatia should also be highlighted. On Instagram, out of the 1,100,000 users mentioned, 58,000 are 13-17 years old, 340,000 are 18-24 years old and 300,000 are 25-34 years old. As for Facebook, as many as 570,000 users are 13-24 years old, and 530,000 users are 25-34 years old. It is evident that young people are the most significant users of the mentioned social media platforms in Croatia and those platforms

can be considered as one of the very important tools for cheap and easy communication with the target audience. And the target audience are precisely those young people who have yet to choose their profession, or those who have yet to enrol in high school or college. A study conducted by the authors on a sample of 127 high school students revealed that as many as 99.21% of respondents use social media, with Facebook and Instagram being the most frequently mentioned ones (see Chart 8). Although advertising through WhatsApp and Viber is still under-represented in Croatia at the moment, in the long run it should definitely be considered as a potential channel for easy and cheap access to target audiences and, of course, advertising. LinkedIn is also worth mentioning as a social media platform intended for job seekers or those already employed, and although it does not attract that much of the targeted audience – the future students – it is still an important place to share interesting information and news, and among other things, about activities in the STEM area as well. In the survey conducted by the authors, in addition to the most used platforms, Facebook and Instagram, the respondents also mentioned the following social media that they use: Snapchat, Viber, WhatsApp, YouTube, Messenger, Twitter and Reddit. One of the papers dealing with the use of social media to promote college, "Use of viral marketing by Universities" states that most colleges in the world have already recognized the importance of social media and the fact that they represent a very cheap channel for accessing a target group and young people. By browsing through social media in Croatia, it can be seen that most colleges in Croatia have active profiles on social media and actively use social media in order to reach out to their existing students. On social media, they publish events held at the faculty, invite students to participate in various activities, and publish information. Through Facebook ads, they can communicate directly with a target group of potential students. As mentioned, it is social media that should be one of the channels of communication, which is two-way communication in the sense that students or potential students can contact the faculty and receive feedback. It is stated in "Marketing 4.0" that marketing (especially marketing 4.0, which relies on the Internet, among other things) is no longer just a concept that is here to offer and present a product or service to a customer, but that today's marketing is here to communicate two-way with the customer (in this case a student) and to offer the customer added value with the product/service itself. M. Golob states that the main feature of new communication technologies is that such technologies enable and greatly support interactivity, which is becoming a major feature of modern marketing communications.

### **3.2. Influencers and celebrities**

Regarding the way of reaching out to audiences via social media, given their age and specificity of thinking, it is necessary to adapt the way of communication and advertising in order to avoid classic "advertisements", and rather make marketing itself take place in a different way, whereby influencers or celebrities can be pointed out as a great way to reach out and reach your target audience. For example, there are several young people in Croatia who have succeeded in creating well-known businesses in the field of STEM and high technology businesses that require high expertise from their employees. They base their business on research, development, innovation and innovative technologies. One example is Mate Rimac, the founder of RIMAC AUTOMOBILI d.o.o. Another example is Ivan Mrvoš, the founder of INCLUDE d.o.o. and an innovator who designed "smart benches". The afore mentioned young innovators, experts in their field, represent the reference examples of young people who succeeded on the basis of their knowledge, innovative thinking and by using high technologies in order to create innovations in the market. It is precisely such cases of positive practice that should be presented to young people in order to encourage them to think about education and business within the STEM area as desirable. These young innovators actively use social media and share a lot of information about the business of their companies with their followers, which certainly

indirectly promotes STEM. There are a number of other influencers who, via social media, can encourage young people (but also others) to engage in STEM fields, and one example already in action is Mr. Nenad Bakić, who actively promotes STEM fields on his social media profiles (Facebook, LinkedIn). It is also worth pointing out the currently active Croatian Makers campaign, which was launched in 2014, started by the Institute for Youth Development and Innovation (IRIM), with the aim of enabling the broad inclusion of robotics, automatics and programming in elementary school education. More than 550 schools, libraries, associations and other educational institutions in Croatia are participating in the Croatian Makers League program in the school year 2018/2019. There are organized competitions, children are being taught robotics and programming, and the project is very well advertised on social media by the participating institutions, with some celebrities also being involved in the promotion. The Minister of Education's announcements on social media will surely reach young people in a simpler, faster and more efficient way than her speech in the news on television. It is in this context that social media should be viewed as one of the most important channels of communication and marketing aimed at the young population, the potential STEM students. The survey conducted by the authors also confirms the fact that, while most young people get their information online when choosing a high school, a significant number of them still collects information from parents and friends - as many as 42 respondents out of 127 stated that they got information on high schools from their parents, and 42 respondents indicated that they got it from their friends. As it was mentioned, when we put influencers and social media together it presents itself as a very good way i.e. a channel for transferring a positive practice onto the younger generations, which the faculties should definitely make use of in their own promotion.

### **3.3. Virtual information centres and virtual visits to schools and colleges**

Virtual and 3D technologies can also be used to promote STEM. When collecting information about potential high schools or colleges, and later when deciding whether to enrol in certain schools or colleges, young people rely heavily on the oral recommendations of some of the students of those schools or colleges. In order to facilitate access to current students who can give their opinions and reflect on some of the educational programs and studies, virtual 3D technologies can be used as a very high-quality tool to connect the desired audience - young potential students with current students in STEM education programs. As a specific proposal, we can mention virtual information centres where all the desired information on potential education within the STEM area could be obtained in one place by using virtual 3D technologies. Moreover, virtual 3D technology could be used for virtual visits to various STEM schools and colleges, which can be counted as a prime example of high technology that came about as a result of the involvement of STEM professionals.

### **3.4. Applications**

There is no need to talk about the abundance of applications these days. However, it is precisely mobile phone applications or web applications that can be pointed out as a valuable tool for potential students to gather interesting and valuable information about potential occupations in the STEM area. For example, there could be an application that would, based on the prospective student's request, present information about the search term, area, or educational program. For example, a potential student is interested in medicine. On the basis of his request in the application, he is presented with information about potential high schools and study programs and directions that he can enrol in Croatia, the number of persons who have completed a particular program or study in the past years, the supply and demand of the said occupation in Croatian, European or world market, etc. All of it is done, of course, in order to present the most important and concrete facts to future high school and college students. The applications would be used as a tool for promoting particular educational and study programs, and schools

and colleges, as well as other promoters of education in STEM fields (e.g. the Ministry, associations, etc.), could advertise and promote their programs and emphasize the importance of STEM for future economic development. M. Golob states that a very important component of mobile app advertising is the ability of consumers to respond to a promotional message received. For example, if a consumer is encouraged to buy by an ad that is seen on a mobile app, the consumer has the ability to directly connect with the business entity through a link, which then leads the consumer to the business entity, its website, or other medium through which it is possible to complete the purchase process.

### **3.5. Robots**

Robotics is one of the areas of STEM. Robots as a product can also serve as a great tool for marketing and promoting STEM. For example, they can be used in colleges closely related to the field of robotics, such as engineering, electronics, and computer science, or informatics, and as a tool that can be of service for students or prospective students, such as providing information about one of their desired studies, directing to the desired hall, etc. In this way, in addition to its concrete benefits, it can also encourage potential students to enrol in a particular study etc. An excellent example of when to use robots is on open door days at colleges or schools.

### **3.6. Plans for marketing campaigns**

With the use of the mentioned technologies and channels of marketing activities, which is the easiest way to reach the target population of prospective students, which are at the same time a vivid display of innovation created as a result of STEM, it is very important to properly design a marketing campaign. It is important that it is targeted, short and clear, and intriguing enough to entice a young person, a potential student, to further engage and explore at least one of the STEM fields. That is why it is very important to have a proper campaign slogan. Here is a suggestion of an interesting and easy-to-remember slogan that encourages thought and further exploration: One STEM ahead.

## **4. CONSLUSION**

Innovation, research and development and the economy based on the activities and professions in the STEM area are recognized as the drivers of the future development of the Croatian economy. Leaving aside the question of the involvement of economic operators in STEM fields, the important fact is that the interest of young people, future potential students, to enrol in educational programs or faculties in STEM areas is insufficient. The very concept of STEM, the opportunities and benefits of higher education within the STEM area are not well known to young generations. Considering that in the long term it is precisely the scientists from these fields who will be the drivers of innovation, research and technological advancements, it is important to arouse their interest and bring them closer to the topic and the benefits of the STEM profession. The most appropriate and simplest approach for the target group, young people who are potential STEM students, is precisely by using modern technologies, and with a modern approach and a targeted content. Some of the most modern technologies are social media platforms, out of which Facebook and Instagram have the highest number of young users in Croatia, and are, as such, an excellent channel of reaching the target audience. Influencers, celebrities, and especially people who are themselves young professionals in the STEM area are great drivers of marketing activities that are targeted at young audiences. Applications as a modern technology can be used to promote STEM in a way that is truly useful and provides their users with the desired information about STEM, but also to promote STEM occupations as desirable, or to bring them closer to the target audience. Virtual 3D information centres set up, for example, in schools or colleges are examples of technology originating from STEM

fields, and can serve as a great tool for bringing STEM closer to young people. Robots, which can also be considered as a product derived from the STEM area, can also be used in a very interesting way to promote STEM. It is important that the marketing campaign and the approach to the target group, the young people, future high school or college students, be designed to stimulate their interest in education in STEM fields, since they represent the future drivers of economic development.

## LITERATURE:

1. *European parliament. 2016. Industry 4.0* (2016.) Retrieved May 6, 2019. From [http://www.europarl.europa.eu/RegData/etudes/STUD/2016/570007/IPOL\\_STU\(2016\)570007\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/570007/IPOL_STU(2016)570007_EN.pdf)
2. *Europska unija. 2014. Digitalna agenda za Europu.* (2014.) Retrieved May 6, 2019. From <http://www.europski-fondovi.eu/sites/default/files/dokumenti/Digitalna%20agenda%20za%20Europu.pdf>
3. *Facebook vs. Instagram na početku 2019. godine: tko smo i što nas najviše interesira. (Infografika)* (2019.) Retrieved May 7, 2019. from <https://www.arbona.hr/blog/drustveni-marketing/infografika-facebook-vs-instagram-na-pocetku-2019-godine-tko-smo-i-sto-nas-najvise-interesira/2803>
4. Golob M. (2016.) *Mobilni marketing kao sastavni dio integrirane marketinške komunikacije* (Zbornik Veleučilišta u Rijeci Vol. IV No.1., str. 147-158). Retrieved May 5, 2019. from <https://hrcak.srce.hr/160239>
5. Grenčíková A., Krajčo K., Sokol J. (2008.) *Use of Viral Marketing by Universities* (Marketing and branding research 5. 100-110 page). Retrieved May 6, 2019. from [http://webcache.googleusercontent.com/search?q=cache:pSY3iFtsgXsJ:aimijournal.com/Pages/DownloadHandler.ashx%3FDownloadObject%3DArticle%26Id%3D04ae635f-7f4d-4dc4-a8b2-0c5a55b302f1+&cd=1&hl=en&ct=clnk&gl=hr&lr=lang\\_hr%7Clang\\_en](http://webcache.googleusercontent.com/search?q=cache:pSY3iFtsgXsJ:aimijournal.com/Pages/DownloadHandler.ashx%3FDownloadObject%3DArticle%26Id%3D04ae635f-7f4d-4dc4-a8b2-0c5a55b302f1+&cd=1&hl=en&ct=clnk&gl=hr&lr=lang_hr%7Clang_en)
6. *Industrijska strategija Republike Hrvatske 2014.-2020. Ministarstvo gospodarstva.* (2014.) Retrieved May 6, 2019. from <http://www.europski-fondovi.eu/sites/default/files/dokumenti/Industrijska%20strategija%20RH%202014.-2020..pdf>
7. *Investing in Europe's future: the role of education and skills European investment bank.* (2018.) Retrieved May 6, 2019. from [https://www.eib.org/attachments/efs/investing\\_in\\_europes\\_future\\_the\\_role\\_of\\_education\\_and\\_skills\\_en.pdf](https://www.eib.org/attachments/efs/investing_in_europes_future_the_role_of_education_and_skills_en.pdf)
8. *Izvadak studijskih programa u STEM područjima znanosti. Ministarstvo znanosti i obrazovanja Republike Hrvatske.* (2018.) Retrieved May 6, 2019. from <https://mzo.hr/hr/izvadak-studijskih-programa-u-stem-podrucjima-znanosti-iz-upisnika-studijskih-programa-1>
9. *Koliko je Instagram korisnika u Hrvatskoj? (Infografika)* (2019.) Retrieved May 7, 2019. from <https://www.arbona.hr/blog/drustveni-marketing/infografika-koliko-je-instagram-korisnika-u-hrvatskoj/722>
10. *Maturanti i dalje idu linijom manjeg otpora: STEM izbjegavaju zbog lakšeg diplomiranja.* (2014.) Retrieved May 4, 2019. from <https://www.srednja.hr/studenti/vijesti/maturanti-i-dalje-idu-linijom-manjeg-otpora-stem-izbjegavaju-zbog-lakse-diplomiranja/>
11. *Politike Europske unije: Digitalna agenda za Europu, Ured za publikacije Europske unije 2014.* Retrieved May 4, 2019. from [https://europa.eu/european-union/file/.../download\\_](https://europa.eu/european-union/file/.../download_)
12. *Priopćenje komisije Europa 2020. Strategija za pametan, održiv i uključiv rast. Europska komisija.* (2010.) Retrieved May 6, 2019. from, [http://www.europski-fondovi.eu/sites/default/files/dokumenti/Europa\\_2020.pdf](http://www.europski-fondovi.eu/sites/default/files/dokumenti/Europa_2020.pdf)

13. Strategija obrazovanja, znanosti i tehnologije (2014.) NN 124/2014 Retrieved May 5, 2019 from <http://www.propisi.hr/print.php?id=13299>
14. Sveučilište u Zagrebu objavilo upisne kvote za 2019./2020.: više je mjesta nego lani. (2019.) Retrieved May 6, 2019. from <https://www.srednja.hr/matura/vijesti-matura/sveuciliste-u-zagrebu-objavilo-upisne-kvote-za-2019-2020-vise-je-mjesta-nego-lani/>
15. *Tko su hrvatski facebook korisnici. (Infografika)* (2016.) Retrieved May 7, 2019. from <https://www.arbona.hr/blog/online-digitalni-marketing/infografika-tko-su-hrvatski-facebook-korisnici/453>
16. Wilhoit Elizabeth D. (2016.) *STEM faculty response to proposed workspace changes* (Journal of Organizational Change Management, Volume: 29 Issue: 5) Retrieved May 4, 2019. from <https://www.emerald.com/insight/content/doi/10.1108/JOCM-04-2015-0064/full/html>
17. Zorko, T. (2015.) *Utjecaj tehnologije na razvoj oglašavanja. Završni rad.* Sveučilište Sjever. Koprivnica. Retrieved May 6, 2019. from <https://repozitorij.unin.hr/islandora/object/unin%3A27/datastream/PDF/view>

## THE NEEDS AND CAPABILITIES OF A QUALITY PRIVATE INITIATIVE IN HIGHER EDUCATION

**Djordje Nadrljanski**

*Full professor, University College of Inspection and Personnel Management in Split, Croatia  
dekan@vsikmp.hr*

**Mila Nadrljanski**

*Full professor, University of Split, Faculty of Maritime Studies, Croatia  
milamika60@yahoo.com*

**Veronika Nemetschek**

*Lecturer, Croatia  
Veronica.nemetschek@icloud.com*

### ABSTRACT

*The main goal of every educational reform is enhancing its efficiency, i.e. enhancing quality of education regarding the given level of its costs. In comparison with the EU, including its new members, it can be concluded that the overall public expenditures for education are not high, but the educational outcomes are not satisfactory. Educational reforms can be considered successful only if they lead to improvement of quality in education. The attitude that efficient system of higher education is indispensable for economic and social development is increasingly present. This sector is considered the key element in strengthening of economy and administration, as well as development of research generations and knowledge. The Bologna declaration says that the importance of education and educational cooperation is of vital importance for the development and strengthening of stable, peaceful and democratic societies, especially in the South East of Europe. Continuous and lifelong acquisition of new knowledge has become a daily necessity. With the development of technology, the flow of information has accelerated, numerous scientific studies are available through various media, and the accelerated pace of life simply compels on education and advancement regardless of someone's age. Education is no longer exclusively related to professional training, but it also applies to those areas that can help in in better presentation skills and job performance. In the last fifteen years, the media environment in which children and adults live has significantly changed. The ability to send information and stimulate learning has increased quite a bit. The educational environment at home has significantly enhanced: cable and satellite TV, internet, PC, mobile phones, home theatre, etc. You can talk about the possibility of establishing an alternative (multimedia) school in each home. You can also talk about how people are aware of the educational potential of the media surrounding them. The task of compulsory education is expanded with one more important goal: training for lifelong learning through new media.*

**Keywords:** *private schools, lifelong learning and education, e-learning, educational software*

### 1. INTRODUCTION

Why am I drawn towards Eastern mysticism and esoteric ideas? Back in 1978 I worked at the Institute of Informatics in Novi Sad and on one occasion the Institute was visited by a group of scientists from India. After conventional exchange of introductions, we continued to talk informally. At one point I was approached by one of the guests (a university professor from New Delhi) saying: Thank you, professor, on the thorough explanation of your education system, but allow me to express my disagreement with western education system. He continued: In the west it is common that somebody who knows a lot (that would be a teacher) keeps asking somebody who knows little (that refers to a student).

In ancient India, a student lived and grew next to a teacher and asked him questions about the world, gaining knowledge based on answers he got. That anecdotal talk motivated me to start a project on the department of Informatics. Even then it was obvious that students' homes were much better equipped with computer technology than education institutions. This was proved in a study which also revealed that students are mainly bored in class. Many students even quit their studies, and the interest in studying was decreasing. We conducted questionnaires, worked on projects, carried out reforms and the like, in order to make education system more efficient, but, unfortunately, we accomplished very little. This time we started with the premise of "education without alternative". The focus of this conference is "lifelong education", so we expect some new ideas and solutions that would provide an answer to a question of how to continue. Development of the processes that regulate financing of higher education, setting mechanisms for quality assurance, teacher and student mobility, autonomy and quality of management in higher education institutions are all identified as key priorities in development of European higher education in the years to come. Teaching and learning oriented on a student is a way of thinking and culture in the framework of a certain higher education institution. It is a process of learning to a large extent connected with and supported by constructivist theories of learning. It is characterized by innovative teaching methods whose goal is promoting teaching in communication with teachers and other students. These methods promote students as equal partners in their own process of learning, at the same time contributing in enhancing their abilities in problem solving, critical thinking and reflective thinking. The changes in environment are dramatic. They reflect in changes triggered by the process of globalization and informatization as well as in changes in institutional environment. The key change and the cause of all tectonic disorders is evidently an indisputable role of knowledge in a development of a society and in a progress of an individual. How to reform this area starting with the practical experience gained on many national and international universities and with an assumption of knowing basic megatrends in education and society as a whole? The essence of this paper is deliberation about the answer to this question. Our knowledge gained on university is our private knowledge and a private asset. Why should not an individual invest their money into that asset? Why do not all young people have the same opportunity to study in good schools around the world instead of only those who are sponsored by state or some other institutions? We advocate for a new system of (private) education that would affirm the following principles:

1. Enabling self-interest of all the participants in the process: students, teachers, administration and owners
2. The concept of providing (selling) services by the school to a consumer (student)
3. Competition within the system – a consumer (student) can choose who they buy services from (within the school, among the same schools and among different schools)
4. Knowledge and skills of students is an individual asset and therefore it has to be paid for
5. The position of everybody in the system depends on achieved results which are market-verified
6. Comparative analysis of principles implemented in other countries' successful reforms (without taking their solutions but only corresponding principles and mechanisms for implementation)
7. Openness of a system towards the flow of people and ideas
8. Internationalization of all activities (teacher, student and scientific project exchange)
9. System transparency

The area of education improvement is thankful for new ideas. Nevertheless, it is extremely dangerous to introduce revolutionary changes and experiments into education. Therefore, the ideas presented in this paper should be taken as comprehension that we are going this direction, taking step by step in making conditions for their implementation.

Why has the University College of Inspection and Personnel Management chosen to consider the topic of lifelong education? We, teacher and associates at the College, were encouraged to consider it as we are facing certain issues directly threatening our success and development which conditioned setting the clear goals. We can achieve these goals within transformation to modern societies that are based on new values, principles and foundations based on knowledge. In this regard, we expect creational support from all the participants. Today's youth in Croatia are mostly bothered by social and economic problems, in particular low standard of living, lack of perspective in life and unemployment. They consider unemployment not as isolated problem of their generation, but they put it in the real economic and social context, comprehending it as a problem with complex causes and long-term negative implications for the youth and the society as a whole. Unemployment especially affects the youth as one of the social groups which passes the turning point after leaving school and before they enter labour market. We are trying to solve this problem because young people expect them also in the segment of education. They are aware of the fact that adequate training is a condition for employment and consequently for providing living conditions and social promotion. The youth estimate they have satisfactory influence in private circles (family and friends), considerable influence in working or educational environment, and very weak in a local community and national policy. Such an estimation of personal influence can be linked with their opinion that their problems would be solved more efficiently if they participated in decision making at all levels. Despite of complex problems bothering the youth and awareness that their solution is equally complex (and uncertain), they are still optimistic, particularly concerning their own future. Also, theorists and researchers who study issues with the youth point out that the need for individualization and pluralization of lifestyles of the youth questions shaping of life according to traditional expectations. One of the key problems which our society is faced with in recent years and decades, and which affects all aspects of the society and all generations is certainly unemployment. Supporting the concept of contemporary trends in the higher education system regarding lifelong education in accordance with the Bologna Process and the Lisbon Declaration, as well as the needs of a local community and the social community as a whole, we have chosen to set a priority to development of lifelong education. We have set the starting elements of the process of lifelong education (learning) with the goal to stimulate the new paradigm of learning – education in the economy based on knowledge and its importance in development and meeting individual and social needs. These two notions, lifelong education and lifelong learning, overlap significantly as lifelong education implies the system of organizational, administrative, methodological and procedural measures which promote lifelong learning. Achievement of social goals is today based on using new ideas and information and acquiring new skills. The possibility of creating and improving knowledge, skills and habits and their efficient usage are the essential instruments of making overall social progress, strengthening of competitive advantage and an initiator of total development. Overall global political and economic crisis has shown that the production based on cutting edge technologies, although affected in short run, has shown resilience and the ability to adapt to new circumstances. Creation and transfer of data, with their application in solving everyday business issues presents the fundamentals of social product, export and employment. The topic is, therefore, education of adults and its tight relation to employment and labour market in general.

## **2. LIFELONG EDUCATION – IMPORTANCE AND EXPECTATIONS**

The notion of lifelong education is differently interpreted and accepted in different cultures and countries. One of the definitions of lifelong education says that it is the activity of learning during life with the goal of improving knowledge, skills and abilities within personal, civil, social and business perspective.

The idea of lifelong education stems from the assumption that a man is the greatest wealth of the society and therefore needs to be invested in. This includes all forms of education:

- formal education (school, college)
- non-formal education (workplace training)
- informal education, intergenerational learning (learning at home, exchanging knowledge in the family and amongst friends), self-directed education (an individual decides for themselves what and how to learn)

An economic development of a country depends on the quality of its human resources. Thereat, the primary factor of development is using human resources and investing in its quality. This is the time of fast changes in necessary skills and knowledge.

- Lifelong education is basic assumption for development and growth.
- Education system must be adapted and must offer a possibility of requalification and additional qualification.

Our concept for solving problems of the youth related to their preparation for life and work is based on the work of Bertrand Russel (British philosopher, historian, mathematician and social critic) who in 1952 wrote a book “The Impact of Science on Society”. He was the first to observe the start of the new epoch in civilization. He revealed and warned about the fact that science and technology change the world and that they would change the society itself. The danger of scientific and technological falling behind is a constant worry of a significant number of active population and young people in every country. This danger is one of the main motifs for education in the world. Modern democracy in its political, social, economic and cultural aspects can stand on solid foundations only in those countries where responsible people, capable to revitalize theoretical structures of the society by giving them concrete content, are increasing in numbers at all levels. In order to be successful, contemporary education today is expected to:

- be open to new conceptions and technologies,
- have full insight into technological advances and the results of technological experiments,
- support and encourage teamwork, and motivate participants in the educational process to achieve the best effects,
- be ready to take the necessary actions to change the system strategy when it is required by application of new methodologies and technologies.

### **3. FACTORS INFLUENCING THE EFFICIENCY OF LIFELONG LEARNING**

In today's world that becomes increasingly complex, some old questions sometimes seek new answers. Lifelong education is the concept by which each individual should be open to the continuous upgrading of their abilities, to acquire knowledge and skills to survive in a constantly and rapidly transforming social and economic environment. People are naturally curious, and curious people are attracted to new acquaintances, new experiences, new ideas and creative work. This finding served as a basic approach in considering our topic for this paper. The important thing is not to stop questioning. Curiosity has its own reason for existence. One cannot help but be in awe when he contemplates the mysteries of eternity, of life, of the marvellous structure of reality. It is enough if one tries merely to comprehend a little of this mystery each day (Albert Einstein). Curious people constantly seek new information, new experiences and new ideas and thus themselves create an environment that promotes the development of their intelligence. Their brain is never still, and it is known that if you do not use your brain, it withers. We cannot be very clever with withered brain. Curiosity has a positive impact on the success in school, college and at work. Curious people will wonder why a problem has occurred, how can they solve it, or why some workers are not motivated for work.

It is certain that, trying to find answers to these questions, they will be more successful at work than those who are not interested in anything. We are all at least somewhat curious but also different according to the degree of curiosity that we show. Curiosity is creative, without it there are no new discoveries, artistic creations, technological advancement, as well as personal improvement and development of every individual. Why is curiosity important?

- Curiosity stimulates activity of the mind.  
Curious people always question, consider and seek answers to their questions. Their mind is rather active than passive in finding answers. Mental exercise of curiosity strengthens your mind.
- Curiosity reveals new possibilities.  
When you are curious, you explore and contemplate new opportunities that may not be so obvious in a normal environment. Only a curious mind is able to look below the surface and discover new worlds.
- Curiosity brings the excitement of the discovery.  
You are simply not bored when you are curious. Routine and uniformity disappear. With active curiosity you will find new things that might interest you, your new mental toys.
- Curiosity is associated with high performance.  
Curious people are often considered as good listeners who successfully lead conversation. It can also be connected to knowledge: the more we learn, the more we want to know, do not we?

### **3.1. Motivation**

Motivation is the willingness to do something that is conditioned by the benefits to meet a particular need of an individual. It is about student participation in setting goals that will lead to increased acceptance of the goal as desirable one, as it would not be the case when their goals were set by someone else. The phenomenon of motivation is of utmost importance for course of teaching and its outcomes and it can affect the performance of other factors that are indispensable in the teaching process. We expect motivated and creative individuals who will actively participate in the study process and develop their creativity and innovation as well as all those who want to develop creative problem-solving skills. No one should choose a profession without taking into account their own abilities and predispositions. For lack of motivation there is no simple solution. Once you win this problem, it will appear again in the future. The key is understanding of your thoughts and the way they affect your emotions. The motivation and diversity of educational opportunities are the basic conditions for successful lifelong learning. It is necessary to raise the need for education and therefore the offer as well. Until recently formal education determined the policy and the way of acquiring education. In the continuity of lifelong learning, non-formal and informal education and learning stand out more.

### **3.2. Creativity**

Creativity educational public here and around the world is one of the most important factors for the success of learning and teaching. Creativity is a quality or set of qualities enabled, encouraged and challenged by creation and productivity. The world is a place where unpredictable things happen and there is a desire for high achievement as a way of controlling one's life. There is no creativity without knowledge, though too much knowledge can be an obstacle to creativity. Events that can seriously disturb or stop personal development can, in certain circumstances, become a positive developmental strength. There is a need for changes around us because the old ways do not work anymore.

The fundamental principles of teaching set by Johann Heinrich Pestalozzi are still dominating. They are:

1. the principle of obviousness - the beginning of abstract thinking - the perception of the phenomenon with as many senses as possible in order to gain more thorough knowledge
2. the principle of systematics of teaching - acquisition of knowledge from simple teaching contents to more complex teaching contents
3. the principle of upbringing in teaching - to raise and develop humanity in a child
4. the principle of accessibility - teaching content according to development level of a child's ability; the principle of durability of knowledge of skills and habits is achieved by repetition

There is also a very impressive pedagogical contribution of Jan Amos Komensky who established a new organization of teaching, introducing class, teaching subjects, curriculum, a lesson and a school year, and also elaborated education system trying to induce the development of educational institution. The general characteristics of the so-called reform of pedagogy and the new school, as well as the general aspirations of didactic and pedagogical concepts at the end of the 19th and the beginning of the 20th century are:

- adapt the curriculum to the abilities, interests and needs of a student's development
- facilitate progress towards the pace of work and development
- individualize teaching
- organize individual and group lessons
- support intellectual, emotional and physical development
- to create the conditions for a student's freedom
- student's evaluation free from the burden of selectivity, failure and discomfort
- provide a new role for the lecturer

In that sense, new features of modern schools and schools for the future have emerged. Educational institutions are obliged to ensure the development of a student at all levels: intellectual, physical, emotional, social, moral and spiritual.

#### **4. CONTEMPORARY VIEWS ON THE THEORETICAL BASIS OF EDUCATION - THE ROLE OF E-LEARNING IN LIFELONG LEARNING AS A COMMUNICATION PROCESS**

Over the past sixty years a number of solutions have been incorporated in the education system in terms of improving educational processes. These innovations have shown that partial solutions can achieve certain results in terms of increasing overall education outcomes. At the same time, they pointed to the fact that education systems must radically change if the efficiency of modern science and technology is to be optimally utilized. The new communication and information technologies and the media have allowed changes in education in general. There is a question of the relationship between the form and the essence of these changes. Rapid changes in the labour market, aging of the population, and more and more pronounced global competition point to the need of using all available skills and knowledge no matter where and how they were gained. By evaluating the outcomes of informal and non-formal learning, new opportunities are opened for individuals who have acquired certain knowledge and skills during their lifetime to obtain formal confirmation. E-learning is short for "electronic learning". This name usually implies performing an educational process with the help of information and communication technology. E-learning is an educational process with more participants using information technology for one or more purposes. A teacher and a student can be spatially remote and do not have to be active at the same time. Therefore, the successful educational process implies not only participants who attend classes and online courses and receive information from available literature and electronic sources, but also being in communication

with their teacher in order to get help and support in learning the educational content and have the opportunity for informal and social contacts: motivation, persuasion, explaining, giving instructions on how to work, adjusting the way of presenting information, asking questions and listening, providing feedback, receiving different questions and comments, encouraging and organizing group work among participants, commenting on group work, examining knowledge in front of the group. If the subject or course is based mainly on on-line education, it is possible that many factors affecting student motivation will be neglected or omitted. It is particularly important to bear in mind the different kinds of students' needs in e-learning as well as the ways of motivating them through adequate communication. Special tasks in such an activity are directed to: professional education, training, adult education, students, teachers, educational management, parents, methodological problems, media qualities, learning preconditions, didactic formatting, etc. Some professions are faced with much greater demands regarding the quality of social and communication skills than before. Likewise, teachers are increasingly faced with demands for social sensitivity and developing communication skills which includes their application in relationships with students, and appropriate communication among students in teaching.

## 5. CONCLUSION

To what extent should education be considered for a better understanding of the process of growth and development, learning, motivation, success, adaptation, creativity and communication? Under the influence of cyberneticists and system theorists, the renowned scholar and psychiatrist Berne<sup>1</sup> began to separate the latent, hidden and psychological level from the manifest, conscious and social level of communication. He noted that people sometimes send messages from different levels so that at the social level the message may sound as factual and objective, while at the psychological level it may have completely different intentions. These transactions are repeated and always end up with a feeling that confirms early decisions. The word “transaction” means message exchange between two or more people, and transaction analysis is actually a communication analysis. This area of scientific approach includes learning skills and methods for understanding, and systematic approach between behaviour, learning, and education. The purpose of this area is to achieve changes in the education process and overcome the didactic distance between lecturers and learners so that learning and development become natural, stimulating and interesting for both. Basically, transactional analysis is the applied psychology of education that offers the way to transform the educational philosophy and principles into everyday practice. In the organizational sense, the proposed model points to possible transformation of the educational institutions into the new form of work: new distance education institutions. The organizational advancement of the proposed model is essential. In addition to the interaction between user-content, manager-user there is also the interaction user-user. Synchronous and asynchronous learning phases are combined. Individual and group work is also complemented. As all these forms are included in the educational process, they ultimately complement each other in the methodological and methodical model of distance education. The didactic characteristics of the proposed model are set on the differentiated and individual principle of designing educational software in computer science teaching. The methodological characteristics of the methodological and methodical model are characterized by the method of active learning of the information content in the initial teaching. The model is distinguished by the project approach in which a team of experts is involved in the e-learning system, including an expert on the application of appropriate

<sup>1</sup> Berne, E. (1989). Što kažeš posle zdravo? Belgrade, Nolit. Transactional analysis and a rational approach to human behaviour. It is based on the assumption that all people are responsible for their thoughts, feelings, and actions and that they can learn how to respect themselves and others, how to think for themselves, how to make their own decisions and how to express feelings without endangering themselves or others. Source: Tatjana Gjurković and Jelena Vrsaljko.- PSIHOPORTAL - small school of psychology - LECTURE 13. What is TRANSACTION ANALYSIS?

pedagogical methods. In the technological field, the model is based on the application of computers, internal and multimedia educational software as a means to realize the educational process. In the structural sense, there is a completely new and original concept of content of multilevel features that structured the program material on the basis of rank of significance and invariance on: concepts, processes, values and facts. This has contributed to the advancement of information science in education. The current educational processes are characterized by closeness. This situation changes when digital media is introduced into teaching, particularly the Internet, which opens the whole process. The online information that students use are no longer processed and didactically reduced, and it is a special challenge for teachers. Such information must be evaluated and demand an opinion. At the same time, it becomes clear that there must be a goal in training the knowledge and skills of media that students should think critically, evaluate and, if necessary, use them. If a user of the educational software faces difficulties, the program itself should help them to find new steps or leave the process, but without consequences (without considering them as stupid). No program can solve any learning problem. This applies particularly to younger children who are not capable of reading and need special support from parents or older siblings. But in order to prevent those people to provide them with wrong explanations or make them confused or insecure, good educational programs should explain them steps in learning. The program itself should have stress reducing characteristics. For this, there are relaxation stages that use elements of pure recreation or regress. However, they should not be counter-productive and should calmly satisfy the aspect of intellectual requirements. Many lifelong-learning users show a tendency to provide the same answers, without having time to think. Therefore, they should come to the right answers. For this reason, the error feedback information should be separated from the data entry in order to comply with the "question - response - feedback information - new data entry continuation". If users are wrong, they should be encouraged to find for themselves the luxury of a sufficient time - to reconsider the problem again without any pressure. Most of them should find self-confidence instead of following the routine, react hastily and guess. They should keep in mind to stay focused regardless the problem that aroused if it is insignificant for their learning.

#### LITERATURE:

1. Memorandum EU o cjeloživotnom učenju, Bruxelles, SEC (2000) 1832
2. «Obrazovanje za sve», Svjetski forum obrazovanja, Dakar, 2000.
3. Đ. Nadrljanski: Kibernetike osnove modeliranja i projektovanja sistema obrazovanja „Misao“ Novi Sad, 1980.
4. Institut za razvoj obrazovanja // [www.iro.hr](http://www.iro.hr)
5. Tempus projekti: Udruga za razvoj visokoga školstva "Universitas "
6. Gruber, E.: Modernizacija pomoću fleksibilnosti daljnjeg obrazovanja, objavljeno u: Perspektive i tendencije obrazovanja odraslih u Europi, HZPOU, Zagreb, 2000.
7. S. Marjanović: Primena kibernetike u rukovođenju radnim organizacijama - Informator-Zagreb, 1970.
8. Značajne doprinose analitičkom vrjednovanju poslova u Jugoslaviji su dali: dr. Mijo Novak; dr. Vinko Suterer; dr. Stevan Kukoleča; dr. Vukan Dešić; dr. Živko Kostić; dr. Jovo Brekić; prof. Stjepan Han; Robert Ogorevc; dr. Olga Maček; Marija Novosel; Sič Ferenc; Spasoje Velemirović, Ratko Vuković i dr. Teorijsku i praktičnu razradu standardne metode vrjednovanja poslova znatno je razvio Robert Ogorevc. Svoja istraživanja je objavio u knjizi Vrednovanje rada - procjena radnih mjesta - „Informator“ Zagreb, 1976.
9. Berne, E.: Što kažeš posle zdravo? Beograd, Nolit, 1989.
10. M. Nadrljanski, Roguljić, Đ. Nadrljanski: Kibernetika u obrazovanju, udžbenik, Sveučilište u Novom Sadu, Učiteljski fakultet, Sombor, 2005.

11. Đ. Nadrljanski, M. Roguljić: Da li će za obrazovanje u budućnosti biti osnova e-learning i distance learning - funkcija medija agenata, naučni skup Promjenama do kvaliteta u radu škola, Beograd, 2005.
12. Nadrljanski, Đorđe, Obrazovni softver. Univerzitet u Novom Sadu, Tehnički fakultet „Mihajlo Pupin“, Zrenjanin, 2000.
13. M. McLuhan, Understanding media: the extension of man, New York, 1964
14. Helbig, Köhler, Lümkomenn: “Medienpädagogik“, str. 7. Kieser Verlag, Neusäß, 2001.
15. Medien, verstehen, gestalten, produzieren, aymopa B. Schelhnanna, P. Gaide, M. Gläser, T. Kegel, Verlag Europa Lehrmittel, Haan-Gruiten, 2002.
16. Prof dr Đorđe Nadrljanski: Obrazovni softver hipermedijini sistemi, Univerzitet u Novom Sadu, Novi Sad, 2000.
17. Prof. dr Đorđe Nadrljanski: Multimedije i virtuelna realnost u obrazovanju, Tehnički fakultet, Zrenjanin, 1997.

# ANALYSIS OF CREDIT RATING IMPACT - CASE STUDY OF THE CZECH REPUBLIC

**Simona Pichova**

*University of Pardubice, Czech Republic  
simona.pichova@upce.cz*

**Jan Zila**

*University of Pardubice, Czech Republic  
jan.zila@student.upce.cz*

## **ABSTRACT**

*In today's world, information and finance are the main drivers. The financial sphere is built on an important pillar and that is trust. Confidence in currency and issuer is important for consumers and businesses, for the entire economic system. For investors, the biggest obstacle is the lack of knowledge of what is happening inside the companies from which they intend to buy securities. Here are rating agencies that fill an important information gap by providing high quality and sophisticated rating. Credit rating agencies are therefore supposed to resolve the lack of information between issuers and investors, or between supply and demand for capital. This rating also applies to the banking institutions to which this contribution will be addressed. The article will present both internal and external ratings based on specific examples of banking houses in the Czech Republic. The aim of the paper is to describe the impact of credit rating agencies on market participants and also to assess the impact of credit rating agencies' evaluations on banking houses and their relationships with corporate clients. For this purpose, a questionnaire survey was conducted in the Czech Republic, from which conclusions are drawn. The main objective of the analysis is to determine the dependence on various factors, in particular, the confidence of banks in rating and the impact of rating on the confidence of corporate clients in banking houses will be verified.*

**Keywords:** *Credit rating agency, External rating, Internal rating, Questionnaire survey*

## **1. INTRODUCTION**

Rating is an independent assessment whose objective is to determine, based on a comprehensive analysis of all known risks of the rated entity, how the entity is able and willing to meet all its obligations on time and in full (Vinš, Liška, 2015). According to the United States Securities and Exchange Commission, a rating can be defined as an opinion of a credit rating agency on a particular date on a company's creditworthiness, security or liability. The International Organization of Securities Commissions and the Committee of European Securities Regulators define a rating as an opinion relating to the creditworthiness of an entity, credit obligation, debt or bond or issuer of such liabilities as an established and defined rating system. According to the European Commission, credit rating agencies issue opinions on the creditworthiness of a particular issuer or financial instrument. In other words, they assess the probability that an issuer will be in default either with its financial liabilities in general or with a certain debt or certainty with a fixed return (Kohout, 2011). It can be stated that in the 19th century, the bond market was dominated by companies that helped exchange by reporting on bonds and their issuers, but it is not yet possible to talk strictly about credit rating agencies and ratings as perceived today. The emergence of credit rating agencies dates back to the early 20th century, which brought with it the emergence of two major credit rating companies, which today dominate the global market in the field of credit rating services and together with the rating agency Standard & Poors form the so-called "Big Three". This is John Moody & Company, founded in 1900, and the Fitch Publishing Company, which dates back to 1913.

Both companies were first established on the market through the printing of quality financial statistics and analysis of bond companies. John Moody then focused on detailed statistics on stocks and bonds of financial institutions, government agencies, manufacturing, mining, energy and food companies, which was contained in his Moody's Manual of Industrial and Miscellaneous Securities in 1900. In 1909, he founded Moody's Investors Service, which was one of the first rating agencies. At that time, it focuses mainly on the evaluation of the bonds of railway companies. After 1914, he also published a manual focusing on the public sector and industry, and on government and municipal securities (Kohout, 2011). Founded originally by a flower dealer, John Knowles Fitch, in New York, Fitch Publishing Company produced financial statistics for bonds and subsequently for stocks. It was John K. Fitch's company that introduced the well-known rating scale of AAA to D in 1916. In 1916, Fitch Ratings and Standard & Poor's begin to offer rating services (Alcubilla, Del Pozo, 2012).

## **2. ESTABLISHMENT OF RATING AGENCIES AND ITS REGULATION**

The 1920s post-war years were marked by economic prosperity as trade grew and thus demand for the services of credit rating agencies. The principles of rating agencies were based on an already built system where investors paid for the services of these agencies, mostly in the form of a subscription. Bond market participants can be divided into three categories in the first half of the 20th century. First, bond issuers who need to raise capital and do so by offering and selling their bonds. Furthermore, investors who have excess capital and want to secure it, respectively, accumulate, so they are interested in investing in bonds. But they worry about the risk of losing, that is, buying such bonds on which they can not only gain anything but even lose. Finally, credit rating agencies that help close deals by providing arguments for lack of confidence by assessing both issuers and individual bonds and selling this information to investors. It can therefore be said that credit rating companies were extremely interested in providing undistorted data to paying customers - investors in order to best assess the potential risk of possible investments. Awareness of this principle is very important, ie who has whom and for what to pay, because later the financing of credit rating agencies turned 180 degrees. Resp. it occurred that credit rating agencies started charging issuers for bond ratings. In the thirties of the twentieth century came the first significant market regulation. In particular, in 1931 banks were required to label bonds with a lower face value. An important milestone in the development of rating agencies has been on the United States in 1936, the introduction of legislative demand for at the US bank, when investments were checking whether the proposed investment does not fall into the category of securities that are classified as speculative, and the recognized rating manuals. This significantly strengthened the role of credit rating agencies. The next step was taken by the SEC in 1975 in a regulation appointing nationally recognized credit rating agencies which are listed in the SEC database under the designation NRSRO (US Securities and Exchange Commission, 2018). A credit rating issued by registered NRSRO agencies may be used by other financial companies for certain regulatory reasons. Currently there are 10 rating agencies, see Table 1 - NRSRO overview. The use of the NRSRO agency rating is that banks and other financial institutions may not have the same amount of capital in reserve if the financial institution has invested heavily in highly liquid and highly secure securities such as US government bonds or commercial papers from very stable companies. The security of these securities under this approach reflects in credit ratings precisely some highly respected rating agencies, respectively, those belonging to NRSRO according to SEC (U.S. Securities and Exchange Commission, 2017).

*Table following on the next page*

*Table 1: List of credit rating agencies by the NRSRO (authors' own processing based on U.S. Securities and Exchange commission, 2017)*

Name	Rating category *	Country
A.M. Best Rating Services, Inc.	B, C, D	USA
DBRS, Inc.	A - E	USA
Egan-Jones Ratings Company	A - C	USA
Fitch Ratings, Inc	A - E	USA
HR Ratings de México, S.A. de C.V.	A, C, E	Mexico
Japan Credit Rating Agency, Ltd.	A, B, C, E	Japan
Kroll Bond Rating Agency, Inc.	A - E	USA
Moody's Investors Service, Inc.	A - E	USA
Morningstar Credit Ratings, LLC	A, C, D	USA
S&P Global Ratings	A - D	USA

\* *Rating category: A - financial institutions, brokers or dealers; B - insurance companies; C - corporate issuers; D - issuers of asset-backed securities; E - issuers of government securities, municipal securities or securities issued by a foreign government.*

These steps again strengthened the position of credit rating agencies. Especially the ten chosen by the SEC. Despite the increasing demand for credit rating agency services in the last few decades, the total number of credit rating agencies has been around 160. 21 agencies provide credit rating services within the EU. The market is very concentrated, the value of the HHI index is more than 1000. Barriers to entry are quite significant. In particular, this is a limiting demand for small credit rating agencies that enter or could enter the market. This is due to market partitioning and issuers' demand for ratings from large credit rating agencies with sufficient credibility. It can therefore be said that issuers demand rating services from well-known and renowned agencies in order to provide investors with highly credible ratings. This, among other things, also affects the cost of capital raised by them. Another barrier to entry is the high cost of issuer change, or administrative and regulatory barriers that hinder greater competition. These are fixed element costs, which represent a much larger proportion of the total costs of small credit rating agencies. For example, the requirement for an independent supervisory body of full-time staff represents relatively high costs for smaller credit rating agencies. For a typical small credit rating agency with approximately 20 employees, wage spending is about 15 % of total spending. Adding a full-time supervisor could increase this expenditure to 20 % (European Commission, 2016).

*Table following on the next page*



*Chart 1: NRSRO market share (authors' own processing based on U.S. Securities and Exchange commission, 2017)*

### 3. RATING AND BANKING INSTITUTIONS

It is in the long-term interest of banks, but also of financial markets, not to repeat the scenario of the recent economic crisis. The importance of banks' credit prudence is greater than it has been so far. However, the question remains, how can this be helpful rating and what role should be played by banking market regulation, eventually. rating and rating agencies. Obviously, rating is itself a very comprehensive approach that offers a thorough credit risk assessment when assessing a wide range of areas such as: macro environment, market environment, operating environment, selected strategies, human resources and the financial results of the audited company. However, in the light of the economic crisis, when credit rating agencies have morally failed - although credit rating agencies were not the only ones who failed - the continued use of external credit ratings without fundamental changes is not only illogical, denial of lessons from recent history, to some extent at risk. In this respect, some of the initiative has been partially taken over by central banks. Especially within the international financial institution BIS - Bank for International Settlements, which was founded in the much-mentioned era of the 1930s and which associates approximately 60 central banks of the world (Bank for International Settlements, 2019). In 1988, the Basel Committee on Banking Supervision - BCBS published a set of minimum capital requirements for banking houses. In 2004, Basil II, in order to change international banking standards, was followed by a check on the holding of a certain level of capital, in particular with a view to protecting banks' financial and operational risk. In principle, the agreement applied a simple rule: the greater the risk the bank is exposed to, the greater the amount of capital that the bank needs to ensure its solvency and overall economic stability. Basel II introduced banks' risk and capital management requirements for their credit, investment and business activities. Basel II also introduced an internal rating method called IRB - Internal Rating- Based Approach. The issue of IRB was described by BCBS in January 2001, at the end of the dot-com crisis. Basel 2.5 and Basel III also count on IRB, where it is part of its basic pillar (Basel committee on banking supervision, 2017). IRB is used in setting requirements by banks for credit risk and for determining capital adequacy. This requires the right data, where the bank monitors and evaluates all available data on its clients, records and monitors their behavior, both quantitative and qualitative.

As in the case of external ratings, the price of the capital provided is based on the credit risk of the client. In particular, the probability of default - PD, default loss - LGD, default exposure - EAD and maturity - M are assessed. These are inputs for risk weighting functions for each asset class to achieve the overall risk, thus risk-weighted assets - RWA , (Valová, 2010).

### 3.1. Internal rating

In the corporate category there are five classes of specialized loans. The first is project financing, ie the financing of industrial projects based on the projected cash flows of the project. Another is object financing, respectively. financing physical assets based on projected cash flows primarily obtained through the lease or lease of the asset. The third is commodity finance, ie the financing of reserves, receivables or stocks of commodities traded on the stock exchange, where the exposure is repaid on the basis of the commodity sale. The fourth is revenue generating real estate, which is the real estate financing that the borrower usually leases to generate cash flow to pay back the exposure, and the last is commercial real estate with high volatility, especially commercial real estate financing that exhibits much higher loss volatility compared to other forms of specialized loans. For these areas, a number of factors are considered to be involved in the IRB calculation. Among other things, assesses the client in relation to the size of the market, barriers to entry, the size and strength of competition, built prestige, attractiveness margins, pricing pressures, customer s ko supplier relations, affect the price of raw materials and management level.

### 3.2. External rating

The external markings consist in the evaluation of the aforementioned credit rating agencies. Below is an external rating of selected ACTIVE banks in the Czech Republic. The Czech National Bank maintains a list of regulated and registered banks and branches of foreign banks operating in the Czech Republic. As of 31 March 2019, there were 51 companies in total. Bank houses that have been rated by Standard & Poor's have been selected . The rating is long term local currency.

*Table 2: Selected banking houses rated by Standard & Poor's in the Czech Republic (authors' own processing based on Standard & Poor's rating agency, 2018)*

Bank houses	Rating mark
Citibank Europe plc.	A+
Česká spořitelna, a.s.	A
Československá obchodní banka, a. s.	A+
ING Bank N.V.	A+
Komerční banka, a.s.	A
mBank S.A.	BBB+
MONETA Money Bank, a.s.	BBB

## 4. ANALYSIS OF RATING IMPACT ON CORPORATE CLIENTS

The aim is to analyze the influence of ratings on banking and corporate client relationships and test their dependence on various factors, in particular the relationship between banks 'confidence in rating and the impact of rating on corporate clients' confidence in banking houses. Data collection was carried out in the form of an online survey, corporate bankers from four banking houses in the Czech Republic were approached.

Return was 40%, of which half of the respondents had a banking practice in length 11-15 and the other half had experience in the banking industry for more than 16 years. It can therefore be stated that respondents who completed the questionnaire have a relatively large experience in the field of banking. This suggests that the quality of the responses they have given will be indicative of the investigation.

#### 4.1. Results of the questionnaire survey

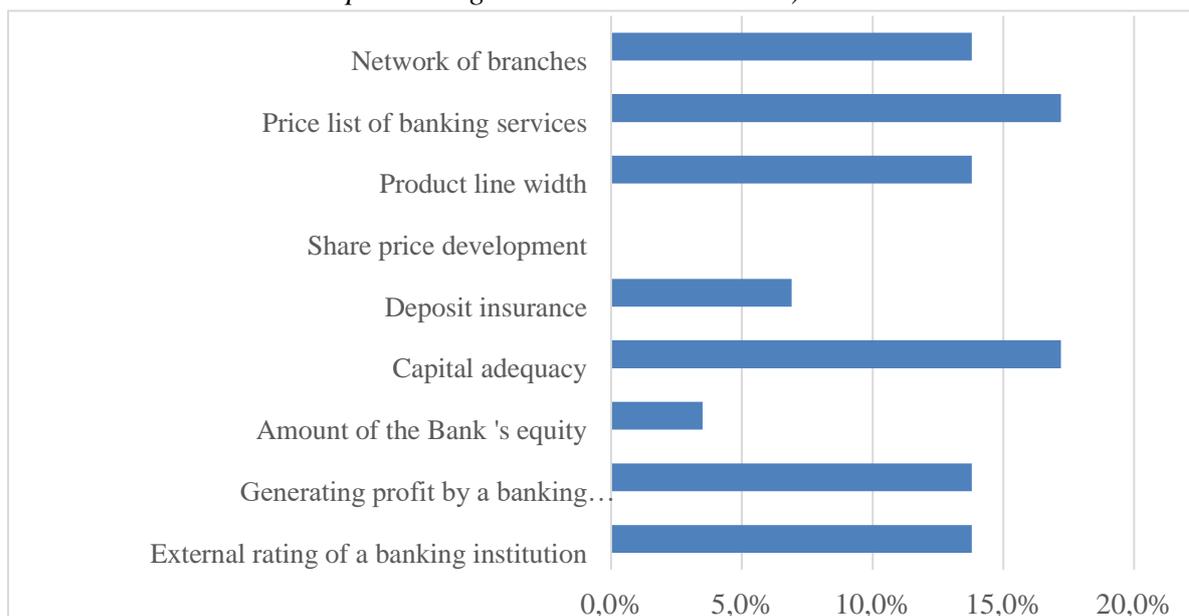
The questionnaire survey contained a number of questions, where the answers of the respondents are captured and evaluated.

*Table 3: Results of questionnaire survey questions (authors' own processing based on own research)*

Question	Result		
	Yes	No	Other
Do you use a credit rating from credit rating agencies to operate?	25 %	75 %	x
Is there an interest of corporate clients in rating?	25 %	75 %	x
Does the bank's external rating affect client confidence?	25 %	62,5 %	12,5 %

When asked about the use of external ratings in practice, respondents had a choice of options: retail, businesses, institutions, sovereign, stocks, collateral. The questionnaire survey found that the most common practice is the external rating used for businesses. In addition, the respondents were also asked to answer a question, which was aimed at finding out their opinion on the credibility of external ratings from reputable rating agencies. The question was asked in general terms and was to see if the answers would reflect a certain shadow of doubts that were placed on credit rating agencies in the recent economic crisis. When asked if respondents trust external ratings from reputable rating agencies, all the answers were the same and that they "rather trust". To determine which aspects have a significant impact on the relationship, respectively. The confidence of corporate clients in the bank house, respondents were asked to choose from several options, with multiple choices. The impact of the bank's external rating on client confidence in terms of various aspects is shown in Chart 2.

*Chart 2: Selected indicators affecting the confidence of corporate clients (authors' own processing based on own research)*



The subsequent part of the questionnaire focused on the use of the internal rating used by banks in accordance with Basel II, Basel 2.5 and Basel III in determining the requirements of credit institutions and capital adequacy by banks. The general risk management practices of banking enterprises used to manage investments in their own banking portfolios should be in accordance with the Bank's internal guidelines. When questioning the use of internal ratings in a corporate environment, respondents again had the following options: retail, corporations, institutions, sovereign, stocks, collateral. Respondents were able to choose more options, with the most used internal rating for businesses (selected by all respondents), institutions (chosen by 80 % of respondents) and collateral (selected by 60 % of respondents). For stocks, retail and sovereign, the internal rating is hardly ever used. The other findings of the survey the following facts: all respondents perceive internal rating as a reliable tool, 20 % of respondents actually very reliable. Internal rating, respectively. According to 80 % of respondents, its methodology is changing bank houses once every five years, and 20 % of respondents said it changes even once a year.

## 5. CONCLUSION

The aim of the questionnaire survey was to look at the issue of rating impact from the perspective of banking houses. In order to do this, it was necessary to address the employees of banks, who are responsible for relations with corporate clients and who actually establish, maintain and maintain these relationships in practice. From the answers obtained it can be stated that the rating is used by every banker, or internal rating, respectively. In the case of external ratings, only 20 % of respondents are chosen to use them in practice, but it can be observed that 80 % of respondents believe that external ratings affect bankers' relationship with their corporate clients. This implies that, although some respondents do not directly use an external rating, they believe that their bank's rating affects the confidence of clients in their institution. The lack of available information, combined with the significance of rating and its influence, was one of the motives that led to this work. The results of the collected data can be partially compared with foreign sources. From the collected data it is clear that the respondents have more internal rating than external rating. This also agrees with the view Boston Consulting Group (Bochtler and col., 2019).

## LITERATURE:

1. Alcubilla, R. G., Del Pozo, J. R. (2012). *Credit Rating Agencies on the Watch List: Analysis of European Regulation*. Oxford: Oxford University Press.
2. Bank for international settlements. *About BIS – overview* (2019). Retrieved 03.03.2019 from <https://www.bis.org/about/index.htm?m=1%7C1>
3. Basel committee on banking supervision. *Basel III: Finalising post-crisis reforms* (2017). Retrieved 23.03.2019 from <https://www.bis.org/bcbs/publ/d424.pdf>
4. Bochtler, S. et al. (2019). *Global Risk 2019: Creating a More Digital, Resilient Bank*. Retrieved 26.03.2019 from <https://www.bcg.com/publications/2019/global-risk-creating-digital-resilientbank.aspx>
5. Directorate general for financial stability, financial services and capital markets union; European Commission. *Study on the state of the credit rating market* (2016). Retrieved 09.02.2019 from <https://publications.europa.eu/en/publication-detail/-/publication/38a23d36-f63e11e5-8529-01aa75ed71a1/language-en>
6. Encyklopaedia Britannica. *New Deal – United States History* (2019). Retrieved 24.01.2019 from <https://www.britannica.com/event/New-Deal>
7. Kohout, P. (2011). *Finance after the crisis: Europe on the road to the unknown*. Prague: Grada.

8. U.S. Securities and Exchange commission. *Current NRSROs* (2018). Retrieved 20.01.2019 from <https://www.sec.gov/ocr/ocr-currentnrsros.html>
9. Valová, I. (2010). *Basel II risk management with a specific focus on internal credit risk ratings*. Brno: Masaryk univerzity.
10. Vinš, P., Liška, V. (2005). *Rating*. Praha: C.H. Beck.

## ECONOMY AND GLOBALIZATION

**Sladjana Zivanovic**

*Faculty of Business Economy and Law, The Adriatic University  
Bar, Montenegro  
sladja.nautilus@gmail.com*

**Sanja Smolovic**

*Naval Faculty, The Adriatic University  
Bar, Montenegro  
sanjasmolovic83@gmail.com*

### **ABSTRACT**

*Nowadays, globalization implies services and goods, people and ideas flow among countries. Taking the economic point of view, the planet Earth is unique. Globalization has more and more been directing us to a state corellativeness starting from individual influence conveyance from one part of the world to the other one until it comes to global scientific policies. Globalization caused huge changes in economy, in the environment, in geopolitics. Globalization influences new economy growth conditions along with the occurrence of new products and services. Concerning the planet of Earth environment, ecological sustainability has to be regarded. Balkan with its specificities makes a constituent part of the Planet. Globalization does not involve only a market globalization but it goes further into the project of modernization and creating rational society. Regarding economic forms as the only ones, would prove wrong, they often don't even appear to be most decisive, although economic issues make the core of international relations. Negative phenomena occur along with positive ones, mostly referring to economic inequality resulting in globalization not having solved an important issue of the relation between the rich and the poor.*

**Keywords:** *globalization, economical inequality, international collaboration, income*

### **1. INTRODUCTION**

The emergence of a global society with its characteristics has its negative and positive consequences. The most important negative consequence of globalization is unequal economic development (Vučinić, 2005). With regard to positive consequences, global societies are reflected in increasing living standards, world market integration, greater democracy, scientific knowledge becoming available to the general public, etc. (Gidens, 1998). At the end of the 20th century, globalization was realized individually and unequally and brought about great changes in the region, as well as in geopolitics and geo-economic relations. New conditions are being created in economics and approaches. In this case, the education that announced the changes must be addressed. The fact is that economics cannot be viewed separately from the technique, social and cultural dimensions. It is being tried to create a new foundation for the economics with new models of economic growth that need to be proven. Globalization is a commonly used word that affects the lifestyle and power of the market. Behind the very rapid development and achieved success of information technology, a new movement that is taking over the planet is emerging. It is necessary to determine the existing situation at the beginning of the 21st century and to analyze the processes with the relation of the main historical factor coming from the West. The term globalization is not simple, and this is alluded to by the fact that all knowledge from the past becomes useless. So, we need move go with the times and follow the changes in technology, economics, politics and change everyday environment. The paper will discuss the relation between globalization and the expected economy with environmental sustainability and the development of the current situation with science, technology and technique.

## 2. THE CONCEPT OF GLOBALIZATION

Globalization denotes the changes that occur in modern society (politics, economy, culture, etc.) that lead to international exchange and international dependence in the world. The rapid development of the globalization process brought up technological advancement and worldwide increased human activity by the rapid flow of information. Major social, political and cultural changes have taken place and the term globalization has been given a "frequency connotation" (Gidens, 2005). There are differing opinions about globalization, and the historical fact that human societies have undergone similar "global" changes (expansion of major religions and civilizations, military conquests, etc.), globalization, as Pečujlić (2005) has seen, represents the enduring pursuit of humanity. From a scientific point of view, globalization is an objective, continuous, unstoppable process of uniting the world in all spheres (economy, politics, culture, civilization, communication, etc.). From an ideological point of view, globalization is an effort of the world power of the West to conquer the world economically, politically and militarily. Pečujlić points out (2005: 5) globalization is a concept that symbolizes the spirit of our time, a powerful force that shapes the life of the modern world.

## 3. VARIOUS ASPECTS OF GLOBALIZATION

Globalization, through its manifestations, extends through all the spheres of modern society. The economic aspect of globalization is the organization of production globally (in a planetary sense). This level is enabled by economically strong international companies that are financially and organizationally ready for a rapid process of products, capital, ideas, people. Multinational companies include millions of people around the world who are interconnected despite their long distances in their business activities. They oversee planetary resources, capital and technology. In this way, they expand the economy without borders and operate as if there are no social and political obstacles. Hence it is about the flow of capital all over the planet. The development of technology in the field of informatics and communication plays a special role here. In global economic integration, international capital flows and international term flows move cyclically, with very rapid growth, much faster than overall product growth. Finances on a global plan have become a digital business. In today's conditions, the financial market is inside a computer network. The revolution in informatics has turned the real into the virtual one, i.e. cyber capitalism that is why not only reforms of the financial system are needed, but complete restructuring in IT and telecommunications together with creating the conditions for controlling the new reality. Political globalization does not know the boundaries of nation-states in the field of market standards, protection of human rights, the natural and social environment. In this case, a system of global governance is created, taking over the present role of the state and creating a new international state. "The weakening of state power is particularly noticeable in the area of finance" (Dujšin, 1999). "Global politics becomes multi- civilization politics" (Milardović, 1999). Abandoning the old and embracing new, broader identities take place. Globalization culture represents an interstate orientation towards the creation of a unique world culture, that is, this dimension constitutes the permeation of different world cultures and customs. Of course, something like this can be achieved by homogenizing national cultures (different styles and views). It is also important to emphasize that through the flow of goods, capital and people across national borders, the flow of habits, customs and culture takes place. The process of culture in different people provokes different reactions. The cultural industries (film and music) contribute most to the rapid spread of culture and popularize mass culture, mostly American. The United States, as well as the United Kingdom, Germany, France, the Netherlands, Australia and Japan and the ownership of private multinationals are largely under the auspices of those countries. These developed countries have made commercialized popular culture with the help of new technology. IT globalization represents communication globalization.

The information-sharing process has become a worldwide process that is expanding at a meteoric rate. The globalization of science and technology represents a process with a universal product that contains the knowledge and experience of humanity as a whole, which has a utilitarian significance for all peoples of the world. Language globalization entails English language as the world language, but for a reason, because it has become a dominant language because of its complementary relation with information technology. "English dominates in the business world and increasingly suppresses other languages from school and official use" (Mlinar, 1990). Terrorism globalization is pointed on to us to by the fact that terrorist attacks are occurring on the entire planet and no country in the world is protected. The globalization of an image of the world that is forcibly sought to impose on all of humanity by activists of the new USA-led world order. The advocates of globalization point out that globalization is an inevitable process that cannot be stopped. Active advocates point out that this process brings progress in all its dimensions, with the goal of making everyone (rich and poor) richer. Furthermore, it is emphasized that globalization contributes to the intensification of human relations with their global thinking. Globalization of environmental and social pollution refers to the environmental consequences that affect all countries in the world. But the global problem of environmental protection cannot be viewed separately from the economic and political dimension. Which can be shown in the following example. Large international companies have operations in several countries in the world. Their production depletes non-renewable reservoirs as well as other raw materials and pollutes the environment and poses a threat to the health of workers. Environmental protection needs to be taken care of by States in a way to implement legislation that regulates environmental pollution or to be enacted by international organizations. To conclude, there is a concern about environmental pollution (the economic dimension) and the state's obligation to pollution (the political dimension).

#### **4. EXPECTED SITUATION IN ECONOMICS**

Economics comes in a special form, but especially in the context of the inseparability of globalization from change, such as conditions of growth, global rule. However, political leaders and responsible people do not abandon the old conceptions. The growth of the economy is coming back, unemployment is rising. This situation, as an ideological-political matrix of the socio-political and social system, creates very unfavorable conditions that cannot be improved. Today, as people move closer in space and time, inequality drives them away more and more, work is being replaced by machines more and more, concern, poverty, social insecurity are present more and more, environmental degradation are increasingly occurring natural disasters, and even life is called into question. (Stipetić, 2000). Today's economy that faces setbacks, crises, fractures that are being created, but in this situation, a model of cooperativeness, indulgence with other institutions, with greater solidarity must be found. In today's conditions, in order to continue our lifespan, we must survive the revolution as a whole. In every pursuit of a better tomorrow, there is a desire to bring about change that brings new hopes, not the spread of danger. However, as with all the revolution so far, it is expected that this will bring new hopes, but also increased dangers, especially for less educated persons, institutions with traditional production, and with all these, countries that are lagging behind in development, developing countries with no strategy and social dimension. The future hopes of the expected economy are growth of the economy, increase of employment, creation of new products, new and better conditions, reduction of inflation. But with all these benefits that are expected of an economy, the difficulties that an expected economy can bring must also be borne in mind. Of course, for these useful expectations, special conditions from the expected economy are also important, such as a large accumulation of capital, the presence of the necessary resources, along with quality human potential. This is required and enabled by globalization with new information and communication technology but this facilitates and accelerates globalization.

However, the fact that globalization is slowing down, as well as having a negative impact on employment and the social dimension, must also be emphasized (Holton, 1998). The end of the 20th century is connected with the processes of globalization and changes in the economy. The process of globalization is done in its own way, on the neoliberal doctrine model, given that most countries are on the path of development. Globalization, with its technical and technological progress, is changing the economy. Technical progress in the long term produces continuous development, which is reflected in the global productivity of the factors. In the last years of the twentieth century, there was an increase in US labor and capital of 5% annually from 1990 to 1995, and 1% annually from 1995 to 1999. The difference in the increase in global productivity has affected only some sectors, predominantly related to computers, etc., but that's only 2.5% of the US economy. The rate of productive investment in the US has increased significantly, with IT equipment accounting for 40% of productive investment” (Stipetić, 2000). Based on an indicator of capitalization intensity that is increasing significantly, so in 2000 capital per capita in the US has increased 4.5%, which is higher than GDP growth rate. This suggests that capital and new technologies are major factors of development, which represents the fact that countries that have capital and use modern technologies also achieve good social development. Most countries with obsolete technology are widening the gap in economic development level, as measured per capita by GDP. In the concept of today's economy, globalization plays an important role, so in that sense it is important to look at the economy of yesterday and today as well as the theoretical aspects of economics. Economic viability is a particularly interesting indicator in today's economics, which points to our knowledge that today's state of the economy will not be mechanically projected into the future. In addition to the fact that the world is undergoing major changes, the current economy is creating new communications with a particular focus on telecommunications and other systems, which contributes to bringing the world together. Significant economic changes are also happening in relation to industrial structures, which today are founded on the basics of sustainable development, where environmental problems are significantly emphasized. Today's economic conditions have led to the creation of networks that function at the level of the planet - Earth and space, where the IT sector is playing a major role. The current economy also enables e-commerce. The globalization of the world has contributed that the current economy, the financial system and its parts get a new role. The classic concept of company functioning is moving to another dimension, better, of higher quality. The current economy is based on innovation. Globalization processes and the current economy create multinational companies that introduce individual countries and world institutions into a global model of exchange of goods and services. The International Monetary Fund, the World Bank for Reconstruction and Development, etc. can be highlighted here. This context of globalization and the current economy is leading to a change in the relation of nation-states. The process that takes place in multinational companies increases their role and results in significantly higher foreign direct investment, which greatly reduces the significance of borders, customs barriers, etc. (Hazel, 2000). In the present conditions and with the present economy, it requires the organization of a different management. The present time emphasizes strategic management in the context of sustainable development. The current economy is also increasingly advocating new work relationships, emphasizing the importance of educating the workforce with new education methods. Particularly significant role is attached to higher education, which guarantees the application of new technology, and this is all reflected in a greater allocation of resources for researches and development. Issues from the current economy play a significant role in international politics. This is all accelerating the opening of borders, liberalizing exchanges, favoring multinational companies that present a planetary strategy. States will generally be engaged on the side of their national companies and pursue proactive policies to conquer foreign markets and control socially strategic sectors.

The aspiration of the state for power and affirmation of their rank on the world stage, which depends on the economic strength, competitiveness of their companies and the places they take in world trade, is more important than their military capacity.

## 5. ECONOMIC GLOBALIZATION

The basic segment of consideration of globalization is the economic dimension, while other dimensions are more in the function of the economic dimension. "Economic globalization minimizes the role of the state but prevails on the free market on the principle of liberalism, based on the good functioning of the international market with the international institutional framework. In a way, Economic Science turns to financial globalization of creating large capital and global companies with a boost to world trade and its liberalization. "The end of the twentieth century was marked by the following major events that influenced the globalization of the economy: the collapse of the Eastern European socialist bloc with the abandonment of the socialist economy, the creation and strengthening of the North American Union, the European Union and the East Asian Union, more recently the rise of the BRICS economies, the globalization of the world economy on the basis of permanent scientific and technological discoveries and the process of internationalization of capital and concentration of economic power" (Leković, 2001) A very important factor for the development of globalization was the global exchange of information through information - communication technology. Furthermore, when the technology of mobile and smart phones is added to this one, the rapid exchange of various information is enabled. Information technology leads to the displacement of jobs on all continents because a new time has come in which jobs are not designated as fixed destinations. "Increasingly, thermal globality is being heard to indicate a state where the process of globalization seems to be over, the barrier is gone, and there is a new global reality. The term was first used by Daniel Jergin in 1998 and further clarified by him in his paper work" (Yergin, Stanislaw, 2005). This term is most commonly used for competitive advantages. "This situation is characterized by a structural shift in trade flows, so companies compete with each other for all consumers, suppliers, partners, capital, capacity, distribution systems. The current hierarchy of economic forces and influence is being demolished, power is shifting from developed countries of the US, EU and Japan to companies from developing countries, forcing former leaders to adapt. The emergence of new business and management rules that are tailored to the global decentralized business environment" (Sirkin et al., 2010). One of the important factors for the normal functioning of the global economy is the stable economic situation. The economic crisis has been known since ancient times, but it must be admitted that the economic crisis that began in 2007 had a negative impact on the finances of all the economies of the world. "The expansion of lending with relaxation of credit conditions, deregulation of financial instruments has led to consumption growing faster than income. Such an increase in aggregate demand has led to an unsustainable degree of indebtedness of many costumers, insolvency, collapse of commercial banks and the price of financial assets. The crisis in the financial sector soon shifted to the real sector with known consequences" (Krugman, 2013). "In addition to the aforementioned economic consequences, globalization has given rise to many other problems of ethical, human, psychological, environmental and social nature. The first consequence of globalization is related to a deep crisis of morality and value systems. There are three basic ethical challenges that have led to the global crisis 1) the enormous greed expressed through the insane race for profit; 2) absence of empathy and elemental feeling for the other person; 3) an ethos of wastefulness modeled in a way that encourages borrowing, acquiring and spending. Such a life orientation produces stress in humans, leads to mental health hospitals, to conflict situations within families, results in loss of happiness and neglect of emotional, friendly and human social relationships" (Yang, et al., 2012).

## 6. THE RELATION OF GLOBALIZATION TO THE MENTAL STATE OF MAN

The relationship between globalization and psychology in research could consist in examining the attitudes of ordinary people towards globalization, specifically how ordinary people think about globalization, what they notice, how they accept it, so perhaps a better approach might be found here. We also need to examine how the specifics of "globalization" are interpreted, what is the active psychological response to processes of globalization, does globalization influence the emergence of creativity and the improvement of adaptation mechanisms? So far, some researches have been done on personal "understandings of globalization" and how ordinary people accept these processes, that is, whether a distinction "between globalization and modernization, Westernization and Americanization" can be made. "Major social changes are coming with the Westernization, they include accelerated population growth, widespread migration, human rights violations, increasing violence and crime, the weakening and destruction of local culture, clashes between cultural groups, substance abuse. All these developments are factors that influence mental health and psychological well-being." (Marsella, 1999). From all this, one might think about the emergence of a "new psychology of the global community" with respect for multidisciplinary, multicultural and multinational interests. Please note that there was also one survey in Hong Kong with the technique mentioned at the point where eastern and western civilizations collide. "This research has shown that Hong Kong people differentiate between modernization and westernization. Modernization is a process that includes the collection of scientific knowledge, its instrumentalization in the educational process and in management. For them, Westernization is the process of adopting and incorporating the social and moral ideals of the West, such as human rights and freedoms and democracy into local cultural value systems" (Fu, Chiu, 2008). Also, a research has been done in the United States and China. "The survey found that respondents believe that globalization is related to Americanization, but at the same time different from it, Westernization and modernization, that is, people associate Americanization with Westernization, since the United States is a major promoter and exporter of social and moral values and practices" (Yang et al., 2012). From this research it can be concluded that globalization differs from modernization and westernization, but understanding of globalization has a great variability. The analysis presented by Yang and others confirms "It has been proven that people from different backgrounds understand the elements of globalization in a very similar way, including global business ventures - brands, information technology, geographical mobility and migration, global disasters, and international trade regulations in the notion of globalization" (Yang et al., 2012). Many authors believe that various societies have national theories about globalization movement, with the statement "people mostly think that the levels of development achieved today are higher than in the past and expect them to continue to grow" (Kashima et al., 2011). Norasakkunkit and Uchida (2011) point out, "how the unique cultural histories of Australia and the countries of the Pacific are influencing people's (profane) perceptions of globalization and emerging social changes. The way in which globalization is perceived varies dramatically even within one society." The "cultures mixing" is in some way influenced by the migration of people due to economic factors, and the contacts influence the approaching and positive reaction between cultures. "Accelerated globalizations, and the mixing of cultures, people can react either positively or negatively to influences from global or foreign culture. Activating patterns from local and foreign cultures can at the same time sharpen the contrast between cultures and make it very obvious" (Chiu Cheng, 2009). Research to date has proven important factors that condition the rejection responses to globalization, "fear for existence" (Torelli et al., 2011), "identification with local culture" (Tong et al., 2011), "the need for closure-withdrawal" (Kruglanski et al., 1993), "political conservatism" (Jost et al., 2003), "and poor mobility" (Oishi, 2010).

## 7. CONCLUSION

Globalization is a multidimensional process with a series of contradictions. The basic element of globalization is the economy with which it forms a freely integrated world market. The desire of globalization is to integrate the national economy into the world, by removing many obstacles, which are not only of economic nature. The globalization of politics is developing in a spirit of pluralism with a developed democracy with respect for human rights and freedoms. Global society also has a role to play in the cultural sector with the desire to use one language while standardizing education. Globalization also means unleashing competition forces that promote economic efficiency that results in optimal allocation of resources. Globalization is irreversible and not an option, but it is a tremendous force that must be restrained. It continues its path to planetary unification of all human actions and activities. Globalization has contributed to making the world a "global village", thanks in particular to information technology and better and cheaper transportation, a large migration of people, and the organization of large global companies. Information, goods, people, capital, are free to move. Different cultures meet, permeate, change their originality. Analyzing such a situation it could be said that cosmopolitan identity, multiculturalism, tolerance is being created. This all seems fairy-tale but viewed at a macro level - global, but we wonder what about the individual in this complete whirlwind of change. We may sometimes wonder if our man can understand why a job in his workplace in a company in Montenegro is threatened by the crisis in America, whether he can understand how the price of fuel is affected by the fires in Canada's forests, or "why milk which he has produces on his farm has to cheapen because it is cheap in France because of the subsidy". One must realize that rapid change dictates the pace and that he has to change his identity over time. These are excruciating changes when a person is required to change his "understanding, knowledge, morality, ability". Sudden and rapid changes reduce a person's possible anticipation. Ordinary people are skeptical of foreign citizens and their capital. In a way, this creates a kind of aggression for them. Globalization and economic globalization have led to the outbreak of the economic crisis globally. In small economies, exports declined. In large companies there have been a decline in productivity, a large layoff of workers, wage cuts. From the fairytale situation of globalization shown above, we have come to a situation of global catastrophe. In this situation of globalization, individuals give up further struggle, and various excesses "such as depression, murder, suicide" occur. It can be concluded that it is not easy to plunge into the current situation in the "global village". The paper presents the current state of globalization and economic globalization, the expected state of the economy, various aspects of globalization, but it cannot be neglected to include "psychology" in the study of the "impact of globalization on man". The fact is that one can and should study what the positive impacts of globalization are and how they affect "man and his advancement". It is also important to conduct researches into what negative effects globalization and crisis can have and how they affect humans. We think that the priority is to carry out "researches into the negative consequences" that the process of globalization and economic crisis can have on humans. As a result of the research, prevention activities should be planned to reduce or avoid major disorders. The following statement is also important: present / future generations are growing up in the current state of globalization and crisis, so it is difficult to predict without a research what the consequences will be in the future.

## LITERATURE:

1. Chiu, C. -Y., & Cheng, S. Y. -Y. (2009). Toward a social psychology of culture and globalization: Some social cognitive consequences of activating two cultures simultaneously. *Social and Personality Psychology Compass*, Vol. 1, 84–100.
2. Dujšin, U. (1999). Globalizacija, ekonomske integracije i Hrvatska, *Zbornik Pravnog fakulteta u Zagrebu*, 49, 2, 179-195.

3. Fu, H. -Y., & Chiu, C. -Y. (2008). Local culture's responses to globalization: Exemplary persons and their attendant values. *Journal of Cross-Cultural Psychology*, Vol. 38, 636–653.
4. Gidens, E. (1998). *Sociologija*. Podgorica: CID.
5. Gidens, E. (2005). *Sociologija*, Beograd: Ekonomski fakultet, str. 57.
6. Hazel, J. J. (2000). *Global Financial Institutions and Markets, USA*.
7. Holton, J. R. (1998). *Globalization and the Nation State*, New York, St. Martin Press.
8. Jost, J. T., Glaser, J., Kruglanski, A. W., Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin*, Vol. 129, 339–375.
9. Kruglanski, A. W., Webster, D. M., Klem, A. (1993). Motivated resistance and openness to persuasion in the presence or absence of prior information. *Journal of Personality and Social Psychology*, Vol. 65, 861-877.
10. Krugman, P. (2013). *Okončajte ovu depresiju, Odmah*. Helix-Smederevo, Interkomerc-Beograd, str. 87.
11. Leković, V., (2001) *Globalizacija svetske privrede – ključni faktori i nosioci*, Ekonomski horizonti, Vol.1-2, 127-141.
12. Marsella, A. J. (1999). Urbanization, mental health, and social deviancy. *American Psychologist*, Vol. 53, 24-634.
13. Milardović, A. (1999). *Globalizacija*, Pan Liber, Osijek-Zagreb-Split
14. Mlinar, Z. (1990). *Globalizacija, deterritorizacija i kulturni identitet*, *Kulturni radnik*, 43, 3, 5-29.
15. Norasakkunkit, V., Uchida, Y. (2011). Psychological consequences of postindustrial anomie on self and motivation among Japanese youth. *Journal of Social Issues*, Vol. 67, 774–786.
16. Oishi, S. (2010). The psychology of residential mobility: Implications for the self, social relationships, and well-being. *Perspectives on Psychological Science*, Vol. 5, 5–21.
17. Pečujlić, M. (2005). *Globalizacija – dva lika sveta*, U: Vučinić, M. (2005). (ured.), *Aspekti globalizacije*, Beograd: Beogradska otvorena škola, str. 37.
18. Sirkin, L.H., Hemerling, W.J., Bhattacharya, K. A. (2010). with John Butman: *GLOBALITY: Competing with Everyone from Everywhere for Everything*. Business Plus, New York.
19. Stipetić, V. (2000). *Gospodarski razvoj svijeta i Srednja Europa u 20. st.*, RRIF, 6, Zagreb.
20. Tong, Y. -Y., Hui, P. P. -Z., Kwan, L., Peng, S. (2011).: National feelings or rational dealings? The role of procedural priming on the perceptions of cross-border acquisitions. *Journal of Social Issues*, Vol. 67, 743–759.
21. Torelli, C. J., Chiu, C. -Y., Tam, K. -P., Au, A. K. -C., & Keh, H. T. (2011). Exclusionary reactions to foreign culture: Effects of simultaneous exposure to culture in globalized space. *Journal of Social Issues*, Vol. 67, 716–742
22. Vučinić, M. (2005). *Aspekti globalizacije*. Beograd: Beogradska otvorena škola
23. Staničić, M. (2000). *Globalno gospodarstvo i globalizacija*, *Ekonomski pregled*, 51, 9-10, 918-927.
24. Yergin, D., Stanislaw, J. (2005). *The Commanding Heights: The Battle for the World Economy*, New York: Simon & Schuster.
25. Yang, D. Y-J., Chen, X., Cheng, S. Y. Y., Kwan, L., Tam, K. -P., & Yeh, K. -H. (2012) *The lay psychology of globalization and its social impact*. *Journal of Social Issues*, Vol. 67, 677–695. (011)

# MODEL OF ANALYSIS OF DEMAND FOR AIR TRANSPORT IN THE ADRIATIC AIRPORTS

**Teo Bratinčević**

*Visoka škola Aspira, Croatia  
teo.bratincevic@aspira.hr*

**Eva Mijatović**

*Visoka škola Aspira, Croatia  
eva.mijatovic@aspira.hr*

**Toni Miljak**

*Visoka škola Aspira, Croatia  
toni.miljak@aspira.hr*

## ABSTRACT

*This paper seeks to show which variables can affect on the demand for air traffic services in the Adriatic airports and create a framework of the demand model. Namely, air transport is a fairly dynamic service from a standpoint of demand that is subject to different influences. The demand for air transport is conditioned by a large number of factors which is almost impossible to identify everything. This paper will determine which factors have the strongest impact on the demand for air transport on the Adriatic airports. After identification of factors or variables such as number of nights in counties, gross domestic product in the Republic of Croatia, investments in airports, prices of airport taxes and a variable that defines the existence or non-existence of a phenomenon such as participation of low cost companies, using correlation and regression define a framework for the impact of these dependent variables on the independent or demand for air transport services on the Adriatic airports. The paper aims to demonstrate a model that is a prerequisite for future statistical analysis that will allow to quantify all the mutual influences.*

**Keywords:** *Air Traffic, Analysis, Demand, Regression*

## 1. INTRODUCTION

The analysis is made to examine the subject examined more closely to get acquainted with those who manage the enterprise, but also, in many cases, others interested. The analysis does not correct the deficiencies made in the business, but it allows to avoid repetition of the omission, ie the observed negativities are eliminated in future business. Therefore, while reviewing the business performance, an analysis is needed to enable rational decisions to be taken for future business. The subject of this paper is to show and analyze the influence of certain variables on the number of passengers at four Adriatic airports and to reach some conclusions, among other things, whether the demand for air transport services in said airports is influenced by internal factors or factors from the environment. Based on the identification of the environment variables, a regression model will be proposed, which will be the framework for statistical analysis and forecasting of demand for the mentioned services on tourist-oriented airports.

## 2. DEMAND ANALYSIS

### 2.1. Concept and meaning of the analysis

The analysis<sup>1</sup> is carried out to examine the matter analyzed more closely and to get acquainted with those who manage the enterprise, but also, in many cases, others interested.

---

<sup>1</sup> Jelavić, A. i drugi, *Ekonomika poduzeća*, Mikrorad d.o.o., Zagreb, 1993.g.

The information provided by the analysis provides for the preparation of the decisions: Based on the organized collected and expertly processed (analyzed) information on relevant facts, and the assessment of these facts, it is possible to propose decisions, often in several variants, for future business. The analysis can only come to realistic conclusions if it is previously verified that the business of an individual company is in line with the applicable external and internal regulations, so it is necessary to conduct a critical examination of the formal conduct of business conduct and the accuracy of business records prior to the analytical exercise. In this sense, analysis is a function that is necessary for those that are managed and those that run the business of companies, but also for those who are business-related to one particular company (citizens, socio-political communities and others). The concept of analysis in practice also encompasses synthesis. Although the analysis and synthesis of the concept of the opposite meaning to the full, and thus realistic knowledge can only be achieved if the conclusions from the partial analysis are completed and interconnected. "Synthesis is the purpose of any analysis, without it the analysis is only a finding of the facts or of the magnitude of the analysis." In practice, the term business analysis implies and carries out both analytical testing and synthetic linking and conclusion. The analysis does not correct the deficiencies made in the business, but it allows to avoid repetition of the omission, ie the observed negativities are eliminated in future business. Therefore, while reviewing the business performance, an analysis is needed to enable rational decisions to be taken for future business.

## **2.2. Types of analysis**

The object of analysis is that organization, phenomenon, subject or something that the analysis critically examines. The analysis should include every organizational part of an enterprise and its entire business. But that does not mean that the analytical function needs to be decentralized. On the contrary, concentrating this function in one place for the whole enterprise has the advantage of internal comparative analysis. It should be emphasized that the precondition for a successful critical and analytical examination is that there are clear backgrounds, and for this purpose each company must keep the necessary records: accounting, statistical and various operational and auxiliary records. Additionally, in addition to permanent records, analysts often organize themselves to determine the required basics for analysis (surveys, special reports, and more). By analogy, the forms of analysis differ from several points of view. From the aspect of analysis, the analysis is divided into internal analysis, which examines the operations of the company itself and the external analysis, which analyzes the business of others. It is very useful to use your own data with other data, so a comparative analysis is carried out. The division into internal and external analysis is also mentioned from the point of view of the organs analyzed: whether the workers and the bodies of the company itself or the bodies outside the enterprise. From the point of view of matter, the analysis is divided into partial analyzes that cover only certain elements of the business, and on a complex analysis that covers the whole enterprise. Such division is not identical in the extensive analysis that starts from getting general insight into the object of analysis and intensive analysis to get a precise response to the analyzed business (or individual business segment). The further division of the analysis is the division of the constant analysis and the occasional analysis. Permanent analysis is performed continuously (continuously) or periodically (eg every month). Occasional analyzes are performed sporadically when there is a need for this. By content, analyzes include: a) business investment analysis (asset analysis, personnel analysis, etc.); b) analysis of work process elements (asset analysis, work analysis, work use analysis, and other), c) business performance analysis (cost analysis, revenue analysis, business analysis, analysis of results), d) analysis of functions (management, sales, procurement, production, transportation and other functions). There is also a division into static analysis and dynamics analysis ie analyzing the state of a particular occurrence at just one point or analyzing the movement of a particular occurrence over a given

period of time. The analysis is done over the past time periods, as well as for the present: both are the basis for assessing and preparing for the future. In order for the analysis to meet the needs for which it is carried out, it is advisable to use different analytical methods. According to the business period covered, the analyzes are divided into analysis for shorter time periods (up to one year) and long-term analysis in order to examine tendencies and predict the trend for a longer period of time.

### **2.3. Measuring and predicting market demand**

Companies<sup>2</sup> face with numerous market opportunities and therefore, before selecting their target markets, they must be carefully evaluated. Knowledge and skills are required to measure and predict the size, growth and profit potential of different market opportunities. *susreću s brojnim tržišnim mogućnostima i stoga ih, prije izbora svojih ciljnih tržišta, moraju pažljivo ocijeniti. Potrebno je znanje i umijeće za mjerenje i predviđanje veličine, rasta i profitnog potencijala različitih tržišnih mogućosti.* Once on the market, companies must prepare an accurate projection of demand. This projection is used by the financial services to increase the required funds for investment and regular business operations; production department for capacity building and production; a procurement service to ensure a suitable stock quantity, and a personal service to hire the required number of workers. The marketing department is responsible for making these estimates. If its prediction is far from the desired target, the company will either be burdened with excess capacity and stock or will lose money because it is no longer available.

#### *2.3.1. Criteria for market demand*

Demand can be measured on the basis of six different product levels (product units, product form, product line, company sales, industrial sales, national sales), five different levels of space (buyer, local area, region, country, world) and three different levels time (short-term, mid-term and long-term). Each type of demand measurement serves some purpose. Thus, some companies could produce a short-term forecast of total demand for a particular product unit to provide the basis for raw material ordering, production planning, and short-term financing arrangements. That is, the company could carry out long-term forecasts of regional demand for its main product line to provide a basis for considering expansion to the market. Market participants could show three characteristics: interest, income and performance. It is not enough only for the consumer to define a market. Potential consumers must have the right income to be able to afford a particular product or service. So the size of the market functions of interest and function of income. In addition, the size of the market is reduced by barriers which appear on the market. The market that is available is a set of consumers that show interest in a particular market offer, have a disposable income and can enter a particular market. For some market offers, companies or countries can limit sales to specific groups.

#### *2.3.2. Demand measurement - terminology*

The most important<sup>3</sup> terms in measuring demand are market demand and company demand. Within each demand, we differentiate the function of demand, prediction and potential.

- **MARKET DEMAND:**

1. Demand function

In assessing marketing opportunities, the first step is to estimate total market demand. This term, though not simple, still explains the following definition. Market demand for the product is the total amount that will be purchased by a certain group of customers, in a

<sup>2</sup> Kotler, P., Upravljenje marketingom, MATE d.o.o., Zagreb, 2001.g.

<sup>3</sup> Kotler, P., Upravljenje marketingom, MATE d.o.o., Zagreb, 2001.g.

certain geographical area, over a certain period of time, in a particular marketing environment, according to a particular marketing program. The most important thing to realize is that market demand - the function of certain conditions, not some fixed number. This is why the function of market demand or the function of market reaction is also called.

2. Market forecast

There is only one level of expenditure for the marketing activity. Market demand corresponding to that level of expenditure is called market forecast.

3. Market potential

Market forecast shows the expected market demand, but not the maximum market demand. For the maximum market demand we have to present the level of market demand with a very high level of expenditure in marketing, where further growth in marketing effort will have little impact on furthering demand. The potential of the market in a given environment is an acceptable level of market demand in line with the achievable level of marketing expenditures.

• COMPANY'S DEMAND:

1. Demand function

Company's demand is the share of the company in market demand. Company demand is, as well as market demand, a function called a company's demand function or sales response function, and is dependent on all market demand determinants and the company.

2. Company's prediction

The company's demand indicates estimated the company's sales to alternative levels of the marketing efforts of a company. Management still has to choose one of these levels. The selected level of marketing effort will cause the expected level of sales, which is called the company's sales forecast. Prediction of company sales is the expected level of company sales, which is based on the chosen marketing plan and the assumed marketing environment.

3. Company's potential

Sales is the company's potential limit which is closer to the enterprise demand in accordance with the increase in marketing efforts in relation to its competitors. Of course, the potential of the market is the absolute limit of company demand. If the company wins 100 percent of the market, ie if the company becomes a monopoly, both potentials would be the same. In most cases, the company's sales potential is lower than the market's potential, even when the company significantly increases its marketing costs versus its competitors. The reason is that every individual competitor has a steady circle of affectionate customers who do not respond particularly to the efforts of other companies when they try to win them.

### 3. DEMAND FOR AIR TRAFFIC SERVICES IN ADRIATIC AIRPORTS

Air transport is taking place for many years, and in the very beginning it did not know how much will be progressive, its progress and how much it will be important for the region in which it operates. Airports record a steady increase in traffic compared to the development of cities, their environment, economy, tourism. Demand for air transport is, of course, of a specific character and influenced by a large number of factors. However, it should be emphasized that market demand is the function of certain conditions, not some fixed number. This is why the function of market demand or the function of market reaction is also called. The paper will outline the model of factor analysis that affects demand for air transport in the Adriatic airports. Demand for air transport is conditioned by a large number of factors that are almost impossible to identify. In this paper, we will try to determine which factors are most influencing the demand for air transport, which will be able to be statistically processed later. Due to the large number of factors, correlation and regression analysis will be used, which should best demonstrate the degree of statistical linkage and analytically express the relations between the phenomena.

The regression analysis aims to select and evaluate the regressive Y function factors that will describe the relationship between variables X and Y in the best possible way. Also, the aim of the regression analysis is to express or describe the relationship between the observed phenomena with the appropriate analytical mathematical expression regression model. Apart from explaining the dependence of parameters or factors, it is possible to predict the movement and dependent variables in the future. As the main criterion for the analysis of demand for air transport services in the airports can be taken the total number of passengers on an annual basis and the analysis based on correlation and regression, so to create a model that will show the degree of statistical integration and analytical express relationships between, in this case the number of passengers as dependent variables, and several independent variables that have different impacts in the selected period.

### **3.1. Demand analysis for air traffic services in Adriatic airports - identification of variables and model creation**

When designing a demand analysis model for air transport services at airports, the number of passengers per annum can be taken as the basic benchmark for a given period because the efficiency of any traffic system is measured primarily by the number of passengers carried. So, the number of passengers at airports should be the dependent variable of the Y multiple regression model. The number of passengers at airports is influenced by a large number of factors, therefore a number of factors that have the greatest impact on the number of passengers at the analyzed airports should be identified. The following will identify the factors and explain why they are exactly what they are. The first factor to be noted is the number of tourists in the counties on an annual basis over a given period. Tourism<sup>4</sup> is one of the most promising economic branches in the Republic of Croatia. Almost all types of transport are used in tourism, and the share of certain types of traffic in total arrivals varies considerably depending on the distance of the tourist destination from the broadcasting countries. The share of air traffic in the arrival of foreign tourists on our coast and islands increases from Istrian to Dubrovnik area. Otherwise, recent air traffic in the world is experiencing high growth rates, especially in the area of tourism. The traffic options in meeting the tourist needs are determined by the size and condition of the traffic infrastructure and transport capacities as well as their ability to meet their demand for quality services such as safety, comfort, speed and transportation cost. The present development of tourism on our coast would be impossible to imagine without the development of air traffic. Considering the structure of the tourist coming to this area, tourism should be the largest air traffic demand generator. Air traffic is particularly important for the valorisation of tourism potential. In addition to the great advantages that this area possesses in relation to other destinations, some of the limitations need to be emphasized, highlighting a highly peripheral position in relation to the major emission markets. As one of the possibilities to repair limiting factors in the development of tourism in this area, the role of air traffic, which takes over most of the realized tourism traffic, must be emphasized. In order to estimate potential demand for air traffic, to perceive trends and foresee future trends, analyze the available tourist capacities, the recorded traffic of tourists and the structure of tourists according to the country of origin in a given period, but it is the subject of another analysis. Thus, the largest share of transport demand in air transport on the Croatian coastal area is boosted by tourism. This factor is chosen because the business of the Adriatic airports is primarily oriented to tourism. The number of tourists in counties per annum over a given period will be considered as the first independent multiple variable regression model and should show the correlation and impact of the number of tourists in the counties on the number of passengers at airports. Another factor to be considered is the gross domestic product (GDP) per capita on an annual basis during that period.

---

<sup>4</sup> Bukvić, I., Utjecaj zračnog prometa na razvoj turizma dubrovačkog područja, Naše more 50:1, 2003.

Namely, the development of the transport system as a whole, and therefore air traffic as one of its subsystems, is dependent on overall economic development, but overall economic development is a good factor in the development of the transport system. For this reason it has been estimated that GDP as the second independent variable in the multiple regression model should be a very important factor affecting the number of passengers and demand for air transport. The third factor to be considered is investment at airports on an annual basis over a given period. Enterprise development and overall socio - economic development depend on different factors, and investments are an indispensable condition for triggering these factors. Given this fact, it is certainly concluded that the development of the company is, among other things, an investment function. Development and investment are therefore in a high degree of interdependence, but this interdependence is not always functional because in different companies and in different periods, the same amount and structure of investments do not always give the same increase in business, in this case the growth in the number of passengers. Nevertheless, investments are the basis for the development of any company and even the airports. For this reason, the investments were taken as the third independent variable in the multiple regression model, where the correlation and relationship between the variables should be shown. The fourth variable to be considered is the price. Price is, one can say the most important factor that determines the demand for some product or service. In the business of every company and even airports it is often asked whether it is possible to increase the business result by changing prices. However, airports as companies have their own specifics. Namely, there is a price for receiving and shipped aircraft that should be considered as a price that directly affects the demand for air transport services at airports. Airline companies are the direct users of airport and airport services to the greatest extent charged by them. The second price to be observed is the price of airport taxis included in airline ticket prices and as a price that directly affects the price of the ticket and thus the number of passengers at airports. So the prices of airport taxis would be taken as the fourth variable in a multiple regression model. And, finally, the fifth variable would be an artificially constructed variable or dummy variable that is the result of the existence or absence of a phenomenon. It should be very useful for the whole model because it should represent a more intense participation of low cost airlines at our airports. A dummy variable that will assume the value is the fifth variable of the multiple regression model. Thus, a multiple regression model with one dependent and five independent variables was obtained that should express the variance of the dependent variables depending on the five independent variables. In order to avoid heteroskedasticity and autocorrelation, a double logarithmic regression model will be used. The multiple regression model looks like this:

$$Y = \beta_0 \times X_1^{\beta_1} \times X_2^{\beta_2} \times X_3^{\beta_3} \times X_4^{\beta_4} \times X_5^{\beta_5}$$

where is:

dependency variable:

Y - number of passengers at airports on an annual basis over a given period of time

Nezavisne varijable:

X1 - number of tourists in counties at an annual level over a given period of time

X2 - GDP per capita in Croatia on an annual basis in euros over a given period of time

X3 - annual airport-level investments in euros over a given period of time

X4 - prices of aerodrome taxis at airports per annum over a given period of time

X5 - dummy variable

$\beta$  - the expected change in the dependent variable (expressed in percentage) when the independent variable increases by 1%.

#### **4. CONCLUSION**

Based on the above, certain conclusions can be drawn and summarized as follows. The aim of this paper was to create a model for an analysis of the impact of factors on demand for air transport services in the Adriatic airports. For the analysis of the demand model, the model assumes correlation and regression analysis by creating a model that will show the degree of statistical correlation and analytically express the relationships between phenomena that are assumed to have different impacts in the observed period. Based on the identified variables and the set regression model framework, it will be possible to statistically process the data and quantify a model that would show the correlation between impact variables and demand trends for air transport services in a future period.

#### **LITERATURE:**

1. Bukvić, I., Utjecaj zračnog prometa na razvoj turizma dubrovačkog područja, *Naše more* 50:1, 2003.
2. Jelavić, A. i drugi, *Ekonomika poduzeća*, Mikrorad d.o.o., Zagreb, 1993.g.
3. Kotler, P., *Upravljenje marketingom*, MATE d.o.o., Zagreb, 2001.g.

# THE INTERNATIONAL COMPETITIVENESS OF FORMER EAEC COUNTRIES: WHAT WOULD BE THEIR INTERNATIONAL TRADE?

**Tomislav Galovic**

*University of Rijeka, Faculty of Economics, Croatia  
tomislav.galovic@efri.hr*

**Petar Misevic**

*University North, Varaždin, Croatia  
pmisevic@unin.hr*

**Igor Arapovic**

*HEP – Proizvodnja d.o.o., Power plant department, Croatia  
igor.arapovic@hep.hr*

## ABSTRACT

*The research paper investigates international competitiveness and trade of the former regional integration The East Asia Economic Caucus (EAEC) or East Asia Economic Group (EAEG) countries. This paper has special insight on what would be with former EAEC countries and their international competitiveness. The research includes the implementation of four international trade and competitiveness indicators like export-import ratio, trade balance, intra-industry trade and trade openness. The research is conducted by using data for 12 former EAEC member states within the period from year 2014 to 2018. The key aim of the research is to identify international competitiveness and trade for former EAEC Member States.*

**Keywords:** *former EAEC countries, international competitiveness, international trade indicators*

## 1. INTRODUCTION

In the past, The East Asia Economic Caucus (EAEC) or East Asia Economic Group (EAEG) Member countries represented a concept of regional economic cooperation. Datuk Seri Dr Mahathir Mohamad, former Malaysian Prime Minister, first proposed for an East Asian Economic Grouping (EAEG) in December 1990. After some time, after concerns were expressed that the EAEG seemed and signaled like a trade block, it was retitled as the East Asia Economic Caucus (EAEC) with special focus on a consultative group for the discussion of regional economic issues (Higgott and Stubbs, 1995). Mahathir proposed that the membership should include the ASEAN Member states like Brunei, Indonesia, the Philippines, Malaysia, Singapore and Thailand - Taiwan, Hong Kong, South Korea and Japan. He later added China and the countries of the Indochina region to the list of possible members. According to Mahathir, it wasn't a new idea in that South Korea had proposed an Asian Common Market in 1970 and Japan an Asian Network in 1988 (Saravanamuttu, 1992: 7). Regardless, the EAEC proposal was given a rough reception especially by the Bush administration which pressured Japan and South Korea to reject the idea. The EAEC was formally accepted as a caucus within the APEC framework at the June 1993 ASEAN Foreign Ministers' Meeting (Higgott and Stubbs, 1995). According to Higgott and Stubbs (1995), EAEC proposal was a response to challenges coming from the global economy. The EAEC was geared as much to combating the political power of the USA and Europe as it was to advance the root of economic liberalism. EAEC characterizes an historically and culturally- rooted cut into the Asia Pacific region which has considerable resonance for a few East Asian governments. Finally, EAEC didn't work due to key obstacles; USA strongly opposed because EAEC would undermine APEC and pressured Japan not to join EAEC. Secondly, there were no shared interest among countries.

In another word, many Asian countries felt uncomfortable building institution which can challenge rivals the US and EU. Besides that, Thailand was more interested in further developing ASEAN Free Trade Agreement while South Korea and Japan were also closely tied with USA. Finally, Matahir's image was negative and discriminatory so many countries were reluctant to join. Due to these circumstances, EAEC was unable to succeed as a regional economic cooperation. Nevertheless, authors wanted to identify the international competitiveness of 12 former Member states of the EAEC. The basic objective of this paper is to see how former EAEC Member states function nowadays in terms of international trade and competitiveness. According to previously stated facts, the main scientific hypothesis of the research was made, namely, that it is possible to measure of international trade and competitiveness of former EAEC member states with relevant international competitiveness indicators. The research includes three sections. After the Introduction, methodology represents the second section of the paper. The third part includes analytical aspects and results of international trade and international competitiveness of former EAEC countries. The final section of research comprises proposals, recommendations and conclusions.

## 2. METHODOLOGY

Scientific method is based on results of the key indicators that show the level of international trade competitiveness of the 12 Member states of former EAEC regional integration. The indicators, which have been regularly used in contemporary economic research, evaluate economy's structural advantages and disadvantages via the composition of international trade flows (Bezić and Galović, 2013). Moreover, the most commonly used indicators, indices, and ratios that are to assess trade patterns, characteristics, and changes in them have been observed. Besides elementary and well-known indicators, this research uses basic indicators that are suggested by OECD Statistical Database (2019) and World Bank (2019). Most of those indicators have been already used in previous studies (Bezić and Galović, 2013; Kandžija et al, 2014; Bezić and Galović, 2014; Galović et al. 2017; Galović et al. 2018) of European manufacturing sectors but also trade blocks like NAFTA and integrations like EU. Definitions of competitiveness provided by the Organization for Economic Cooperation and Development (OECD) and the Department of Trade and Industry (DTI) points out the importance of technological factors in achieving competitiveness. The Department of Trade and Industry (DTI, 1994; Galović et al. 2018) defines a company's competitiveness as an ability to produce certain goods and services, at the right time and price. The definition of the Organization for Economic Cooperation and Development from the micro aspect, includes competitiveness that refers to the company's ability to compete, maximize the profit and to achieve growth based on costs and prices by using technology, quality improvement and efficiency maximization of its products. There are numerous papers that measure relation between competitiveness and technological abilities. Scientists like Lall (2001) and Wignaraja (2003) and institutions like the Organization for Economic Cooperation and Development (OECD) have confronted attitudes of other scientists who are trying to define competitiveness only from the aspect of price factors by emphasizing non-price factors, like technology. The discussion has led towards the revision of traditional theories in the framework of intricacies involving competitiveness. Some analyses of factors influencing the success or failure of efforts to promote industrialization and growth conclude that a growing level of intra-industry trade plays an important positive role (World Bank, 2018; Galović et al. 2018). Intra-industry exchange yields extra gains from international trade over and above those associated with comparative advantage because it allows a country to take advantage of larger markets. Intra-industry trade (IITR) is calculated as the value of total trade remaining after subtraction of the absolute value of net exports or imports of a country. For comparison between countries and industries, the measures are expressed as a percentage of each industry's combined exports and imports. The index varies between 0 and 100.

It indicates the similarity between imported and exported products. The closer the value to 100 the more the products which are imported and exported belong to the same industry. If a country exports and imports roughly equal quantities of a certain product, the index value is high. Whereas if trade is mainly one-way (whether exporting or importing), the index value is low. The equation for the said indicator is shown below.

$$(1) \quad \text{IITR}_i = 1 - \left( 1 - \frac{|expo_i - impo_i|}{expo_i + impo_i} \right) \times 100$$

wherein:

$expo_i$  - export activity of country "i"

$impo_i$  - import activity of country "i"

Following indicator is trade balance (TBAL). It is calculated as a difference between the value of all goods and services a country exports and the goods and services a country imports. This indicator is shown in real values of national currencies and highlights the trade pattern of each industry. Trade balance represents one of the vital macroeconomic indicators which are used to measure the competitiveness of a country or sector. When country's exports exceed imports country has a positive trade balance or trade surplus. When its imports surpass exports, the country has a negative trade balance or trade deficit. TBAL indicator is calculated using the following equation:

$$(2) \quad \text{TBAL}_i = expo_i - impo_i$$

wherein:

$expo_i$  - export activity of country "i"

$impo_i$  - import activity of country "i"

Another simple indicator is the export-import ratio (EXIM) which is calculated as a ratio between export and import shown in percentage. It is calculated as export over imports of a country, multiplied by a hundred. EXIM can be seen within following equation:

$$(3) \quad \text{EXIM}_i = \frac{expo_i}{impo_i} \times 100$$

wherein:

$expo_i$  - export activity of country "i"

$impo_i$  - import activity of country "i"

Furthermore, the trade openness indicator (TOI) is calculated as the ratio of trade over a country's GDP. The calculation is made by dividing the sum of exports and imports of a country with its GDP which is the value of all final goods and services in an economy during a given period. The higher the index of trade openness, the higher the influence of trade on domestic activities, and the stronger that country's economy. The equation is as follows:

$$(4) \quad \text{TOI}_i = \frac{expo_i + impo_i}{GDP}$$

wherein:

$expo_i$  - export activity of country "i"

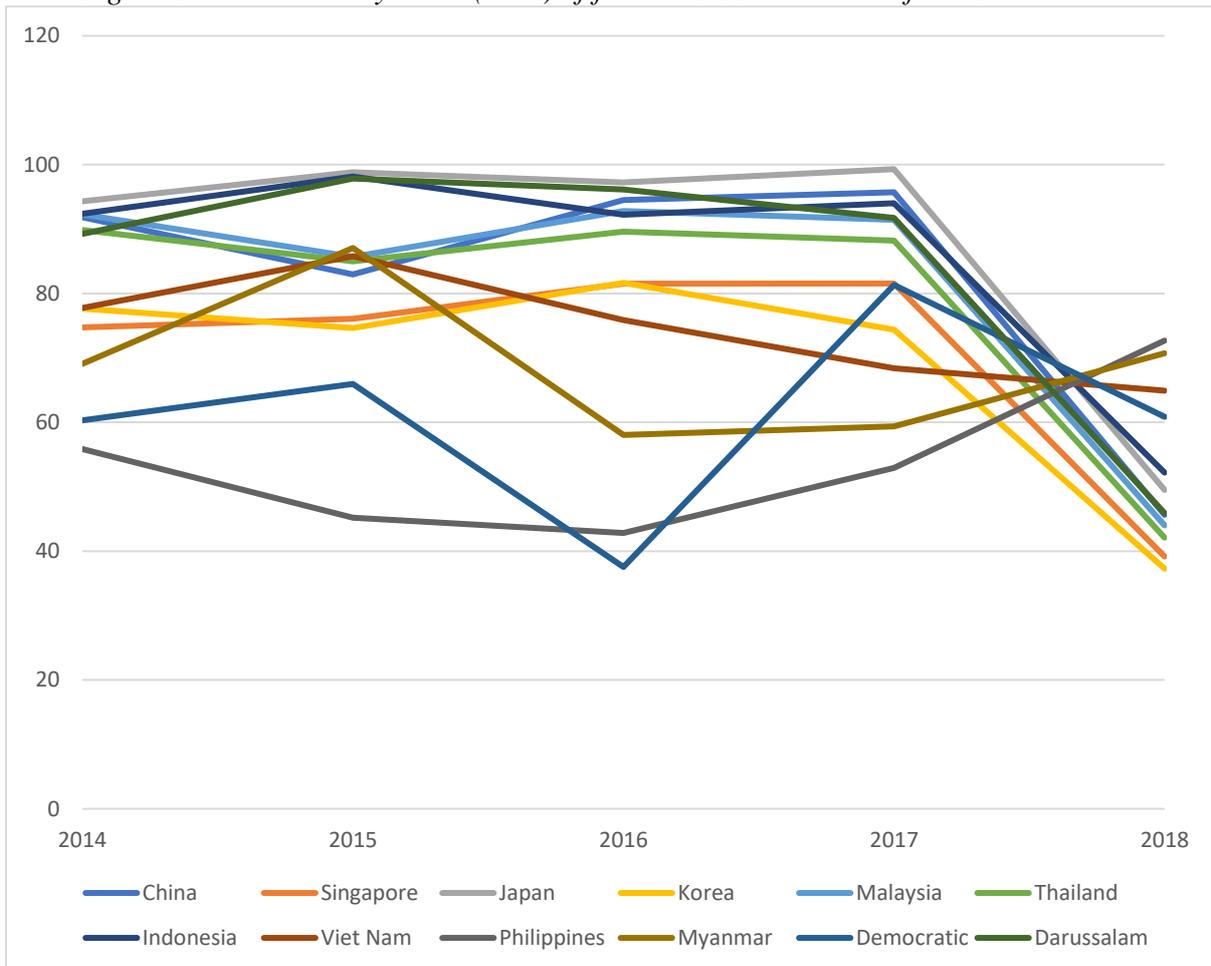
$impo_i$  - import activity of country "i"

$GDP$  - a country's gross domestic product

### 3. RESULTS

Based on the implementation of international trade indicators, this section provides analytical results of international competitiveness and trade of group of countries like China, Singapore, Japan, South Korea, Malaysia, Thailand, Indonesia, Vietnam, Philippines, Myanmar, Lap People's Democratic Republic, Brunei Darussalam and EAEC. All these countries belonged to former EAEC regional integration for the new period from 2014 to 2018. In order to get satisfactory level of international competitiveness indicators like export-import ratio, trade balance, intra-industry trade and trade openness are used. The data is extracted from UNCTADstat (2019). Figure 1 shows IITR indicator results for 12 countries of former EAEC integration.

Figure 1: Intra-industry trade (IITR) of former EAEC countries from 2014 to 2018



Data source: UNCTADstata, <http://unctadstat.unctad.org>, 2019

If EAEC would still exist as an integration, the results of intraindustry trade are as following under the condition of *ceteris paribus*. However, author's projections are that the numbers would be even higher for former 12 Member states and EAEC. Globalization process, growth of China would increase the EAEC numbers if it would still exist. To sum up former EAEC integration exports and imports equal quantities especially during the period 2014 to 2017. In year 2018 IITR index rapidly decreases because of sharp fall in the case of strong exporters China, South Korea, Japan, Indonesia and Malaysia. These countries recorded also highest IITR index. On the other side, the lowest index was recorded in the case Lao People's Democratic Republic, Myanmar and Phillipines. Next Table 1 shows trade balance of 12 countries of former EAEC integration.

Table 1: Trade balance (TBAL) of former EAEC countries from 2014 to 2018

TRADE BALANCE	Balance in value in 2014	Balance in value in 2015	Balance in value in 2016	Balance in value in 2017	Balance in value in 2018
China	48.000.998,00	74.609.432,00	53.937.337,00	38.551.688,00	43.665.505,00
Singapore	39.314.000,00	35.036.971,00	33.207.657,00	32.874.852,00	36.733.713,00
Japan	- 8.427.369,00	- 2.593.489,00	2.858.507,00	2.611.876,00	1.907.240,00
Korea, Republic of	23.594.481,00	26.868.220,00	27.308.330,00	36.676.933,00	34.397.605,00
Malaysia	8.656.127,00	8.529.974,00	12.861.440,00	11.555.127,00	12.824.902,00
Thailand	12.135.706,00	11.990.527,00	12.887.257,00	12.513.266,00	15.661.242,00
Indonesia	- 8.432.133,00	- 4.807.030,00	- 1.458.733,00	21.216,00	- 3.273.430,00
Viet Nam	- 2.867.587,00	- 5.012.768,00	- 5.996.710,00	- 5.792.482,00	- 15.117.345,00
Philippines	- 5.226.652,00	- 7.662.497,00	- 12.734.993,00	- 14.587.084,00	- 15.150.806,00
Myanmar	- 1.763.868,00	- 2.323.954,00	- 2.166.977,00	- 3.299.562,00	- 4.447.285,00
Democratic Republic	- 1.576.395,00	- 1.081.852,00	- 1.356.813,00	- 1.662.134,00	- 1.254.045,00
Brunei Darussalam	233.221,00	- 134.881,00	- 75.842,00	403.245,00	241.565,00
EAEC	8.636.710,75	11.118.221,08	9.939.205,00	9.155.578,42	8.849.071,75

Data source: UNCTADstata, <http://unctadstat.unctad.org>, 2019

Out of 12, half of former EAEC countries recorded trade deficit but former EAEC regional integration indicate trade surplus for the observed period with highest value in year 2015. The highest surplus was recorded in China, Singapore, South Korea and Thailand. These economies represent one of the most opened countries with export orientation. These leading countries have recorded trade surplus for whole observed period. The biggest trade deficit was recorded in case of Vietnam, Philippines and Myanmar which proved to be import depended countries. Following Table 2 indicates the share of exports in imports of former EAEC Member countries.

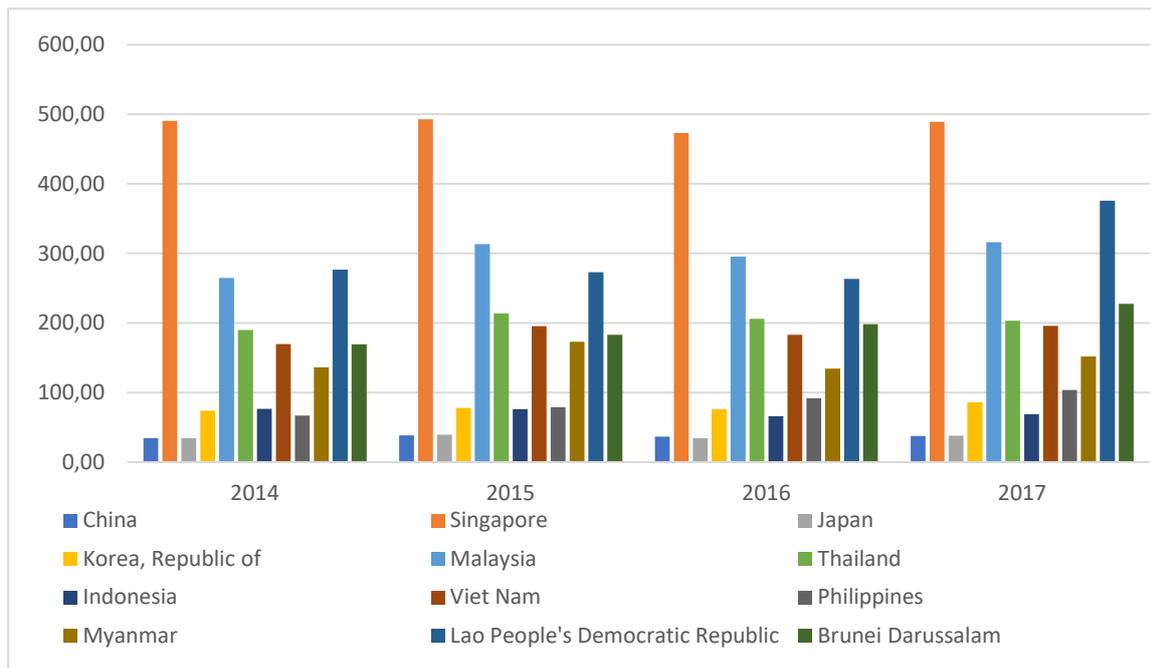
Table 2: Export-import ratio (EXIM) of former EAEC countries from 2014 to 2018

EXPORT IMPORT RATIO	2014	2015	2016	2017	2018
China	130,64	142,58	130,41	118,46	119,16
Singapore	169,26	160,99	158,63	152,35	155,30
Japan	90,33	97,06	103,42	102,87	102,01
Korea, Republic of	158,70	166,22	168,21	176,99	168,14
Malaysia	121,40	120,22	134,36	126,28	127,28
Thailand	137,26	132,53	135,81	131,24	137,59
Indonesia	77,98	86,29	95,36	100,06	91,60
Viet Nam	83,37	76,58	72,45	76,67	54,06
Philippines	57,00	50,09	37,34	38,07	37,58
Myanmar	66,94	63,27	59,42	51,08	41,39
Lao People's Democratic Republic	39,89	56,79	50,80	58,44	64,37
Brunei Darussalam	117,55	89,22	93,50	134,21	117,84
EAEC	121,12	125,54	123,21	118,64	116,67

Data source: UNCTADstata, <http://unctadstat.unctad.org>, 2019

The highest level of export import ratio was recorded in the case of China, Korea, Singapore and Brunei. EAEC as former integration recorded very high EXIM results. That means that former EAEC are more export-oriented countries with high level of export competitiveness. What is common for majority of former Member states is volatile trend with slight increase between 2014 and 2015 and then decrease in the share of exports in imports from 2016 to 2018. Lao People's Democratic Republic, Philippines, Vietnam are considered as import oriented countries with relatively smaller share of exports in imports.

Figure 2: Trade openness indicator (TOI) of former EAEC countries from 2014 to 2018



Data source: UNCTADstata, <http://unctadstat.unctad.org>, 2019

Figure 2 indicates trade openness of former EAEC Member states. Singapore, Malaysia, Lao People's Democratic Republic and Brunei recorded the highest level of trade openness. Just for an example, Lao is import depended country with higher level of imports than exports and with lower GDP than other countries. On the other side, Singapore represents a country which proved to be more export than import oriented economy. In many countries, the rate of trade openness proved to higher than 100%. Smaller economies tend to have higher rates of trade openness, because they are not able to produce all the necessary products. It is natural for large and diversified countries to have lower rates of trade openness. This doesn't necessary mean that these countries carry out restrictive trade policies.

#### 4. CONCLUSION

Former regional integration EAEC (East Asia Economic Caucus) was established with the cause to promote free trade, accelerate economic growth, enhance economic cooperation and to weaken the influence of strong global economies (like USA) from regional framework. Mahathir vision was that East Asia needed open regionalism to counter at act EU and NAFTA. Mahathir has the ambition that EAEC to be led by Japan because Japan is part of G7. But EAEC couldn't be established because Japanese resistance to join the EAEC. The analytical aspect shows that member countries like China, Singapore, Japan, Republic of Korea were the biggest importers of all former EAEC member states, and they recorded continuous import growth throughout the year 2014 – 2018. These countries represent the biggest exporters with high export competitiveness, biggest GDP, trade balance, intra-industry trade index, import-export ratio, trade openness and export share of GDP between the year 2014 to 2018. Thereby, the main scientific hypothesis of the research was confirmed; it is possible to measure of international trade and competitiveness of former EAEC member states with relevant international competitiveness indicators. If the EAEC still exists today, it is possible to project that EAEC would have higher international trade and competitiveness. The removal of trade barriers would speed up the intratrade between 12 countries while making them economically stronger. The positive results of international trade would strengthen political and trade relationships between countries which would lead to more efficient trade policies towards each other but also towards

other countries of the world. Consequently, positive impacts of efficient regional integration would be visible as GDP growth while weakening the growth of trade deficit for most EAEC Member states.

#### LITERATURE:

1. Bezić, H.; Galović, T., (2013), The International Trade of OECD and EU ICT Sector, *Advances in Business-Related Scientific Research Conference - ABSRC 2013*, GEA COLLEGE – Faculty of Entrepreneurship, Slovenia
2. Bezić H.; Galović T., (2014), The International Trade of European Chemical Industry, *Advances in Business-Related Scientific Research Conference - ABSRC 2014*, GEA COLLEGE – Faculty of Entrepreneurship.
3. Bezić H.; Galović T., (2014), Machinery and Equipment sector trade performance of the European OECD Member Countries, *Advances in Business-Related Scientific Research Conference – ABSRC 2014*, GEA COLLEGE – Faculty of Entrepreneurship.
4. Department of Trade and Industry (1994), Competitiveness, *White Paper*, Cm 2867, HMSO, London
5. Galović, T.; Mišević P.; Popović, L., The Export Competitiveness of EU28 Countries, *TRADE PERSPECTIVES 2017 Specialization and Customer Centered Retailing / Baković T.; Knežević B. ; Dužević I. (ur.)*.Zagreb: Ekonomski fakultet Zagreb i Hrvatska gospodarska komora, 2017. str. 15-31.
6. Galović T.; Bezić H.; Primorac D. (2018) The Export Competitiveness of NAFTA Countries, *Economic and Social Development*, Split, 2018. str. 493-502.
7. Hufbauer G. and J. Schott (1993), *NAFTA: An Assessment*, Washington DC, 6. Institute for International Economics.
8. Higgott, R., & Stubbs, R. (1995), Competing Conceptions of Economic Regionalism: APEC versus EAEC in the Asia Pacific. *Review of International Political Economy*, 2(3), 516-535. Retrieved from <http://www.jstor.org/stable/4177157>
9. Lall, S., (2001), Competitiveness technology and skills, Edward Elgar, UK Structural business statistics (2017), [http://epp.eurostat.ec.europa.eu/portal/page/portal/european\\_business/introduction](http://epp.eurostat.ec.europa.eu/portal/page/portal/european_business/introduction), (Retrieved June 9, 2017)
10. Saravanamuttu, Johan (1992) 'Malaysia's foreign policy in the Mahathir period 1981-1992: an iconoclast come to rule', paper prepared for a conference on 'The Political Economy of Foreign Policy in Southeast Asia in the New World Order,' Windsor, Ontario, University of Windsor, 29 October-1 November.
11. UNCTADstata (2019), <http://unctadstat.unctad.org>, (Retrieved April 13th, 2019)
12. Wignaraja, G. (2003), Competitiveness analysis and strategy, IN Wignaraja G. (Ed.), *Competitiveness Strategy in Developing Countries*, Routledge, New York, str. 15-60
13. World Bank (2018), <http://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2015&locations=EU&start=2011> , (Retrieved March 12th, 2019)

# THE MUSIC INDUSTRY IN THE CONTEXT OF DIGITIZATION

**Miroslav Skoro**

*University North, Croatia  
mskoro@unin.hr*

**Ante Roncevic**

*University North, Croatia  
aroncevic@unin.hr*

## **ABSTRACT**

*The focus of this paper is the state of the music industry within the context of digitization. This paper defines a musical composition as a subject of copyright, then clarifies the difference between the old and new musical economy. The digitization process has caused a radical change in the way music is consumed. For this reason some of the business models of the music industry are presented within this paper, with special emphasis on the digital age.*

**Keywords:** *copyright, digitization, music industry, music industry models, music economics*

## **1. INTRODUCTION**

From being a service, then a product, then a service once more, music has become exposed to devaluation, ubiquity, and piracy, all thanks to the process digitization and the Internet. One can locate the most damaged parts of the music industry within its creative sector. Namely, the music digitization process has caused a radical change in the way music is consumed. New distribution channels have emerged, resulting in the need to redefine its management model and the allocation of revenue in the music industry. The subject of this research is the examination of the music industry through the effects of the digitization of music. This paper emphasizes the differences in the business models of the music industry, both in the traditional and the contemporary context, as this process has caused a drastic change in the way people listen to music. Consequently, the fundamental research question of this article relates to the recognition of a new business model of the music industry. This paper aims to briefly explain the notion of music as intellectual property; to determine the conceptual difference between the perception of music as a product and/or service; and to show the impact of digitization on the music industry in the context of copyright and future business models. While formulating the objectives and the presentation of this paper, various methods were used to provide credible and concrete insights into the disputed problem. The scientific methods used while writing this paper are the historical method, analysis and synthesis, induction and deduction, abstraction and concretization, as well as compilation, comparison, generalization and specialization.

## **2. A MUSICAL COMPOSITION AS THE SUBJECT OF COPYRIGHT**

When asked “What is music?”, Wade-Matthews and Thompson (2005) answered with a counter-question: “What isn’t music?”. Almost everyone has an opinion or perspective on music and everyone “understands” it, be they professionals or amateurs. Some, like Rosen (2008), argue that music is universal language understandable to everyone, while Pinker (1998) believes this sentiment to be a cliché, arguing that individuals often make cultural divisions whenever they speak about “our” or “their music”. Musical accompaniment is usually at the center of social events and experiences (Turino, 2008:1). Furthermore, the same author asserts that people in different social communities use music as an expressive means to outline their moods, court one another, celebrate weddings, put their children to sleep, inspire political movements and gatherings, maintain friendships, etc. Thus, many theorists emphasize the collectivity of music because it “galvanizes (expresses, cf.) the creative power of the collective”

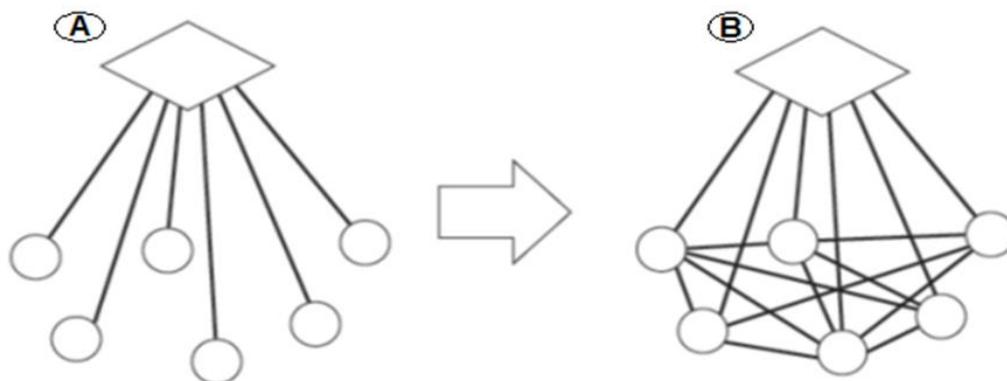
(Andreis, 1975:10). It all suggests that music during its consumption, its use, even judging by its own value, has a collective character and worth, but this does not dispute the fact that a piece of music is primarily the result of an individual's creative process. Individualism, as Andreis concludes himself, was created when an individual began to control the tones and deliberately create a melodic movement. In this moment, they realized that they did not have to mimic the sounds of nature, but could instead create something completely new: a musical thought (1975:13), that is, a musical composition. A product is by definition "the result or output of labor" (Anić, 1994:140). A piece of music is, therefore, the fruit of human intellect, an intangible creation, and is the result of the creative work of a musical creator (i.e. a composer) who is the rightful owner of the work he creates. The concept of ownership over some resource (Waldron, 1992:842) is determined by three prerequisites, all of which must be fulfilled by the owner. The first condition states that the owner must have the right to use the resource; the second specifies that they must have the right to exclude others from using the resource; and the third determines that they must have the ability to transfer the first two rights to others through donation, sale or inheritance (Waldron, 1992:842). Of the three rights listed above, Waldron states that the most important one is the second right, as the first one is applicable to almost every existing sidewalk or park in the world. The element of exclusion turns the owner's right of use into an essential right of ownership and is simultaneously the supposition for the third right. The notion of music as intellectual property of an author of a composition is crucial to understand the origins of the music industry and the way this business actually functions. The music industry is a business engaged in the sale of musical compositions, that is, their performances and recordings, and in a broader sense encompasses a wide range of activities from different fields of human activity. According to Wikström (2013:47), the core of the music industry is comprised of the composers, writers, musicians, producers and arrangers, the record labels and the music publishers. The music industry has gone through various phases in its history, but has always been driven by the creative acts of individuals who had the need to express themselves through music. The development of the simplified process of the music industry, up to the beginning of the 18<sup>th</sup> century, consisted of composing and printing musical compositions, and it was predominantly in the hands of aristocrats and the Church. One of the first composers to turn to the market was Mozart who suffered in poverty as a pledge for his freedom (Scherer, 2004). Being a composer and an author during those days is not the same as it is today. Hadjiafxendi and Mackay (2007) present a critical approach to authorship in a scientific context, but also write on the meaning of authorship as a product of the diversity of different technological, cultural and historical conditions. The precondition of understanding musical theory and transcription was implicated in the era computerization because otherwise it was virtually impossible. By digitizing various music processes, today it is possible to record and arrange melodies without previous music education. Musical authorship has lost its charm, mystery, and peculiarity, and in today's society anyone can become a musician.

### **3. THE OLD AND NEW MUSIC ECONOMY**

Economically speaking, music was initially a service provided personally by the authors (or by performers on their behalf) as live entertainment. The appearance of devices from which performances could be recorded, duplicated and distributed as an actual physical product through a sales chain marked the birth of the record industry. The record industry is part of the music industry that has ruled over this whole business for over a century. In this now old music economy, as it is called by Wikström, the content was inseparable from the record or from other audio formats (2013:6), and the music industry was truly an "industry of physical goods" (Meler and Škoro, 2013:53). Consequently, music ceased to be an experience that could only be appreciated during its performance (Doyton, 2013). A wax cylinder that developed into a vinyl record, and then into a cassette, then a CD, etc. has forever changed the way people perceive

and experience music. It has become possible to love, appreciate and enjoy the music from authors and performers you have never seen or heard live. It was enough to own an LP and reproduce it on one of the devices. The act of materializing someone's intellectual property, which was until then exclusively a service, has resulted in a product that has a price and has to be distributed and promoted (Meler and Škoro, 2013). It is important to note that with the advent of the record industry, the hard-won artistic freedom of musicians, who for centuries were in the service of the monarch and the Church, has once more found itself in a predicament, creating a space for a confrontation that has been continuously stewing on the margins of the music industry (Meler and Škoro, 2013). Namely, according to the previously discussed authors, record companies were ready to approach the audience in pursuit of better financial and business ventures and direct the creative nature of their protégés in that direction. For Wikström (2013:5), everything in this old approach to record labels (“the old music economy”) was a matter of control – to maximize revenues of intellectual property and minimize its unauthorized and illegal use. Obviously, this type of control within the modern market is simply not possible. In order to further explain this statement, Wikström uses Watt's approach from his book on networks “Six Degrees: The Science of a Connected Age”. In his work, Watts (2004:18) explains network connectivity simply as a collection of objects interconnected in some way. The network structure has high connectivity if all of the objects within the network are interconnected (Figure 1).

*Figure 1: Illustration of network connectivity between the music industry and the user*



*Source: Wikström (2013:6)*

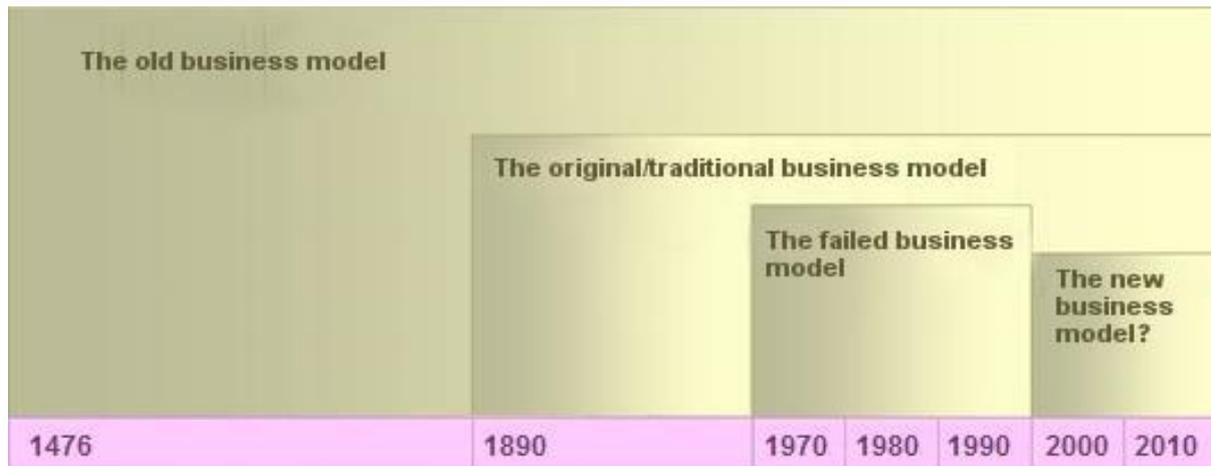
By using Watts' concept of connectivity as a unit that measures the quality of human interconnectedness within a network, Wikström explains the distinction between the old and the new music economy. In the old approach, the network structure was made by the record industry and the level of connectivity between users and record labels was very strong (Wikström, 2013). Users did not have any connections to each other, or they were very weak (as shown in Figure 1 in Section A). The new approaches and solutions of the 21<sup>st</sup> century drastically reduced the physical sales of compact disks, while simultaneously reducing the impact of mass media, and Wikström concludes that new communication technologies have created a completely different structure and hierarchy when it comes to network connections. Today, everyone can download music or put it on the Internet or stream it through the Internet, and the result is the complete loss of complete control of the record labels over their music content and consequently better connectivity for the user (Figure 1, Section B). The conclusion is that the old approach which suggested high control and low-level connectivity between users has been replaced by high user connectivity and low control of the record companies (Wikström, 2013:6).

One of the key reasons why control was possible lies in the way music was consumed as a product, that is, in the format on which the recording was stored and distributed on the market. An audio format can be described as a prescribed or standardized form of something on which music (i.e. sound) is stored and distributed.

#### 4. BUSINESS MODELS OF THE MUSIC INDUSTRY IN THE ERA OF DIGITIZATION

The business models of the music industry have changed throughout the centuries, and it is possible to delineate four different models (Figure 2).

Figure 2: Cumberland's business models of the music industry throughout history Source:



Source: Reproduced from Cumberland (2013)

The old business model refers to the period during the end of medieval times and the weakening of the influence of the Church, as well as the advent of printing musical notation. That model was based on the fact that music was seen as a service, and sheet music, which is printed worldwide even to this day, served as the basic file format. The original or traditional business model began with the invention of the phonogram and the emergence of phonogram manufacturers (discographers) who became part of the music industry at the end of the nineteenth- and beginning of the twentieth century. Cumberland labels the period between 1970 and 1990 as the failed business model era, although the amount of revenue generated by the music industry, specifically its discography, reached its peak during that time, while simultaneously experiencing a sudden and irreparable decline. The reason behind this trend is the rapid development of technology, which made it impossible for the larger companies to put Internet distribution and trade under their control. A successful business model is a better way of doing business than existing alternatives, states Magretta (2002), emphasizing that each new model is mostly a variation of old models. Each business model, as a rule, has two parts in its value chain. The first part concerns activities related to creation, the other part is tied to sales, that is, the monetization of goods or services. The end of the 20<sup>th</sup> century marks the creation of a new business model of the music industry, the form of which can be delineated and defined only 17 years later, and even now there is still great uncertainty as to what the final shape of the model will actually look like. Nowadays, when the statistical indicators show the first signs of recovery and stabilization of the music industry, it is easier to come to the conclusion as to what happened during the past 20 years, as well as who was right in their predictions. It cannot be disputed that record labels at first did not know what to do. In fact, in their desire to accumulate extra profit, they digitized their recordings to sell their old products anew. Any previous change of format was a signal to start reissuing old, already commercialized

recordings, and in turn, re-commercialize them. However, while they were publishing CDs, record labels managed to incapacitate their previous business model. Previous formats had a relatively poor sound quality and every copy further impaired that quality. This new technology had the perfect sound quality of the original, and the quality remained the same with each new copy. Realizing that the damages were greater than the benefits, record companies went to court and began “hunting” illegal users, thus wasting valuable time that was being used up by other more skillful players. The discovery of digital content compression (MP3), along with the dawn of the Internet and new forms of communication, the emergence of social networks as well as UGC<sup>1</sup> services (e.g. YouTube) - all of these inventions were enough for someone to understand how things should be restructured and give users a new way of consuming music. The notorious concept of immaterial property in an extremely material world was further complicated by the technological progress which was not followed up by proper legislation. Only time will tell whether record labels will disappear and whether their properties and business transactions will be taken over by other enterprises. The relationship between the music industry and technology throughout history has always been very close and intimate (Leyshon, 2001). According to Leyshon, technological progress generally supported the music industry, which is why the latter welcomed it with open arms. In the very beginning, computerization was greeted with the same sentiment because, as previously stated, it offered the owners of recordings (discographers) the ability to once again sell old music in a new format. In that cycle of reformatting an album (from vinyl to cassettes, from cassettes to CDs, from CDs to MP3s. etc.), the parties who made (and make) the greatest profit are the record labels. Many authors agree in the general assessment that the music industry underestimated the appearance of CDs and MP3s which literally exploded in tandem with the birth of the Internet.

Chart 1: The global music industry revenues (1999.-2016. US\$ billions)



Reproduced from IFPI (2017:11)

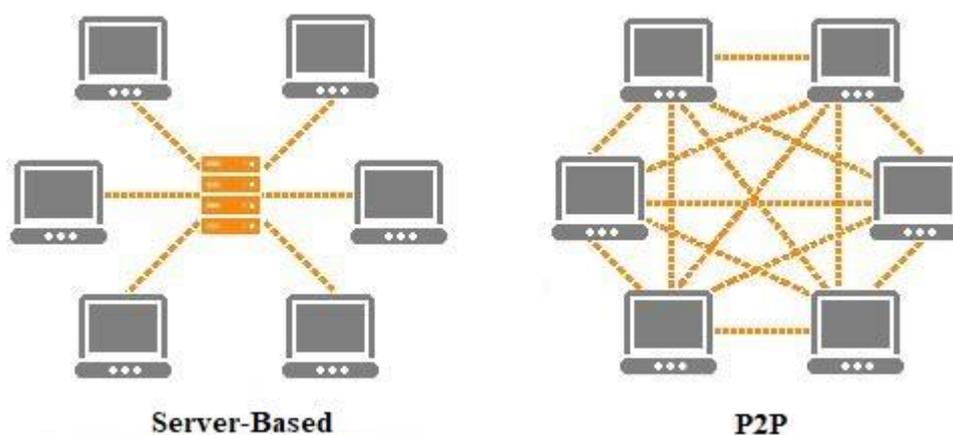
During an eighteen year period (Chart 1), there was a steady drop in sales in 1999, which made up the world's total revenue of \$ 23.8 billion. The first revenue from digital sales was recorded in 2004. As with the classical model of distribution of music products, music is distributed in digital environments through digital brokers, that is through large databases containing stored music. Such databases are called digital aggregators. Their existence undoubtedly invalidates the presence of the insignificant amount of literature that, in the first decade of the 21<sup>st</sup> century,

<sup>1</sup> UGC - User Generated Content – signifies any content that users have created themselves and have disseminated it on social media networks in order to give their own perspective or evaluation of a certain product or service.

celebrated and bragged the Internet would democratize the music market and make intermediaries obsolete. One of the most popular terms was “disintermediation”, which is what was expected to happen to Internet commerce. As noted by Galuszka (2015:256), experts were announcing the “death of the music industry”, but the outcome of the second decade of the 21<sup>st</sup> century are disproving this prediction. Namely, DeGusta was probably referring to the record label businesses when he wrote the previous statement and not the entire music industry, as it had been exposed to crises in the past and survived. This circumstance is best described by Rogers (2013:177) who declared that it was an “evolution, not a revolution”. In this sense, there is an ongoing struggle of creators against Internet empires (YouTube, Google, Facebook, and other platforms) who are massively profiting from content classification, i.e. from web traffic and the sale of advertising space. The aforementioned internet platforms in public appearances argue that they do not exploit the content, but only make it available to users. It is true that this availability occurs during the so-called transfer of value, as the real content owners do not get fair compensation, that is, the revenue does not reach them even though they are transferred through internet platforms. A classic example is a YouTube user overlaying photos or video clips during a song. The European Commissioner for Education, Culture, Youth and Sports Tibor Navracsics stated at the forum for the European Grouping of Societies of Authors and Composers (GESAC), which took place on May 30 2017 in Bruxelles, that “between 2000 and 2015, musicians had lost more than 40% of their revenue in online distribution”. The two of the most popular ways to consume music when it comes to legal digital distribution are streaming and downloading. When a user in a digital store permanently downloads music and stores it on their device, this is called downloading, and legally speaking, the user becomes the owner of the file in which the bought music is stored. In the event that a user plays music content through a music service on their device while not permanently storing it, then one is referring to the act of streaming. The difference between the two processes is the type of payment enacted in these transactions (Doerr, et al., 2010). When downloading content the user pays the amount per song or album, while streaming content runs on a monthly subscription. Although it is still the most popular way to consume music, the number of downloads has been dropping in numbers with each consecutive year. Streaming changes the way people listen to music, and in the economic sense abolishes the secondary market category. In a world of physical recording media, it was possible to trade with the same products any time and after the original purchase was completed, because the original customer was the owner of the product. There is no such thing in the digital world of streaming. Every listening session is recorded and charged, and the composition retains its intrinsic value as a service in the sphere of the creative industry. Revenues generated by music services (platforms) such as Spotify, Deezer or Apple Music are based on the sale of the advertising space or on a model called “freemium”. Freemium is a business model which depends on the concept that the basic amenities of a service are free, but additional functionalities or extensions of the product or service are charged (Despot, Ljevak Lebeda and Tomašević, 2015:84). In the 21<sup>st</sup> century, music consumers are seeking a multimedia experience and are no longer satisfied by merely listening to music. This is emphasized by the development of social media networks, which are characterized by the interaction between users, and whose numbers of users are increasing with each passing day. Aula (2010:43) emphasizes that social media allows users to network, produce different content as well as rapidly distribute it. They also support the creation of services and shared web sites which are created and maintained by the users (Wikipedia), websites for video and photo sharing (YouTube), virtual worlds (Second Life) and journals (blogs), etc. (Aula 2010:43). The author argues that the problem with social media is the complete lack of control one has in this sphere, in addition to the possibility to lose one's reputation not only by doing, but also by not doing anything at all, that is, by not reacting to i.e. lies spread on social networks. This is why Aula (2010:48) stresses the importance of managing a crisis as early as possible, and not after

the crisis actually breaks out. The music industry, and its record labels, in particular, are characterized by a slowness which is partly due to the very comfy and untouchable position they have held for years. Accepting new technologies has proven to be a slippery slope because, in pursuit of greater financial gain, record labels have participated in the digitization of their music and in delivering the goods to the market. In order to seriously engage in social media where more and more users are congregating, creatives require money, time and highly skilled people, so as to effectively market their original content. This is why musicians are implementing their own DIY approach because they do not want to wait for a record label or someone else to do the work for them. The fans expect musicians to nurture and feed their virtual presence on web pages and social networks, both on their official sites as well as Facebook and Twitter (Stopps, 2008). With the correct and timely analysis of e-mails and messages, one can get valuable data to, for example, plan concerts and tours. Similarly, by properly using available networks and channels, it is possible to make a significant impact on the viewing public. Some analysts predict that the social responsibility of these powerful networks and services will continue to grow because the rules will become more rigorous. Creative industries have suffered a great deal of damage in the past years because there was no interest or understanding from legislators, but what the creative economies have failed to do will be achieved by actual politicians. In his article, Fuchs (2017) contends that politicians have realized the power of social media and will adjust the regulatory mechanisms of Internet advertising to be on the same level as those maintained on television and radio. He presses on that, in that case, Facebook, for instance, will be obligated to keep a digital copy of the advertisements, along with information pertaining to who saw the ad, when did that person see it and how much did it cost them. Communicating and sharing content through social networks has become a commonly accepted and highly effective marketing tool that the music industry needs to attend to. According to an IFPI study (2017) about the world of streaming services, more than 46% of users enjoy music through YouTube, but when it comes to profits, it should be noted that YouTube annually pays only \$1 per user, while, for example, Spotify pays \$20 per user (IFPI, 2017). YouTube is without a doubt the world's most important web site for finding and discovering content created by users, and this has caused music to become an audio-visual format, whereas before it was predominantly an aural format (Stopps, 2008:9).

Figure 3: The P2P model



Source: Reproduced from Wowza Live Streaming Software, (Date of Access: 15 September 2017)

Deliberating through the perspective of left-wing thinkers, David (2010:30) in his book “Peer to peer and the music industry” states that “some innovations are taken up. Others are not. What is taken up may be taken up in ways other than were intended by their developers”.

This way he emphasizes that change is not just an expression of a technological evolution, but it also allows the creation of new distribution channels. These channels can abolish or “circumvent” traditional and current models of product availability, especially when it comes to advancements in IT. In short, it is about networking and communication between computers for the purpose of sharing data assets, without server mediation (Figure 2), i.e. the P2P<sup>2</sup> model. This model allows each computer to become a workstation and a host, i.e. a user within the data transfer. It only needs to have a program that provides the exchange of indexed content. Wikström (2013:49) asserts that a number of scientists have tried to explain the logic and dynamics of the music industry, citing three vital parts of this industry, which are: recording music, music publishing (publishing companies) and live performances. Record companies are still an important part due to the value of the musical compositions in their music catalogs. YouTube and social media function as a type of promotional channel, while simultaneously posing as one of the biggest problems to the music industry for infringing on copyright and the so-called transfer of value (this is especially true when it comes to YouTube). The impression is that the music industry is constantly contradicting itself and the rules of their usual business operations. Harker (1997) might also be right when he states that this industry is shrouded in a veil of secrecy, as only a few parties know the actual data and relations, and that faction wishes to keep it that way. The failure of business models, as observed by Magretta (2002), occurs when the model either does not pass a narrative test (the story behind the model makes no sense) or does not pass the numerical test (the basic business mathematics does not add up). Only time will tell whether this new business model of the music industry will survive by modifying itself according to the oncoming times and trends, or whether it will be replaced by a new one.

## 5. CONCLUSION

Like any material property, music can be loaned, sold, inherited, and used however the user pleases. Despite its extreme collectivity, especially when it comes to its consumption, music is primarily the result of an individual’s creative process. Music is intellectual property and is the result of the creative work of an author who owns the work they create. The music industry is a business engaged in the sale of musical compositions, i.e. their performances and recordings. In economic terms, music can be both a service and a product. Throughout history, one can discern four different business models within the music industry. The latest model, which is still morphing and adapting to the times, is a direct consequence of the process of digitization and the Internet. Digitization has brought a lot of changes in all aspects of our lives and business practices, especially when it comes to the music industry. The modern way of distributing music and the new music economy are characterized by a large number of user connections and participation, which has led to a loss of control by the right-holders and an increase in amateur activity in the industry itself. The biggest problem for the music industry is the unrestricted sharing of content via the P2P model, as well as the transfer of value that occurs through the UGC channel. The social responsibility of strong social networks and services will continue to increase as the rules become more rigorous. What the financially crippled and damaged creative industries failed to do will be done by politicians implementing regulatory mechanisms, primarily in terms of advertising on the Internet. There are already visible effects of campaigns organized by individual politicians that have achieved exceptional results using only new forms of communication and by bypassing conventional media. This is why musicians, as well as the music industry, must accept new technologies and original ways of communicating with users in order to cultivate and nurture the growing demands of fans in the virtual world.

<sup>2</sup> “Peer to peer (P2P) is the name for a type of communication within a computer network. The usual way of communicating within a network is the client-server model, where clients only communicate with the server and directly download data from it. In contrast to this way of sharing data, P2P networks have no centralized servers and all of the participants are equal. Everyone has the same rights to take and give data, and all of the participants share their resources.” (Protrka, N. and Hrestak, D, 2017:321, author's translation).

**LITERATURE:**

1. Andreis, J. (1975). *The History of Music, Vol. I-IV*. Zagreb: Liber-Mladost.
2. Anić, V. (1994). *The Croatian Language Dictionary*, Zagreb: Novi Liber
3. Aula, P. (2010). Social media, reputation risk and ambient publicity management. *Strategy & Leadership*, Vol. 38 (6), pg. 43-49.
4. Bemuso - For independent musicians,  
<http://www.bemuso.com/musicbiz/musicroyaltycollectionsocieties.html#royaltycollection-societies>, [accessed: 23 October 2017]
5. Cumberland, R. (2013) <http://www.bemuso.com/articles/thenewmusicbizmodel.html#the-oldmusicbusinessmodel> [accessed: 15 September 2017]
6. David, M. (2010). *Peer to Peer and the Music Industry. The Criminalization of Sharing*. Sage Publications.
7. DeGusta, M. (2011). The real death of the music industry. *Business Insider*, 18. Available at: <http://www.businessinsider.com/these-charts-explain-the-real-death-of-the-music-industry-2011-2>, [accessed: 31 August 2017]
8. Despot, I., Ljevak Lebeda, I. and Tomašević, N. (2015). “Freemium” business models in publishing. New packaging for the needs of readers in the digital age. *Libellarium: Journal for the History of Writing, Books, and Cultural Heritage Institutions*, 8(1). doi: 10.15291/libellarium.v8i1.216, (pg. 81-89).
9. Doerr, J., Benlian, A., Vetter, J., i Hess, T. (2010). Pricing of content services—an empirical investigation of music as a service. *Sustainable e-business management*, 13-24.
10. Doyton, M. (2013). Think of Your Music as a Service, Not as a Product. Available at: <http://www.musicthinktank.com/blog/think-of-your-music-as-a-service-not-as-a-product.html> [accessed: 31 August 2017]
11. Fuchs, E. (2017). Facebook and Google could soon have to play by a new set of rules. *Yahoo Finance*. Available at: [https://finance.yahoo.com/news/facebook-google-soon-play-new-set-rules-202757658.html?utm\\_source=taboola&utm\\_medium=exchange](https://finance.yahoo.com/news/facebook-google-soon-play-new-set-rules-202757658.html?utm_source=taboola&utm_medium=exchange); [accessed: 3 October 2017]
12. Galuszka, P. (2015). Music aggregators and intermediation of the digital music market. *International Journal of Communication*, 9, 20.
13. Hadjiafxendi, K. and Mackay, P. (Eds.). (2007). *Authorship in Context: from the Theoretical to the Material*. Palgrave Macmillan
14. Harker, D. (1997). The wonderful world of IFPI: Music industry rhetoric, the critics and the classical marxist critique. *Popular Music*, 16(1), pg. 45-79.
15. IFPI, *Connecting With Music: Music Consumer Insight Report* (2017).
16. Leyshon, A. (2001). Time–space (and digital) compression: software formats, musical networks, and the reorganisation of the music industry. *Environment and Planning A*, 33(1), pg. 49-77.
17. Magretta, J. (2002). Why business models matter. Available at: <http://repository.binus.ac.id/2009-2/content/A0154/A015481231.pdf>, [accessed: 10 May 2017]
18. Meler, M. and Škoro, M. (2013). (R)evolution of music marketing. In *23rd CROMAR Congress Marketing in a Dynamic Environment—Academic and Practical Insights*.
19. Pinker, S. (1998). *How the mind works*. Penguin Books, London.
20. Rogers, J. (2013). *The death and life of the music industry in the digital age*. Bloomsbury - New York, London.
21. Rosen, R. (2008). *Music and Copyright*. Oxford University Press, Inc.
22. Scherer, F. M. (2004). *Quarter notes and bank notes: The economics of music composition in the eighteenth and nineteenth centuries*. Princeton University Press.
23. Stopps, D. (2008). *How to make a living from music*. World Intellectual Property Org.

24. Turino, T. (2008). *Music as social life: The politics of participation*. University of Chicago Press
25. Wade-Matthews, M., and Thompson, W. (2005). *Music: an illustrated encyclopedia of musical instruments and the great composers*. Hermes House.
26. Waldron, J. (1992). From authors to copiers: individual rights and social values in intellectual property. *Chicago-Kent Law Review*, Vol. 68, pg. 841-887.
27. Watts, D. J. (2004). *Six degrees: The science of a connected age*. WW Norton & Company.
28. Wikström, P. (2013). *The music industry: Music in the cloud*. Polity.
29. Wowza Live Streaming Software, <https://www.wowza.com/uploads/images/Server-based-vs-P2P-network.jpg> [accessed: 15 September 2017]
30. Protrka, N., & Hrestak, D. (2017). Provođenje kriminalističkih istraživanja korištenjem P2P računalnih mreža. *Policija i sigurnost*, 26(4/2017), 320-331.

# THE ROLE AND REPRESENTATION OF EXPERT SYSTEMS IN MAKING DECISIONS ON GRANTING CREDIT IN BANKS IN THE REPUBLIC OF CROATIA

**Luksa Lulic**

*Assistant Professor at Zagreb School of Business, Croatia  
dekan@pvzg.hr*

**Branka Stipanovic**

*Lecturer at Herzegovina University,  
Dr. Milenko Brkić Faculty of Social Sciences, Bosnia and Herzegovina  
stipanovicbranka@gmail.com*

**Hrvoje Smoljic**

*Professional Specialist of Economics,  
Faculty of Information Studies in Novo Mesto, Slovenia  
s.g.hrvoje@gmail.com*

## ABSTRACT

*The research topic is the role and representation of expert systems in making decisions on granting credit in banks in the Republic of Croatia. The relevance of the topic lies in the significance of the development of reliable tools for credit risk estimation in the long-term preservation of a bank's competitive advantage. An empirical research was conducted on the frequency of use of expert systems when making decisions on granting credits in banks that operate in the territory of the Republic of Croatia. The research results indicate that the use of such systems in such instances correlates with the bank's asset value and size.*

**Keywords:** *expert systems, banks, creditworthiness*

## 1. INTRODUCTION

The topic of this paper is the role and representation of expert systems in making decisions on granting credit at banks in Croatia. This paper aims to point to expert systems as intelligent systems that rationalize the decision-making process on crediting and increase the effectiveness of decisions. The paper aims to provide a theoretical overview of expert systems with special reference to expert systems in banking, as well as to examine the representation of the use of such systems in banks operating in the Republic of Croatia. The paper is divided into five parts. After the introduction, the paper goes on to examine theoretical references in the second part which speak in favor of the efficiency of expert systems in decision-making. The third part outlines the role of expert systems in making decisions on granting credit; it describes the frequently used models for estimating the creditworthiness of a company as well as the features of certain expert systems for estimating creditworthiness. Based on the results of empirical research, presented in part four, conclusions are drawn on the frequency of use of expert systems in banks in Croatia. The conclusion summarizes the theoretical and empirical findings on the role and representation of expert systems in making decisions on granting credit.

## 2. THE DEFINITION OF THE TERMS IT AND EXPERT SYSTEMS AND THEIR ROLE IN CONTEMPORARY BUSINESS

The term "system is an entirety that consists of purpose-servingly associated parts which communicate between themselves and with the 'environment'", and they associate for mutual benefit which is the accomplishment of mutual goals" (Šimundić, 2000:23). IT systems have a particularly important role in contemporary business because they enable the automation and

redesign of business processes and advance their efficiency (Zachman, 1987, Venkatraman, 1994, Davenport and Short, 2003). According to Galbraith 1997, Šimundić 2000, and Drljača 2003, IT systems advance business processes by enabling automated gathering, storing, archiving and processing of data and the delivery of information in compliance with the demands and needs of users of the IT system. The historic development of IT systems dates back to the 1960s (Mason, Mitroff, 1973), when a need arose for the automation of business processes, that is, electronic data processing. The term expert system is less broad than IT system, referring to a later generation of IT systems which started their systematic development in the 1980s (Šimundić, 2000). An expert system is characterized by the ability to draw logical conclusions by using archived knowledge. Therefore, an expert system is an intelligent system that uses logic in the problem-solving process (Wen, 2008). According to Wen, expert systems offer a powerful and flexible tool for solving various problems that cannot be solved using traditional methods or when such methods do not provide equally satisfactory solutions. Expert systems, therefore, represent exceptional support in the process of decision-making and problem-solving. The fact is that expert systems use existing findings to generate new ones to make decisions, pointing to the conclusion that these systems imitate the decision-making process used by people – experts in a certain area. The quality of decision-making by expert systems is dependent on the quality of gathering, processing and generating expert knowledge by the system itself. Expert systems have a particularly important role in contemporary business since they reduce the time required to carry out repetitive and routine tasks, thereby making the decision-making process fairly easier. As Dušak (1992) points out, the foundation of program support for expert systems is the emulation of steps experts would make in certain cases.

### 2.1. Types of expert systems

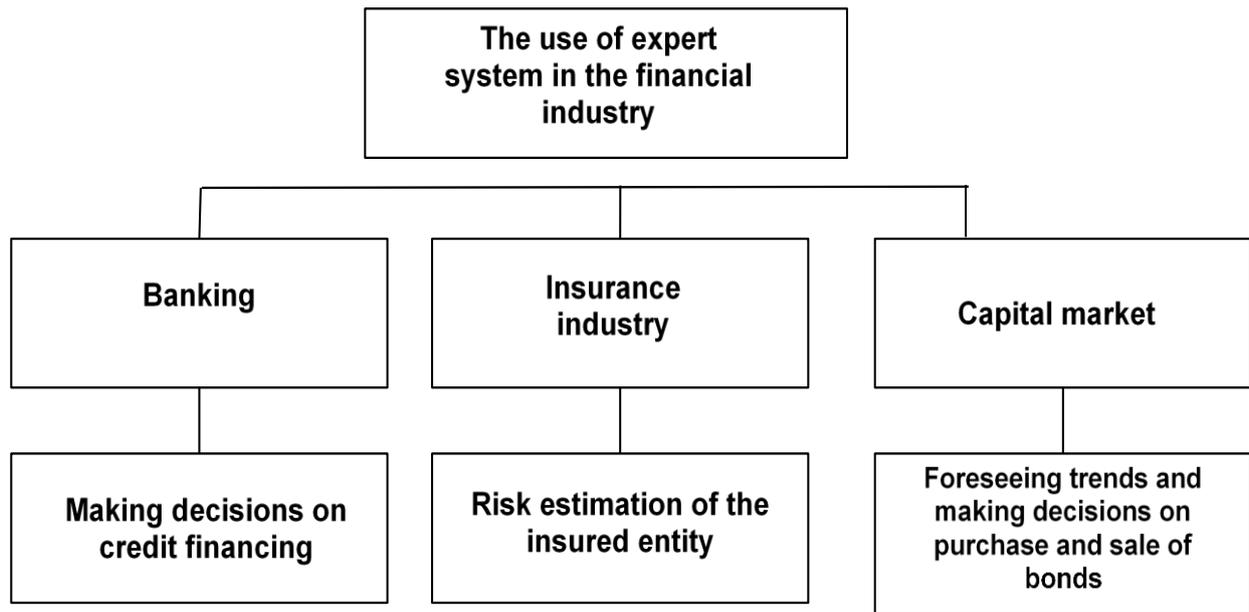
Meesad and Yen (2003) and Šimundić (2000) point out that expert systems can be divided according to the architecture and the decision-making process into:

- Deductive expert systems – whose architecture is built on a set of rules of deductive logic. Deductive logic means deriving individual facts from general understanding. The underlying principle of deductive expert systems is the use of causality, i.e. causal-consequential relations when making decisions (Luger, 2005). Deductive expert systems solve problems from a business area by using the conditions created by users from which conclusions are drawn
- Predictive expert systems – which use the existing archived knowledge to foresee solutions to a problem or the probability of an outcome
- Expert systems founded on a case study – systems that store examples to derive conclusions from them. This is a principle of expert system architecture favorable for the legal domain (Šimundić, 2000). According to Šimundić, this model is founded on experience which means copying a known solution or result onto a similar type of problem
- Neural networks – the expert systems of “neural networks” were modeled on the neural networks of living beings. These systems imitate the human way of making decisions and represent the simulation of actual neural systems. Neural networks are characterized by adaptability and self-organization (Luger, 2005). Based on these features, it can be concluded that these systems were built to achieve autopoiesis, which is confirmed by the conclusions drawn by Beera (1995)
- Fuzzy expert systems – systems founded on the so-called fuzzy logic. Such expert systems are founded on the fact that expert knowledge is in most cases heuristic and depends on judgment (Šimundić, 2000). Since judgment includes uncertainty, fuzzy expert systems were developed to advance the process of managing the heuristic knowledge and the knowledge that depends on judgment, in order to improve the skills of finding truths and new facts and conceptions (Rojnić, 2007).

## **2.2. The application of expert systems in contemporary business practice**

Expert systems have a wide spectrum of use in contemporary business (Luger, 2005). Their use in contemporary business has always been to successfully manage the knowledge of an organization. One of the initial applications of expert systems was in medicinal diagnostics (Miller, 1994). Today, expert systems are used in numerous business areas for diagnostic purposes, such as operational management, planning, scheduling, supply management, and others. Expert systems are used in business in all instances where it is necessary to determine the cause of a business issue. Expert systems are especially useful when establishing business processes on the principle of optimization. If a business process consists of a set of complex and interdependent activities that need to be done in a set time, expert systems can be of extreme importance for scheduling the activities and resources within the set time needed to carry out the business process. The use of such systems in business process planning results in their optimization and redesign, which is what Davenport and Short (2003) examined. This, in turn, leads to the rationalization of costs, i.e. the improvement in efficiency on the level of some business functions and the organization as a whole. The use of expert systems with the aim of more efficient knowledge management in an organization is an especially important aspect of applying expert systems, considering the ever-growing significance of knowledge in acquiring competitive advantage of companies. Knowledge represents a significant asset component, comprising components such as managerial systems, brand identity, customer information or corporate reputation. Knowledge is an asset of a person with a high level of personalization, manifested through the expertise of an individual and a group within an organization (Pascarella et al, 2003). Expert systems have a special role in structural knowledge management (Kolaković, 2003), which is the lapsed knowledge of an organization stored in handbooks, brochures and databases of expert systems. Expert systems largely make the process of supervision and control easier in real-time and they ensure an efficient observation of trends, quality control, and the occurrence of certain anomalies in business processes. The systems explained above are especially suitable for application in production processes. The application of expert systems has also developed in the administration of justice. According to Šimundić (2002), expert systems make routine decisions easier thus affecting the rationalization of time and costs. The aforementioned expert system features can be considered additional justification, i.e. purpose for the development of expert systems. The financial industry has a special need for expert systems which are used as support in decision-making, particularly regarding decisions on granting citizens and business entities credit. According to Nakić (2013), expert systems in the insurance industry act as instruments of ensuring a high level of quality of the advice given to insured entities, but also as a specific instrument for efficient realization of tasks of strategic and operational management of an insurance and reinsurance company, such as assessing damages. It is believed that in the future, these systems will play a great role. Expert systems are especially important for foreseeing trends and making decisions in trading in the capital market (Figure 1).

*Figure following on the next page*

*Figure 1: The use of expert systems in the financial industry*

*Source: Authors*

### **3. THE ROLE OF EXPERT SYSTEMS IN MAKING DECISIONS ON GRANTING CREDIT**

Modern banking has been characterized by dramatic and fast changes on the global level and expert systems have proven to be a tool of great importance in the decision-making process, with special emphasis on making decisions on granting credit.

#### **3.1. Trends in modern banking**

The nature of business-making in the banking sector on the global level is under the strong influence of the trends of globalization and market liberalization (Goldberg, 2009). These processes have greatly increased the competition among business entities in banking on both national and international level, so consumer-centric orientation has become the primary focus of banking houses. The hypercompetitive surrounding in banking has led to a particular “need for research and monitoring of consumer attitudes. Based on these attitudes, it is realistically possible to make important and often strategic decisions” (Nakić, 2014) in the banking business. The liberalization of the banking market has also caused flexibility in the area of providing financial services. Lowering the barriers has enabled banks to step out from the traditional banking affairs and offer their clients a wide range of financial products. Banks today offer insurance, innovative technological banking services, etc. All this has resulted in the efforts of banks to increase profit from various fees and not just from interest charges (Rončević, 2006, Tuškan, 2009). The globalization and liberalization trends force banks on the global level to achieve a more efficient system of cost management and to raise the level of business efficiency. Banks aim to create a volume economy which will satisfy the demands of shareholders. The development of IT technology and expert systems greatly contributes to the accomplishments of the said goals of banking institutions. As Rončević (2009) points out, across the world new technologies have been developed and adopted which contributed to the globalization of financial flows and the development of financial organizations. IT development continues to create additional value for banking services for clients while at the same time enabling banks to increase their productivity and business efficiency by using alternative sales channels such as online or mobile banking and ATM and POS services.

### 3.2. The roles of expert systems in modern banking

Expert systems improve the quality of a great number of business processes in banking. The most important functions of expert systems are (Jo, Lee, 2007):

- Managing knowledge in the banking sector,
- Managing client relations and the development of marketing policy,
- Risk assessment and analysis, and
- Carrying out the policy of prevention of criminal activity such as money laundering.

Using expert systems enables banks to adapt their mobile and online services more efficiently to the needs and demands of clients based on the accumulated knowledge of consumer behavior and attitude (Nakić, 2014). The unification of knowledge and skills from various domains that impact the overall quality of the banking service, in turn, leads to a higher degree of customer trust and loyalty, which is the ultimate objective of banks in a highly competitive environment on both national and international level. Risk assessment is a particularly important segment of the banking business in which expert systems prove their exceptional benefit. Risk is a condition in which there exists a possibility of negative deviation from the desired and anticipated outcome. Risk is the probability that something will not occur in the way it was planned. “In a corporate sense, this means that risk is the unfulfillment of business targets that have been set which must include the chances and threats from the environment which can potentially contribute to the growth and development of a company or hinder it and thereby bring into question the company’s existence” (Rasmussen, 1997). Expert systems use computer algorithms to assess the qualitative and quantitative parameters of the business of a potential credit recipient and the degree of risk (Atiya, 2011). A successful risk assessment at banking institutions is the fundamental prerequisite for a long-term successful business, especially after the economic crisis of 2007 which was first and foremost the crisis of banking and monetization that later spread to the real economic sector (Drašković, 2009). Recognizing and preventing criminal activity, colloquially referred to as money laundering, are part of corporate policy and corporate social responsibility of each respectable banking institution. The process of uncovering said criminal activities can be made difficult because the aforementioned activities are masked as legal. Expert systems are able to detect abstract financial transactions and provide an exceptional contribution to the realization of a bank’s policy against money laundering.

### 3.3. Models for estimating the creditworthiness of clients – 5C, Bex, Z-score

Frequently used models for estimating creditworthiness are models 5C, Bex, and Z-score.

#### 3.3.1. Model 5C

The 5C Model is one of the more common models used to estimate creditworthiness. The five Cs (Matsuyama, 2007) refer to:

- the characteristics of credit applicant (Character),
- the capital of credit applicant (Capital),
- the capacity of credit applicant (Capacity),
- the collateral, and
- the conditions of business of credit applicant (Conditions).

##### 3.3.1.1. Character

The credit applicant’s character is a subjective criterion which refers to the overall impression made by the potential credit recipient. The impression is conveyed by education, employment experience, references and other business features of the applicant.

### 3.3.1.2. Capital

According to Iazollino and Fortino (2012), the capital that the credit applicant invests is an important indicator of the degree of certainty of the success of his/her business undertaking. Interested creditors and investors expect the debtors to have their own funding and assume personal financial risk when realizing the business undertaking.

### 3.3.1.3. Capacity

Applicant's capacity is a criterion which refers to his/her ability to repay credit and it is connected to cash as the most solvent asset form (Nishiguchi et al., 1998). Therefore, it is in the interest of a bank clerk to analyze the business monetary flow and calculate the probability of credit repayment in a determined time period. The capacity criterion also demands an insight into the up-to-dateness of applicant's earlier payments.

### 3.3.1.4. Conditions (instruments) of capital insurance

It is important for a bank that the potential credit applicant has additional sources of funding for credit repayment. Conditions or instruments of capital insurance are assets such as equipment, buildings, and other accounts receivable. General insurance instruments of credit repayment include real estate mortgage, movable and immovable assets, whereas other insurance instruments include supplies, various receivables, bills, checks, acceptance orders, guarantees, insurance contracts, shares, bonds, and others.

### 3.3.1.5. Conditions of business

Economic conditions in the environment and industry are a relevant criterion when making the decision on granting credit. It is, therefore, important to understand the features of macro- and micro-surroundings in which the credit applicant intends to do business.

### 3.3.2. The BEX methodology

The BEX methodology of estimating creditworthiness was developed by Croatian scientists dr. Vinko Belak and Assistant Professor dr. Željana Aljinović Barač who used it to analyze companies listed on the Zagreb Stock Exchange. The methodology was developed with the aim to adjust the procedure of the estimation of creditworthiness to the business climate on the market in the Republic of Croatia. It consists of (Belak, Aljinović-Barač, 2007):

- five structural indicators
- five indicators of financial operations
- four indicators of investment efficiency on the capital market.

According to the authors of the model, BEX consists of four indicators with certain weight, based on which the following formula is derived:

$$BEX = 0,388 ex_1 + 0,579 ex_2 + 0,153 ex_3 + 0,316 ex_4$$

where

$ex_1$  = profitability,

$ex_2$  = value creation,

$ex_3$  = solvency,

$ex_4$  = financing strength.

The borderline values of the model are obtained if the result is set to 1 (Belak, Aljinović-Barač, 2007).

$$BEX = 0,388 \cdot 6,675\% + 0,579 \cdot 1,0 + 0,153 \cdot 25\% + 0,316 \cdot 1 = 1,0$$

### 3.3.3. Altman's Z-score model

Altman's Z-score model is used to predict the bankruptcy of a company. It was published by Edward I. Altman, a professor of finance from New York University in 1968 (Altman, 2000). The Z-score formula means using various balance-sheet positions and positions from accounts receivable and payable. The Z-score model is a linear calculation of the probability of bankruptcy based on a set of business (financial) ratios with different weighting. The risk of bankruptcy is determined by comparing the company to other enterprises from the same industrial sector. The original Z-score formula (Altman, 2000) is:

$$Z = 1.2T1 + 1.4T2 + 3.3T3 + 0.6T4 + 0.99T5$$

Where:

T1 = current assets / total assets

T2 = retained profit / total assets

T3 = earnings before interests and tax / total assets

T4 = market value of equity / book value of total liabilities

T5 = sales income / total assets.

According to the author of the model, the Z-score test can be interpreted in the following way:

- Z-score above 3,0 – based on the quantitative financial indicators, bankruptcy is unlikely
- Z-score between 2,7 and 2,99 – the company is not at risk, but significant caution and improvement in business are required
- Z-score between 1,8 and 2,7 – the company is likely to go bankrupt within two years
- Z-score below 1,80 – bankruptcy is highly likely.

The shortcomings of Altman's Z-score model stem from the fact that it cannot be applied to corporations that are currently entering the capital market because the T4 indicator cannot be calculated (market value of equity/book value of total liabilities), since the market value of equity has not yet been estimated. Apart from that, the T5 indicator which includes sales profit can vary in certain activities, especially in the service sector, which means it lacks a high level of reliability. In addition, the model is "not suitable for the analysis of the business of financial institutions" (Altman, 2000).

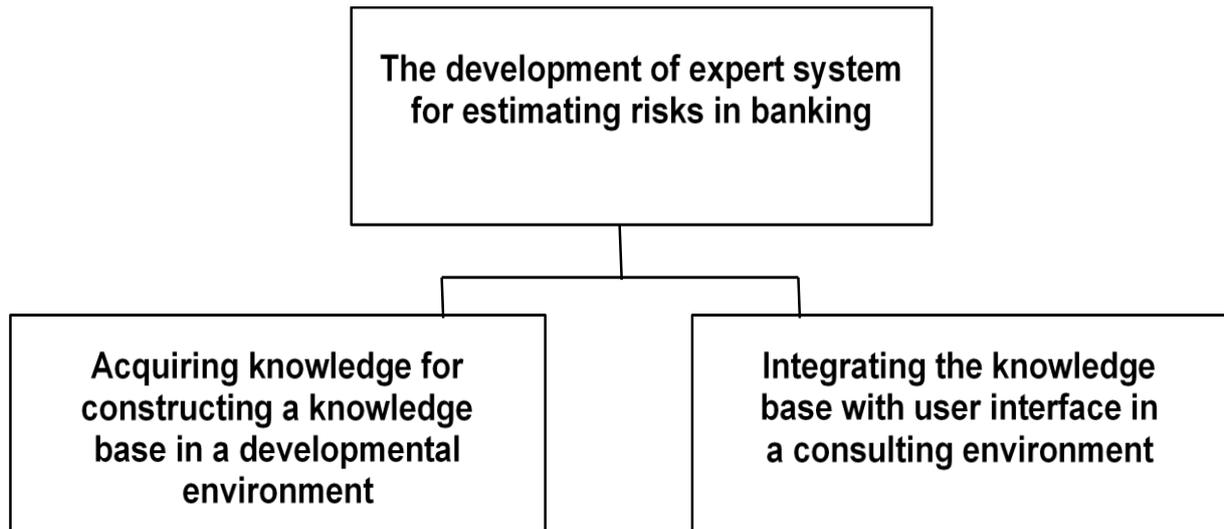
## 4. THE DEVELOPMENT OF EXPERT SYSTEMS FOR ESTIMATING RISK IN BANKING

The development of expert systems for estimating risk in banking is based on two activities (Mahmoud et al., 2008):

- Acquiring knowledge to build a knowledge base in a developmental environment and
- Integrating the knowledge base and user interface in a consulting environment (Figure 2).

*Figure following on the next page*

Figure 2: Stages of development of expert systems for estimating risk in banking



Source: Illustrated by the authors based on Mahmoud et al., 2008

#### 4.1. Acquiring knowledge to build a knowledge base in a developmental environment

To accumulate the knowledge required to develop an expert system for estimating risk in banking, a knowledge engineer analyzes the structural knowledge that is available at an organization, in books, scientific and professional articles, specialized journals, reports, and publications by the central bank and commercial banks, and others. Upon the analysis, the engineer then meets with experts from the field of risk management in the banking sector and cooperates with them to deepen the process of building, acquiring and accumulating required knowledge for the future expert system. In the knowledge building stage, knowledge engineers use adequate methodological approaches or systematic approaches. When developing expert systems for estimating risk in banking, it is common to use CommonKADS (Mahmoud et al., 2008). CommonKADS is the leading methodology for supporting structured knowledge engineering. It is now the standard for knowledge analysis and expert system development, and it has been incorporated into many major companies in Europe, as well as in the US and Japan (Schreiber, 2000, Aguilar et al., 2000). CommonKADS methodology enables engineers to spot the opportunities and difficulties in how organizations develop, distribute and apply their knowledge resources, and gives tools for corporate knowledge management. CommonKADS also supports the development of expert systems that support selected parts of the business process. When acquiring knowledge on risk estimation in banking, both direct and indirect methods are used, in accordance with the fact that organizational knowledge can be divided into explicit and tacit (Kolaković, 2003). Direct methods of acquiring knowledge are used to code the tacit (implicit) knowledge of employees. Based on the combination of both methods of accumulating knowledge, an engineer then replicates or imitates the decision-making process by experts in estimating risk in banking. Expert systems for estimating risks in banking analyze the following documents (Todorović, 2009):

- Financial reports
- Reports on market trends
- Statistical reports

Risk estimation is carried out based on six criteria: a feasibility study, macro-environment analysis, financial indicators analysis, creditworthiness analysis, and collateral analysis (load insurance instruments) (Mahmoud et al., 2008).

#### 4.2. The components of expert system knowledge base for estimating risks in banking

The components of expert system knowledge base for estimating risks in banking are (Huang et al., 2004):

- Economic feasibility study
- Financial feasibility study
- Technical feasibility study
- Marketing feasibility study
- Insurance instruments estimation

In accordance with the previously described methodologies for assessing creditworthiness (BEX, Altman's Z-score), each of the five components of the expert system knowledge base for estimating risks in banking is assigned a specific "weight", that is, significance (point number) which refers to the impact of that component on the overall degree of risk. According to Mahmoud et al., 2008, the components are worth a specific number of points:

- Economic feasibility study – 15 points
- Financial feasibility study – 30 points
- Technical feasibility study – 20 points
- Marketing feasibility study – 20 points
- Insurance instruments – 15 points

In each of the components of risk estimation, there are critical points. If a critical point in any component in risk estimation in banking has been reached, the financing plan is automatically rejected. An expert system does not only have the option to make decisions on banking finance – it also generates financing recommendations, such as credit amount, repayment period, interest rates, and others. Some components of the expert system for risk estimation in banking are connected to mathematical models. Certain mathematical models comprise various methods of achieving risk estimation in accordance with the available data (Huang et al., 2004). An important feature of expert systems in risk estimation in banking is the possibility for the end-user to monitor the decision-making, that is, the line of reasoning. This can be ensured by either monitoring the data in the system memory or using meta-knowledge (Schreiber, 2000).

#### 4.3. The description of certain expert systems in banking

Modern banks use the following expert systems for risk estimation:

- Cogito – Cogito expert system is used for knowledge management, customer relationship management (CRM), risk estimation and fight against money laundering in banking. Mobile and online banking services ensure an increased level of user experience, and the Cogito system enables users a simple and emphatic experience. When estimating the risk of a request for bank financing, there are numerous criteria which must be taken into consideration, apart from the basic financial reports of an enterprise. Cogito expert system is used to understand the profile of company leadership with the aim of detecting all additional factors that may indicate risk. Since financing is closely linked to management quality, management has become an ever-greater factor in making financing decisions. The use of Cogito expert system detects unlawful money flows in a sophisticated manner. This is an exceptionally competent system able to identify abstract financial transactions, which is one of the reasons why more and more financial institutions rely on Cogito technological services in their fight against money laundering (URL 1).
- FINEVA – is a multi-criteria system for making decisions in banking founded on the knowledge of experts and used as a system of support for assessing the business of a company and its financial sustainability.

The system was developed by using the knowledge of N. F. Matsatsinis, M. Doumpos, and C. Zopounidis from the Technical University of Crete (Gherghina, 2015). The financial analysis of a company includes the identification of its strengths and weaknesses mainly by carrying out the procedure of quantitative assessment and interpretation of financial indicators. The technology of expert systems is well-adjusted for these kinds of tasks.

Apart from their use for risk estimation in banking, expert systems are also used for optimal bank portfolio management (PORT-MAN), investment banking (INVEX), financial marketing (FAME), and exchange rate risk management (DEVEX) (Nedovi, Devedžić, 2002).

## **5. EMPIRICAL RESEARCH ON THE ROLE AND REPRESENTATION OF EXPERT SYSTEMS IN MAKING DECISIONS ON GRANTING CREDIT IN BANKS IN THE REPUBLIC OF CROATIA**

### **5.1. Research problems and hypotheses**

The paper starts with the following research problems and hypotheses:

1. Are expert systems for risk estimation equally represented in all banks that operate in the Republic of Croatia?

**Hypothesis 1:** All banks that operate in the Republic of Croatia are not equipped with expert systems for risk estimation

2. What is the role of expert systems in making decisions on granting credit in Croatian banks?

**Hypothesis 2:** Making decisions on granting credits is not entirely founded on the results of expert systems' reasoning.

3. Do banks that operate in the Republic of Croatia use internally or externally developed expert systems for risk estimation?

**Hypothesis 3:** By and large, banks in Croatia use externally developed expert systems.

4. Is the use of expert systems conditioned by the commercial bank's market share in the Croatian market?

**Hypothesis 4:** There is no statistically relevant correlation between the use of expert systems and market share of commercial banks in the Croatian market.

### **5.2. Research methodology**

The research, conducted online from 2–20 January 2016, included the opinions of managers working in Croatian banks and in charge of decisions on granting credit and the role and representation of expert systems in business. The managers' opinions on the role and representation of expert systems in business were surveyed using an online questionnaire which comprised 20 open-ended and closed-ended questions. The methods of data processing were statistical-mathematical: arithmetic mean and frequency distribution, as well as the chi-squared test which examined the statistical relationship between the representation of expert systems in business and the market position of banks in the Republic of Croatia. The research sample included employees (managers in charge of making credit-granting decisions) from 31 commercial banks in Croatia, which makes up 100% of the banks. Based on the oligopoly banking structure in Croatia, the leading banks are (Croatian National Bank, 2015):

- Zagrebačka banka (27%),
- Privredna banka (16%),
- Erste & Steiermärkische Bank (15%)
- Raiffeisenbank Austria (8%),
- Hypo Alpe-Adria Bank (7%)
- Societe Generale – Splitska banka (6%).

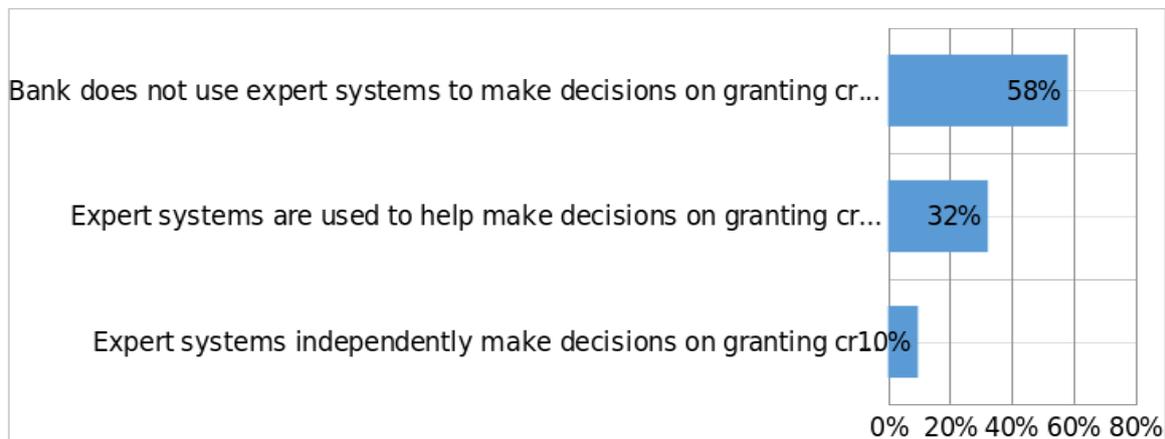
### 5.3. Research results

The results of the research are presented in the order of problems and hypotheses.

#### 5.3.1. Research results related to the role of expert systems in banks in Croatia

The results indicate that a great number of commercial banks in the Republic of Croatia still do not use expert systems when making decisions on granting credit. Namely, 58% of the banks, instead of using expert systems, rely on program support, based on which employees in charge of risk estimation independently make decisions on granting credit. Expert systems for risk estimation are used in 42% of commercial banks in Croatia. The role of expert systems in Croatian banks has been examined based on the criteria presented in Chart 1.

*Chart 1: The role of expert systems in making decisions on granting credit*



*Source: Authors' analysis*

As presented in Chart 1, 10% of the banks use expert systems completely independently as the only tool in decision-making. At 32% of the banks, expert systems are only a helpful resource for the staff that makes that kind of decisions, whereas in 58% of the banks, expert systems are not used at all. The results of the research point to the fact that commercial banks in Croatia in 100% of the cases use externally developed expert systems. The statistical correlation between a bank's market share and the representation of expert systems in decision-making is illustrated in Table 1.

*Table following on the next page*

*Table 1: Chi-squared test – the statistical significance of the correlation between a bank's market share and the use of expert systems*

	Bank uses an expert system	Bank does not use an expert system	TOTAL	
Market share > 6%	8	1	9	
Market share < 6%	4	14	18	
I do not want to respond	1	3	4	
TOTAL	13	18	31	
Table of expected frequencies			0	
Market share > 6%	4	5	9	
Market share < 6%	8	10	18	
I do not want to respond	1	3	4	
TOTAL	13	18	31	
f0	Ft	f0-ft	(f0-ft) <sup>2</sup>	(f0-ft) <sup>2</sup> /ft
8	4	4	16	4
1	5	-4	16	3,2
4	8	-4	16	2
14	10	4	16	1,6
1	1	0	0	0
3	3	0	0	0
TOTAL				10,8

*Source: Authors' analysis*

The zero hypothesis which states that there is no statistically significant correlation between a bank's market share in Croatia and the use of expert systems is rejected ( $\chi^2=10,8$ ,  $df=7$ ,  $P>0.05$ ).

### 5.3.2. Discussion

Based on the research results, hypothesis 1 – that all banks that operate in Croatia are not equipped with expert systems for risk estimation – is confirmed. The results indicate that 13 commercial banks in the Republic of Croatia use expert systems for risk estimation when making financing decisions, whereas 18 banks do not use expert systems but only the program

support in drawing up the credit rating of potential debtors. The research results also confirm the second hypothesis, according to which making decisions on granting credit is not entirely based on the results of reasoning by expert systems for risk estimation. Namely, most banks that already use an expert system do not use its findings to substitute the entire process of decision-making by experts. The reason for this stems from the fact that with complex decisions, expert systems are not able to completely imitate the decision-making process of a human expert. Therefore, commercial banks use expert systems mainly as support when making such decisions. Considering the complexity and financial cost of the internal development of expert systems for risk estimation in banking, all Croatian-based banks that use expert systems in their business, use only the externally developed and standardized systems. According to the research results, the third hypothesis must be modified and state that banks largely use externally developed expert systems for risk estimation. It can also be concluded that all banks operating in Croatia use externally developed expert systems. The fourth hypothesis, put forward as hypothesis 0, proposes that there is no statistically significant correlation between the use of expert systems and market share of commercial banks. Yet in accordance with the results of the chi-squared test, hypothesis 0 is rejected and the affirmative hypothesis on the existence of a statistically more significant correlation is accepted. Therefore, commercial banks whose market share is larger than 6 percent use expert systems significantly more often than banks with a market share lower than 6 percent. A significant obstacle in carrying out this research stems from the fact that some banks refused to answer some of the questions due to the protection of trade secrets. For these reasons, it was impossible to draw more detailed conclusions on the profile of commercial banks in Croatia that use expert systems.

## 6. CONCLUSION

Expert systems have a broad spectrum of use in banking, especially in risk estimation when granting credit. These systems follow the methodology of creditworthiness assessment and make decisions based on data obtained from economic, financial, technical, and marketing analysis and credit insurance instruments estimations. In the Republic of Croatia, the use of expert systems in risk estimation is still underdeveloped meaning that a great number of commercial banks still prefer support programs when evaluating credit-related risks. Those commercial banks that do use expert systems consider them to be a support in making decisions on crediting, which means that the systems still do not entirely replace the process of decision-making by a human expert in a certain field. The results of our research have shown that there is a statistically significant correlation between a bank's market share and the use of expert systems in estimating risk in banking.

## LITERATURE:

1. Aguilar, J., Cerrada, M., & Hidrobo, F. (2007). A methodology to specify multiagent systems. In *Agent and Multi-Agent Systems: Technologies and Applications* (pp. 92-101). Springer Berlin Heidelberg.
2. Altman, E. I. (2000). Predicting financial distress of companies: revisiting the Z-score and ZETA models. *Stern School of Business, New York University*, 9-12
3. Atiya, A. F. (2001). Bankruptcy prediction for credit risk using neural networks: A survey and new results. *Neural Networks, IEEE Transactions on*, 12(4), 929-935
4. Beer, R. D. (1995). A dynamical systems perspective on agent-environment interaction. *Artificial intelligence*, 72(1), 173-215
5. Belak, V., Aljinović Barać, Ž. (2007). Business excellence (BEX) indeks-za procjenu poslovne izvrsnosti tvrtki na tržištu kapitala u Republici Hrvatskoj. *Računovodstvo, revizija i financije*, no. 17(07)

6. Davenport, T. H., & Short, J. E. (2003). Information technology and business process redesign. *Operations management: critical perspectives on business and management, 1*, 97
7. Drašković, M. (2009). Globalna finansijska kriza i neoliberalna dogma. *Ekonomija/Ekonomist, 16*(1), 127-148
8. Drljača, M. (2003). Informacijska osnovica za kontinuirano poboljšanje kvalitete poslovnog procesa. *Elektrika*, no. 26
9. Dušak, V. (1992). SIMULACUSKO MODELIRANJE U PROCESU ODLUČIVANJA. *Journal of Information and Organizational Sciences*, (16), 65-71
10. Galbraith, J. R. (1977). Organization design: An information processing view. *Organizational Effectiveness Center and School*, 21, 21-26
11. Gherghina, S. C. (2015). An Artificial Intelligence Approach towards Investigating Corporate Bankruptcy. *Review of European Studies*, 7(7), 5
12. Goldberg, L. S. (2009). Understanding banking sector globalization. *IMF Staff Papers*, 171-197
13. Huang, Z., Chen, H., Hsu, C. J., Chen, W. H., Wu, S. (2004). Credit rating analysis with support vector machines and neural networks: a market comparative study. *Decision support systems*, 37(4), 543-558
14. Iazzolino, G., Fortino, A. (2012). Credit Risk analysis and the KMV-Black and Scholes model: a proposal of correction and an empirical analysis. *Investment Management and Financial Innovations*, 9(2), 167-181
15. Jo, H., Han, I. Lee, H. (2007). Bankruptcy prediction using case-based reasoning, neural networks, and discriminant analysis. *Expert Systems with Applications*, 13(2), 97-108.
16. Kolaković, M. (2003). Teorija intelektualnog kapitala. *Ekonomski pregled*, 54(11-12), 925-944
17. Luger, G. F. (2005). *Artificial intelligence: structures and strategies for complex problem solving*. Pearson education.
18. Mahmoud, M., Algadi, N., Ali, A. (2008, August). Expert system for banking credit decision. In *Computer Science and Information Technology, 2008. ICCSIT'08. International Conference on* (pp. 813-819). IEEE.
19. Mason, R. O., Mitroff, I. I. (1973). A program for research on management information systems. *Management science*, 19(5), 475-487
20. Matsuyama, K. (2007). Credit traps and credit cycles. *The American Economic Review*, 503-516
21. Meesad, P., Yen, G. G. (2003). Accuracy, comprehensibility and completeness evaluation of a fuzzy expert system. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems*, 11(04), 445-466
22. Miller, R. A. (1994). Medical diagnostic decision support systems--past, present, and future: a threaded bibliography and brief commentary. *Journal of the American Medical Informatics Association*, 1(1), 8
23. Nakić, S. (2013). Menadžment prodaje usluga osiguranja. *Putokazi*, 1(2), 185-197
24. Nakić, S. (2014). PODRUČJA PRIMJENE STAVOVA POTROŠAČA. *Praktični menadžment, stručni časopis za teoriju i praksu menadžmenta*, 5(1), 14-21.
25. Nedović, L., & Devedžić, V. (2002). Expert systems in finance—a cross-section of the field. *Expert Systems with Applications*, 23(1), 49-66.
26. Nishiguchi, K., Kawai, H., & Sasaki, T. (1998). Capital allocation and bank management based on the quantification of credit risk. *Economic Policy Review*, 4(3).
27. Pascarella, E. T., Cruce, T., Umbach, P. D., Wolniak, G. C., Kuh, G. D., Carini, R. M., Zhao, C. M. (2006). Institutional selectivity and good practices in undergraduate education: How strong is the link? *Journal of Higher Education*, 251-285.

28. Rasmussen, J. (1997). Risk management in a dynamic society: a modelling problem. *Safety science*, 27(2), 183-213.
29. Rojnić, M. (2007). Uvod u evolucijske osnove inteligencije: modularni um i enigma opće inteligencije. *Psihologijske teme*, 16(1), 47-80.
30. Schreiber, G. (2000). *Knowledge engineering and management: the CommonKADS methodology*. MIT press.
31. Šimundić, S. (2000). Uvod u informatiku. Pravni fakultet, Sveučilište u Splitu, Split
32. Todorović, T. (2009). Upravljanje kreditnim rizikom u banci. *Ekonomski horizonti*, 11(2), 81-99.
33. Tuškan, B. (2009). Upravljanje rizicima upotrebom financijskih derivata u RH. *Zbornik Ekonomskog fakulteta u Zagrebu*, 7(1), 107-120.
34. URL 1. <http://www.expertsystem.com/customers/banking-insurance/>, 05.02.2016.
35. URL 2. <http://www.hnb.hr/publikac/istrazivanja/i-019.htm>, 20.01.2016.
36. Venkatraman, N. (1994). IT-enabled business transformation: from automation to business scope redefinition. *Sloan management review*, 35, 73-73.
37. Wen, W. (2008). A dynamic and automatic traffic light control expert system for solving the road congestion problem. *Expert Systems with Applications*, 34(4), 2370-2381.
38. Yam, R., Tse, P., Li, L., Tu, P. (2001). Intelligent predictive decision support system for condition-based maintenance. *The International Journal of Advanced Manufacturing Technology*, 17(5), 383-391.
39. Zachman, J. (1987). A framework for information systems architecture. *IBM systems journal*, 26(3), 276-292

# TAX INCIDENCE OF THE IMPLEMENTATION OF THE PHILIPPINE TAX REFORM FOR ACCELERATION AND INCLUSION (TRAIN) ACT: A COMPUTABLE GENERAL EQUILIBRIUM-MICROSIMULATION APPROACH

**Ricardo L. Dizon**

*Ateneo de Manila University, Philippines  
Polytechnic University of the Philippines, Philippines  
rldizon@pup.edu.ph*

## **ABSTRACT**

*The effects on occupational choice, labor income, and distributional impact in the advent of the implementation of first package of Republic Act No. 10963, the Comprehensive Tax Reform Program of the Philippines also known as Tax Reform Acceleration and Inclusion (TRAIN) is a topic of enduring interest for researchers, economists and policy makers. Economists use the concept of tax incidence in evaluating the effects of the changes in tax policies of the government on economic welfare. The primary objective of the tax reform is to design an effective system of tax collection that is capable of financing government expenditures that will translate to a better position of an economy. The continued spike in the headline inflation rate, beginning the first quarter of 2018, brought controversial reactions in the implementation of the first package of TRAIN Law. The Bangko Sentral ng Pilipinas (BSP) (2018) cited that the Philippines recorded the highest inflation rate in almost ten years in June 2018. The aggregated effects of lower consumption on food and non-alcoholic beverages, rising global price of oil, and the implementation of the Philippine Government's TRAIN Law, brought about this increase in the general prices of goods and services (BSP, 2018). The purpose of this paper is to determine the anticipated effects of the changes in the tax system through the implementation of the TRAIN Law focusing on distributional and labour effects on the household sector. This dissertation applied the CGE- Microsimulation framework in order to obtain the macro and micro levels of the impact of TRAIN that is currently implementing by the Philippine Government. In particular, the Top-Down Behavioural Microsimulation approach was employed in this dissertation paper. The results of the simulation revealed that it was anticipated that the implementation of the TRAIN law results not only to an increase in the household income but in the disposable income as well. However, despite the increase in household income and disposable income, Region IV remained as the lowest estimated household income among regions in the Philippines. In terms of the poverty effects, the measurement of the poverty indices revealed that there are significant reductions in the number of poor as well as in the magnitude of poor due to the implementation of the TRAIN Law. However, based on the simulated FGT poverty gap, there is no significant difference in the poverty gap among the poor before and after the implementation of TRAIN Law.*

**Keywords:** Behavioral Microsimulation, CGE, Distributional Effects, FGT Gap, Inequality, Labor Occupational Choice, Poverty, Poverty Gap, Poverty Severity, SST Index, Tax, Top-Down Microsimulation, TRAIN Law

## **1. INTRODUCTION**

The effects on occupational choice, labor income, poverty, and distribution of income in the advent of the implementation of first package of Republic Act No. 10963, the Comprehensive Tax Reform Program of the Philippines also known as Tax Reform Acceleration and Inclusion (TRAIN) is a topic of enduring interest for researchers, economists and policy makers. Economists use the concept of tax incidence in evaluating the effects of the changes in tax policies of the government on economic welfare.

The primary objective of the tax reform is to design an effective system of tax collection that is capable of financing government expenditures that will translate to a better position of an economy measured through an increase in economic growth, increase in employment, and reduction in poverty incidence. The United Nation (2015) emphasized that in order to fund the Sustainable Development Goals of the international community, particularly, the developing countries should increase their domestic resource mobilizations through increasing tax collections. As contained in the Theory of Economic Development, taxation is the way to restrain non-essential consumption so that savings and capital investment could be increased, thus, results to economic development and capital accumulation (Dom & Miller, 2018, p.13). Tanzi and Shome (1992) cited that the Philippines has significantly lagged behind its Association of Southeast Asian Nations-5 (ASEAN-5) neighbors in terms of achieving sustainable economic development due to poor administration of tax collection. Though the Philippines has introduced tax reform measures in the late 1980s that include income and consumption, the revenue collection of the country has no significant response in the tax reform. In December 19, 2017, the Philippines introduced another tax reform through the passage of the Republic Act No. (RA) 10963 or otherwise known as Tax Reform for Acceleration and Inclusion (TRAIN). The TRAIN is an act amending various sections of Republic Act No. 8424 (National Internal Revenue Code of 1997). The RA 10963 is a consolidation of House Bill No. 5636 and Senate Bill No 1592 (Department of Finance). The aims of the TRAIN are to: (a) enhance progressivity of the tax system through the rationalization of the Philippine internal revenue tax system, thereby promoting sustainable and inclusive economic growth; (b) providing an equitable relief to a greater number of taxpayers and their families in order to improve levels of disposable income and increase economic activity; and (c) ensure that the government is able to provide for the needs of those under its jurisdiction and care through the provision of better infrastructure, health, education, jobs, and social promotion for the people. The TRAIN Act provides reforms in the following tax system of the Philippines: (a) Personal Income Tax; (b) Estate and Donor's Tax; (c) Value Added Tax System; (d) Excise Tax of Petroleum Products; and (e) Excise Tax of Automobiles. Further, this law also incorporated the increase in tax on sugar-sweetened beverages. The Comprehensive Tax Reform Program (CTRP) has four proposed packages which are Package 1 (TRAIN), Package 1B (Tax Amnesty), Package 2 (TRABAHO), Package 2+ (Universal health Care), Package 3 (Property Valuation and Taxes), and Package 4 (Capital Income and Financial Taxes). Package 1 aims to simplify and lower personal income taxes, estate and donor's taxes, expanding value-added tax, adjusting oil and automobile excise taxes, and introducing excise tax on sugar-sweetened beverages. Further, Package 1B or the Tax Amnesty Bill includes lifting of bank secrecy laws, automatic exchange of information, and three types of tax amnesties. The three types of amenities are estate tax, unpaid internal revenue taxes with corresponding waiver of bank secrecy laws, and delinquencies. Package 2, also known as TRABAHO, aims to lower the corporate income tax rate from thirty percent to twenty-five percent for a large majority of business. In addition, Package 2+ proposes an increase in the excise tax on both alcohol and tobacco products to generate additional funds for Universal Health Care. Package 3 enables the promotion and development of a just, equitable, and efficient real property valuation system. Meanwhile, Package 4 is about the reforms in capital income and financial services taxation. The continued spike in the headline inflation rate, beginning the first quarter of 2018, brought controversial reactions in the implementation of the first package of TRAIN Law. The Bangko Sentral ng Pilipinas (BSP) (2018) cited that the Philippines recorded the highest inflation rate in almost ten years in June 2018. The aggregated effects of lower consumption on food and non-alcoholic beverages, rising global price of oil, and the implementation of the Philippine Government's TRAIN Law, brought about this increase in the general prices of goods and services (BSP, 2018).

Several studies and existing pieces of literature have been published with regard to the effects of the tax policy of the government in developing countries and even in the Philippines, in particular. Nevertheless, there exists a fascinating and timely discussion as to how the current reform in the tax policy through the TRAIN law has offered a concrete evidence of its future economic effects.

## 2. THE PURPOSE OF THE STUDY

This research paper focused the discussion on the First Package of the CTRP since it aimed to evaluate the effects of tax reform on labor occupational choice, income, and poverty and distributional effects on households. The purpose of this paper is to determine the anticipated effects of the changes in the tax system through the implementation of the TRAIN Law focusing on distributional and labor effects on the household sector. This dissertation applied the CGE-Microsimulation framework in order to obtain the macro and micro levels of the impact of TRAIN that is currently implementing by the Philippine Government. In particular, the Top-Down Behavioral Microsimulation approach was employed in this dissertation paper.

## 3. THEORETICAL AND EMPIRICAL BACKGROUND OF THE STUDY

Tax reform plays a vital role in a country; it must depend on expenditure allocations, capability of the government to efficiently collect tax, and the tax system. The reasons for tax reforms are as follows: (a) reduce deadweight losses; (b) improve equity in public tax policy system; (c) raise government revenues to sustain public expenditures; and (d) reduce the compliance burden. In terms of the developing countries, tax policy should be centered on aiming at equity, economic neutrality, and simpler administration. An inefficient tax system often leads to insufficient tax revenue collections, reduced economic welfare and growth, which further leads to economic distortions, tax evasions, and corruption (Heerden & Schoeman 2013). Ahmad and Stern (1991) pointed out that the effect of changes in effective tax collection should not be solely assessed in terms of tax revenue collection performance, but in terms of incentives in the production side and the effect on distribution of income, as well. The effect of labor tax in the supply of labor was assessed in the studies of Kotlikoff and Summer (1987); Heijdra and Ligthart (2009); and Espinosa and Ruiz (2014). This research paper accounted the movement of the labor from agriculture to non-agricultural farming activity, and from being employed to unemployed which the latter studies do not thoroughly studied. Kotlikoff and Summer (1987) cited that the effects of the labor income tax on the timing of labor supply in different periods of the life cycle will affect its long-run incidence. Consumption will be proportional to  $w(1-\tau)L+T$ , where  $w$  is the wage,  $\tau$  is the percentage tax,  $L$  is Labor Supply, and  $T$  is equal to  $T = \tau wL$ . An increase in the labor income tax decreases labor supply and capital stock. This causes a reduction in the interest rate and in consumption. If labor supply increases in the same proportion as the percentage tax, capital stock will not be affected and consumption remains the same (Heijdra & Ligthart, 2009). The paper focused on the discussion of capital accumulation, while, this dissertation focused on the labor income and occupational choice. Espinoza and Perez Ruiz (2014) developed a one-sector, four-factor general equilibrium model using different wage-setting mechanisms for both skilled and unskilled labor, and the productive role of government spending, to be able to study the effect of labor incidence in terms of employment using a general equilibrium approach. Nadoveza, Sekur, and Beg (2016); Sajadifar, Khiabani, and Arakelyan (2012); and Manasan (2017) examined the effects of tax reform using the CGE Model. The paper of Nadoveza, Sekur, and Beg (2016) used CGE modeling since it captures the overall effects of policy changes, shocks and reforms in the economy. The findings revealed that lower taxes on labor resulted in an increase in the price of labor associated with an increase in the demand for labor, and a decrease in the price of capital.

The study of Manasan (2017) used the CGE model to assess the anticipated effects of the TRAIN Law focusing on the distributional effect. The paper emphasized that those Compensation Income Earners (CIE), individuals who are in the richest income deciles, will be the beneficiaries of the Personal Income Tax reform. Though the poorer CIE is also projected to benefit from the tax reform, this is significantly smaller compared to the benefits that will be derived by richer deciles. Sajadifar, Khiabani, and Arakelyn (2012) evaluated the effects of the VAT reform in Iran using the Computable General Equilibrium model. The results of the paper showed that implementing the VAT will increase the indirect tax collection and will result to changes in the pattern of production and consumption. Similar to the study of Ahmed, Abbas and Ahmed (2010); Creedy and Kalb (2005); Colombo (2010), this research study used the behavioral microsimulation approach in combining the macro and micro effects of tax reform but differed in terms of its focus on the labor mobility across regions due to changes in tax. Ahmed, Abbas, and Ahmed (2008) linked the CGE approach to the top-down model. The top-down microsimulation approach was used to avoid the assumption of complete convergence between CGE and microsimulation. The results of the study revealed that the non-uniform VAT deteriorates investments, distort consumption, and increases wage inequality. The increase in VAT had a result similar to the result when an increase in non-uniform VAT was implemented. The study of Creedy and Kalb (2005) found that tax reform resulted to a 1.8% decreased in the share of single parents in the total labor and an increased in their working hours by 1.3%. Further, the average weekly hours were observed having an increased by nearly three hours which indicated an overall positive effect of the tax reform. The study of Colombo (2010) emphasized that combining both microsimulation and macroeconomic model (CGE model) enabled to account for the heterogeneity of the individual agent while simultaneously considering the general equilibrium effects of any proposed policy reform. The studies of Cury, Pedrozo, and Mori Coelho (2016); Zhang (2015); and Cogneau and Robilliard (2001) used the fully-integrated approach in incorporating the macro effects of tax reform into the micro level. The study of Cury et al. (2016) analyzed the effects of different policies in Brazil such as cash transfer and taxation on income inequality. The study of Zhang (2015) emphasized on incorporating the multiple household types in the conventional CGE model to enhance its capability to analyze the micro level effects of certain policies such as individual's income distribution, tax reforms and subsidies on specific individuals. As explained by Cogneau and Robilliard (2000), the effects of various growth shocks on the total indicators of poverty and inequality were relatively small which could be associated with the diversification of income sources and reallocation between various activities. The strategy for development has to be more concentrated on rural or agricultural households in order to attain the policy reform in mitigating poverty and inequality. Ahmad (2014); Quimbo and Javier (2015); and Emini (2009) focused the discussion of their respective studies on the distributional effect of tax reform. Ahmad (2014) emphasized that in order to realize the distributional effect of the tax reform, a country should concentrate on items consumed by the poorest that do not enter into inter-industry transaction which include unprocessed food consumed. Meanwhile, the paper of Quimbo and Javier (2015) clearly explained that tax reform in the Philippines had an equity gain. The change in tax rates reduces the levied tax rates concentrated in the lowest income deciles rather than in the highest tax bracket. Through the simulation model, it was anticipated that 36% of the tax burden would be borne by the highest tax brackets.

## **4. DATA AND RESEARCH METHODOLOGY**

### **4.1. Data and Sources**

The 2015 Family Income Expenditure Survey (FIES) was taken from the electronic copy given by Philippine Statistical Authority (PSA). Meanwhile, the old tax table, new tax table, and tax revenue collections were taken from the website of the Bureau of Internal Revenue (BIR) and

the distributions of labor were taken from Bureau of Labor Statistics (BLS) and Department of Labor and Employment (DOLE). Moreover, the data on the CGE results was obtained from the research work of Tũaño et al. (2018).

#### **4.2. The Philippine CGE-Microsimulation Model**

The effects of the First Package on Comprehensive Tax Reform Program of the Philippines<sup>1</sup> was assessed based on the model of Zhang, Wang, and Chen (2013), Savard (2010) and Dissou and Didic (2011). Similar to the cited literatures, this dissertation also employed the CGE-Microsimulation methodology with modifications in terms of focusing on household income effect, cross sectional movement of occupational choice of labor, poverty, income inequality and distributional effects. Further, the prior model did not incorporate the unobserved characteristics that could influence the income generation of the household. Meanwhile, this dissertation incorporated the unobserved characteristics of household through inverse mill ratio, Heckman Selection Model in the estimation of household income. Also, this dissertation includes a procedure of drawing from randomly normal distribution to account for an individual who did not report information on wages as prescribed by Tiberti et al. (2017). The CGE approach was used to analyze the effect of TRAIN in aggregate economy. Meanwhile, the micro-level approach was used to simulate individual and household behavior using the FIES. The CGE-microsimulation approach is necessary to study the effect of TRAIN law in household income that will determine their occupational choice, distributional and poverty effect across the country (Zhang, et.al, 2012).

#### **4.3. Conceptual Paradigm of the Study**

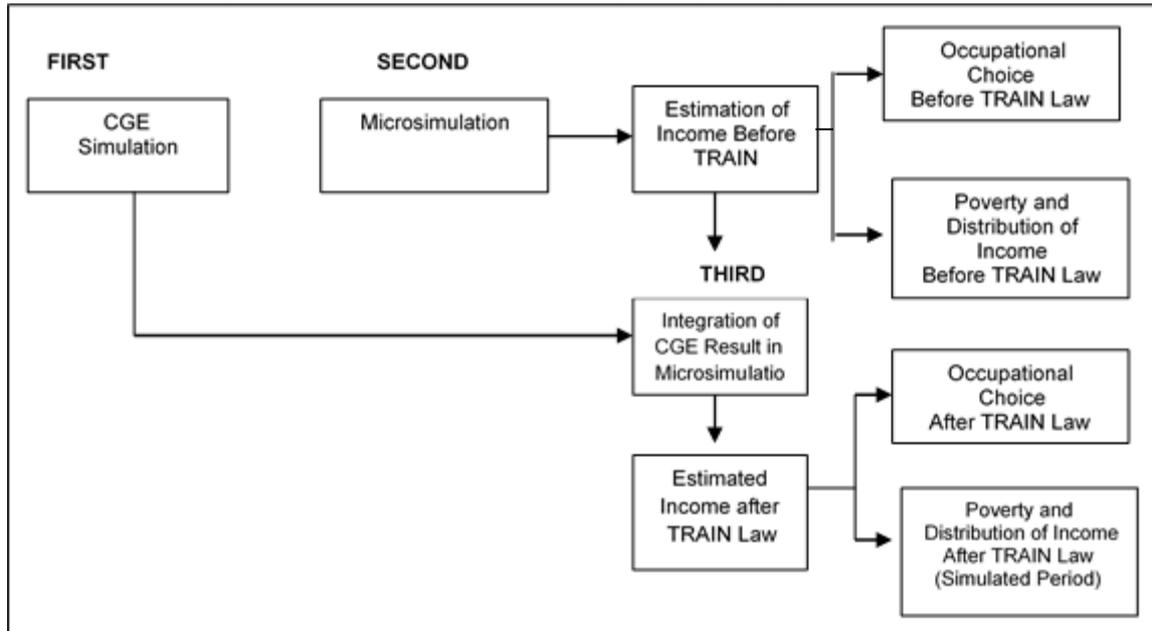
In order to investigate the effects of the TRAIN Law 1 in relation to the statement of the problem on how the changes in fiscal policy affects household income, occupational choice, poverty, and distributional of income, this study implemented the sequential process which is shown in Figure 2. This study implemented a three-tiered procedure in determining the effects of the implementation of TRAIN Law on Income, Occupational Choice, and Poverty and Distribution of income. The three-tiered procedure involves: (1) Computable General Equilibrium (CGE) Simulation; (2) Microsimulation; and (3) Integration of CGE Result to Microsimulation using Top-Down Behavioral Approach.

*Figure following on the next page*

---

<sup>1</sup>Also known as the Republic Act No. 10963 or otherwise known as Tax Reform Acceleration and Inclusion (TRAIN)

Figure 1: Process of Determining the Effect of TRAIN Law



Source: Tiberti et al. (2017)

#### 4.3.1. CGE Model Specification

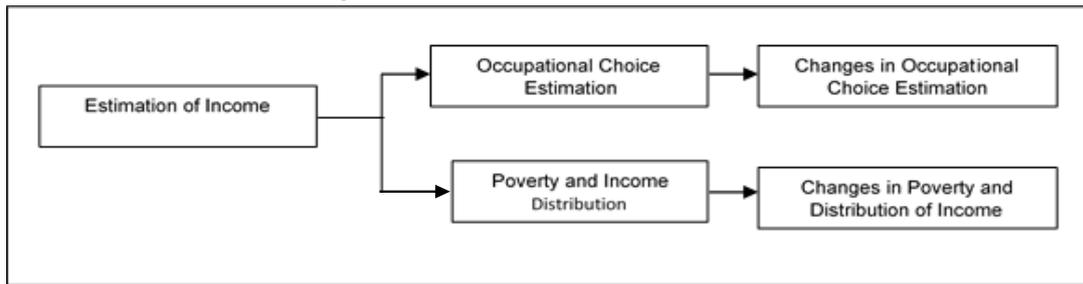
This research adopted the Computable General Equilibrium (CGE) results of the study of Tuano et al. (2018) regarding the effects of TRAIN Packages 1 and 2. This study modified the approach of Tuano et al. (2018) by studying the effects of TRAIN law in household level through incorporating behavioral approach of microsimulation. In particular, the CGE model constructed by Tuano et al. (2018) used a Social Accounting Matrix for the year 2015 using the inflated 2012 65 x 65 Input-Output Table of the Philippines culled from PSA. The model used 50 production sectors and incorporated the four (4) agents of the economy such as aggregate household, aggregate firms, the government, and the rest of the world. Production was composed of a 3-tiered system which are: (1) production or activities; (2) commodities; and (3) institutions. The result of the CGE model of Tuano et al. (2018) was used as input to the microsimulation, which is the focused of this dissertation.

#### 4.3.2. The Microsimulation Process

In order to realize the effects of fiscal or structural policies or external shock on government policies, various researchers used the CGE model combined with microsimulation. The microsimulation model considers various factors as exogenous variables such as macro projections, CGE model, and hypothesized shocks. It is a model that considers the behavior of individual agents such as households and firms. The microsimulation enables to capture the effects of economic policies such as public expenditures, tax/subsidy policies, structural reforms like trade liberalization, privatization, and then global price shocks or other shocks on those individual agents. An individual household model requires micro-data from a household survey including the socio-economic characteristics of individuals, labor-market status and labor income, and household spending. The microsimulation simulates changes in household budget constraints and operates in a partial equilibrium. The disadvantage of microsimulation model is that it does not simulate changes in macro and micro variables such as prices, wages, or employment rates. Generally, there are two types of microsimulation models - the parametric and non-parametric. The parametric model consists of a system of equations that determine the occupational choice, returns to labor and human capital, consumer prices and other household income components.

The non-parametric model involves seeking individuals with similar characteristics to simulate certain changes such as change in labor income for an individual that moves from unemployment to employment, individual that moves from unemployment to employment, and occupational shifts. Figure 2 shows the microsimulation process implemented to assess the effects of the TRAIN law in household level. The Microsimulation process in this research paper involved the estimation of income, which is a primary input to estimate the occupational choice and poverty and income distribution. The estimation of household income is the aggregation of sources of household income decomposed into three which are: (1) estimation of wage income; (2) estimation of entrepreneurial non-farming income; (3) estimation of entrepreneurial farming activities

Figure 2: The Microsimulation Process



#### 4.3.2.1. The Occupational Choice Estimation

In order to estimate the effects of the TRAIN Law on the occupational choice of the workers, multinomial logistic regression was used. The occupational choices of the households are composed of four (4) categories such as: (1) wage worker; (2) entrepreneurial self-employment; (3) farming; and (4) unemployed. The individual household labor supply was estimated using the multinomial logistic regression model which represents the discrete- utility maximizing framework. The reduced form of the estimation equation of the individual labor supply is shown below:

$$\ln \frac{P(E_i = m)}{P(E_i = 4)} = \alpha_m + \sum_{j=1}^J \beta_{mj} X_{ij} + u_{ij} = Z_{mi} \quad (1)$$

The  $Z_{mi}$  represents the actual individual utility function associated with each occupational choice. The notation  $X_{ij}$  represents the individual's characteristics such as area classification (urban/rural), number of children, marital status, gender, education, and estimated income due to working in the particular sector. The denominator  $P(E_i = 4)$  represents that the household will choose occupational choice which yield highest level of utility with reference to the based occupation 4 which represents unemployed individuals. Moreover, the procedure stated by Bourguignon, Fournier and Gourmand (2004) was followed in calculating the individual residual terms, where, it is assumed that the distribution of the error term using the multinomial model is independent, random and possessed and an exponential form. After estimating the individual actual utility associated with each occupational choice, the probabilities associated with each occupational choice are estimated which is represented by the equation:

$$P(E_i = 4) = \frac{1}{1 + \sum_{m=1}^{m=3} \exp Z_{mi}} \quad (2)$$

Equations 1 and Equation 2 show the individual probabilities of being in one of the four categories for the reference category (4 = unemployed), and for other reference categories, respectively. The individual changes his occupational status according to his probability, where the individual prefers to work if the utility associated with wage worker is higher than the utility associated with the other activities.

#### 4.3.3. Linking CGE to Microsimulation

This research study adopted the Top Down with behavioral approach in integrating the CGE model into microsimulation. The approach uses econometric modeling of household behavior allowing the heterogeneity of the household and individual in terms of wage, occupational choice, self-employment income, level of education and consumer behavior. This approach allows the simulation of the effects on household's income by introducing changes in its subset variables. Further, this study also incorporated dynamic simulation in the form of repeated simulation of household income-generation using estimated or calibrated function of fertility, schooling and migration. The sampling re-weighting enable to combine dynamic simulation into CGE by changing the attributes of the individuals through emphasizing the dynamic ageing which household characteristics are updated each period. The research papers of Creedy and Kalb (2005); Colombo (2010) and Tiberti et al. (2017) have been used as the foundation of this paper in adopting the behavioral Top-Down approach in linking microsimulation with CGE modeling. The microeconomic behavioral parameters were introduced in the microsimulation model of employment and consumption.

#### 4.4. Test of Significant Difference in the Effects of TRAIN Law

The Paired Samples t-test was used to compare if there is significant difference in the effect of TRAIN in household income, occupational choice, poverty and distribution of income. This dissertation used the following formula for population of paired difference (Bowerman, 2004):

$$t = \frac{d - D_0}{S_d / \sqrt{n}} \quad (3)$$

The decision rule for the test of significant difference is that if computed t-value is greater than the critical t-value at five percent level of significance, reject the null hypothesis; that there is no significant difference in the mean of two populations. Otherwise, the null hypothesis is accepted if the computed t-value is less than the critical t-value.

## 5. INTERPRETATION OF THE RESULTS AND DISCUSSIONS

### 5.1. The Philippine Labor Force, Employment, and Underemployment

As of January 2019, the Philippines recorded a total population of 72,524 thousand who aged 15 years old and above and were considered as part of the labor force of the country. Of this total population, only 60% participated in the labor market as of January 2019, a conservative increase from 60.10% posted in July 2018. The unemployment rate of the Philippines posted a conservative decrease of 0.2% points from 5.4% in July 2018 to 5.2% in January 2019. Moreover, the underemployment of the Philippines also showed an improvement from 17.20% in July 2018 to 15.60% in January 2019. Most of the workforce in the Philippines concentrated in Regions IV-A (CALABARZON) (8,051 thousand persons), National Capital Region (9,354 thousand persons), and Region III (Central Luzon) (8,051 thousand persons). The highest labor participation rate was recorded in Region IV-A, Region VII (Central Visayas), and Region XII (SOCCSKSARGEN) with 63.10 Labor Force Participation Rate. In contrast, the lowest labor force participation rate was recorded in the Autonomous Region in Muslim Mindanao (ARMM)

(47.70%), Region IX (Zamboanga Peninsula) (55.80%), and Region V (Bicol Region) (55.90%). The occupational class of worker in the Philippines is classified into four major categories: (1) wage and salary workers; (2) self-employment without any paid employees; (3) employer in family-operated farm or business; and (4) worked without pay in own family-operated farm or business (unpaid family worker). The workers of the Philippines are comprised of almost 66% wage and salary workers, 26% self-employed without any paid employee, 3% employer in family-operated farm or business, and (4.70% worked without pay in their own family-operated farm or business

## **5.2. The Philippine Tax Reform and the Wage/ Salaried Workers**

The Comprehensive Tax Reform Program (CTRP) also known as Tax Acceleration and Inclusion (TRAIN) or otherwise known as Republic Act (RA) 10963 was signed by the President of the Republic of the Philippines, President Rodrigo R. Duterte on December 19, 2017 and took effect on January 1, 2018. The aims of the TRAIN are to make the Philippine Tax System simpler, fairer, and more efficient to promote investments, reduce poverty and, unemployment. Prior to the implementation of the TRAIN law, the minimum net taxable income based on the BIR Tax Table as mandated by Republic Act No. 9504 otherwise known as The National Internal Revenue of 1997 was Php 10,000.00. The RA 9504 stipulated that there shall be allowed a basic personal exemption amounting to fifty thousand pesos (Php50,000.00) for each individual tax payer and additional exemption amounting to Php25,000.00 for each child not exceeding four. This study extracted the individual wage earner from the latest 2015 FIES from PSA to determine the number of household that falls in the category per tax bracket. The determination of the tax bracket to which each individual household belongs is based on the net taxable income which can be computed by deducting the yearly contributions in the allowable deductible items such as Philhealth Contribution, Home Development Mutual Funds (HDMF), and Social Security Services (SSS) for private workers, Government Service Insurance System (GSIS) for public workers, and allowable dependent exemption. Based on the extracted information, Philippine Employment in 2015 was distributed mostly in private firms with 84.37%; while, only 15% worked in the government. Further, a large percent of government workers had a yearly net taxable income between Php250,000.00 to Php500,000 which comprised 21% of the total government workers. Compared to the private sector, large portion of workers earned between Php30,000 to Php70,000.00 with 25% share in the total number of private company workers. The average consumption expenditure classified according to income tax brackets is higher than the average household disposable income after deducting tax and other mandatory social security contribution such as HDMF, SSS/GSIS, and Philhealth. Moreover, the old tax rate is beneficial to those who are earning monthly income below than Php10,000.00. The highest beneficiaries of the tax reform in its first year of implementation in 2018 were those who have yearly earnings of a monthly gross taxable income between Php 140,000 to Php 250,000 and Php400,001. Those who earn between Php250,000 to Php260,000 a year did not benefit from the tax reform which was more or less concentrated on a zero percentage point increase in tax levied on compensation. Further, results revealed that the highest benefit gained in the implementation of both TRAIN Law and SSL IV in the Public Sector were those who hold Salary Grade (SG) 20 up to 27 with an increase in take home pay of 52% to 145%. SGs 20 to 27 are equivalent to the supervisory level up to managerial level among the public sector workers. In contrast, those who hold Salary Grade 6 were those who got the lowest benefit in tax reform coupled with the pay hike in the government sector.

## **5.3. The CGE Results**

This study adopted the results of the CGE study on the impact of TRAIN Packages 1 and 2 prepared by Tũaño et al. (2018). Tũaño et al. (2018) used 2012 65x65 Input-Output (IO) Table

of the Philippines taken from the PSA. The 2012 IO was inflated to 2015 prices to reflect local economy current prices. The following discussions pertain to the CGE simulation results of the research paper by Tuaño et al. (2018) about the effects of TRAIN law in the labor market, and in the goods market. Based on the study of Tuaño et al. (2018), the low skilled workers benefitted from the implementation of TRAIN law with 3.20% anticipated increase in income. Meanwhile, the highly skilled workers posted a 2.70% increase in income. The prices of agricultural product are anticipated to post an increase ranging from 2.30 percentage points to 5.1 percentage points. Among agricultural products, bananas had the highest anticipated spike in prices with 5.10 percentage points.

#### **5.4. The Effects of TRAIN Law using the Top-Down Approach of Microsimulation**

Table 1 exhibits the summary results of simulation results of the effects of TRAIN law in household income, occupational choice, poverty and distribution of income and poverty. The simulation results display the positive effects in the household income across all sectors such as skilled, unskilled laborer, and entrepreneurial, which are reflected in the positive changes. The aggregate income of household is anticipated to increase by 2.95%. Meanwhile, the occupational choice of the household is expected to have a slight structural change from entrepreneurial farming to wage sector by 0.012 percent. Moreover, the poverty gap, poverty severity, poverty head count, poverty gap among poor, poverty severity, Gini coefficient index, average poverty headcount index, average poverty gap, Gini coefficient poverty gap, and SST index is expected to decrease due to implementation of TRAIN law. The Poverty Gap Index as shown in Table 1 indicates that there is slight improvement in the Poverty Gap Index. The Index is useful as this measures the cost of eliminating poverty by determining how much is to be transferred to the poor to bring their income or expenditure up to the poverty line. This measure is beneficial to the country since it provides potential saving to the poverty alleviation budget of the Philippines.

*Table following on the next page*

*Table 1: Summary of Simulation Results of the Effects of TRAIN Law*

Variable		Before TRAIN Law	After TRAIN Law	Changes
Household Income (In Philippine Peso)	Unskilled Workers	3,139,934,387.26	3,240,412,287.65	3.20
	Skilled Workers	1,780,659,416.83	1,828,737,221.09	2.70
	Entrepreneurial	5,680,738,574.37	5,845,479,993.02	2.90
	Total Income	10,601,332,378.45	10,914,629,501.76	2.95
Occupational Choice ( In Number of Household)	Wage Sector	16,957	16,959	0.012
	Entrepreneurial Farming	14,316	14,314	-0.012
	Entrepreneurial Non-Farming	2,988	2,988	0.00
	Unemployment	7,283	7,283	0.00
Poverty Gap ( In percentage point)	Wage Workers	0.73	0.70	-0.03
	Non-Farming	1.04	1.01	-0.03
	Farming	0.62	0.60	-0.02
	Unemployed	0.84	0.82	-0.02
Squared Poverty Gap ( In percentage point)	Wage Workers	1.42	1.37	-0.05
	Non-Farming	2.45	2.39	-0.06
	Farming	1.20	1.16	-0.04
	Unemployed	2.71	2.66	-0.05
Head Count	Wage Workers	68.80	67.13	-1.67
	Non-Farming	78.95	77.62	-1.33
	Farming	62.92	60.83	-2.09
	Unemployed	60.02	58.18	-1.84
Poverty Gap among poor	Wage Workers	28.24	26.86	-1.38
	Non-Farming	36.49	35.05	-1.44
	Farming	25.65	24.41	-1.24
	Unemployed	26.56	25.44	-1.12
Poverty Severity	Wage Workers	14.45	13.53	-0.92
	Non-Farming	20.14	19.04	-1.1
	Farming	13.13	12.29	-0.84
	Unemployed	15.10	14.33	-0.77
Gini Index		0.45145	0.45133	-0.000120
Average Poverty Headcount Index		0.6767	0.6594	-0.0173
Average Poverty Gap		0.2923	0.2494	-0.0429
Gini Coefficient Poverty Gap		0.4514	0.4513	-0.0001
SST Index		0.287096	0.287072	-0.000024

*Source: Author's calculations based on 2015 FIES from PSA*

In general, the implementation of TRAIN leads to the reduction in the poverty gap index, which is consistent with the findings of Chen et al. (2001). Chen et al. (2001) found in their study that taxing petrol allows a pass-through effect of the tax which reduces the burden of tax to concentrate into poor household. Also, the study of Gemmill and Morrissey (2002) confirmed that taxes on gasoline and autos for private transport are strongly preferred on distributional grounds. Since the TRAIN law covers both direct (labor tax) and indirect taxes (gasoline, fuels, and VAT), the implementation of tax reform translates to lower poverty gap as consistent which is backed up by the assumption of Ahmad and Stern (1987); Cancho and Bondarenko, and Goode (1984) and emphasized that developing countries should not be highly dependent on personal capital income that can be easily evaded but instead focus on indirect taxes. Among Class of Workers, the farming entrepreneurial class exhibits the lowest Poverty Gap Index of 0.60 while

the highest Poverty Gap Index is recorded in non-farming entrepreneurial workers with 1.04 before implementation of TRAIN and an index of 1.01 after the implementation of the Train Law. The Poverty Gap Index for farming entrepreneurial suggests that in order to eradicate poverty, average transfers should be equal to 0.62 for farming entrepreneurial, 0.73% for wage workers, 0.84 for unemployed, and 1.04 for non-farming entrepreneurial. It is noticeable that among class workers, the biggest beneficiaries of the TRAIN law were those in the wage workers and non-farming entrepreneurial class posting both 0.03 percentage points improvement in the Poverty Gap Index. The poverty head count ratio measures the incidence of poverty as a proportion of population that lives in poverty. It measures the percentage of population that has a disposable income below the poverty line. If the poverty headcount is higher after the policy is allocated, then the policy has disadvantage to some individuals. According to the FGT measures, the non-farming entrepreneurial class had the highest poverty rate, poverty gap, and poverty severity with a percent index of 78.95%, 36.49%, and 20.14%. After the TRAIN Law, the farming-entrepreneurial still had the lowest severity of poverty at 12.29%. Noticeably, the number of poor in the farming entrepreneurial class may be considered as the greatest beneficiary of the TRAIN law since it posted the highest improvement in the number of poor with a percentage drop down of 2.09%. This means that the implementation of TRAIN Law is an advantaged in almost 2.09% of the population. In terms of severity of poverty, the non-farming entrepreneurial class had the highest improvement as it had declined by 1.1% from the base period. The statistical findings of this dissertation are similar to the results of the study of Lustig and Taqdiri (2018) where a reduction in the poverty head count in the Iranian by 10.5 percentage point. The Gini Index was used in this dissertation to measure the extent of movement in the distribution of income (or, in some cases, consumption expenditure) among households within the Philippines due to the implementation of the TRAIN Law. A Gini index of zero represents perfect equality and of 100, perfect inequality. The Philippines experienced a slight improvement on the unequal distribution of income. The Philippine Gini coefficient showed an improvement from 0.4515 before TRAIN law to 0.45133 after the TRAIN law which translate to reduction in the overall income inequality of the household in the Philippines by 0.000120 percentage point. The findings of this dissertation are similar to the findings of the research paper of Llambiet al. (2011) where the income tax reform results to a reduction in Gini coefficient. Llambiet al. (2011) emphasized that a one-point reduction of the Gini inequality coefficient is due to progressive nature of the direct income tax where the richest decile is the clear loser from the tax reform of income tax. Specifically, Region 14 had the highest decline in the unequal distribution of income due to implementation of the TRAIN Law. It was then followed by Regions 6,7, and 9 which experienced a decline in Gini coefficient of 0.014%. The statistical results displayed that the average poverty headcount index of the Philippine showed an improvement after the implementation of TRAIN law from 0.6767 in the base period to 0.6594 in the simulated period, a decline by 2.56 percentage points. This means that a decline in the occurrence of the people who are suffering from poverty in the country due to the enhanced income levels of those who are least in poverty. Also, the statistical result of the average poverty gap index showed an improvement by 4.41 percentage points posting an index of 0.2794 after the implementation of TRAIN Law from 0.2923 index in the base period. This translates to a conclusion that the tax reform leads to a decrease in the depth of poverty in the Philippines. The implication of reducing the relative poverty gap is that policy makers may provide social assistance to all poor people equally or arbitrarily dependent on their different needs and regardless of their income levels (Xu, 2011). In terms of the Gini coefficient for poverty gap, the TRAIN law leads to a minimal improvement in the poverty inequality in the Philippines as reflected in the simulated index of 0.4513 from an index of 0.4514 from the base year. Osberg and Xu (2008) emphasized that the percentage change in Gini coefficient for poverty gap is often very small which further indicates that the combination of average poverty

headcount and average poverty gap index would be sufficient for comparative analysis for over time or across the regions. Osberg and Xu (2008) explained further that the small changes in Gini coefficient of poverty gap is the difference in income among the poor are relatively small compared to the difference in income among the non-poor. The SST gives more weights to the poverty gap of the poorer individual. It is usually between zero and one. The zero SST indicates that all incomes are above the poverty line and further indicates that there are no poor people. Meanwhile, an SST of one (1) indicates that all individuals are poor and they have zero income (Aguirregabiria, 2006). The statistical results of this dissertation showed that the SST index is 0.287072 after the implementation of the TRAIN law from 0.287096. The improvement in SST index reflected the less people are becoming poor, or an increase in the number of people with an average income above the poverty line. This further indicates that a slight improvement in terms of the joint improvement in the average poverty headcount index, average poverty gap, and Gini coefficient. The result of this dissertation is similar to the findings of the study of Ahmed et al. (2008) and Cury et al. (2016) which found that the tax reform on excise tax leads to the reduction of number of poor household.

### 5.5. The Occupational Choice Estimation

The multinomial logistic regression was used in order to estimate the occupational choice of the workers which are composed of wage worker (1), entrepreneurial non-farming (2), entrepreneurial farming (3); and unemployed (4). The multinomial logistic regression uses maximum likelihood estimation, which is an iterative procedure. The first iteration (called iteration 0) is the log likelihood of the "null" where it assumes that the model has no predictors. The objective of the multinomial regression model is to minimize the log likelihood which can be achieved through the inclusion of the predictor variable in every series of iterations. The estimated statistics indicates that the model is fitted which can be seen through the likelihood ratio ( $\chi^2$ ) test p-values of 0.00. The likelihood ratio tests whether all the predictor regression coefficients in the model are simultaneously equal to zero and to all the equations in reference to the base (4) – the unemployed. The results of the regression showed that for wage sector (1), the explanatory variables such as income, education, age, marital status and urban were statistically significant in different comparisons at 5% level of significance, but each coefficient differs. This research study found that education, age, sex, and region have negative coefficient signs which imply that the probability of chosen job category of being employed to be less likely with reference to the base category, of being unemployed and these results are supported by the findings of the study of Colombo (2010). Das (2012) cited that the accumulation of capital through education is no longer a guarantee of getting better quality job and often certain groups of workers are being separated from the better job not because they are less socially acceptable rather because they lack ability. Moreover, the positive sign of income, marital status, number of children, and urban implies that the probability of being in the employed sector to be more likely with reference to the base category. The probability of joining the non-farm entrepreneurial sector and farm entrepreneurial sector is more likely to occur as income increases, for married individual, as the number of children increases, in the rural areas, and higher regions. Results of the study shows the predicted change in household occupational status from being unemployed to the other occupational choices such as employed, non-farming entrepreneurial activity, and farming-entrepreneurial activity. The movement in occupational status is being determined by comparing the utility generated from each occupational choice. The individual will choose occupational choice which will yield highest level of utility. Based on Table , there are very conservative movements in the occupational choice of the household. This movement can be seen in Regions 1, 2, 5, 6, 8, 10, and CARAGA. It is noticeable that CARAGA region posted the highest movement between the occupational choice of labor due to the implementation of TRAIN law.

### 5.6. Tests of Significant Difference

To test if there are significant differences in the household income, occupational choice and poverty, the paired samples t-test was utilized. The paired samples t-test compared two means that are from the same individual, object, or related units. It represented the pre-test and post-test of an in intervention, particularly, the TRAIN law. The paired samples t-test aims to determine whether there is statistical evidence that the mean difference between paired observations is significantly different from zero.

*Table 2: Independent Sample t – Test: Comparison on the Effects of the TRAIN Law in Household Income*

Indicators	Period	Mean	t-value	p-value	Decision	Remarks
Unskilled	Pre-TRAIN	184,702,022.8	-13.230	0.000	Reject Ho	Significant
	Post TRAIN	190,612,487.50				
Skilled	Pre-TRAIN	104,744,671.60	-12.736	0.000	Reject Ho	Significant
	Post TRAIN	107,572,777.70				
Entrepreneurial	Pre-TRAIN	334,161,092.60	-12.537	0.000	Reject Ho	Significant
	Post TRAIN	343,851,764.30				
Total	Pre-TRAIN	623,607,787.00	-12.937	0.000	Reject Ho	Significant
	Post TRAIN	642,037,029.50				

*Source: Author's calculations based on 2015 FIES from PSA.*

Table 2 shows the result of independent sample t-test which compared the pre tax reform and post-tax reform income of the household. Based on the table, there is a significant difference in the household income due to implementation of TRAIN law. The conclusion is based on the respective p-value of 0.000 which is less than five percent level of significance. The findings jibed with the results of the simulation that the implementation of TRAIN results to higher income of the household. Table 3 reflects the test of significant difference in the occupational choice before and after the implementation of TRAIN. Since the computed p-values, 0.431 (wage), 0.431 (non-farm) 1.00 (farm), were greater than the five percent level of significance, the null hypothesis that there is significance difference in the occupational choice before and after the TRAIN law is accepted. The result conformed to the simulation results that there is slight changes in occupational choice of the household.

*Table 3: Independent Sample t – Test: Comparison on the Effects of the TRAIN Law in Occupational Choice*

Indicators	t value	p value	Decision	Remarks
Wage	-.808	0.431	Do not Ho	Not Significant
Non-farm	0.808	0.431	Do not Ho	Not Significant
Farm	0.000	1.00	Do not Ho	Not Significant

*Source: Author's calculations based on 2015 FIES from PSA*

It can be gleaned from Table 4 that among the poverty indices only FGT Poverty Gap is not significant since the computed p-value of 0.582 is greater than the five percent level of significance. This means that the TRAIN law does have much effect in bringing the income gap among the poor family. This is in relevance to the works of Osbergand Xu (2008) which

explained that since the income of the poor is very small, it will result to minimal differences in the poverty gap. In line with the purpose of the TRAIN law, it is anticipated that there will be a significant improvement in the poverty gap, poverty severity, FGT poverty headcount, FGT poverty severity, and Gini coefficient as reflected in the respective p-values of less than the five percent level of significance.

*Table 4: Independent Sample t – Test: Comparison on the Effects of the TRAIN Law in Poverty*

Indicators	t-value	p-value	Decision	Remarks
Poverty Gap	8.660	0.003	Reject Ho	Significant
Poverty Severity	12.247	0.001	Reject Ho	Significant
FGT Poverty Headcount	10.862	0.002	Reject Ho	Significant
FGT Poverty Gap	-.616	0.582	Do not reject Ho	Not significant
FGT Severity	12.762	0.001	Reject Ho	Significant
Gini Coefficient	32.288	0.000	Reject Ho	Significant

## 6. CONCLUSIONS AND RECOMMENDATIONS

It is recommended that the government look upon the improvement of the agriculture sector since individual may not choose the farming activity over the other occupational choice. This is associated with lower utility of farming activity compared to other occupational choices. The government may also develop a program on the acquisition and expansion of the acreage of farmland to produce more agricultural products. The inequality that is anticipated to occur due to the implementation of TRAIN law may result to social tensions, discrimination, poverty traps, erosion of social capital and unbalanced allocation of resources among regions. This dissertation recommends that the government may give fiscal incentives for poorer entrepreneurs, to give them social security, and make it easier for them to pay taxes according to their status and profits. Since the country is predominantly 'Agriculture', the government may craft policies and programs to promote farming as a business by incorporating it as a goal in all government offices in the Philippines and also as an additional mandatory subject in the primary, secondary, and tertiary education. In the case of existing farmer since they are usually in competition with all other farmers producing the same type of goods, the government may increase allocations of funds for the farming sector in the form of agricultural loans and subsidies to increase the profit of the farming entrepreneurial class. The most common government intervention that this paper can recommend is the reduction in the price of shipping, storage, and provision farm machinery by encouraging cooperatives and to lower the cost of production so as the farming sector would generate higher profit. Moreover, the government may include in the proposed TRAIN 2 wider tax incentives to the self-employed farmers in a form of business tax credit, investment tax credit, relief from capital acquisitions tax, income tax exemptions for land leased by farmers, retirement relief on capital gains tax for retired laborers, and establishment of own social security for farmers, their children and other members of the family. These fiscal incentives are being observed in several countries such as France, United State, United Kingdom and other developed countries (Andersen et al, 2002). The government may also give some fiscal incentives for the farmers who stay in the farming sector and preserve open spaces in rural areas. The government may also do geographical targeting where it could identify regions with higher prevalence of inequality. To address across the country's inequality, the government should empower programs that aim to improve access to roads, communications, and markets that will boost the entrepreneurial activities of both the poor and non-poor. It is also recommended that a regular or permanent work be given to those who are in chronic poverty and temporary work may be given to those in transient poverty.

Since the simulation results shows that the most vulnerable sector on the incidence of poverty and income inequality are those household who are engage in non-farming entrepreneurial, this dissertation recommend to the government for the passage of package 2 of TRAIN law which is also known as TRABAHO. The government may lessen the poverty gap, inequality, and poverty severity in non-farming entrepreneurial by adopting Earned Income Tax Credit that is being implemented in the United States. The Earned Income Tax Credit can be claimed by those poor household who are working for someone or from running or owning a non-farming business (Hoynes& Patel, 2016). Moreover, future researchers may opt to study the effects of the TRAIN Law on those people who are considered to be in chronic and transient poverty.

#### LITERATURE:

1. Ahmad E. 2014. Public Finance Underpinnings for Infrastructure Financing in Developing Countries. *Paper for the G4*. London: The London School of Economics and Political Science.
2. Ahmad, E. and Stern N. 1987. Taxation for Developing Countries. *Handbook of Development Economics, Vol. II*. United Kingdom: Elsevier Science Publisher.
3. Ahmed, S., Ahmed, V., and Abbas, A. 2010. Taxation Reforms: A CGE-Microsimulation Analysis for Pakistan. *Poverty and Economic Policy Research Network*. Ssrn, 1–50. <https://doi.org/10.2139/ssrn.1683451>. (Accessed on January 9, 2019).
4. Anderson F., Ashein, L. Mittenzwei, K. and Veggeland F. 2002. Taxation of Agriculture in Selected Countries. Study of United States, Canada, Australia, Germany, United Kingdom, Ireland, France, Switzerland, and Italy with relevance to the WTO. Oslo: Norwegian Agricultural Economics Research Institute.
5. Bangko Sentral ng Pilipinas. 2018. Inflation Report. Manila: Bangko Sentral ng Pilipinas.
6. Bourguignon, F. Ferreira, F. and Leite, P. Beyond Oaxaca- Blinder : Accounting for Difference in Household income Distribution. *The Journal of Economic Inequality Vol. 6*. Washington D.C.: The World Bank.
7. Cogneau, D. and Robilliard S. 2001. Growth, Distribution and Poverty in Madagascar: Learning from a a Microsimulaiton Model in a General Equilibrium Framework. *IFPRI TMD Discussion Paper No 61*.
8. Colombo, Giulia. 2010. Linking CGE and Microsimulation Models : A Comparison Different Approaches. *Internationa Journal of Microsimulation Vol. 3: 72-91* 3: 72–91. Europe: International Microsimulation Association.
9. Creedy, John, and Guyonne Kalb. 2005. Behavioural Microsimulation Modelling for Tax Policy Analysis in Australia: Experience and Prospects. *Australian Journal of Labour Economics Vol. 8 (1): 73–110*. Australia: The Center for Labour Market Research.
10. Cury S., Pedrozo, E., and Coelho, A. 2016. Cash Transfer Policies, Taxation and the Fall in Inequality in Brazil An Integrated Microsimulation-CGE Analysis. *Microsimulation Association International Journal of Microsimulation 9 (1)*. [https://www.microsimulation.org/IJM/V9\\_1/IJM\\_9\\_1\\_2016\\_Cury.pdf](https://www.microsimulation.org/IJM/V9_1/IJM_9_1_2016_Cury.pdf). (Accessed on March 15, 2019).
11. Department of Budget and Management. *Annual Report*. Manila.
12. Department of Budget and Management. <https://www.dbm.gov.ph/index.php/secretary-s-corner/speeches/list-of-speeches/498-ateneo-senior-high-school-talk-on-train-law>. (Accessed on July 13, 2019).
13. Dom, R. and Miller, M. 2018. Reforming Tax Systems in the Developing World: What Can We Learn From The Past? *ODI Report Vol. 1*. London: Econstor.

14. Emini, C. 2009. Long Run vs. Short Run Effects of a Value Added Tax: A Computable General Equilibrium Assessment for Cameroon. *Mélanges en l'Honneur du Professeur Georges Walter Ngango.Ssrn* 2 (00). <https://doi.org/10.2139/ssrn.1394953>. ( Accessed on February 15, 2019).
15. Espinoza, R., and Ruiz, E. 2014.Labor Tax Cuts and Employment: A General Equilibrium Approach for France. *IMF Working Papers Vol. 4 (114): 1*. Washington D.C.: International Monetary Fund.
16. Heerden, Y. and Schoeman, N. Finding the Optimum Level of Taxes in South Africa: A Balanced Budget Approach. *University of Pretoria Working Paper*. Vol. 1. South Africa: University of Pretoria.
17. Heijdra, B., and Ligthart, J. Labor Tax Reform and Equilibrium Unemployment: A Search and Matching Approach. *Center Discussion Paper No. 2004*[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=616607](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=616607). ( Accessed on December 17, 2018).
18. Hoynes, H. and Patel A. 2016. Effective Policy for Reducing Poverty and Inequality? The Earned Income Tax Credit and the Distribution of Income.*NBER Working Paper No 21340*.<https://www.nber.org/papers/w21340> ( Accessed on July 17, 2019).
19. Kotlikoff, L. and Summers, L. 1987. Tax Incidence. *The Handbook of Public Economics Vol. 1*. United States: NBER.
20. Manasan, R. G. (2017). Assessment of the 2017 Tax Reform for Acceleration and Inclusion. *Discussion Paper Series No. 2017-27*. Quezon City: Philippines Institute for Development Studies.
21. Nadoveza, O., Sekur, T., and Beg M., 2016. General Equilibrium Effects of Lower Labor Tax Burden in Croatia. *Zagreb International Review of Economics & Business Vo. 19*. Croatia: Faculty of Economics and Business, University of Zagreb and De Gruyter Open.
22. Osberg, L. and Xu K. 2008. How Should We Measure Poverty in a Changing World? Methodological Issues and Chinese Case Study. *Review of Economic Development Vol. 12 (2)*. United Kingdom: Blackwell Publishing.
23. Philippine Statistics Authority. 2015 Family Income and Expenditure Survey. Quezon City.
24. ----- . [openstat.psa.gov.ph/](http://openstat.psa.gov.ph/). ( Accessed on January 28, 2019).
25. Quimbo, S. and Javier X. (2015). Rethinking The Taxation of Compensation Income in the Philippines.*Philippine Review of Economics* Vol. 51 (1). Quezon City: University of the Philippines School of Economics and Philippine Economic Society.
26. Sajadifar, S., Khiabani N., and Arakelyn A. 2012. A Computable General Equilibrium Model for Evaluating the Effects Value-Added Tax Reform in Iran. *World Applied Sciences Journal Edition Vol. 18 (7)*. Armenia:IDOSI Publications.
27. Tiberti, L., Cicowiez, M., and Cockburn J. 2017. A Top-Down Behaviour (TB) Microsimulation Toolkit for Distributive Analysis: A Manual. Canada: Partnership for Economic Policy.
28. Tuaño, P., Castillo, C., Clarete, R., Muyrong, M. and Banaag, M. (2018), . Assessing the TRAIN's Coal and Petroleum Excise Taxes: Macroeconomic, Environmental and Welfare Effect. *Discussion Paper Series Np 2018 (41)*. Quezon City:PIDS.
29. Zhang, Y., Wang, X. and Chen, K. (2012). Growth and Distributive Effects of Public Infrastructure Investment in China. Partnership for Economic Policy Working Paper No. 2012-0. China: Springer, Cham.

# THE RECONSTRUCTION OF AGE LIMITATION TO MARRY AFTER THE CONSTITUTIONAL COURT'S VERDICT AS A LANDMARK DECISION

**Moh Fadhil**

*Faculty of Sharia IAIN Pontianak, Indonesia  
fadilfadil07111991@gmail.com*

## **ABSTRACT**

*Child is the key of human survival in the world. Each state has the obligation to ensure for the full and harmonious development about their individual life in society. According to UNICEF, a child means every human being under the age of eighteen years. World attention to the child rights are the real action which is formulated in the Sustainable Development Goals (SDGs) as the blueprints for achieving a better life in the future. SDGs are the global action to fight inequalities relating to the welfare of child and provide access to justice. Recognizing that, in accordance with the fourth goal of SDGs, every child should has the right of obtaining a quality education as the foundation to create sustainable development. To obtain a quality education, the state has to recognize an equal access to primary education. But, the SDGs campaign in Indonesia is not running optimally because of child marriage. It is fuelled by poverty, tradition, the fundamental thought relating to religion, and gender inequality. Therefore, the aim of this paper is to understand the urgency of reconstruction the age limitation of marriage in Indonesia. This paper also discusses about the verdict of the constitutional court which reconstructing age limitation of marriage to reduce child marriage in Indonesia.*

**Keywords:** *Child Marriage, Gender Equality, Convention on the Right of the Child, SDGs, Constitutional Court*

## **1. INTRODUCTION**

### **1.1. Background**

Children are postulated as the key to human survival on earth. Children are always correlated to the answers of a nation future in building civilization. The existence of children is the main entity in every development programs of a civilization. Building advanced civilizations requires the quality of educated and civilized children, whereas the poor quality of children will have an impact on the darkness of the future of civilization. The development of a child's life is like a requirement that must be prepared by a nation resulting that the future of the nation can be obtained in accordance with the ideals of the nation's development. The importance of children's life in sustainable development has got the most attention by world organizations. The United Nations Children's Fund (UNICEF), as an organization of the United Nations (UN) which is engaged in humanity, particularly child welfare development assistance, plays an active role in protecting children's lives, keeping children's rights to be fairly granted and striving for children's opportunity to develop their potential for a good future of the nation. The important role of UNICEF indicates that the world community has emphasized the importance of children's lives for the sustainable development. In the context of world development, the world's concern on children's rights is formulated into sustainable development goals. The concept of sustainable development according to the World Commission on Environment and Development (WCED) is "development which meets the needs of the present without compromising the ability of future generations to meet their own needs (Fardan, 2015, pp. 81). The concept was later formulated into Sustainable Development Goals (SDGs). SDGs are blueprints that break down the goals that must be achieved by a country in welcoming a better future. These goals are aligned into the country's development agenda so that the development carried out by a country can be oriented towards the continuation of a better life in the future.

Of the 17 goals referring to sustainable development, SDGs include child-related element as a part of sustainable development goals. Goal 4 emphasizes that the country must contribute in providing access to the quality education for children. Education is the gateway to enlightening civilization. With education, the potential of children can be developed to advance the future of a nation. Meanwhile, goal 5 emphasizes that sustainable development requires a paradigm shift that is oriented towards gender equality. This case is considered crucial since young girls conservatively are still supposed as subordinate entities for men and have to undergo marriage at the early age (Jensen, 2017, pp. 5). In the context of human rights (HAM), every child is equal in terms of fulfilling their rights, indicating that every child has absolute rights that are coherent with their entities as humankind. Therefore, a country should actively protect them from various kinds of discrimination. Fulfillment of children's rights has been obtained since the Convention on the Rights of the Child was enacted by the UN General Assembly on November 20<sup>th</sup>, 1989 and entered in force on September 2, 1990 (Lestari, 2017, pp. 2). The Convention has become a universal guideline and perspective of children, with their absolute rights, as the main entity in the world. Indonesia as part of the participating countries then ratified it into Presidential Decree No. 36 of 1990 concerning the Convention on the Rights of the Child (CRC). After the ratification, the government's commitment in protecting children's rights can be seen from the enactment of Law on Child Protection (Law No. 23/2002) which was later revised to Law No. 35/2014 concerning amendment to Law No. 23/2002 on Child Protection (Law on Child protection). The enactment of the Law on Child Protection is the government's response to the global demands for the importance of the SDGs. The paradigm that was built after the entry into force of the Child Protection Law was protection against discriminatory treatment of children. In addition, it is also expected to fulfill the child's right to survival, the growth of children as a generation that is expected to be able to advance the nation in the future (Swastika, 2013, pp. 18-20). However, the fundamental problem that distorts the implementation of SDGs in Indonesia is apparently the large number of underage marriages which is considered lacking the stability of the child's future. The phenomenon of child marriage in Indonesia comes from socio-cultural interpretations that most people still consider that women are subordinate or has lower position than men so women are naturally placed in the kitchen of the household. A conservative view of religion also guides the community to marry off their children early to avoid illegal sexual activity which will only cause disgrace to the family. This argument in fact is invalid and is considered as part of the feudalism concerning the dignity of the family. Religion is used as a shield to protect family dignity rather than protect children's rights. In addition, the pluralism of children's age becomes a problem which remains unsolved. This matter eventually shows the country's fault which creates legal uncertainty for children in Indonesia. The pluralism children's age in the marriage perspective raises a disparity in the legal marriage age between boys and girls. The age disparity in marriage according to the Law No.1/1974 article 7 concerning marriage (Law on Marriage) is stated as, "A marriage is only allowed when the marriage candidate has reached the age of 19 (nineteen) years and the female marriage candidate the age of 16 (sixteen) years". Such age disparity in marriage is evidently contrary to the basic values of Pancasila, especially the fifth principle which states "Social justice for the whole of the people of Indonesia". It also contradicts the instrumental values in article 27(1) of the 1945 Constitution of the Republic of Indonesia which states that, "All citizens have the same position in law and government and must obey the law and government with no exception" ". This instrumental value comes from the fundamental values in the universal principle, which is also known as the principle of equality before the law (Winarta, 2008, pp. 283). Beside the discrepancy between the age disparity of marriage and the constitution, age disparity also distorts the implementation of goal 5 concerning gender equality. Regulatory paradigms that are intolerant towards gender will only lead to injustice.

This condition drags out the essence of legal objectives which guarantees legal certainty, justice and expediency. The age disparity in marriage does not only create a legal uncertainty but also cause an injustice in terms of gender inequality which leads to the lack of expediency regarding the unavailability of quality education and gender inequality in law and government. However, quality education and gender equality should be benefit for every child. Child marriage issues which cause distortions to the fulfillment of the SDGs are subject to study that needs to be explored, particularly in the process of reformulating the marriage regulations in a responsively and progressively. The Constitutional Court as the guardian constitution issued a phenomenal decision called the landmark decision at the end of 2018. The decision is related to the problematic age of marriage in Indonesia and attempts to reconstruct the legal age of marriage.

### **1.2. Problem Statement**

To be able to answer the SDGs challenge in terms of child protection, this paper will discuss the issue of child marriage in Indonesia emphasizing on, (1) how urgent it is to reconstruct the ideal legal age of marriage in Indonesia? and (2): how is the reconstruction of the legal age of marriage in Indonesia according to Constitutional Court point of view?

### **1.3. Methods**

This study is a normative juridical one as a legal assessment research conceptualized as an applicable norm or rule. This study is also referred as library research in law (Soekanto, 2009, pp. 13-14). This study applied case approach. The source of data in this study was secondary data with primary legal material in the form of a Constitutional Court decision and statutory laws related to the discussion, also secondary legal material from books and journals. Furthermore, the method used in this study was qualitative descriptive method.

## **2. DISCUSSION**

### **2.1. Marriage and Child Age Disparity Issue**

According to the Law on Child Protection article 1(1), it is explained that “a child” is someone who is under eighteen years old, including a child who is still in the womb. The definition clearly explains the age limit that can be categorized as a child is up to eighteen years old. However, the stipulations regarding the age category of a child in Indonesia do not correspond horizontally with regulations. This inflicts varied paradigm regarding the age limit of children in some regulatory regimes, for example the Law on Child Protection stipulates the age limit of child is 18 years, the Law of Marriage states 16 years for girls and 19 years for boys, the Law No. 23/2006 on Population Administration sets the age of 17 years, the Law No. 7/2017 on General Election also sets the age of 17 years, the Law No. 22/2009 concerning Traffic and Land Transport also sets the age of 17 years, and many other variations. These variations in age limit signify the country’s unsteady state of understanding on the concept of individual’s competence to be categorized as legal individuals. Such variations will only lead to legal uncertainty and cause a social injustice for the community. Based on the age variations above, the Law on Marriage actually builds a clear limitation between the age of boys and girls. This turns out to be an age disparity in marriage that causes social injustice (Marilang, 2014, pp. 144). Teleologically, the reason of the disparity in the restriction of the age of marriage concerns on population and the physical and mental condition of the child. Firstly, determining the age limit of marriage is a form of country’s control over the increase in population. The large number of child marriage cases in Indonesia before the enactment of the Law of Marriage was a factor which caused the uneven population growth. Secondly, child marriage has many disadvantages for not only the spouse but also the population issue. Moreover, marriage without physical and mental maturity will only cause fetal and maternal health problems. Besides, child marriage is more vulnerable to divorce issue which impedes the fulfillment of community

welfar. Besides, child marriage is more vulnerable toward divorce issue which consequently impedes the fulfillment of community welfare (the explanation at point 4 in Law No.1/1974 of Law on Marriage). Historically speaking, the codification of article 7 in the Marriage Law was in fact rejected by some Islamic parties and various community organizations since the limitation on the legal age of marriage conflicted with Islamic teachings and the socio-cultural aspects of Indonesian society which at the time still consider women as subordinates. According to Sudirman, Islam does not explicitly regulate the age of marriage, so the role of the country in determining the age limit of marriage is a context of *ijtihadiyyah*. The context of social problems in Indonesia that are different from those in Saudi Arabia is the reference for allowing *ijtihadiyyah* to achieve the *maslahat mursalah*. The high rate of divorce due to the mental immaturity of married children indicates unstable personal integrity in understanding their own identity. Problems with reproductive health of young women and uneven population distribution rates are the consideration of the country to regulate the age limit of marriage in Indonesia (Sudirman, 2006, pp. 5-9). However, during the 45 years of the Marriage Law regime, the determined age turned out to be no longer relevant to the conditions that exist today. The stipulation of the minimum age of marriage for women is 16 years old considering that, physically, 16 years old is not an ideal age and reproductive organs and psychological conditions at this rate are not ready for marriage yet. Even the majority of world views the ideal age for women to be ready both physically and psychologically is at 18 according to the mandate of the CRC. Also the 16 years of age is still at the age of compulsory education for children. This can be seen from the government program regarding 12-year compulsory education which generally starts at 6 and ends at 18 years of age. If the minimum age of marriage for women is not reconstructed, it will distort the implementation of Goal 4 regarding the quality education that must be given to every child during the 12-year of compulsory education. Also, the age limit regime distorts Goal 5 in presenting gender equality in Indonesia.

## **2.2. The Urgency of the reconstruction of Ideal Age in Marriage in Indonesia**

Basically, Islamic law does not explicitly state the age limit of marriage. This is based on various histories regarding the marriage of the Prophet Muhammad and Aisyah r.a. . Some Salafi scholars even agree that marriage in Islam only requires that the marriage candidates have been *akil baligh* (have reached puberty), so there is no need to wait for them to be *mumayyiz* (physically and mentally mature) (Zulfiani, 2017, pp. 213). Admittedly, the absence of an ideal age limit of marriage can be traced to the confusion that occurs among the Scholars when determining the age limit for *baligh* (Ali et al, 2015, pp. 91). In Indonesia, the efforts of the scholars in determining the age limit of marriage resulted in two groups consisting of those who support and refuse child marriage. The supporting group assumed that theologically, Islam does not forbid child marriage as narrated by Abdullah bin Mas'ud, the Prophet Muhammad said " O young men, those among you who can support a wife should marry, for it restrains eyes (from casting evil glances) and preserves one from immorality; but he who cannot afford It should observe fast for it is a means of controlling the sexual desire. (Shahih Al- Bukhari-Muslim) (Al-Bukhari, pp. 187). The hadith above does not mention the age limit when a child is considered competent to get married so that it required *ijtihad* of the scholars in determining the words to define a competent child. The word "competent" should be observed holistically in accordance with Indonesian community's needs and context both biologically, psychologically, sociologically, and economically or financially. The group that supported child marriage had inconsiderably defined "competent" as mere physical department without examining some elements which affect children's mental development and readiness in making decisions as maturity behavior. Consequently, such assumption must be refused and unfounded. Additionally, the supporting group pointed on moral and ideological reasons. Morale is used as an excuse to reduce the impact of promiscuity that has the potential to cause illegal sex act

while ideologically, marriage is expected to increase the population of Muslim communities in Indonesia (Musfiroh, 2016, pp. 69). These reasons, in fact, were unfounded and conservative. Moral issues should have been put in a proportional circumstances in the household environment. Families have an obligation to instill religious moral values and elaborate them with early sex education. Decent and proportional understanding will establish correspondence righteousness to the importance of preventing adultery. Conversely, the family's reasoning on hastening their children's marriage to prevent adultery is considered as a state of giving up responsibility for the development of a child's life. Moreover, most parents still consider early sex education to be taboo to discuss. Juridically, Article 26 (1) of the Child Protection Law obligates parents to be responsible for maintaining the lives of children as explained in point a-d as follows:

- a) Parenting, nurturing, educating and protecting children;
- b) Rearing children in accordance with their abilities, talents, and interest;
- c) Preventing child marriage; and
- d) Providing character education and instilling moral values for children.

Article 26 (1) point a-d above must actually be placed limitedly and imperatively. This means that the obligation of parents juridically, as stated at the article above, is related to one another. Point a, b, and d are three elements to execute in order to do well on point c. Preventing the child marriage is the obligation of parents which correlates with the children's nurturing and educating pattern. Also, parents must attempt to lead to the fulfillment of their children's abilities, talents and interests and have them being bound by character education and values. Parents who have successfully implemented the points above will be able to lead their children to become human beings who are able to promote social welfare for their families, communities and nations. As for the group that rejected child marriage, they also referred to the hadith above with relevant arguments stating that the competence for someone to be able to get married cannot be seen through physical state only, but must also be elaborated holistically. This could be seen from the concept of maqashid as-Shari'ah as an approach to discern the context behind the verses of God's commandments in understanding the universal goals behind the law (Shidiq, 2009, pp.116). The universal objectives on the texts of the Qur'an and Hadith were elaborated with contemporary scientific views such as medical, psychology, anthropology, sociology, economics and other sciences in order to create a comprehensive and integral understanding oriented to the human virtues (Rohman, 2016, pp. 70). Based on the concept of maqashid as-Shari'ah, Muhammad Yusuf al-Qardhawi allowed taqyid al-mubah (restrictions on what is permissible) in order to achieve righteousness. This became a consideration of the importance of determining the minimum age of marriage. There are three points of view that can be considered for the importance of determining the minimum age of marriage. The first consideration is the women's reproductive health. Women of reproductive age refers to all women aged 18 years and ideally in range 20-30 years old. Secondly, it is related to the potential for violence against women. This includes both physical and non-physical violence. Non-physical violence happens in girls who are not mentally ready to get married and are not ready to understand the essence of love between in a wife's life. Whereas physical violence often occurs in marriage which is based on compulsion and mental unreadiness to face the complexity of household conflicts. The immature husbands who have not understood their nature in leadership tend to wreck every problem in violence. Likewise, finance issue often triggers acts of verbal and physical violence. Thirdly, religious views related to the marriage of the Prophet Muhammad and Aisyah r.a. is a privilege bestowed to the Prophet Muhammad and not for His followers. It was to build mushahahah relationship back then with Abu Bakar r.a. (Musfiroh, op.cit. pp. 70). Maqashid As-Syari'ah's approach as an instrument to determine the minimum age of marriage was an ijtihadiyyah held by the government to decide an ideal marriage age for

both marriage candidates who were physically and mentally ready to manage independent family. The Law on Marriage was a solution and a breakthrough initiated by the government to support an ideal and dignified marriage campaign in order to build a harmonious family that will have an impact on the benefit of society. Therefore, the enactment of the Marriage Law was a progressive and responsive attempt in order to fulfill the community's social welfare to support the fulfillment of the productive age, the distribution of population and sustainable human development. However, the problem that later arose was the age limit determined by the Marriage Law did not have a strong foundation in deciding that the age of maturity for women was at the age of 16 years. The miss of a strong basis for deciding 16-year as an age of maturity for women was considered normal in the context of the discussion at that time. There was an attempt to compromise the government in setting such age against the resistance of most people who still hold a conservative view of women as entities in the domestic department. The community back then considered women to be no more than just housewives. The view that limits the independency of women by Madelon is called as the state ibuism (Gender, 2016, pp. 54). Beside the fact that there was no universal provision that sets the limits of the age category of children at that time does seem to be doubtful, so that the government as the power holder over the community must be able to set the consensual acts of age limits as a solution to the problem of the age-related marriage. Historically, the Marriage Law was enacted in 1974 while the Convention on the Rights of the Child was just passed in 1989, so it can be said that the government at that time was responsive to the demands of social dynamics in society. Unfortunately, the stipulation of age of 16 for women was based on the consideration that psychologically, women were way earlier to turn adults than men were. Such consideration, in fact, was presumed mythical and non-scientific. Therefore, new regulations regarding the minimum age of marriage are demanded and they must be more relevant to current conditions that are progressive, responsive and futuristic oriented. There are four main urgencies that need to be reconstructed regarding the age of marriage in Indonesia. Firstly, the minimum legal age on the current Marriage Law is disharmonic with the stipulation in Article 27(1) of the 1945 Constitution of the Republic of Indonesia which emphasizes that the country upholds equality particularly in terms of gender equality. As a constitutional state (*rechstaat*) which upholds the universal values of human rights, gender equality is the main element for achieving a fair and prosperous state (*welfare state*). Goal 5 in SDGs points out the importance of gender equality as one of the goals of sustainable development. In the baseline report issued by UNICEF on the implementation of SDGs in Indonesia, gender equality is meant to eliminate the practice of marriage at an age that is not supposed to, considering that in Indonesia, the age of 16 for women's legal age does not reflect the government's commitment to the SDGs campaign. The elimination of the discrimination is expected to bring great opportunities for access to justice, education, reproductive health services for women and reduce sexual violence or violence against women. According to UNICEF, citing the 2016 National Women's Life Experience Survey (SPHPN), 1 in 10 women (12 percent) in the age ranging 20-24 years were married before the age of 18. Then there were 0.6 percent of women who were married before the age of 15 years. Also, girls who were married before the age of 18 were six times more likely to not complete education. If this condition remains, it will only impede the SDGs campaign and potentially affect the quality of women who in fact have the same role as men do in every sustainable development activity in Indonesia (UNICEF, 2017, pp. 66-67). Secondly, Indonesia has ratified the Convention on the Rights of the Child into the Presidential Decree of the CRC and the Child Protection Law which stipulates the age limit of children is 18 years as stated in Article 1 point 1 of the Child Protection Law. Therefore, Indonesia is adhered by the rules of international law which compel Indonesia to oblige to the results of the ratified convention. The Marriage Law is obliged to be harmonized horizontally with the Child Protection Law which substance is the elaboration of universal values of civil, political, economic, social and cultural

rights in the growth and development of children's lives. Thirdly, it is a universal reason that child marriage is an extension of violence against children. This is clearly stated in Article 16(2) of the Universal Declaration of Human Rights (UDHR) which was later adopted into Law No. 39/1999 concerning Human Rights (Law on Human Rights). Article 10 (2) of the Human Rights Law as an adaptation of article 16 (2) of the UDHR confirms that "Marriage shall be entered into only with the free and full consent of intending spouses, in accordance with the prevailing legislation". Fourthly, the ambiguity of article 7 (1) and (2) of the Marriage Law actually becomes the initiator to legitimize child marriage. Article 7 (1) stipulates the legal age of marriage for men is 19 years old and 16 years old for women while article 7 (2) paves the way for underage marriage which is referred to as marriage dispensation. It is true that the stipulation of marriage dispensation can be applied to couples who happen to be in premarital pregnancy but the stipulation does not set the requirements to obtain marriage dispensation is only left to the judgment of the court. Therefore, it is necessary to set the requirements that can be used as a basis for the court to provide marriage dispensation.

### **2.3. Reconstruction of the Legal age of Marriage as a Landmark Decision in Indonesia according to Constitutional Court point of view (Verdict No. 22/PUU-XV/2017)**

The verdict of the Constitutional Court No. 22 / PUU-XV / 2017 was enacted after the protest of three housewives as victims of child marriage who experienced direct impact of the un-ideal marriage due to the Marriage Law regime which led to constitutional harm. The verdict is categorized as a landmark decision which provide constitutional solution for the stagnation of constitutional practices and the legal system that applies to the imposition of marital age restrictions in Indonesia. Also, legal considerations given by the Constitutional Court have straightened or returned interpretations in accordance with the constitution. The term of landmark decision by the Constitutional Court is interpreted as a stipulation containing new legal principles, providing a constitutional solution, abrogating the law, having constitutional strategic values that change interpretations of prevailing norms or returning interpretations according to the constitution and containing implicit constitutional norms, but stated firmly by the Constitutional Court through *ratio decidendi* (Konstitusi, 2017, pp. viii-ix). Therefore, to understand about how landmark decision works, this verdict will reveal the value of landmark decision that giving the constitutional solution about marital age restrictions. The petitioners argued that Article 7 of the Marriage Law had contravened article 27(1) of the 1945 Constitution of the Republic of Indonesia concerning the principle of equality before the law. Indonesia, in fact, is a constitutional state (*rechtstaat*) as Article 1(3) of the 1945 Constitution of the Republic of Indonesia must uphold the principle of equality before the law (The Ruling on the Constitutional Court, point 57). According to A.V. Dicey, equality before the law is an element of the rule of law or a fundamental principle for the establishment of a legal state (Dicey, 1915, pp. 120). The petitioners emphasized that due to the un-ideal marriage age, the inalienable rights of children were deprived of the matrimony. This is due to the fact that marriage is a legitimacy of maturity or being in a state or formally mature. Substantially inalienable rights of children apparently turned into a pile of obligation in the household without any mental readiness. However, the Marriage Law was philosophically enacted to build equality between men and women in to run a household. This was inflicted on the principle of mutual assistance and complementarity to achieve spiritual and financial well-being as explained in No. 4 point d of the Marriage Law. In order to fulfill this matter, the Marriage Law adheres to the understanding that restrictions on the age of marriage are based on the principle of maturity of each person's soul and body. The petitioners formulated the basis of their arguments in the Court's consideration through the Constitutional Court Ruling No. 028-029 / PUU-IV / 2006 that "discrimination is interpreted as any limitation, harassment or exclusion based on the distinction of humans on the basis of religion, race, color, sex, language, and

political opinion”. (The Ruling on the Constitutional Court, point 68). The consideration of the Constitutional Court is a strong constitutional basis as a reference in removing all forms of formal discrimination in the regulatory sector. The Constitutional Court as the guardian of constitution has a role in the flow of judicial power to guard the ideals of law (*rechtsidee*) (Tanya, 2011, pp. 43). To strengthen his argument, the petitioners presented a medical expert, dr. Fransisca Handy. Handy explained that pregnancies at the age of less than 18 years risked for mental health, contagious diseases, pregnancy disorders, childbirth problems and health risks for the expected babies. Another expert, Julianto Witjaksono, emphasized that the risk of pregnancy at the age of less than 18 years is three to seven times greater the potential for maternal and child mortality (The Ruling on the Constitutional Court, point 78). Furthermore, the petitioners also emphasized that child marriage diminishes the hope of access to the world of education as can be seen in the National Economic Social Survey (SUSENAS) issued by the Central Statistics Agency (BPS) through the table below.

*Table 1: The Percentage of 20-24 Year Old Married Women Who were Married before 18 Years Old According to the Education Level They Graduated in 2013 and 2015 (BPS/SUSENAS 2015)*

<b>THE HIGHEST LEVEL OF EDUCATION</b>					
<b>Year</b>	<b>Never Go to School</b>	<b>Elementary School</b>	<b>Junior High School</b>	<b>Senior High School</b>	<b>Total</b>
2013	11,97	42,76	38, 60	6,67	100
2015	9,87	40,06	41,18	8,88	100

The table above shows the impact of child marriage results in children having to finish school early. The highest number of dropouts is at the elementary level in 2013 of 42.76 percent and in 2015 of 40.06 percent. Moreover, the highest dropout rate can also be seen at the junior high school level in 2015 of 41.18 percent and 2015 at 38, 60 percent (The Ruling on the Constitutional Court, point 86). Economic factors contribute to the number of discrimination against women. Poverty is a justification for parents to give up more on their daughters than sons education. Based on the arguments of the petitioners, the Constitutional Court considered its decision as the author outlined below:

1. That article 7 (1) of the Marriage Law is considered as an open legal policy of national agreement that can be amended at any time by the legislators in accordance with the demands of development. However, the Court considered that the authority to revise the age limit was a legislative review procedure which was the accountable of the legislators. The Court also considered that the legal policy could not be said to be contrary to the 1945 Constitution of the Republic of Indonesia. However, it cannot be denied that the minimum age of marriage causes problems in regarding physical and mental health, education, divorce, socio-economic and other problems.
2. Even though legal policy is under the authority of lawmakers, its constitutionality can be assessed as long as there is an element that exceeds authority, violates morality and rationality, raises intolerable injustices and does not clearly contradict with the 1945 Constitution of Republic of Indonesia. Therefore the Court considered that article 7 (1) of the Marriage Law does not exceed authority and does not conflict with popular sovereignty. Nevertheless, the legal policy should not be discriminative in accordance with the previous Court's conviction that discriminatory legal policies based on color, ethnicity, religion, political beliefs and gender tend to conflict with morality and rationality, be contrary to political rights which causes intolerable injustice and it clearly contradicted the 1945 Constitution of the Republic of Indonesia.

3. The Court then considered that when the Marriage Law was enacted, there was a development of constitutionality and reinforcement of human rights protection which signified by the amendments to the 1945 Constitution of the Republic of Indonesia and the enactment of the Child Protection Law which stipulates 18 years as the age limit of children. Based on this progress, marriages under the age of 18 will abolish women's rights to grow as children as Article 28B(2) of the 1945 Constitution of the Republic of Indonesia. The age limit is also discriminative towards article 28C(1) of the 1945 Constitution of the Republic of Indonesia as a right of equality for children obtaining education. Article 31(2) of the 1945 Constitution of the Republic of Indonesia affirms the obligation for all citizens to participate in primary education. The government programs in education are 12-year compulsory education, so marriage for women under 18 years is not accordance with the government's regulation. Therefore, article 7(1) of the Marriage Law is no longer relevant to be hold constitutionally and requires new relevant adjustment to provide legal certainty and nondiscriminatory events. Besides, the article has been horizontally in disharmony with the Child Protection Law as a special and relevant stipulation about children and it also has an impact on fulfilling article 28B(2) and 28C(1) of the 1945 Constitution of the Republic of Indonesia.
4. Even though the legal policy is irrelevant and discriminatory, the Court is believes that the authority to amend the stipulation on the age limit of marriage is the under of the authority of the legislators. Moreover, the legal policy has clearly disrupted the universal development agenda in the SDGs, the 12-year compulsory education program and Planning Generation (GenRe). Furthermore, Indonesia is a participating country in the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) which has been ratified into Law No. 7/1984 concerning Ratification of the Convention on the Elimination of All Forms of Discrimination against Women.
5. Based on the legal considerations above, the Court set a deadline for the legislators to make changes on the minimum legal age of marriage in no later than three years under the condistion that "if the legislator has not amended it up to the deadline, the minimum legal age of marriage in article 7 (1) of The Marriage Law is harmonized with the child's provisions in the Child Protection Law. Furthermore, in the Court's ruling deciding the stipulation of Article 7 (1) of the Marriage Law is a constitutional deadline meaning that if the deadline has passed and the legislator has not made a change, then the stipulation is unconstitutional.

### 3. CONCLUSION

Indonesia, as a country committed to the principles of universal development in the SDGs blueprints, is supposed to carry out reforms on regulations that are considered to impede sustainable development goals. One form of optimizing sustainable development is to build a gender equality paradigm that must be legally supported as stated in the 5 SDGs goal. However, the agenda was disrupted by the enactment of article 7 (1) of the Marriage Law which regulates the minimum legal age of marriage. The age disparity of marriage infact causes legal uncertainty, discrimination and violations of the constitution in Article 27 (1), Article 28B (2) and 28C (1) of the 1945 Constitution of the Republic of Indonesia. Such discrimination has violated the principle of universal children's rights as stated in the UDHR, CRC and CEDAW. The Constitutional Court as the guardian of constitution through verdict No. 22/PUU-XV/2017 as a landmark decision has offered a constitutional solution in the application of constitutional practices and legal systems in the implementation of marital age restrictions. Furthermore, the Court's consideration has also rectified or restored the interpretation of the minimum legal age of marriage in accordance with the constitution by giving the legislators a constitutional

deadline to immediately amend the stipulation on the minimum legal age of marriage as stipulated in the Marriage Law.

#### LITERATURE:

1. Ali, Mukti et al (2015). *Fiqih Kawin Anak Membaca Ulang Teks Keagamaan Perkawinan Usia Anak-Anak*. Jakarta: Rumah Kitab, Ford Foundation dan Norwegian Centre for Human Rights.
2. Bukhari, Muhammad bin Ismail bin Ibrahim ibn al-Mughirah. (t.t.). *Shahih Al-Bukhari*. Beirut: Dar al-Fikr.
3. Dicey, A.V. (1915). *Introduction to the Study of the Law of the Constitution*. London: Macmillan.
4. Jensen, Lois (Ed). (2017) *The Sustainable Development Goals Report 2017*. New York: United Nations.
5. Law No. 22/2009 concerning Traffic and Land Transport
6. Law No. 23/2006 on Population Administration
7. Law No. 35/2014 concerning amendment to Law No. 23/2002 on Child Protection
8. Law No. 7/2017 on General Election
9. Law No.1/1974 on Marriage
10. Lestari, Raisa. (2017). Implementasi Konvensi Internasional tentang Hak Anak (Convention on The Rights of The Child) di Indonesia (Studi Kasus Pelanggaran terhadap Hak Anak di Provinsi Kepulauan Riau 2010-2015). *Jurnal JOM FISIP: Vol. 4. No. 2 Oktober*. Riau: Riau University.
11. Mahkamah Konstitusi Republik Indonesia. (2017). *Putusan Landmark Mahkamah Konstitusi 2014-2016*. Jakarta: Kepaniteraan dan Sekretariat Jenderal Mahkamah Konstitusi.
12. Marilang. (2018) Dispensasi Kawin Anak di Bawah Umur. *Jurnal Al-Daulah: Vol. 7. No. 1. June*. Makassar: Alauddin State Islamic University.
13. Musfiroh, Mayadina Rohmi. (2016). Pernikahan Dini dan Upaya Perlindungan Anak di Indonesia. *Jurnal De Jure: Jurnal Hukum dan Syari'ah: Vol. 8. No. 2. December*. Malang: Maulana Malik Ibrahim State Islamic University.
14. Ngoyo, Muhammad Fardan. (2015). Mengawal Sustainable Development Goals (SDGs): Meluruskan Orientasi Pembangunan yang Berkeadilan. *Jurnal Sosioreligius: Vol. 1 No. 1. June*. Makassar: Alauddin State Islamic University.
15. Prasetyo, Dossy Iskandar and Bernard L. Tanya. (2011). *Hukum, Etika dan kekuasaan*. Yogyakarta: Genta Publishing.
16. Presidential Decree No. 36 of 1990 concerning the Convention on the Rights of the Child
17. Program Studi Kajian Gender Sekolah Kajian Strategik dan Global Universitas Indonesia Bekerjasama dengan Kementerian Pemberdayaan Perempuan dan Perlindungan Anak Republik Indonesia. (2016). *Perkawinan Anak dalam Perspektif Islam, Katolik, Protestan, Budha, Hindu dan Hindu Kaharingan*. (Research report). Jakarta: Indonesia University of Indonesia.
18. Rohman, Holilur. (2016). Batas Usia Ideal Pernikahan Perspektif Maqashid Shariah. *Jurnal of Islamic Studies and Humanities: Vol. 1 No. 1*. Yogyakarta: Ahmad Dahlan University.
19. Shidiq, Ghofar. (2009). Teori Maqashid Al-Syari'ah dalam Hukum Islam. *Jurnal Majalah Ilmiah Sultan Agung: Vol. 44. No. 118*. August. Semarang: Sultan Agung Islamic University.
20. Soekanto, Soerjono. (2009). *Penelitian Hukum Normatif, Suatu Tinjauan Singkat*. Jakarta: Raja Grafindo Persada.

21. Sudirman. (2006) Pembatasan Usia Minimal Perkawinan: Upaya Meningkatkan Martabat Perempuan. *Jurnal EGALITA: Jurnal Kesetaraan dan Keadilan Gender: Vol. 1. No. 2.* Malang: Maulana Malik Ibrahim State Islamic University.
22. Swastika, Novia (Ed). (2013). *Evaluasi Pemenuhan Hak Anak pada Daerah Otonom Hasil Pemekaran di Provinsi dan Kabupaten.* (Research report). Jakarta: Badan Penelitian dan Pengembangan Hak Asasi Manusia.
23. The verdict of the Constitutional Court of Indonesia No. 22/PUU-XV/2017.
24. UNICEF. (2013). *Laporan Baseline SDG tentang Anak-Anak di Indonesia. (Baseline Report)* Jakarta: Kementerian Perencanaan dan Pembangunan Nasional (BAPPENAS)
25. Winarta, Frans H. (2008). *Peranan Advokat dalam Menyongsong Terwujudnya Keadilan Sosial bagi Pencari Keadilan: Bunga Rampai Komisi Yudisial dan Keadilan Sosial.* Jakarta: Komisi Yudisial Republik Indonesia.
26. Zulfiani. (2017) Kajian Hukum terhadap Perkawinan Anak di Bawah Umur Menurut Undang-Undang No. 1 Tahun 1974. *Jurnal Hukum Samudera Keadilan: Vol. 12. No. 2. July-December.* Aceh: University of Samudra.

# ADULTERY ARTICLES IN THE CRIMINAL CODE BILL: FORMS OF ACCOMMODATION FOR THE DEVELOPMENT OF NATIONAL LAW AGAINST ISLAMIC VALUES

**Any Ismayawati**

*State Islamic University of Kudus*

*Jl. Conge Ngembalrejo Bae Kudus Jawa Tengah PO. BOX 51, Indonesia*

*anyismayawati@yahoo.com*

## **ABSTRACT**

*This paper aims to find out what values are protected in adultery articles in the Criminal Code Bill, to find out how forms of legal protection from adultery articles about protected values, and to know what Islamic values are accommodated in adultery articles. in the Criminal Code Bill. Philosophical, comparative and hermeneutic approaches are used to achieve the objectives in this study. Enforcement of the adultery article in the Criminal Code that has been ratified, still raises new crimes, because the values in the article of adultery in the Criminal Code do not match the values that live and apply in the community. This triggered the public to be vigilant. Enforcement of Article 284 in the Criminal Code is considered unable to resolve the problem of adultery in Indonesia. Based on this, the adultery article needs to be reconstructed. The current Criminal Code Bill in the House of Representatives is a form of development of national law, which has been sought by the Indonesian people so that the law is in accordance with the values of the Indonesian nation, because effective law is a reflection of the values of the nation. Likewise, the adultery article in the Criminal Code Bill should be in accordance with the values that live in Indonesian society. Adultery articles in the Criminal Code Bill are implicitly a form of protection for marital institutions, social honor and sexual morality values. Protection of these values includes the determination of adultery as an ordinary violation, not complaint offense and a disadvantaged third party can report, besides that the adulterer is anyone who has sexual relations without a legal marriage. Values in adultery articles in accordance with Islamic values, Islam glorifies the institution of marriage, upholds one's honor based on behavior and maintains social morality in society.*

**Keywords:** *Adultery, Islamic Values, The Criminal Code Bill, Development Of National Law*

## **1. BACKGROUND**

The Criminal Code is still the main source of reference in criminal law. The Criminal Code consists of three books, book I contains general rules, book II contains criminal acts, and book III contains criminal acts related to violations. Although the Criminal Code is the main source, there are several criminal acts that are further regulated in separate laws. This condition is quite alarming considering the Criminal Code is a translation of the Dutch Criminal Code (WvSvNI) which then through Law Number 1 of 1946 was changed to WVS which was translated by the Criminal Code. the validity of WVS is temporary, but until the country is 74 years old, the Criminal Code is still in used. The Criminal Code currently in force still raises problems that are often criminogenic, because several articles in the Criminal Code are not effective in dealing with criminal acts. The ineffectiveness of the article is because the values that animate the articles in the Criminal Code are derived from Dutch values that are incompatible with the values of the Indonesian people. As time goes by, science and technology also influence the development of criminal acts which cannot be accommodated by the Criminal Code articles. Based on various considerations, the Criminal Code must be updated immediately. Referring to this, the presence of the Criminal Code Bill is a breath of fresh air for Indonesian law. However, in the process of ratifying the Draft KUHP into a national KUHP it is not easy. The existence of articles of the tug of war from the various parties or certain groups becomes the

main background of the difficulty of ratification of the Criminal Code. One of the articles that raises polemics is adultery article. There are those who agree with the existence of the article, but there are also those who oppose the article. Each party has an opinion that underlies his attitude. The emergence of the polemic needs to be reviewed to provide input in the reconstruction of the adultery article in the Criminal Code Bill, so that the ratification process of the Criminal Code Bill is not hampered. To facilitate the review of adultery articles in the Criminal Code Bill, it is necessary to study the values protected in the Adultery Article in the Criminal Code Bill, the forms of protection of protected values, and whether the protected values are in accordance with the values in Indonesian society, especially Islamic values because the majority of the Indonesian people are Muslim. A philosophical juridical approach is used in this study.

## 2. DISCUSSION

### 2.1. The values protected in the adultery article in the Criminal Code Bill

To be able to discuss the values protected by the adultery article in the Criminal Code Bill, the contents of the article of adultery, which is regulated in Article 484, are as follows:

1. Sentenced for adultery, with a maximum of 2 (two) years in prison:
  - a) A man who is in a marital relationship with a woman who is not his wife;
  - b) Women who are in a marital relationship make love with men who are not their husbands;
  - c) Men who are not in marriage bond with women, even though it is known that these women are in a marital bond;
  - d) Women who are not in a marital relationship make love with men, even though it is known that these men are in a marital bond;
  - e) Men and women who are not married each other make intercourse.
2. The criminal acts as referred to in paragraph (1) cannot be prosecuted except for complaints of husband, wife, parents, or children.
3. Complaints as referred to in paragraph (2) do not apply to the provisions of article 26, article 27, and article 31.
4. Complaints can be revoked as long as the trial at the trial has not yet begun.

Based on Article 484 of the Criminal Code Bill, it can be seen that the values protected in the article are:

- Marriage institution  
Basically, article 484 of the Criminal Code Bill states that people who make love with people who are not legal partners are called adultery. The rules show that to have an intimate relationship with people who are authorized by the institution of marriage, so that if the institution of marriage is ignored, it is said to have committed adultery. Article 484 of the Criminal Code Bill has extended the limits of adultery when compared to Article 284 of the Criminal Code. In this case it can be said that the drafters of the Criminal Code Bill have criminalized. Article 484 of the Criminal Code Bill has extended adultery limits when compared to Article 284 of the Criminal Code. In the formation of a regulation, criminalization is very possible based on the existing signs. According to Sudarto<sup>1</sup>,

<sup>1</sup> Sudarto, *Law and Legal Criminal Law*, Bandung: Alumni 1981, p.44-48. that the grid for criminalization is as follows:

- a. The use of criminal law must pay attention to national development goals, namely to create a just and materially and spiritually prosperous just society based on Pancasila; in connection with this matter, (the use of) criminal law aims to overcome crime and make a suspension of the countermeasures itself, for the sake of welfare and protection of the community.
- b. Acts that are attempted to be prevented or overcome with criminal law must be "undesirable actions", namely acts that bring harm (material and / or spiritual) to the citizens of the community.
- c. The use of criminal law must also take into account the principle of "cost and results" (*cost and benefit principle*).

criminalization must pay attention to several lattices or marks. Criminalized actions must be undesirable actions by the community that bring material and spiritual losses. Extension of adultery refers to sexual relations without a legal marriage. The criterion for this action is a form of free sex which is not desired by Indonesians because the losses incurred are not only material but also huge losses on the moral (spiritual) side<sup>2</sup>. Material loss includes adultery, which is one of the factors causing divorce. In terms of spirituality, the losses incurred include making the household not harmonious, eliminating confidence in someone, making someone a social person and the biggest impact is the moral degradation of the nation.

- Social moral value

Basically, In Article 484 of the Criminal Code Bill, stated that anyone who is not married is engaged in sexual relations with the same person who is not married legally to have sex is called adultery. This means that the moral value of the community is protected in these rules. The formation of moral values of life in Indonesian society states that people who engage in relationships without marriage have committed adultery and have damaged the moral order of society. Based on this, the preparation of the Adultery Article in the Criminal Code Bill, the issue of propriety in the community and the values that guide community life should be used as a benchmark for criminalization by still having to pay attention to the signs that are used as the basis for criminalization. Sudarto also explained that the measure to criminalize an act depends on the values and collective views contained in the community about what is good, what is right, what is useful or vice versa. It can be said that the views of society and religion about decency are very influential in the formation of laws, especially criminal law<sup>3</sup>. Opinion Paul Vinogradoff quoted by Suteki<sup>4</sup> said that in fact the law grew out of the practices carried out by community members in establishing relationships between one person and another. Starting from this opinion and in relation to legal politics in the stage of legal formation, the actions of the community in completing acts of adultery based on customary values and religious values should be institutionalized in a form of formal law.

- Protecting the interests of victims

The formulation of infidelity violations in Article 484 of the Criminal Code Bill pays more attention to the interests of the victims when compared to Article 284 of the Criminal Code. As can be seen in the formulation of sanctions in the form of a maximum prison sentence of two years. The principle of balance between the interests of the perpetrators and the interests of the victims has been tried to be considered in Article 484 of the Criminal Code Bill with the severity of criminal sanctions which were initially only oriented towards the interests of the perpetrators, have begun to shift in relation to the interests / whereabouts of the victims. The Criminal Code Bill can also be known by changing the type of violation, which was originally (Article 284 of the Criminal Code) as a complaint of violations into ordinary violations. Changes in the types of violations also accommodate the values of Indonesian society in viewing the institution of marriage. In this case, the living value in Indonesian society is that marriage is not just an individual problem. Therefore, if there are parties who damage / tarnish the institution of marriage, the parties involved can fight for the protection of victims.

d. The use of criminal law must also pay attention to the capacity or capability of the work force of law enforcement agencies, that is, there must be no oversight of duties (*overbelastingi*).

<sup>2</sup> Barda Nawawi Arief, *May Crime Between the Development of Cyber Crime Studies in Indonesia*, Jakarta: PT. Rajagrafindo Persada, 2006 p.181.

<sup>3</sup> Sudarto, *Criminal Law and Community Development Study of Criminal Law Renewal*, Bandung: Sinar Baru, 1983, p. 67.

<sup>4</sup> Suteki, *Legal Design in the Social Room*, Semarang: Thafa Media, 2013, p.83

- Pedigree/nasab of children  
Prohibition of intercourse with any person and only allows intercourse only with a legitimate partner will keep the child nasab. This is because it will be known from the seeds of who a child is born. The childbirth is very important because it is related to who can be a guardian of marriage or inheritance rights.
- Health  
Another value protected in Article 484 of the Criminal Code Bill is protection of health. Sexual intercourse with people who are not legitimate partners is a form of free sex. One of the dangerous effects that arise for the perpetrators is the emergence of difficult venereal disease and even no cure for threatening reproductive health. Besides that free sex is one of the causes of HIV disease that attacks a person's immune system and this disease has not found a cure. Prohibition of committing adultery on everyone, both those who are bound by marriage and those who have not at all intended to have sexual relations only with their legal partners, so that health can be more monitored and maintained.

### **3. FORMS OF PROTECTION IN THE CRIMINAL CODE BILL IS :**

#### **3.1. Expansion of adultery criteria**

The provisions in Article 284 of the Criminal Code both directly and indirectly provide opportunities for men and women who have not been married to have sexual relations without a legal marriage. In contrast to Article 484 of the Criminal Code Bill, with the extension of adultery criteria, namely that sexual relations carried out by men and women who are not legally bound by marriage with others is a criminal act (adultery) so that violations of these provisions can be criminal. The expansion of adultery criteria / limitations shows that protected by Article 484 of the Criminal Code Draft is not only a marriage institution but also a social moral value of the community

#### **3.2. Adultery is used as an ordinary offense not an offense of complaint**

Adultery criteria in Article 284 of the Criminal Code require a marriage bond for both the perpetrator or one of the perpetrators. This can be explained by understanding the relationship between religion and state in the Netherlands. The Netherlands is a secular state that does not interfere with the existence of religion, including not interfering with the behavior of its citizens, whether or not they adhere to religious norms. Secularism argues that the positive law in force is a law derived from human agreement through social contracts that are not bound at all to religious law<sup>5</sup>. Quoting Sajipto Rahardjo's<sup>6</sup> opinion that the actions taken by the wider community against adultery are a form of society writing a legal text that completing adultery does not have to wait for complaints from husband / wife as victims. So when Article 484 of the Criminal Code Bill makes adultery offenses as an ordinary offense only copy the text that has been written by all Indonesia during this time. Still according to Sajipto Rahardjo<sup>7</sup>, who quoted Chamblis's opinion that Article 284 of the Criminal Code is a Dormancy Statutory or legal phenomenon that sleeps / is put to sleep, namely a law that is still valid but not used by the people. This can be seen rarely used Article 284 of the Criminal Code in resolving adultery offenses. Article 484 of the Criminal Code Bill is part of the development of national law (building and overhauling Indonesian law) which in its implementation uses an approach

---

<sup>5</sup> A. Ubaidillah and Abdul Rozak, *Democracy, Human Right and Civil Society*, Jakarta: ICCE UIN Syarif Hidayatullah Jakarta, 2006, p. 40

<sup>6</sup> Sajipto Rahardjo, *Law and Behavior*, Jakarta: Kompas, 2009, p. 21

<sup>7</sup> Sajipto Rahardjo, *Ibid*, 2009, p. 21

oriented to human values, cultural identity values, and religious moral values that live in society or can be said by using a humanist, religious and cultural approach<sup>8</sup>.

### 3.3. Sanctions for adultery offenses become more severe

Sanctions for adulterers in Article 284 of the Criminal Code are a maximum of 9 months in prison. The lightness of adultery sanctions in Article 284 makes the values to be protected by the article unable to be protected, because light sanctions do not deter even they can harm the victim. Based on this, in Article 484 of the Criminal Code Draft adultery sanctions are more aggravated with a maximum penalty of 2 years in prison. The increase in sanctions is expected to prevent acts of adultery and deter the perpetrators of acts of adultery. Implicitly with more severe sanctions, it is expected that the values to be protected can be truly protected. According to Wirjono Projodikoro, it can be said that the existence of crime is a means of psychology, which means that with this criminal threat, people are pushed psychologically not physically, not to commit crime<sup>9</sup>. The living value in Indonesian society about the institution of marriage is protected in Article 484 of the Criminal Code Bill by making adultery offenses as ordinary offenses not offenses. It can be seen that in Article 484 of the Criminal Code Bill that can report adultery is not only the husband or wife of the adulterer.

## 4. CONFORMITY OF ADULTERY ARTICLE IN THE CRIMINAL CODE BILL WITH ISLAMIC VALUES IN INDONESIAN SOCIETY

In Islam sexual relation must be in a legitimate marriage. In Islam, marriage is a sacred bond (mistaqan ghalidan)<sup>10</sup>, therefore in protecting the sanctity of marriage in Islam the pillars of marriage are regulated. If the pillars of marriage are not fulfilled, the marriage is not valid. Islam places marriage as the backbone of family life. Whereas family is the foundation of society and is one form of worship for Muslims. Regarding the sanctity of marriage, in Muslim societies the choice of a spouse involves the whole family. Marriage in Islam is not only a bond between individuals but a bond between extended families. In Article 484 of the Criminal Code Bill in accordance with Islamic values that are prohibited from engaging in legal sexual relations outside of marriage for people who are married or not married. To be able to have sexual relations must be done in a legal marriage. Regarding the sanctity of marriage, in Muslim societies the choice of a spouse involves the whole family. Marriage in Islam is not only a bond between individuals but a bond between extended families. That is why Islam upholds marriage, because marriage is a sacred thing, sacred and contains a contract that is not only binding between two people (male and female only), but also binding kinship which later aims to build a new family with the hope of the household ideal *sakinah mawaddah and rahmah* as in the Word of Allah SWT letter ar-Rum verse 21. In addition, one of the purposes of marriage in Indonesian society is to maintain good relations between groups of relatives or family in the broadest sense<sup>11</sup>. Based on this, if there is a damage to the marriage institution, the injured party is not only a married couple, but the entire family. That is, those who act to guard the marriage institution not only husband and wife but also their families.

<sup>8</sup> Satjipto Rahardjo, *Building and Remodeling Indonesian Law A Cross-Discipline Approach*, Yogyakarta: Genta Publishing, 2009, p. XV

<sup>9</sup> Wirjono Projodikoro, *Criminal Law Principle in Indonesia*, Bandung: Eresco, 1986, p. 23

<sup>10</sup> Abu rohmah, *Maintaining Ethics and Norm of Marriage*, in Suara Merdeka, Tuesday 4 December 2012, p. 6

<sup>11</sup> The public's understanding of marriage is in accordance with what was stated by Gautama, S. *Aspects of Mixed Marriage Law (Staatblad 1898 No. 158)*, Bandung: PT. Citra Aditya Bakti, 1996, p. 172. Likewise with the opinion of Soerojo Wignjodipoero. *Introduction and Principles of Customary Law*, Jakarta : PT. Gunung Agung, 1968, p. 122-149. Marriage is a very important event in the livelihoods of the Indonesian people because marriage does not only concern women and men, but also the parents of both parties, their siblings, and even their families. Even in customary law, marriage is not only an important event for those who are still alive, but marriage is also an important event for those who are still alive but it is also a very meaningful event and that is fully received attention and followed by the spirits of the ancestors both sides. Marriage aims to obtain offspring and aims to be able to live together in a community in a family relationship.

This is in accordance with Article 484 of the Criminal Code Bill that can report the occurrence of adultery (adultery is one of the acts that tarnish the sanctity of marriage institutions) not only the husband or wife of the perpetrator. In other languages, making adultery as an ordinary offense is not an offense of complaint is in accordance with Islamic values. In Islamic law the form of adultery is divided into two, First, namely adultery *ghoiru muhsan* which means intercourse between unmarried adults. Second, namely adultery *muhsan*, which means intercourse is carried out by men with women who are not husband and wife and one or both of them are married in marriage with another husband / wife<sup>12</sup>. The existence of two types of adultery in Islamic law shows that every sexual intercourse committed outside a legal marriage is adultery. Sanctions for adultery in Islam are very severe (in the Qur'an letter an-Nur verse 2 it is stated that severe sanctions for men and women who commit adultery, which are harassed by each perpetrator as much as 100 times are harassed and witnessed before many people)<sup>13</sup>. In the hadith of the prophet Muhammad, it was explained that the punishment for adulterers who had been married, whether male or female if there was tangible evidence and / he had been pregnant or his own confession was stoning. The adulterer who had never married the Prophet sentenced him to 100 lashes and exiled for a year. Form sanctions stoning closer to the theory of retaliation. While sanctions of deterrence and exile are closer to the combined theory, besides being given sanctions with the aim of retaliation, there is also a purpose so that adulterers become deterrent not to repeat again<sup>14</sup>. Islam provides severe sanctions for zina perpetrators. In addition to physical punishment, Islam also provides moral and social sanctions in the form of the announcement of its disgrace, being exiled (*Taghrib*), not being allowed to marry and being rejected. this is more so that the perpetrators of zina. Sanksi is so heavy for adulterers because Islam believes that the impact of adultery is very dangerous for human life, both in the context of the lives of individuals, families (child status) and society. Islam upholds marriage (in the Qur'an the letter ar-Ruum verse 21 mentioned part of the power of God which is to create wives of your own kind to feel calm and full of affection). For this reason marriage is worth worship because it is not only to channel each other's passions but also to build a harmonious and loving family rather than committing adultery<sup>15</sup>. Nasab child is very important (in the Qur'an the letter al-Ahzab verse 5 mentioned that calling a child by including the nasab of his father is still required to safeguard the rights, guarding the psyche of the child because after all the child is born in a sacred state due to people's mistakes his parents, in the Islamic view also obliged to make the child's birth certificate). The values in the article 484 of the Criminal Code Bill are in accordance with the values that live in Indonesian society especially in accordance with Islamic values.<sup>16</sup>

## 5. CONCLUSION

Based on the result of the study of the contents of Article 484 of the Criminal Code Bill by comparing the contents of article 284 of the Criminal Code, it can be concluded that the values protected by Article 484 of the Criminal Code Bill which are not protected by Article 284 of the Criminal Code included the protection of marriages from defilements, social moral, more attention is given to the sense of justice for the victims, guarded by the health of the children and the health of free sex. The form of protection provided by Article 484 of the Criminal Code Bill on protected values on interest is the expansion of adultery superiors, the making of adultery as an ordinary offense, the severity of sanctions. As for compability between Article 484 of the Criminal Code Bill with Islamic values, among others, that in Islam, intercourse can

<sup>12</sup> Oemar Seno Adji, *Criminal Law (Procedur) in Prospection*, Jakarta: Erlangga cet 2nd, 1986, p. 49-51

<sup>13</sup> Al-Qur'an, Departemen Agama RI, Depok: Al-Hudd, 2016, p. 351

<sup>14</sup> H. Ahmad Wardi Muslich, *Introduction to and Principles of Islamic Criminal Law*, Jakarta: Sianr Grafika, 2006. Cet. II. p. 17

<sup>15</sup> Al-Qur'an, Departemen Agama RI, Depok: Al-Hudd, 2016, p. 407

<sup>16</sup> Al-Qur'an, Departemen Agama RI, Depok: Al-Hudd, p. 419

only be done in a legitimate marriage, meaning that Islam prohibits free sex. In Islamic law the form of adultery is divided into two, First, namely adultery *ghoiru muhson* which means intercourse between unmarried adults. Second, namely adultery *muhson*, which means intercourse is carried out by men with women who are not husband and wife and one or both of them and married in marriage with another husband/wife. The existence of two types of adultery in Islamic law shows that every sexual intercourse committed outside a legal marriage is adultery. This in accordance with what is stipulated in Article 484 of the Criminal Code Bill In Islamic law the sanction of adultery is very heavy because adultery is included in the category of great sin. Therefore, if Article 484 of the Criminal Code Draft adultery sanctions are more severe than those in Article 284 of the Criminal Code, it can be said Article 484 of the Criminal Code Bill in accordance with the rules in Islamic Law.

#### LITERATURE:

1. A Ubaidillah and Abdul Rozak. (2006). *Democracy, Human Right and Civil Society*, Jakarta: ICCE UIN Syarif Hidayatullah Jakarta.
2. Al-Qur'an. (2016). Departemen Agama RI, Depok: Al-Hudd.
3. Gautama, S. (1996). *Aspects of Mixed Marriage Law (Staatblad 1898 No. 158)*, Bandung: PT. Citra Aditya Bakti.
4. Nawawi Arief, Barda. (2006). *May Crime Between the Development of Cyber Crime Studies in Indonesia*, Jakarta: PT. Rajagrafindo Persada.
5. Prodjodikoro, Wirjono. (1986). *Criminal Law Principle in Indonesia*, Bandung: Eresco.
6. Rahardjo, Satjipto. (2009). *Law and Behavior*, Jakarta: Kompas.
7. Rahardjo, Satjipto. (2016). *Building and Remodeling Indonesian Law A Cross-Discipline Approach*, Yogyakarta: Genta Publishing.
8. Rohmad, Abu, *Maintaining Ethics and Norm of Marriage*, in Suara Merdeka, Tuesday 4 December 2012.
9. Seno Adji, Oemar. (1986). *Criminal Law (Procedur) in Prospection*, Jakarta: Erlangga cet 2nd.
10. Sudarto. (1983) *Criminal Law and Community Development Study of Criminal Law Renewal*, Bandung: Sinar Baru.
11. Sudarto. (1981). *Law and Legal Criminal Law*, Bandung: Alumni.
12. Suteki. (2013). *Legal Design in the Social Room*, Semarang: Thafa Media.
13. Wardi Muslich, H. Ahmad. (2016). *Introduction to and Principles of Islamic Criminal Law*. Jakarta: Sinar Grafika. Cet.2.

## **PUBLISHING ACTIVITIES OF SHITES AND DEMOCRATIZATION OF ISLAMIC THOUGHT IN INDONESIA**

**Idzam Fautanu**

*Faculty of Shari'ah and Law, State Islamic University of Bandung, Indonesia  
idzamfautanu@uinsgd.ac.id.*

**Taufiq Rahman**

*Faculty of Social and Political Sciences, State Islamic University of Bandung  
Jl. A.H. Nasution No. 105, Bandung 40614, Indonesia  
fikrakoe@uinsgd.ac.id*

### **ABSTRACT**

*This paper examines the pattern of publication in a mass Islamic organization that is a minority in Indonesia, namely those originating from the Shia Islamic School. The publication process itself is inseparable from the position of an organization which is one of the centers of Shia community activities in Indonesia in giving and receiving knowledge and information. The study on the Indonesian Ahlulbait Jamaat Association (IJABI) which was founded in Bandung uses qualitative methods with data collection techniques through observation, interviews, documentation studies, and literature studies. The results of the study show that there is a model of publication activity which is characterized by the presence of managers, participants, and supporters of publication activities based on the role of communication among the very dominant Shia citizens. This needs to be exemplified by other organizations, in order to strengthen the character, intelligence and skills of the community in facing the fast, effective and efficient development of the age.*

**Keywords:** *religious publications, mass organizations, Shiite organizations, information storage, Islamic thought*

### **1. INTRODUCTION**

In a socio-historical perspective, since the history of the Republic, Indonesia is characterized by various elements of culture that interact with incoming religious ideas (Rahman, 2013: 57). One that stands out and often raises many debates is the active role of Ahlulbait or Shia in the history of early Islam in the archipelago. The polemic about the existence of this role has never ended (Musa, 2013: 412). Thus, because of the historical context of the development of the Ahlulbait movement or more specifically the Shi'a religious understanding, it is recognized that there are problems that have not yet been resolved. Historically, however, not a few who support the analysis that the very beginning of Islam in Indonesia was pioneered by Shia Islam, reinforced by the hypothesis of the similarity of traditions and the frameworks of Shiite political theologies. The most frequently cited example is the tradition of the celebration of the day of Ashura, the memorial of Shahid Imam Husain in Karbala Field on the 10th of Muharram 61 H. This warning in Aceh known as the month of "Asan Usen", in West Sumatra known as "Tabuik Month", in Java the month of "Suro" and in Aceh once had a king who embraced Shia even though he gave the freedom of madzhab to his people (Azra, 1995). The Association of the Ahlul Bait Indonesia Jamaah (IJABI) is a mass organization (mass organization) which was established on July 1, 2000 M / 29 Rabiul Awal 1421 in Bandung. This mass organization stands with a registered certificate no. 127 of 2000 / D1 Ministry of Home Affairs of the Republic of Indonesia, Directorate General of National Unity and Community Protection. In each province, regency / city is formed by regional, regional and so on, and even overseas branch management (IJABI, 2018).

After 17 years, 36 foundations based on the Ahlulbait movement and 43 Pengajian groups based in 21 provinces and 33 regencies and cities have been formed.<sup>1</sup> The sending of students to Hawzah Ilmiyyah (a kind of Islamic boarding school) in Qum, Iran, has long been ongoing. Likewise with the return of some students who later taught Ahlulaitic thinking in Indonesia, through recitation groups and foundations formed by Ahlulbait lovers.<sup>2</sup> What is examined here is how a minority Islamic organization in Indonesia manages its archives. Archives in this case are regular storage of archival materials, namely written materials, certificates, letters, decisions, deeds, lists, documents and maps (Eldhose, M. and Rekha, C., 2013). Whereas the definition of publication in this study is "act or process of producing a book, magazine, etc., and making it available to the public."<sup>3</sup> However, in line with the times, publication now has become easier, faster, and more globally digital, namely the presence of the Internet (Gold, MK, et. Al., 2018; Chaouchi, H. and Bourgeau, T., 2018 ). Therefore, this research intends to investigate the issues of publication carried out by Muslim-based mass organization Syi'ah, which in Indonesia is a minority, namely IJABI in Bandung.

## 2. HISTORY OF IJABI

On July 1, 2000 at the Gedung Merdeka Bandung, the venue of the 1955 Asia Africa Conference, the mass organization of the Indonesian Ahlulbait Jamaat Association (IJABI) was declared. This mass organization was pioneered by Indonesian intellectual figures Dr. Jalaluddin Rakhmat, M.Sc who now sits as chairman of the Syuro Council'. Kang Jalal (referred to as such) who is a communication expert is also known as an Indonesian Muslim Scholar. Kang Jalal, along with several people including two doctors from ITB, namely Dimitri Mahayana and Hadi Suwastio, founded the IJABI, of course based on the development described above. IJABI was officially registered with the Ministry of Home Affairs through the Directorate General of National Unity and Community Protection number: 127 of 2000 / D.I. on 11 August 2000. The establishment and development of the IJABI was indeed spearheaded by many Shiite (Imamiyah) Ahlulbait lovers. Mission sacra IJABI is to gather all Ahlulbait lovers from any circles and schools of thought to carry out an effort to enlighten mustadh'afin thought and empowerment (IJABI, 2018). The purpose of IJABI is explicitly described in the Bylaws, one of the unique goals of this is to introduce and disseminate Islamic teachings which are narrated through the Prophet's family. It is this uniqueness that challenges this mass organization to prove the epistemology and axiological implications of the love of the Ahlulbait of the Prophet Muhammad. With the principle of love for the Ahl al-Bayt of the Prophet SAW, IJABI formulated the method of its movement with the approach of love (tasawwuf, irfan). This approach is the study of mysticism-philosophicalism, so the development of the concept of love is shaped by theological-rational foundations (IJABI, 2018). In the Ahlulbait study, the development of human social movements was shaped by movements which developed within man himself. Recognition of self is the key to knowing Allah SWT. The introduction of Allah SWT cannot only be through mere revelation (textuality) but also with true truth. In simple terms, the development of social movements must be supported not only by the tools of social analysis and community support but must also be supported by people who are respectful of Allah SWT and the Messenger of Allah (IJABI, 2018). This is where the role of Imamah (leadership) becomes the next study that must be understood by Ahlulbait lovers with rational theological foundations. In that context, attitude towards diversity is open, because openness is a condition for testing a thought. This test is actually inherent in Ahlulbait criticism as in the picture of the (occult) waiting for Al-Mahdi as.<sup>4</sup>

<sup>1</sup> <http://rausyanfikir.tripod.com/perpustakaan.htm> [3/9/2017].

<sup>2</sup> An interview with Jalaludin Rakhmat, [12/26/2017] in Bandung.

<sup>3</sup> <https://www.merriam-webster.com/dictionary/publication> [15/8/2017].

<sup>4</sup> An interview with Miftah Fauzi Rakhmat, [12/26/2017] in Bandung.

Organizationally, IJABI's main programs are:

1. Pilot School: SMA Plus Muthahari, Bandung.
2. Islamic schools are free of charge, among others: SMP Plus Muthahari Cicalengka; Al-Mukarromah Middle School in Bandung; PonPes al-Hidayah Cianjur; PonPes al-Wafa, Bondowoso; Boarding School Bustanul Arifin, Lumajang; and Sekolah Rakyat Panrita, Makassar.
3. IJABI On Campus, including: Paramadina University Jakarta, Makassar Hasanudin University, Bandung Institute of Technology, and Surabaya Institute of Technology.
4. IJABI Course, among others: National Sunni-Shia Discussion, DKI Region: Ummul Qur'an, Sufism, Philosophy, Critical Study of Sunni - Shia Hadith, West Java region: Interpretation of the Qur'an, Women's Studies, and others.
5. Declaring MUHSIN (Majelis Ukhuwah Sunni-Syiah Indonesia), May 20, 2011.<sup>5</sup>

In 2000, there were 24 Regional Coordinators throughout Indonesia, Java, Sumatra, Sulawesi and Irian. The number of members for that year was 3,000. In 2007, the Internal Affairs Committee: 29 regional administrators, 83 regional administrators, and 145 branch administrators. Foreign Administrators: Iran, Morocco, Egypt and Saudi Arabia. Total number of members: 2,500,000 people. In 2017, the number of management has not changed much because the organization is in a period of stabilization and a period of strengthening organizational consolidation.<sup>6</sup> Based on BPS data in 2010, of the total population of Indonesia 237,641,326 people. Of these 87.18% are Muslim (207,176,162),<sup>7</sup> with an estimated 2.5 million Syi'ah Muslims,<sup>8</sup> it means that about 1.2% are Shi'ite. As a member of the Shura council IJABI, Ust. Miftah Fauzi Rachmat stated that the character of the IJABI movement was not as much a recruiting organization as possible, as if everyone had to become Ijabiyun. However, the IJABI movement is more co-operative in nature, where IJABI can live side by side in harmony with other congregations / organizations / schools. So, the large number of members is not a priority of the IJABI movement, but so that all the people, members of the organization, are cared for and nurtured by their leaders, so that no one member of the organization is unlucky like a chicken losing its mother.<sup>9</sup>

### 3. IJABI PUBLICATIONS

In the contemporary Indonesian era, the development of the Ahlulbait movement was inseparable from the influence of the 1979 Islamic Revolution which was led by Imam Khomeini who was a lover of the Ahlulbait from the Imami Shiite community. The influence of this revolution was so strong especially with the publications of Shari'ati's writings, Murtadha Mutahhari and Imam Khomeini himself into Indonesian which received a great response from Indonesian readers. This is evident from the high level of conversation about the revolution and the basis of the thinking of Imam Khomeini beginning in the 1980s. One of the intellectual figures in Indonesia who later became a reference in the discussion about Iran and Shia by the public is Dr. Jalaluddin Rachmat. He wrote and responded to Shia thoughts and also spoke at various seminars in Indonesia. Therefore the great role of Jalaluddin Rachmat cannot be separated from the development of Ahl al-Bayt in Indonesia. The publication of the book with the Ahlulbait school theme is also very intense. Initially pioneered by publisher Mizan, it continues to grow and is supported by other publishers such as the Hidayah Library and Lantern.

<sup>5</sup> An interview with Jalaludin Rakhmat, [12/26/2017] in Bandung.

<sup>6</sup> An interview with Miftah Fauzi Rakhmat, [12/26/2017] in Bandung.

<sup>7</sup> [https://id.wikipedia.org/wiki/Agama\\_di\\_Indonesia](https://id.wikipedia.org/wiki/Agama_di_Indonesia) [3/9/2017].

<sup>8</sup> An interview with Jalaludin Rakhmat, [12/26/2017] in Bandung.

<sup>9</sup> An interview with Miftah Fauzi Rakhmat, [12/26/2017] in Bandung.

Publisher Mizan himself published the book Dialogue Sunnah Shia which was printed several times. The publication of Ahlulbait (Indonesian-language) books to the present continues, no fewer than 373 titles have been published regarding Ahlulbait by 59 publishers in Indonesia until February 2017.<sup>10</sup> The following are data on Ahlulbait themed book publishing by 4 major publishers since 2001, namely: 1) Hidayah Library as many as 60 books, 2) Mizan as many as 56; 3) Lentera (50 books); and 4) YAPI Jakarta as many as 31 books.<sup>11</sup> Besides being able to be purchased in stores, these books can also be purchased through online stores such as: [www.tokobukuahlulbait.net](http://www.tokobukuahlulbait.net). The latest development is the emergence of 63 publishers affiliated with Syi'ah with hundreds of their product titles. As much as the Sunnis are concerned for the development of Shiism in Indonesia, so are the books that counter the Shiite books.<sup>12</sup> Kang Jalal (Jalaluddin Rakhmat) as the central figure and founder of IJABI, has a major influence on not only the Ijabiyun but also on the style of thought of some of the younger generation - and / or Indonesian Muslims; especially with the productivity of books, the establishment of schools, activities in seminars, even becoming political figures by entering the Indonesian Democratic Party of Struggle (PDIP) and becoming members of the DPR for the 2014-2019 period. In terms of digital publications, IJABI has website facilities such as [www.ijabi.or.id](http://www.ijabi.or.id), [www.majulah-ijabi.org](http://www.majulah-ijabi.org), [www.misykat.net](http://www.misykat.net) and twitter: @bahteraIJABI. In addition to da'wah, the online media also stores archive data. For example, lectures by IJABI activists, religious questions and answers, outside activities, organizational news, Islamic epistemology study programs, and others. Another thing that is more open and easy to access, including through mobile phones, is that IJABI provides sound-cloud services, namely lecture recordings, especially lectures by IJABI leaders themselves, namely Jalaluddin Rakhmat. In these clouds 669 lectures have been recorded with various discussions, especially the discussion of Islam. This can be accessed via <https://soundcloud.com/misykat-bandung>. Until now, there have been 1,931 followers. According to one of his followers, this service is very helpful especially when outside Bandung. This can be repeated anywhere and anytime.<sup>13</sup> In this case the Shiites in Indonesia enjoy technological developments, especially the Internet. In general, for the level of mass organizations, IJABI has been well organized. The performance and service of its management towards its followers is good with the existence of study and publication activities. This is acknowledged by its members. However, due to the rejection of some people, what is felt to be still lacking is awareness of the wider community about IJABI. Here, it is thought that the pattern of introduction may have to be changed so that people are easily familiar, for example by introducing through student organizations and plunging into village communities.<sup>14</sup> However, the dissemination of Syiah's teachings was indeed difficult because Syi'ah had been "labeled" deviating from Islamic teachings.<sup>15</sup> In addition to enjoying technological developments, the IJABI Shiites have also enjoyed the protection of the Indonesian government. With this protection, IJABI activists can carry out religious activities in the public sphere. To support these public events, IJABI activists first requested permission from the police. However, there are still people who reject the existence of Shi'ites, including in conducting public events.<sup>16</sup>

#### 4. DISCUSSION

Factors of globalization and the Indonesian reform era's socio-political climate certainly strongly supported the development of IJABI. Theoretically, the birth of various socio-religious

<sup>10</sup> <http://rausyanfikir.tripod.com/perpustakaan.htm> [3/9/2017].

<sup>11</sup> <http://rausyanfikir.tripod.com/perpustakaan.htm> [3/9/2017].

<sup>12</sup> <https://www.nahimunkar.org/inilah-daftar-63-penerbit-dan-buku-buku-syiah-di-indonesia/> [3/18/2019].

<sup>13</sup> An interview with AZ, an IJABI follower, 3/19/2019.

<sup>14</sup> An interview with HA, an IJABI follower, 3/19/2019.

<sup>15</sup> An interview with SY, an IJABI activist, 3/19/2019.

<sup>16</sup> An interview with SY, an IJABI activist, 3/19/2019.

schools of thought shows the importance of finding solutions to various problems of human life, which up to now, the existing ideas have not been able to answer them. Therefore, the birth and development of various religious discourses became an interesting material for many groups, especially the campus. In the Indonesian context, it can be seen by the increasing number of modern-educated people who have the commitment and originality of Islamic thought (Rahman, M.T. and Mimbar, A.S., 2018; Hasbullah, M. and Rahman, M.T., 2018). This allows the excavation of religious discourse, especially the Shia in Indonesian style, namely IJABI in a critical, open, objective and comprehensive manner. In the content movement, IJABI is a socio-religious movement with basic character, spirit, mission sacra, vision, grand idea of Islamic Madani, non-expansionistic coexistence. IJABI longs to live side by side with schools, organizations and other religions, with supra priority enlightenment programs for thinking and empowering the weak (mustadh'afin). This movement seems to have a prospect and will continue to survive in the era of multi-culturalism now. In Indonesia, the democratization of Islamic thought has indeed become a tradition. In this country various thoughts emerge and develop, even institutionalize into organizations with various programs. Large organizations such as Muhammadiyah were born from renewal thinking brought from Mecca (Alfian, 1989). Likewise with the Islamic Unity (Persis) organization, which emerged in the midst of Islamic thinking in Indonesia (Federspiel, H.M., 2009). And Islamic conservatism manifested itself in a large organization which was also born during the era of Dutch colonialism, namely Nahdlatul Ulama (NU) (Bush, R., 2009). At the time of filling out independence, organizations which had started only as thoughts of a particular person or group had emerged. Just mention the thoughts of Nurcholish Madjid which later gave birth to Islamic neo-modernist groups with products from Paramadina institutions which later became the leading universities in Jakarta (Tebba, S., 2004). Likewise the emergence of the Prosperous Justice Party (PKS) which also originated from the idea of Islamic revival which brought the ideas of the Muslim Brotherhood from Egypt (Noor, F.A., 2011). The latest development that can be called is the outbreak of Khilafah thought brought by Hizb ut-Tahrir Indonesia (HTI) (Ward, K., 2009). This indicates that Indonesia is very open to the development of Islamic thought. These democratic conditions have provided opportunities for Shiites in this contemporary age. For the Shiites, this is a fertile land to spread religious ideas in various fields. The development of Syiah's thoughts on the IJABI organization which is quite developed in Indonesia, has shown that Indonesia is a heaven for religious thought (Zuhdi, M., 2018: 310). Here Indonesia has shown the world that even minority religions are highly valued and live peacefully with followers of other religions, even they may work in the midst of society (Christian Green, M. and Toft, M.D., 2018: 19). Especially for the Shi'ites, the ripples of religious conflict in Indonesia do not lead to bloodshed that disrupts social and political life (Hefner, R.W., 2018). This is because even in the case of Syi'ah, Indonesia has made its Indonesian version, such as the IJABI, where Syi'ah is no longer oriented to the Islamic Republic of Iran.<sup>17</sup> Thus, in the event that this Islamic thought in Indonesia has been democratized, any party may develop its thinking (Hadiz, V.R., 2018). It is clear that the assumption that there will be an export of the Revolution from the Islamic Republic of Iran is a mere figment. What happens in Indonesia is religious democratization, where religion is delivered in a peaceful manner. When compared to Malaysia's fellow Malay clans, Indonesia's condition is more favorable for the development of Islamic thought. In Malaysia, Syi'ah is a school that is prohibited from developing. This is because Syi'ah is outside Malaysian law. Syi'ah in Malaysia is culturally very isolated and often gets attacks (Musa, M.F., 2013). Meanwhile, in Indonesia, Syi'ah is very legally recognized (Latief, H., 2008). Even culturally the Shiites can live side by side with adherents of other schools in Islam. This can be seen from the publications of the Syiah activists, especially IJABI, in many societies, especially in the

<sup>17</sup> An interview with Jalaludin Rakhmat, [12/26/2017] in Bandung.

form of books and websites. In this case the Shiites in Indonesia, represented by members of IJABI, have celebrated democratization, especially the democratization of the interpretation of Islam.

## 5. RESEARCH METHOD

This study uses a case study approach, because this research concerns the lives of one or several communities, organizations or individuals that are used as units of analysis, using a qualitative approach. In addition, qualitative research aims to maintain the shape of human behavior and maintain its qualities (Follmer, E.H., 2018). Case study method (case study) is a form of in-depth research on an aspect of the social environment including humans. Case studies can be carried out on individuals, groups of people, human environment or social institutions such as IJABI. This method is considered effective because it is able to be used to find motives behind social facts that appear empirically (George, A.L., 2019). Therefore, the approach used in this study relies more on the publication approach as one of the mature branches of social science. Data collection techniques are carried out through: observation, interviews, and documentation studies. In observation, the researchers went directly to the location of the research, which was to explore and observe the object of research, namely the Syi'ah organization based in Bandung, namely IJABI. While in depth interviews, researchers interviewed IJABI activists in order to obtain primary data. Here the interviewees are important figures and are considered representative for the interests and objectives of the study (Willis, R., 2018). In the documentation study, researchers tried to collect materials in the form of writings related to research problems which were then correlated with the results of the interviews conducted.

## 6. CONCLUSION

From the discussion above, it can be seen that:

1. The dynamic character of the IJABI movement can be seen from various publication efforts and can use it for the benefit of the life of the organization, according to its purpose. This was realized by the administrators and members of IJABI as an important thing to always be aware of the usefulness of the archives.
2. In terms of discourse, IJABI has a fairly strong tradition in the field of book publishing. Here the book becomes an important archive that shows the existence of the Syi'ah propaganda movement, supported by at least four book publishers such as Mizan, Pustaka Hidayah, Lentera, and YAPI.
3. The static character of the IJABI documentation can be seen by taking a fairly responsible and lasting path in its online publication. Among other things, using hosting ".or.id" and ".com (dot com)", does not take a free domain. This gives a condition to the activity of its members to perpetuate their website.
4. The publication of Syiah IJABI's activities needs to be emulated by other organizations, because the organization has strengthened the character, intelligence and skills of its followers in facing the fast, effective, efficient and global era.

## LITERATURE:

1. Alfian, 1989. *Muhammadiyah: The Political Behavior of a Muslim Modernist Organisation Under Dutch Colonialism*. Gadjah Mada University Press.
2. An interview with AZ, an IJABI follower, 3/19/2019.
3. An interview with HA, an IJABI follower, 3/19/2019.
4. An interview with Jalaludin Rakhmat, [12/26/2017] in Bandung.
5. An interview with Miftah Fauzi Rakhmat, [12/26/2017] in Bandung.
6. An interview with SY, an IJABI activist, 3/19/2019.

7. Azra, Azyumardi. 1995. Syiah di Indonesia; Antara Mitos dan Realitas, *Jurnal Ulumul Qur'an* No. 4, Vol.VI, Tahun 1995.
8. Bush, R., 2009. *Nahdlatul Ulama and the struggle for power within Islam and politics in Indonesia*. Institute of Southeast Asian Studies.
9. Chaouchi, H. and Bourgeau, T., 2018. *Internet of Things: Building the New Digital Society*. *IoT* 2018, 1(1), 1-4.
10. Eldhose, M. and Rekha, C., 2013, March. Disambiguated archieve rectification. In *2013 IEEE International Conference ON Emerging Trends in Computing, Communication and Nanotechnology (ICECCN)* (pp. 777-781). IEEE.
11. Federspiel, H.M., 2009. *Persatuan Islam: Islamic reform in twentieth century Indonesia*. Equinox Publishing.
12. Follmer, E.H., Talbot, D.L., Kristof-Brown, A.L., Astrove, S.L. and Billsberry, J., 2018. Resolution, relief, and resignation: A qualitative study of responses to misfit at work. *Academy of Management Journal*, 61(2), pp.440-465.
13. George, A.L., 2019. Case studies and theory development: The method of structured, focused comparison. In *Alexander L. George: A Pioneer in Political and Social Sciences* (pp. 191-214). Springer, Cham.
14. Gold, M.K., Karlin, J., Davis, Z., Gooding, P., Terras, M. and Berube, L., 2018. Manifold Scholarship: Hybrid Publishing in a Print/Digital Era. *Digital Humanities 2018: Book of Abstracts/Libro de resúmenes*.
15. Green, M.C. and Toft, M.D., 2018. Freedom of Religion or Belief Across the Commonwealth: Hard Cases, Diverse Approaches. *The Review of Faith & International Affairs*, 16(4), pp.19-33.
16. Hadiz, V.R., 2018. Imagine All the People? Mobilising Islamic Populism for Right-Wing Politics in Indonesia. *Journal of Contemporary Asia*, 48(4), pp.566-583.
17. Hasbullah, M. and Rahman, M.T., 2018. ELIT POLITIK ISLAM NASIONAL DAN PENGEMBANGAN PESANTREN DI DAERAH. *Jurnal Socio-Politica*, 8(1), pp.45-56.
18. Hefner, R.W., 2018. Introduction: Indonesia at the crossroads: imbroglios of religion, state, and society in an Asian Muslim nation. In *Routledge Handbook of Contemporary Indonesia*(pp. 3-30). Routledge.
19. <http://rausyanfikir.tripod.com/perpustakaan.htm> [3/9/2017].
20. <http://rausyanfikir.tripod.com/perpustakaan.htm> [3/9/2017].
21. <http://rausyanfikir.tripod.com/perpustakaan.htm> [3/9/2017].
22. [https://id.wikipedia.org/wiki/Agama\\_di\\_Indonesia](https://id.wikipedia.org/wiki/Agama_di_Indonesia) [3/9/2017].
23. <https://www.merriam-webster.com/dictionary/publication> [15/8/2017].
24. Latief, H., 2008. The Identity of Shi'a Sympathizers in Contemporary Indonesia. *Journal of Indonesian Islam*, 2(2), pp.300-335.
25. Musa, M.F., 2013. The Malaysian Shi'a: A Preliminary Study of Their History, Oppression, and Denied Rights. *Journal of Shi'a Islamic Studies*, 6(4), pp.411-463.
26. Noor, F.A., 2011. *The Partai Keadilan Sejahtera (PKS) in the landscape of Indonesian Islamist politics: cadre-training as mode of preventive radicalisation?* Singapore: Nanyang Technological University.
27. Profile IJABI 2000 – 2017. Bandung: IJABI, 2018.
28. Rahman T. 'Indianization'of Indonesia in an Historical Sketch. *International Journal of Nusantara Islam*. 2013;1(2):56-64.
29. Rahman, M.T. and Mimbar, A.S., 2018. KONSEP POLITIK ISLAM KULTURAL PERSPEKTIF NURCHOLISH MADJID. *FIKRI: Jurnal Kajian Agama, Sosial dan Budaya*, pp.385-400.
30. Tebba, S., 2004. *Orientasi sufistik Cak Nur: komitmen moral seorang guru bangsa*. Khazanah Populer Paramadina (KPP).

31. Ward, K., 2009. Non-violent extremists? Hizbut Tahrir Indonesia. *Australian Journal of International Affairs*, 63(2), pp.149-164.
32. Willis, R., 2018. Constructing a ‘Representative Claim’ for Action on Climate Change: Evidence from Interviews with Politicians. *Political Studies*, 66(4), pp.940-958.
33. Zuhdi, M., 2018. Challenging Moderate Muslims: Indonesia’s Muslim Schools in the Midst of Religious Conservatism. *Religions*, 9(10), p.310.

# SHARIA AND DEMOCRACY: EFFORTS TO SYNERGIZE THE DEMANDS OF FAITH WITH THE LEGAL SYSTEM IN INDONESIA

Nurrohman Syarif

*UIN Sunan Gunung Djati, Bandung, Indonesia*

*nurrohman@uinsgd.ac.id*

## ABSTRACT

*Since the fall of the New Order's authoritarian regime, Indonesia as a country with the largest Muslim population in the world is often praised as a country that has proven that Islam, democracy and modernity can grow and develop together. However, democracy in Indonesia does not escape the challenges associated with the return of the spirit of religion in political life. The problem is the return of religion to politics – and to public life in general – is a serious challenge to the rule of democratically enacted law and the civil liberties that go with it. Islamic activism or Islamism although they use freedom provided by democracy, actually rejects the principles of democracy and human rights which they see as contrary to the sharia and the absolute sovereignty of God. In the past thirteen years there has been a tendency for rising aspirations for Indonesia to be regulated by sharia law. The purpose of this research is to look for the meaning of sharia and democracy for Muslims, the theological foundations for Muslim to support democracy, and the challenges and alternative solutions that can be offered so that sharia can be transformed to Indonesia legal system. By assuming that sharia has a purpose and that Islamic law can change, evolve in line with developments and challenges of the times, the author argues that the synergy between sharia and democracy can occur in Indonesia as long as Muslims in Indonesia can accept plurality in understanding the sharia and are not bound to one model in understanding sharia. The author believes that sharia can be applied in democratic countries such as Indonesia, because the purpose of the sharia and the purpose of the state are the same, namely the achievement of social justice for all without discrimination.*

**Keywords:** *Democracy, justice, plurality, sharia*

## 1. INTRODUCTION

As a country in the form of a republic that upholds people's sovereignty, Indonesia can be called a democracy. Since the fall of the New Order's authoritarian regime, Indonesia, a country with the largest Muslim population in the world, is often praised as a country that has proven that Islam, democracy and modernity can grow and develop together. Unfortunately, democracy is often seen by some as an 'obstacle' to the practice of Islamic law in Indonesia. As if Muslims want to practice the Islamic Sharia, they must renounce democracy and if they take democracy they must leave the sharia. One of the banners found on the campus of UIN Sunan Gunung Djati Bandung in March 2014 reads: *Khilafah: Mainstream Perjuangan Mahasiswa, Tinggalkan Demokrasi Jalan Semu Perjuangan.* (Khilafah: The Mainstream Struggle for Student , Leave Democracy, Pseudo Path of the Struggle). Some observers are worried that Islamic activists who always carry the theme of Islamic sharia will use democracy to kill democracy. Wendy Asbeek Brusse and Jan Schoonenboom in their article *Islamic Activism and Democratization* stated that regimes in the Middle East and their supporters in the West were reluctant to give Islamic politics the freedom to move and participate fully in national elections and parliamentary elections because they reasoned that when Islamic activism get access to politics and hold power, they will immediately end democratic competition. This is because they basically reject the principles of democracy and human rights which they see as contrary to the

Sharia and the absolute sovereignty of God.<sup>1</sup> Ralf Dahrendorf, a member of the British House of Lords and former rector of the London School of Economics, in his article also writes as follows: the return of religion to politics - and to public life in general - is a serious challenge to the rule of law and the civil liberties that go with it.<sup>2</sup> Conversely, some Islamic activists actually feel worried about democracy, because for them democracy will pave the way for the development of secularism, pluralism and liberalism. Therefore, without any effort to synergize between the demands of the Islamic Sharia and the demands of democracy, the differences between the two groups that have different perspectives can be even wider and can lead to conflict and violence which in turn will disrupt the integrity of the nation. By assuming that democracy does not threaten the beliefs of Muslims and Islamic Sharia able to be synergized with the democracy, this paper will explain the meaning of sharia and democracy, theological foundations for Muslims to support democracy, and the challenges and alternative solutions for practicing sharia in the context of Indonesia constitutional democracy.

## 2. THE MEANING OF SHARIA AND DEMOCRACY

The term sharia in Arabic literary means a path or a way.<sup>3</sup> From this reading, sharia generally means the way or path that Muslims take to lead their lives – be it as individuals, as society or as a religious community. The term sharia is often used in present discourse as if it were synonymous with Islam itself as the totality of Muslim obligations in both the private, personal religious sense and vis-à-vis social, political, and legal norms and institutions.<sup>4</sup> From the perspective of Islamic jurisprudence, sharia refers to Islamic law. As the sacred law of Islam, Islamic law is an all-embracing body of religious duties, the totality of Allah's commands that regulate the life of every Muslim in all aspect. Although Islamic law is a 'sacred law', it is by no means essentially irrational; it was created not by an irrational process of continuous revelation but by a rational method of interpretation, and the religious standards and moral rules which were introduced into the legal subject-matter provided the framework for its structural order.<sup>5</sup> As God's plan for mankind consisting of His prescriptions for human behavior, sharia is rather abstract concept which leaves ample room for various concrete interpretations by human beings. The classical sharia is the body of Islamic rules, principles and cases compiled by religious scholars in search of God's will during the first two centuries after Muhammad. In this sense, sharia can be found in the classical works of religious scholars of the dominant legal schools (madhab), and is therefore more concrete. The historical sharia includes the entire body of all principles, rules, cases and interpretation developed and transmitted throughout a history of more than one thousand years across the entire Muslim world. In this context sharia is plural. Islamic legal systems grow from the efforts of pious individuals who truly want to know God's will. Individuals who are motivated by their religious commitment eventually form a circle or study group. Nearly a hundred years after the death of the Prophet Muhammad, or around 730 AD, individuals who have extensive knowledge and continue to want to learn become educated people who have more influence in society solely because of their knowledge. These experts rivaled the country's authority in the field of law by placing themselves as the articulators of the law. So, legal authority is based on the knowledge that a person has, not on power, politics or society. Given the legal expertise that makes a person have authority, the legal authority is private or personal, inherent in the experts and the community (madzhab), not the political authorities or the state. So, Islamic law represents the views of legal experts.

<sup>1</sup> Wendy Asbeek Brusse dan Jan Schoonebom, 'Islamic Activism and Democratization' dalam ISIM( International institute for the study of Islam in the modern world) REVIEW 18, 2006

<sup>2</sup> Ralf Dahrendorf, "Is secularism coming to an end?", *The Jakarta Post*, November 15, 2006

<sup>3</sup> Qur'an chapter :45 verse:18

<sup>4</sup> Abdullahi Ahmed An-Na'im, "The Normative Relevance of Sharia in the Modern Context", in Rudolph Peters, Peri Bearman, *The Ashgate Research Companion to Islamic Law*, (Ashgate Pub Co, 2014) p.311.

<sup>5</sup> Joseph Schacht, *An Introduction to Islamic Law*, (Oxford University Press, 1964) p.1-4.

It was developed by individuals and legal science (Fiqh Science). In the classical history of Islam, the state does not take part in the legislative process. Books written by experts have more legal power. In contrast to other civilizations including Western civilization, where the State plays a role in the process of legislation and legal execution, in Islamic civilization the State is not involved in managing the law or in the process of creating and promulgating the law. Authority outside the political system has the role of creating it. Although the State does not formulate a law, the State adopts a judge to implement the law. So, the law remains independent of the State but the courts in the classical system are not independent. "The Shari'a court [was]... an apparatus of the state, but based on a law that was outside the state's domain,"<sup>6</sup> So, in history, Islamic law actually has a number of characters. First, Islamic law contains sacred values because it comes from God. The second character is that Islamic law contains a moral value. The third character is that Islamic law is basically personal. Because it is related to faith. Every Muslim because of his faith consciousness, can practice Islamic law wherever he or she is. Islamic law can be practiced in an Islamic state, in a secular state or in the state base on Pancasila like Indonesia. It is what is called by Juhaya S Praja, professor of Islamic law in State Islamic University Sunan Gunung Djati Bandung, a credo theory.<sup>7</sup> The fourth character, Islamic law is not entirely dependent on certain countries. Because it was developed by legal experts. The state does not formulate a law, the state appoints judges to implement the law. It can be called juristic law because Islamic law in its history was explored and developed by Islamic jurists. Islamic law is therefore neither common or civil law, but is juristic law.<sup>8</sup> The fifth character, Islamic law is flexible and dynamic. It can change if there are social changes. The sixth character is that it is rational, because even though it comes from the words of God or from the believe system, it can be understood and in line with common sense or explanation of science. Historically, sharia has been influenced by time and place. The contemporary sharia contains the full spectrum of principles, rules, cases and interpretations that are developed and applied at present, throughout the Muslim world. New technologies of information and communication have decreased the dominance of legal schools of classical sharia. The variety of meanings of sharia has given rise to a flexible, multi-interpretable discourse about sharia and law which moves smoothly from one meaning of sharia to another. Therefore the theological assumption that sharia is a fixed set of norms that apply exclusively to all Muslims must be dismissed on the basis of both legal and empirical evidence.<sup>9</sup> Although there is a flexible, multi-interpretable discourse about sharia, it has an objective. The first objective of sharia is protecting basic human rights for all members of community irrespective of race, religion and culture. There are seven basic human rights that must be protected by the state or society, ie : 1) the right to life and its enjoyment 2) the right to believe 3) the right to gain knowledge 4) the right to disagree 5) the right to consultation 6) the right of equality and justice 7) the right of the oppressed.<sup>10</sup> The second objective of sharia is establishing justice between Muslims and the rest of humanity. Equality is among the key message of Prophet Muhammad in his last sermon. Qur'anic legislation in the field of private and public life has social justice and the building of an egalitarian community as its end.<sup>11</sup> The third objective of sharia is providing benefits (maslahah) for human beings and removing hardships (al-usr) from them. Bringing about benefits and removing harm is essential in establishing a harmonious society.

<sup>6</sup> Lubna A Alam (2007) Keeping The State Out: The Separation of Law and State in Classical Islamic Law, *Michigan Law Review*. 105 (6). 1255-1264.

<sup>7</sup> Juhaya S Praja, *Teori-teori Hukum Islam : Suatu Telaah Perbandingan dengan Pendekatan Filsafat*, Bandung, Program Pascasarjana Universitas Islam Negeri (UIN), 2009, hlm.107.

<sup>8</sup> Ann Black, Hussein Esmaili, and Nadirsyah Hosen, 2013. *Modern Perspective on Islamic Law*, UK: Edward Elgar Publishing Limited. (p.xi)

<sup>9</sup> Jan Michiel Otto, *Sharia and National Law in Muslim Countries*, (Leiden University Press, 2008)p. 9-11.

<sup>10</sup> Mohammed Abed al-Jabri, *Democracy, Human Rights and Law in Islamic Thought*, (I.B.Tauris & Co Ltd, London, 2009) p.251.

<sup>11</sup> Fazlur Rahman, *Islam and Modernity: Transformation of an Intellectual Tradition*, (University of Chicago Press, 1984) p.19.

Thus, any ruling that replaces justice with injustice, mercy with its opposite, common good with mischief, or wisdom with nonsense, is a ruling that does not belong to the sharia, even if it is claimed to be so according to some interpretation.<sup>12</sup> If sharia or Islamic law develops or experiences evolution, democracy also develops and experiences evolution in line with human development. Democracy, which in terms of language means that sovereignty is in the hands of the people, in its development, is limited by a number of principles. At least there are four principles that are often used to guard democracy. First, the principle of rule of law, the second is the existence of free and fair elections, third, the protection of human rights, fourth, the active participation of citizens in political affairs and civil life. In its development there is no truly "liberal" democracy that allows the people without limitation to do whatever they want. The 2004 United Nations General Assembly (UN) resolution recommended seven things: (1) the separation and balance of power (2) an independent judiciary, (3) the pluralistic systems of political parties and organizations, (4) respect for the rule of law, (5) the existence of accountability and transparency, (6) free independent and pluralistic media, and (7) respect for human and political rights.<sup>13</sup> If a democratic state respected human and political rights, Islam also promoted human rights. Mohammad Abed al-Jabri mentioned seven human rights that should be protected by state or society, namely: 1) the right to life and its enjoyment 2) the right to belief 3) the right to acquire knowledge 4) the right to disagree 5) the right to deliberation or undertake consultation 6) the right to equality and justice 7) the rights of the oppressed to free from the oppression. This is the basic right that if the people cannot enjoy it, the punishment in the sharia cannot be carried out fairly, Al-Jabri said. He added: Without putting an end to poverty, ignorance and the injustice of the rulers and the injustices of the strong against the weak, the hudud will remain exposed to doubt. And, the Prophetic hadith says, 'Avoid the hudud [penalties] when in doubt.'<sup>14</sup>

### 3. THE THEOLOGICAL FOUNDATIONS FOR MUSLIMS TO SUPPORT DEMOCRACY

Theologically, in the Holy Qur'an, there are a number of verses that can be used as the foundation for democratic life, among them are.

1. The principle of respecting for humanity. (QS 17 :70)
2. The principle of freedom and individual responsibility. (QS :7-8)
3. The principle of equality of human beings before God. (QS 49:13)
4. The principle of justice. (QS 5: 8)
5. The principle of human equality before the law. (QS 5: 8)
6. The principle of not harming yourself and others. (QS 2:279)
7. The principle of criticism and social control, (QS103:1-3)
8. The principle of keeping promises and upholding agreements. (QS 17:34)
9. The principle of mutual help for good, (QS 5:2)
10. The principle of respecting plurality (QS 5:48)
11. The principle of deliberation (*syuro*) in handling worldly affairs ( QS 42: 38 and QS 3: 159)

The scholars differed in formulating the principles of sharia in managing the state. Abd.Muin Salim mentions four principles : (1) the principle of the mandate (*amanat*) (2) the principle of justice (harmony) (3) the principle of obedience (discipline) and (4) the principle of deliberation by making the Qur'an and Sunnah as a reference.<sup>15</sup>

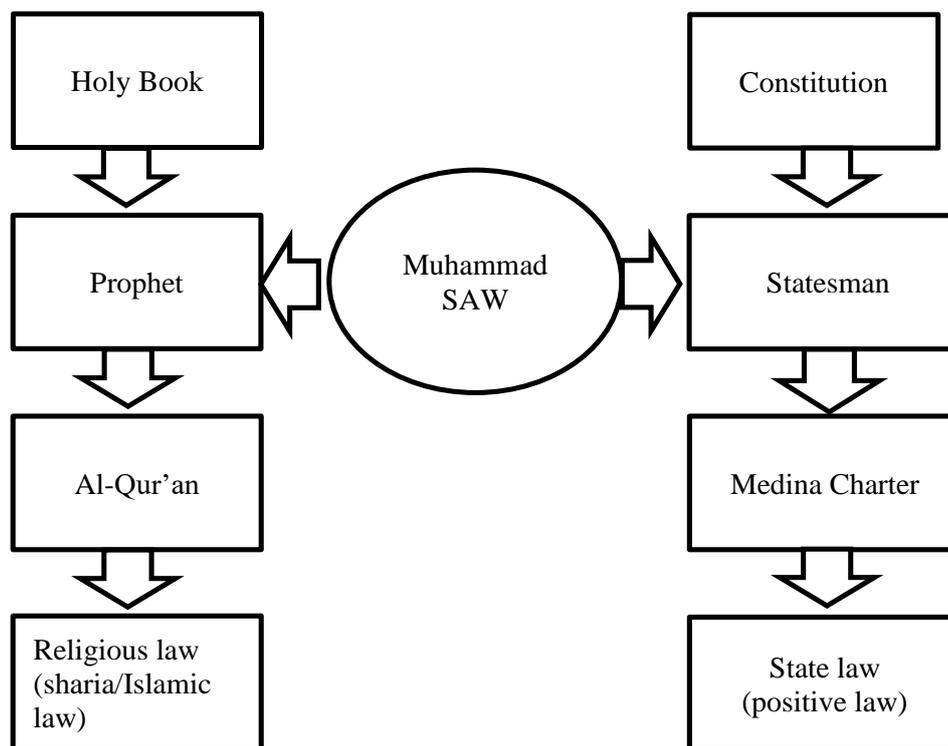
<sup>12</sup> Jasser Auda, *Maqasid al-Shari'ah as Philosophy of Islamic Law, A Systems Approach*, (London, Washington: The International Institute of Islamic Thought, 2007)p. xxii.

<sup>13</sup> Jennie S Bev, *Urgency of next form of democracy in Indonesia*, The Jakarta Post, July 19, 2013

<sup>14</sup> Mohammad Abed al-Jabri, *Democracy, Human Rights and Law in Islamic Thought*, Published in 2009 by I.B.Tauris & Co Ltd 6 Salem Road, London, p.251.

<sup>15</sup> Abd.Muin Salim, *Konsepsi Kekuasaan Politik dalam al-Qur'an*, Jakarta, Rajawali Press, 1994, hlm.306

Yusuf Musa in his book *Nidzam al-Hukm fi al-Islam* mentions two pillars that must be enforced in administering government according to Islam. First, the principle of syuro (deliberation), second, the principle of justice.<sup>16</sup> Muhammad Husain Haikal mentioned several basic principles. The first basic principle is faith in the One God and that He is the one who must be worshiped. Then from this basic principle, several principles are born such as equality, brotherhood and freedom (al-musawah, al-ikha and al- khurriyyah)<sup>17</sup>. There are three basic teachings in Islam that can be used to support democracy namely : 1) Islam endows its people for direct access to God 2) Islam has no race complex 3) Islam has banned human hatred and opened the way for human brotherhood and equality.<sup>18</sup> Practically, the election of Muhammad as the leader of the plural Medina community took place through a democratic process.<sup>19</sup> In Medina, the prophet Muhammad not only practiced the idea of democracy but also developed the concept of inclusive community. The word ummah in the Prophet era in Medina experienced an extension of meaning. The word ummah is not only used for the names of groups of people bound by nasab (blood) ties, but refers to groups in the broadest sense. The ummah is not only directed at the faithful group but includes those who want to fight with the believers, namely the entire population of Medina. Among the Ansar (people who reside in Medina) there were those who were not yet Muslims but they were included in the ummah, so were the Jews.<sup>20</sup> Muhammad SAW was not only a prophet but also a statesman (head of state).<sup>21</sup> As prophet and statesmen, Muhammad, through the constitution of Medina gave an example to his people how to synergize the demand of faith with the demand of constitution. See Picture 1.



Picture 1: Muhammad Prophet and Statesman

<sup>16</sup> Muhammad Yusuf Musa, *Nidzamal al-Hukmi fi al-islam*, Kairo, 1963, hlm. 177-178)

<sup>17</sup> Munawir Sjadzali, *Islam dan Tata Negara*, Jakarta. UI Press, 1990.hlm 185

<sup>18</sup> Danial Zainal Abidin, "Islam The Misunderstood Religion" Penertbit PTS Millenia Sdn.Bhd, Bentong Pahang, Kuala Lumpur, 2005, hlm. 15.)

<sup>19</sup> Nurcholish Madjid, *Cita-cita Politik Kita*, makalah, 1983, hlm. 12

<sup>20</sup> Ahmad Ibrahim al-Syarif, *Daulat al-Rasul fi al-Madinah*, Mesir, hlm.99-100.

<sup>21</sup> W. Montgomery Watt, *Muhammad Prophet and Statesman*, Oxford University Press, 1961,p.94-95.

The picture can be narrated that as a Prophet, Muhammad upheld the Scriptures or the Quran to guide the believers. But as a statesman he upheld the constitution in the form of the Medina Charter. The Scriptures produce religious law (fiqh / sharia) and the constitution produces state law (positive law). Not all religious laws automatically become State law. Religious law which has not been or has not been transformed into State law is accommodated as a private matter of each religious follower. The prophet Muhammad did not make the Qur'an directly as a constitution to regulate them. Because not all residents of Medina are believers. So, life together in the community of Medina was arranged through an agreement known as the Medina agreement. While the Qur'an produced religious law (sharia/ fiqh), the constitution produced state law (positive law). So, the principles of plurality or unity in diversity can be preserved. According to Reza Aslan, a democratic country not because it is secular, but because it is dedicated to accept pluralism. It is pluralism—the peaceful coexistence and legal equality between different ethnic, religious or political ideologies—that defines democracy, not secularism.<sup>22</sup> What is practiced by the Prophet Muhammad in Medina was praised by modern scholar in sociology such Robert N Bellah. Bellah said that under Muhammad, Arabian society made a remarkable leap forward in social complexity and political capacity. When the structure that took shape under the prophet was extended by the early caliphs to provide the organizing principle for a world empire, the result is something that for its time and place is remarkably modern. In a way the failure of the early community, the relapse into pre- Islamic principles of social organization, is an added proof of the modernity of the early experiment. It was too modern to succeed. The necessary social infrastructure did not yet exist to sustain it.<sup>23</sup> Historically, the prevailing form of government in Islamic history was known as Caliphate, which in reality was dynastic and authoritarian. For about 30 years after the death of the Prophet, Muslims succeeded in establishing a form of government with a strong democratic orientation, but upon the rise of the Umayyad Dynasty the democratic experiment came to an end, and power became concentrated in the hands of particular families or military forces.<sup>24</sup> In the Sunni community there is no one universally accepted doctrine of caliphate. The very basis of Sunni thought excludes the acceptance of anyone theory as definitive and final. What it does lay down is a principle: that caliphate is that form of government which safeguards the ordinances of Sharia and sees that they are put into practice. So long as that principle is applied, there may be infinite diversity in the manner of its application.<sup>25</sup>

#### 4. THE RELATIONSHIP BETWEEN FAITH AND THE LEGAL SYSTEM OF INDONESIA

Indonesia has determined Pancasila as the state's ideology, the principle of unity in diversity (Bhinneka Tunggal Ika) as its jargon, the 1945 constitution as its constitution and the Unitary State of the Republic of Indonesia as the chosen form of state. Pancasila itself consists of; Belief in the one and only God, fair and civilized humanity, the unity of Indonesia, populism led by wisdom in deliberation / representation and social justice for all Indonesians. “Belief in the one and only God” is placed as the spiritual basis. “Fair and civilized humanity” is placed as the moral basis. “The unity of Indonesia” is placed as a social orientation. “Populism led by wisdom in deliberation / representation” is placed as the political orientation.

<sup>22</sup> Reza Aslan , **The Iraqi Constitution: A Model of Islamic Democracy, New Perspectives Quarterly , Volume 23#1 Winter 2006.** : Source : [http://www.digitalnpq.org/archive/2006\\_winter/aslan.html](http://www.digitalnpq.org/archive/2006_winter/aslan.html) diakses 18 Oktober 2010.

<sup>23</sup> Robert N.Bellah,*Beyond Belief: Essays on Religion in a Post-Traditionalist World*,University of California Press, 1991, page 150-151.

<sup>24</sup> Khaled Abou El Fadl ,*Islam and the State: A Short History*, in Khaled M. Abou El Fadl, Said Arjomand, Nathan Brown, Jerrold Green, Donald Horowitz, Michael Rich, B, *Democracy and Islam in the New Constitution of Afghanistan* (2003) Published 2003 by RAND 1700 Main Street, P.O. Box 2138, Santa Monica, p. 13-16

<sup>25</sup> Hamid Enayat, *Modern Islamic Political Thought; The Response of the Shi'I and Sunni Muslims to Twentieth Century*, London, The Macmillan Press LTD, 1982. page 14.

“Social justice for all Indonesians” is placed as the goal.<sup>26</sup> The five principles of Pancasila can be summarized as; belief in God, humanism, nationalism, democracy and social justice. Since the beginning of independence, Indonesia has chosen a form of constitutional democratic state that combines the principles of faith in God with democratic principles, in other words, combining God's sovereignty and people's sovereignty. Constitutional democracy adhered to by Indonesia, in fact, in line with the principles of the constitution of Medina during the time of the Prophet. There are eight principles in the Medina Charter, namely (1) monotheism (2) unity and togetherness (3) equality and justice (4) religious freedom (5) defending the State (6) the preservation of good customs (7) supremacy of law / shari'a (8) politics of peace and protection. These eight principles also occurred in the constitution of Indonesia.<sup>27</sup> Among 47 article in the Medina Charter, there is no single article which formally mentions that Medina state is an Islamic state.<sup>28</sup> Therefore, ideologically and constitutionally there is no obstacle to practice, synergize or transform faith-based Islamic law into national law. Although the first principle of Pancasila “Belief in the one and only God” was often understood as the prove that Indonesia adheres the sovereignty of God, however the sovereignty of God existed only in theological domain not in political reality. In his dissertation on Masyumi, Yusril Ihza Mahendra explained that there are two domains in which each sovereignty was applied, namely the political domain for popular sovereignty, and the metaphysical or theological area for God's sovereignty. With these two domains, each type of sovereignty will not conflict with each other, because God only acts in the area of Muslim metaphysical consciousness, while humanity has full sovereignty in the political sphere. Because God always illuminates Muslim consciousness, including political consciousness. Every human political action is thus "illuminated by the presence of God".<sup>29</sup>

## 5. THE CHALLENGES AND ALTERNATIVE SOLUTIONS

Historically, the form of government in Islam which was known as caliphate. During the most of history, it was dynastic and authoritarian. The challenge is how to change the dynastic, authoritarian caliphate system into an egalitarian democratic system of caliphate that ever occurred in the early history of Islam. Opportunities are open because in the Sunni tradition, the caliphate is understood as an open system. The main challenge faced by Muslims in building democratic consolidation is the existence of authoritarianism in understanding Islam or sharia.<sup>30</sup> Authoritarianism tends to make someone who practices it as if they were the ones who most knew the will of God and who best represented Him. Even though in the eyes of God, everyone has the same position in the sense that everyone is the representative of God or His caliph on the earth. Authoritarianism also tends to reject pluralism, whereas accepting plurality in practicing sharia in Indonesia is important to support democracy. In exploring the meaning of sharia, at least, there are three theories, bayani, irfani and burhani. In bayani method, the truth was obtained through linguistic approach that produced correspondence truth. The source of truth is religious text and the method is juristic reasoning. In Islamic history, this method was often used by jurists and theologians. In irfani method, the truth was obtained through psychognostic approach that produced inter subjective truth. The source of truth is intuition and the method is illumination. Gnosis refers to knowledge based on personal experience or perception.

<sup>26</sup> Masdar Farid Mas'udi, “Islam Indonesia vs NKRI”, makalah disajikan dalam rangka bedah buku “SYARAH UUD 1945 :Perspektif Islam,” di UIN Sunan Gunung Djati Bandung , Kamis 30 Juni 2011.

<sup>27</sup> Harun Nasution, “Islam dan Sistem Pemerintahan Sebagai yang Berkembang dalam Sejarah” dalam *Studia Islamika*, Nomor 17 tahun VIII (July 1985), LP IAIN Syarif Hidayatullah, Jakarta, p.11-12.

<sup>28</sup> Munawir Sjadzali, *Islam dan Tata Negara*, Jakarta. UI Press, 1990, hlm.15-16

<sup>29</sup> Luthfi Assyauckanie, *Ideologi Islam dan Utopia; Tiga Model Negara Demokrasi di Indonesia*, Freedom Institute, Jakarta , (2011) p. 106.

<sup>30</sup> Khaled Abou El Fadl, *Speaking in God's Name: Islamic Law, Authority, and Women* (Oxford; One world Publications,)2001.page 202.

In religious context, gnosis is mystical or esoteric knowledge based on direct participation with the divine. In Islamic history, this method is used by mysticians. In burhani method, the truth was obtained through logical approach that produced coherence or consistence truth. The source of truth is ratio and the method is analytical discourse. While these three methods actually had been used in the Muslim world, burhani method which put forward the way of demonstrative-philosophical thinking not developed optimally by Muslim thinkers and scientists.<sup>31</sup> See Table 1.

The name of theory	Source	Method	Approach	The validity of truth
<i>Bayani</i>	Religious text	<i>Istinbath/istidlal/</i> juristic reasoning	Linguistic	Correspondence
<i>Irfani</i>	Intuition	<i>Kasyf/</i> illumination	Psycho-gnostic	Inter-subjective
<i>Burhani</i>	Ratio	Analytical discourse	Logic	Coherence/consistence

Table 1: *The Theories for Exploring the Meaning and the Content of Sharia*

There are also three roles of religion in politics. Firstly, religion as a political ideology; secondly, religion as ethical, moral and spiritual base and third, religion as sub-ideology. Countries that place religion as ideology tend to practice religious teachings formally as positive law and take a structural approach to socialization and institutionalization of religious teachings. Countries that place religion as an ethical, moral, and spiritual source tend to support cultural approaches and reject structural approaches in terms of socialization and institutionalization of religious teachings. This means that the implementation of religious teachings should not be institutionalized through legislation and state support, but enough with the consciousness of religious people themselves. Countries that place religion as sub-ideology tend to support a cultural as well as structural approach by involving religious teachings in public policy making in a constitutional, democratic and non-discriminatory manner.<sup>32</sup> See Table 2.

Types	Description
Religion as Political Ideology	Countries that place religion as ideology tend to practice religious teachings formally as positive law and take a structural approach to socialization and institutionalization of religious teachings.
Religion as ethical, moral and spiritual base	Countries that place religion as an ethical, moral, and spiritual source tend to support cultural approaches and reject structural approaches in terms of socialization and institutionalization of religious teachings.
Religion as sub-ideology	Countries that place religion as sub-ideology tend to support a cultural as well as structural approach by involving religious teachings in public policy making in a constitutional, democratic and non-discriminatory manner.

Table 2: *The Role of Religion in Politics*

The model of Muslims in practicing sharia can be divided into three, exclusive textual, inclusive substantial, and combination. The first model is usually trying to implement sharia as mentioned in the text of the Qur'an, prophet tradition or in the text of standard works recognized by its authority in explaining Islamic law.

<sup>31</sup> Sembodo Ardi Widodo, "Nalar Bayani, 'Irfani dan Burhani dan Implikasinya Terhadap Keilmuan Pesantren", *Hermenia, Jurnal Kajian Islam Interdisipliner*, Vol.6.Nomor 1, Januari-Juni 2007, p 65-92

<sup>32</sup> Nurrohman Syarif ; Tajul Arifin, and Sofian Al-Hakim, S. (2017). *Sharia in Secular State - The Place and Models for Practicing Islamic Law in Indonesia*. In *2nd International Conference on Sociology Education - Volume 2: ICSE*, ISBN 978-989-758-316-2, pages 52-60. DOI: 10.5220/0007104306920700

This model is based on the assumption that the sharia has perfectly regulated all aspects of life. Sharia after the prophet Muhammad no longer experiences the process of evolution. Therefore, the duty of Muslims is to apply it when the provisions are clear in the text of the Qur'an or prophet tradition (al-Sunnah). If there is no provision, then they can use analogy or individual reasoning (ijtihad). Muslims do not need to take other legal systems outside of Islam. Sharia is a law of God that can not be known its true content except by the experts, ie. Jurist (faqih ,mujtahid). Therefore, any legislation made by a legislature must be approved by a sharia expert, and the sharia expert has the right to veto any laws deemed inconsistent with the sharia. The first model is commonly practiced privately in private matter. The second model, it is try to practice the Islamic sharia by looking at the concepts or ideas that exist behind the text. If the main idea has been captured, then its application can be carried out flexibly in accordance with the times and places. This model is based on the assumption that every legal provision in Islamic law has its reasoning and purpose. Therefore, the proponents of this model do not object if Islamic law undergoes evolution. They are also relatively easy to accept any legal system as long as the legal system upholds justice, equality, freedom, brotherhood and humanity which are the core of sharia. Sharia is applied openly through accepting "external elements" such as local custom and thoughts coming from outside Islam. There is no monopoly in the interpretation of sharia, and therefore, there is no need for "sharia supervisory" institutions that monopolize the interpretation of sharia. The second model was commonly practiced in public life. The third model is combination. In practicing sharia, they divided it into two; purely religious teaching that should be done without any question or reasoning ,( ta'abbudi) and what is understood by reason ( ta'aqquli). They sort the sharia into two, private and public. In private law, they tend to be textual exclusives because it is part of ta'abudi, but in public law, they tend to be substantially inclusive. The choices taken by each person, community or country will depend on the legal politics embraced by them. See Table 3.

	Description	Assumptions
Exclusive textual	trying to implement sharia as mentioned in the text of the Qur'an, the prophet tradition or in the text of standard works of expert recognized by its authority in explaining Islamic law	Sharia has perfectly regulated all aspects of life. Sharia after the prophet Muhammad no longer experiences the process of evolution
Inclusive substantial	Trying to practice sharia by looking at the concepts or ideas that exist behind the text. If the main idea has been captured, then its application can be carried out flexibly.	Every legal provision in Islamic law has its reasoning and purpose. Therefore, Islamic law undergoes evolution. There is no monopoly in the interpretation of sharia.
Combination	In practicing the sharia, they divided it into purely religion ( <i>ta'abbudi</i> ) and <i>ta'aqquli</i> (be understood by reason). They sort the sharia into two, private and public.	Some sharia has a reason and experiences evolution, and the other ones are should accepted without reason and not experience evolution

*Table 3: The Models for Practicing Sharia*

From the above explanation, the existing model for practicing sharia in Indonesia is a combination. Some provisions of sharia are practiced exclusively, but the others are practiced substantively and inclusively. In the private aspect, or civil law, sharia tends to be practiced exclusively textually. But in the public domain or penal law, sharia tends to be transformed substantially inclusively. In civil cases, effort to synergize the demands of faith with the legal system in Indonesia can be traced from the era of colonialism. Van Den Berg (1845-1927) introduced the *receptie in complexu* theory. In this theory, Muslims should adhere sharia norm as consequence of their belief or religion. This theory that becomes Dutch policy toward Muslims since 1855. Snouck Hurgronje (1857-1936) introduced the the *receptie* theory. According to this theory, Islamic law in Indonesia only applies if customary law requires it.

This theory became the reference of colonial policy since 1929 through the Indische Staatsregeling (IS) of 1929. Article 134 paragraph 2 of IS said: "In the case of civil cases among fellow Muslims, will be resolved by the judges of Islam if their customary law wants it."<sup>33</sup> After Indonesia become independent state, Hazairin introduced *receptie exit* theory. According to this theory, after Indonesia became independent state and has its own constitution, even though the transitional rule states that the old law is still valid as long as its soul not contradictory to the 1945 Constitution, all laws of the Dutch East Indies government based on *receptie* theory cannot be applied again because its soul is contradictory to the 1945 Constitution. According to the 1945 Constitution article 29 verse 1, the Republic of Indonesia is obliged to form an Indonesian national law with the material derived from religious law. The religious law that would be Indonesian national law is not just Islamic law, but also other religious law living in Indonesia. Religious law in civil and criminal law absorbed into Indonesian national law, then becoming a new Indonesian law based on Pancasila.<sup>34</sup> The new Indonesian law based on Pancasila which derived from sharia norms and values is what is called Fiqh Indonesia (Indonesian Fiqh) by professors Hasbi Ash-Shiddieqy.<sup>35</sup> Sayuti Thalib introduced *receptio a contrario* theory. This theory said that for Muslims, Islamic law should be applied to them, customary law can be applied if not contrary to Islamic law. A Qadri Azizy introduced the positivization of Islamic law theory. According to this theory, Islamic law basically has become a positive law for Indonesian Muslims therefore, the application of Islamic law is no longer determined on acceptance of customary law. The main reference of this theory is Law No.1/ 1974 on marriage. Article 2 (1) of this law said that marriage is valid, if it is done according to the law of each religion and belief.<sup>36</sup> See Table 4.

The name of theory	Description	Implication	Notes or reference
<i>Receptio in complexu</i>	Muslims should adhere sharia norm as consequence of their religion.	Sharia norms directly applied to Muslims without waiting whether its accepted by custom or not.	Applied in religious court since 1855
<i>Receptie</i>	"In the case of civil cases among fellow Muslims, will be resolved by the judges of Islam if their customary law wants it."	The application of sharia norms depend on the acceptance of customary law	the reference of colonial policy since 1929
<i>Receptio a contrario</i>	For Muslims , Islamic law should be applied to them	Customary law can be applied if not contrary to Islamic law	
Positivisa-tion	Islamic law has basically become a positive law for Indonesian Muslims	the application of Islamic law is no longer determined on the basis of acceptance by customary law	The main reference of this theory is: UU No.1 / 1974 about marriage

Table 4: The Theories for Practicing Sharia in Indonesia

The downfall of New Order regime gives the rise of three types of democracy that compete with each other in Indonesia, namely; Islamic democracy, religious democracy and liberal

<sup>33</sup> Nurrohman Syarif, *Syariat Islam dalam Perspektif Negara Hukum berdasar Pancasila* , Pandecta ,Volume 11. Nomor 2. December 2016

<sup>34</sup> Hazairin, *Tujuh Serangkai tentang Hukum*, Jakarta, Bina Aksara, cet.ketiga, 1985: 52.

<sup>35</sup> Nur Ahmad Fadhil Lubis, (1997). "Islamic Legal Literature and Substantive Law in Indonesia", *Studia Islamika, Indonesian Journal for Islamic Studies*, Volume 4, Number 4, 1997. Pp.33 -92.

<sup>36</sup> Nurrohman Syarif, *Syariat Islam dalam Perspektif Negara Hukum berdasar Pancasila* , Pandecta ,Volume 11. Nomor 2. December 2016

democracy. Each model of democracy affected how sharia be practiced.<sup>37</sup> Because, sharia as a collection of ahkam (a set of positive rules), principles, a methodology, and a discursive process that searches for divine ideals, is a work in progress that is never complete.<sup>38</sup> There is an evolution of Islamic law<sup>39</sup>. However, in the current time, when Muslims want to transform Islamic values into state law it must be done through a democratic process without discrimination. The democratic constitutionalism is the best way to functionalize Islamic values<sup>40</sup>.

## 6. CONCLUDING REMARK

All the explanations stated above show that sharia law can be compatible with democracy. Because even though the sharia is basically inseparable from the beliefs of Muslims, the space of ijtihad (individual thought), especially those related to social life, is very open. Islamic sharia is not a dogmatic belief that cannot be reformed. It can grow and develop in line with the development of democratic consolidation in Indonesia as long as it not deviate from its purposes, namely : protecting basic human rights for all members of community irrespective of race, religion and culture, establishing justice between Muslims and the rest of humanity, and providing benefits (maslahah) for human beings and removing hardships (al-usr) from them. In the democratic era, the opportunity to incorporate sharia elements into law remains large even though the challenges are also large. As an ethical, moral and spiritual foundation based on belief, the sharia can actually be implemented or practiced by Muslims without the legitimacy or formalization of the State. But if sharia law, as a religious norm, will be transformed into a state law, then it must be adjusted to the principles and provisions of the constitution. Muslims, especially Indonesian Muslims, should learn to accept the principles of democracy because even though democracy is not the best way to regulate the State, it is a best among the worse. In addition, there is no principle of democracy that contradicts the teachings of Islam. In a democratic country, Muslims are not only valued as a group but are also valued individually. This spirit is in line with the Qur'anic teachings that place everyone as a khalifatullah (vicegerent of God), a predicate which in history seems to have been monopolized by religious elites or rulers.

## LITERATURE:

1. Abou El Fadl, K (2004) , *Islam and The Challenge of Democracy; A Boston Review Book*, Princeton University Press,
2. Abou El Fadl, K (2001), *Speaking in God's Name: Islamic Law, Authority, and Women* (Oxford; One world Publications,)
3. Abou El Fadl , K (2003) , *Islam and the State: A Short History*, in Khaled M. Abou El Fadl, Said Arjomand, Nathan Brown, Jerrold Green, Donald Horowitz, Michael Rich, B, *Democracy and Islam in the New Constitution of Afghanistan* (2003) Published 2003 by RAND 1700 Main Street, P.O. Box 2138, Santa Monica, p. 13-16
4. Abidin, DZ (2005) , “Islam The Misunderstood Religion” Penertbit PTS Millenia Sdn.Bhd, Bentong Pahang, Kualalumpur. .
5. Alam, L A. (2007) Keeping The State Out: The Separation of Law and State in Classical Islamic Law. *Michigan Law Review*. 105 (6). 1255-1264.
6. An-Na'im, A. A. (2014), “The Normative Relevance of Sharia in the Modern Context”, in Rudolph Peters, Peri Bearman, *The Ashgate Research Companion to Islamic Law*, (Ashgate Pub Co, 2014) p.311.

<sup>37</sup> Luthfi Assyaukanie, *Ideologi Islam dan Utopia; Tiga Model Negara Demokrasi di Indonesia*, Freedom Institute, Jakarta, 2011:84-217.

<sup>38</sup> Khaled Abou El Fadl , *Islam and The Challenge of Democracy; A Boston Review Book*, Princeton University Press, 2004:34.

<sup>39</sup> Wael B Hallaq, *The Origins and Evolution of Islamic Law*, Cambridge University Press. 2005

<sup>40</sup> Robert W. Hefner, *Shari'a Politics; Islamic Law and Society in the Modern World* , Indiana University Press (2011): 43.

7. Aslan , R. (2006) , *The Iraqi Constitution: A Model of Islamic Democracy*, New Perspectives Quarterly , Volume 23#1 Winter 2006. : Source : [http://www.digitalnpq.org/archive/2006\\_winter/aslan.html](http://www.digitalnpq.org/archive/2006_winter/aslan.html) diakses 18 Oktober 2010.
8. Assyaukanie, L. (2011) , *Ideologi Islam dan Utopia; Tiga Model Negara Demokrasi di Indonesia*, Freedom Institute, Jakarta, 2011:84-217.
9. Auda, J (2007), *Maqasid al-Shari'ah as Philosophy of Islamic Law, A Systems Approach*, (London, Washington: The International Institute of Islamic Thought)
10. Bellah, R N. (1991), *Beyond Belief: Essays on Religion in a Post-Traditionalist World*, University of California Press.
11. Bev, J. S (2013), *Urgency of next form of democracy in Indonesia*, The Jakarta Post, July 19, 2013
12. Black, A; Esmaceli, H; and Hosen, N (2013). *Modern Perspective on Islamic Law*, UK: Edward Elgar Publishing Limited.
13. Brusse, W. A.; Schooneboom, J, (2006) 'Islamic Activism and Democratization' dalam ISIM( International institute for the study of Islam in the modern world) REVIEW 18.
14. Christmann, A. (2009) *The Qur'an, Morality and Critical Reason: The Essential Muhammad Shahrur*, Brill, Leiden.
15. Dahrendorf, R. (2006), "Is secularism coming to an end?", *The Jakarta Post*, November 15, 2006
16. Djiwandono, J. S. (2006), *Misinterpreted democracy may lead to tyranny*, The Jakarta Post, Oct. 6, 2006
17. Enayat, H. (1982) *Modern Islamic Political Thought; The Response of the Shi'i and Sunni Muslims to Twentieth Century*, London, The Macmillan Press LTD.
18. Hallaq, W.B (2005), *The Origins and Evolution of Islamic Law*, Cambridge University Press.
19. Hazairin (1985), *Tujuh Serangkai tentang Hukum*, Jakarta, Bina Aksara, cet. ketiga.
20. Hefner, R.W. (2011) , *Shari'a Politics; Islamic Law and Society in the Modern World* , Indiana University Press.
21. al-Jabri, M. A. (2009), *Democracy, Human Rights and Law in Islamic Thought*, Published in 2009 by I.B. Tauris & Co Ltd 6 Salem Road, London.
22. Lubis, N. A. F. (1997). "Islamic Legal Literature and Substantive Law in Indonesia", *Studia Islamika, Indonesian Journal for Islamic Studies*, Volume 4, Number 4, 1997. Pp. 33 -92.
23. Madjid, N. (1983), *Cita-cita Politik Kita*, makalah
24. Mas'udi, M. F. (2011), "Islam Indonesia vs NKRI", makalah disajikan dalam rangka bedah buku "SYARAH UUD 1945: Perspektif Islam," di UIN Sunan Gunung Djati Bandung , Kamis 30 Juni 2011. <sup>[1]</sup><sub>SEP</sub>
25. Musa, M. Y. (1963), *Nidzamul al-Hukmi fi al-islam*, Kairo
26. Nasution, H. (1985) "Islam dan Sistem Pemerintahan Sebagai yang Berkembang dalam Sejarah" dalam *Studia Islamika*, Nomor 17 tahun VIII (July 1985), LP IAIN Syarif Hidayatullah, Jakarta, p. 11-12.
27. Otto, J. M. (2008), *Sharia and National Law in Muslim Countries*, (Leiden University Press, 2008)
28. Praja, J. S. (2009) *Teori-teori Hukum Islam : Suatu Telaah Perbandingan dengan Pendekatan Filsafat*, Bandung, Program Pascasarjana Universitas Islam Negeri (UIN), 2009.
29. Rahman, F. (1984), *Islam and Modernity; Transformation of an Intellectual Tradition*, (University of Chicago Press, 1984) p. 19.
30. Salim, A.M. (1994), *Konsepsi Kekuasaan Politik dalam al-Qur'an*, Jakarta, Rajawali Press, 1994, hlm. 306
31. Schacht, J. (1964), *An Introduction to Islamic Law*, (Oxford University Press, 1964) p. 1-4.

32. Sjadzali, M. (1990), *Islam dan Tata Negara*, Jakarta . UI Press, 1990, hlm.15-16
33. Syarif, N. (2016), *Syariat Islam dalam Perspektif Negara Hukum berdasar Pancasila* , Pandecta ,Volume 11. Nomor 2. December 2016
34. Syarif, N. ; Arifin, T and Al-Hakim, S. (2017). Sharia in Secular State - The Place and Models for Practicing Islamic Law in Indonesia.In *2nd International Conference on Sociology Education - Volume 2: ICSE*, ISBN 978-989-758-316-2, pages 52-60. DOI: 10.5220/0007104306920700
35. al-Syarif, A. I. , *Daulat al-Rasul fi al-Madinah*, Mesir, hlm.99-100.
36. Watt, W. M. (1961), *Muhammad Prophet and Statesman*, Oxford University Press.
37. Widodo, S. A. (2007), “Nalar Bayani, ‘Irfani dan Burhani dan Implikasinya Terhadap Keilmuan Pesantren”, *Hermenia, Jurnal Kajian Islam Interdisipliner*, Vol.6.Nomor 1, Januari-Juni

# REACTUALIZATION OF (MASLAHAH) THE COMMON GOOD AS A BASIS OF CONTEMPORARY ISLAMIC LAW ISTINBATH - A COUNTER SCRIPTURALISM PARADIGM ON INTERPRETATION OF RELIGIOUS TEXTS IN THE ERA OF SUSTAINABLE DEVELOPMENT GOALS

**Muhammad Usman**

*Lecturer at Faculty of Sharia,  
Islamic State Institute of Surakarta (IAIN Surakarta), Indonesia*

**Joko Roby Prasetyo**

*Lecturer at Faculty of Sharia,  
Islamic State Institute of Surakarta (IAIN Surakarta), Indonesia*

## ABSTRACT

*In a theoretical perspective, the arrival of Shari'a (Islamic Law) is for the common good of people. However, this common good just only become an empty jargon because of the excessive understanding of attachment to religious texts as promoted by orthodox ideology. In this case, the original Shari'a was that the road turned into an objective for itself. The re-actualization of Islamic law which emphasizes more on substance, it is maslahah of justice is needed to answer the current problems of humanity. Formal and textual provisions, however, must be a reference for human behavior in shared life, but it must be fully realized that formal-textual legal standards are only the way in which the ideals of common good are actualized in real life. This research is a library research with analysis-critical discourse on the interpretation of the sources of Islamic religious law texts using the approach of Philosophy of Islamic Law. This research resulted in the formulation of the Islamic law Istinbath (he decision-making processes based on existing Koran or Sunnah evidence) method by prioritizing the meaning of a law to find harmony between legal formal-textual and life welfare which well known as (hikmatut tasyri` ) the philosophy behind Islamic law legislation. Islamic law is not solely as a science (law as science), but more than that, law as a policy guides humans behavior and dialectic to the reality surrounded it (law as wisdom).*

**Keywords:** *Re-actualization, Maslahah (common good), Istinbath, and Islamic Law*

## 1. INTRODUCTION

Islamic law always experiences continuous development. The dialectical process between revelation and reason, as hinted at by the verses of the Qur'an, is the basis of the postulate to always produce new laws that are based on text and context. Noel J. Coulson argued that the dialectical relationship between revelation and reason gives an understanding that Islamic law has two sides. Islamic law as a law derived from Allah's revelation (divine law), and in other forms at the same time, Islamic law is also a product of human reasoning of jurists. Islamic law is at a crossroads between maintaining scientific knowledge or revitalizing new approaches to understanding revelation.<sup>1</sup> The classical stream still maintains classical epistemology. They believe that the formulation of Islamic law is final while modernist Islamic groups argued that classical reasoning, with all its greatness, is not a product of thought that has been final and holy, and it can be applied from time to time and in all conditions.<sup>2</sup>

---

<sup>1</sup> Muhammad Muslehuddin, *Philosophy of Islamic Law and The Orientalists*, (New Delhi: Markazi Maktaba Islami, 1985), pg. xi.

<sup>2</sup> Muhammad Syahrur, *Metodologi Fiqih Islam kontemporer*, Cet VI (Yogyakarta: eLSAQ Press, 2010), pg. xi.

Islamic legal thought as a science is always open to being reduced and developed (open-ended).<sup>3</sup> Modernist groups argue, the product of classical thought is so far away set back will be very irrelevant to answer all the problems of "new world". Where the problems and challenges are more complex than before. Until the 21st Century, the world experienced various kinds of multinational dimension problems. Demographic bonuses, poverty, security, health crisis, environmental issues are the main topics at international meetings. The world community responded with a meeting in September 2000 with 189 countries in attendance and produced a declaration known as The Millennium Development Goals (MDGs) positioned the issue of poverty as a major pilot project that must be immediately started together.<sup>4</sup> This declaration was followed-up with the meeting on September 25-27 at the United Nation International Office which was attended by 193 representatives from countries around the world. This meeting produced the eighteen Sustainable Development Goals (SDGs). Responding to the development of the "new world", Actualization of Islamic law as a form of its vital element in responding to various contemporary issues is a necessity. Muslim thinkers try to led the religion to answer the problems appeared in current times. Hasan Hanafi discussed the theocentric reconstruction of traditional theology towards anthropocentricity,<sup>5</sup> Seyyed Hossein Nasr formulated environmental theology,<sup>6</sup> then Ali Asghar Engineer initiated Liberation theology.<sup>7</sup> In Indonesia we have Abdurrahman Wahid, Muslim Abdurrahman, Masdar F. Mas'udi, and Kuntowijoyo emerged with a critical theological paradigm. From this fact, this shows that there has been a paradigm shift from the classical legal paradigm which was theocentric towards contemporary legal products that are anthropocentric, critical, and practical.<sup>8</sup> The contemporary Islamic law paradigm positions Islam to be (maslahah) mercy for all mankind and shôlih li kulli zamân wa makân, so it's expected to be able to answer current problems. What was initiated by these modernist thinkers has found its momentum at this time. Islamic law is not solely as a science (law as science), but more than that, law as a policy guides humans behavior towards the reality surrounded it it (law as wisdom). Looking at the development of Islamic legal thought, it can be said that the development of thought is a manifestation of the sense of crisis of Muslim thinkers in seeing the reality faced by Islamic societies in their respective periods.

## 2. AL-MASLAHAH AND SDGS DISCOURSE

In terms of the language etymology, the word Maslahah has the form mufrad (singular) derived from the word al-salah which means goodness and benefit, the plural form of the word al-salah is (al-masalih). The word maslahah has an understanding of something that has many benefits and goodness, the opposite of this word is mafsadah, which is something that has many ugliness.<sup>9</sup> With the above understanding, the terminology of the term maslahah implies taking advantage and rejecting deity with the aim of maintaining the wisdom of tasyri (philosophy behind Islamic law legislation). The aim of the Shari'a, by the mujtahid popularized by the term maqosid as-shari'ah, that is maintaining religion, soul, mind, ancestry and prosperity. All Islamic jurisprudence scholars agreed that the Islamic Shari'a is entirely beneficial.

<sup>3</sup> Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: The University of Chicago Press, 1996), pg. 85.

<sup>4</sup> Atih Rohaeti Dariah et al, *A New Approach for Sustainable Development Goals in Islamic Prespective* (JURNLProcedia: Social and Behavioral Science 219, 2016) pg. 159-166.

<sup>5</sup> Hassan Hanafi, *Islamologi 3: Dari Teosentrisme ke Antroposentrisme*, terj. Miftah Faqih (Yogyakarta: LKiS, 2004).

<sup>6</sup> Abstracted from Seyyed Hossein Nasr, *Antara Tuhan, Manusia, Dan Alam; Jembatan Filosofis Dan Religius Menuju Puncak Spiritual*, terj. Ali Noer Zaman, (Yogyakarta: IRCiSoD, cetakan kedua II, 2005)

<sup>7</sup> Ashgar Ali Engineer, *Islam dan Teologi Pembebasan* (Yogyakarta: Pustaka Pelajar, 2003)

<sup>8</sup> The definition of paradigm here is what is meant by Thomas S. Khun: "The term" paradigm "is used in two senses. First, the paradigm means that all constellations of beliefs, values, techniques, etc. are shared by existing community members. Second, the paradigm shows a kind of element in the constellation, concrete solving of puzzles which, when used as a model or example, can replace certain rules as a basis for solving problems and puzzles from incomplete normal sciences. Philosophically, at least, the second understanding is deeper. See Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: The University of Chicago Press, 1996), pgh. 175.

<sup>9</sup> Ibnu Mandzur, *Lisanul Arab* (Beirut: Dar Ihya al-Turast al-Arabiyy, s.a), pg. 227

This opinion is accepted by the *jumhur* (majority) of scholars in every period and place. The scholars have their own expressions to explain this principle. Najm al-Din al-Tufi gave a statement: "Broadly speaking, all the verses contained in the Qur'an contain benefits and common good". As well with the hadith, because the position of the hadith is a *Bayyan* (explanation) of the Qur'an, then the position of *bayyan* (explanation) follows *mubayyan* (what is explained)<sup>10</sup> *Maslahah* will have different definition if it is defined as *sharia* itself. At-Tufi in his book (*Risalah al-Tufi fi Ri'ahah al-Maslahah*) said, Benefit is the main goal in the stipulation of the law, while the arguments only function as resources. This concept if met with the main problems in the Islamic religion there will be a lot of opposition from the majority of scholars, but if it is met with *furu* problems, the majority of scholars will use the same concept of *al-maslahah*. As well as al-Ghazali's opinion, he said "sometimes we make common good as an argument for a law, and make another law an argument over it. In this case, the I agreed with the statement "where there is common good then that is actually the *Shari'a* of God". I have described the product of Islamic law by the method of *al-maslahah* as described before which is believed to be able to answer the challenges of the "new world". The influence of technological and information progress, socio-cultural and political plurality, demographic bonuses, and environmental issues creates new problems of the international community. Islam as one of the religions with the majority of followers on the face of the earth, is expected through renewal of its legal products, able to contribute to the discourse of Sustainable Development Goals (SDGs) agreed upon by the international community. The SDGs Agenda, which includes 18 sustainable development plans, strongly reflects the values of Islam itself. First, the *maqasid sharia* in which includes maintaining religion, soul, mind, descent and prosperity, being the highest goal of the *Shari'a* proves that Islam as a religion has a universal benefit orientation. Second, Islamic doctrine strongly emphasizes its adherents to have a decent life (*hayat thayyibah*). Third, the concept of *mardhatillah* (hoping for the pleasure of Allah) provides a life view for a Muslim, if all the activities of his life must be blessed by Allah. As compensation for this attitude, Allah will reward a prosperous and peaceful life not only in the world but also in the hereafter.<sup>11</sup> Of course this idea is not too much, the legal product which is derived from human theological reflection, will influence internal cognition of humans expected to play a role in efforts to give guidance to human behavior. Al-Faruqi also further emphasized that it was the theological view that would determine the worldview of individuals and society.<sup>12</sup>

### 3. REACTUALIZATION OF MASLAHAH (THE COMMON GOOD) AS A BASIS OF CONTEMPORARY ISLAMIC LAW ISTINBATH

Fourteen centuries ago, the Prophet Muhammad revolutionary in just only twenty-three years able to change all fundamental aspects of the Arab community with a brilliant strong leadership. He was able to run a change of spirit to live a wider friendship based on the spirit of faith which was no longer based on his descendants and prosperity.<sup>13</sup> In pre-Islamic period, Arabs only recognize tribes as one of the highest political entities, so with Islam, they became citizens of a larger and more comprehensive political unit whose territory covered the entire Arabian Peninsula and which later turned out to be the initial capital of the birth of Imperium. In other words, the arrival of Islam brought by the Prophet Muhammad is truly a blessing for the universe. Therefore, for the first time, Islamic law actually has no other basis except "human beneficiary". The standard expression that Islamic law is proclaimed for the human, birth and inner happiness; materially and spiritually, fully reflecting the principle of common good.

<sup>10</sup> Ahmad al-Raysuni and Muhamamad Jamal Barut, *Ijtihad; Antara Teks, Realitas, dan Kemaslahahan Sosial*, terj. Ibnu Rusydi and Hayyin Muhdza (Surabaya; Erlangga, 2002), pg. 16.

<sup>11</sup> Atih Rohaeti Dariah dkk, *A New Approach for Sustainable Development Goals in Islamic Prespective*, pg. 159-166.

<sup>12</sup> Muhammad In'am Esha, *Teologi Islam: Isu-Isu Kontemporer*, pg. 63.

<sup>13</sup> Joseph Schacht. *An Introduction to Islamic Law* (London: Oxford University Press, 1965), h. 11.

However, too much attachment to the text (nash) as promoted by the dominant orthodoxy until now has made the principle of common good become just only a jargon. Common good as the goal of Shari'a has been emptied, then the Shari'a which at first was the road has become a goal for itself. Embryonally, this tendency of textualistic and formalistic orthodoxy has begun to emerge since the earliest times, when some Sahabah (close friends of Prophet Muhammad), including Bilal bin Abi Rabah, expressly rejected the Caliph Umar's ijihad on the sharing the conquered land of war welfare (ghanimah) known as Sawad al Iraq. Departing from the consideration of maslahah as the soul of Shari'a, at that time the Caliph Umar offered a policy (ijihad) not to just shared the vast and fertile spoils just only to the army, but also given the conquered land people so that they can still worked on it, and they had had to pay certain kharaj (retribution) to the state. This Umar's opinion had over the consideration of the benefit of greater interests which in fact indeed became the ultimate goal of the Islamic prescription. With his policy (ijihad), Umar intended to achieve the following common good: a) The people were conquered did not lose their livelihoods and still be able to work in their fields as before to fulfill their own and their families' needs; b). From the kharaj paid by the conquered people, in return for the right to cultivate the land, the state can increase the income used not only to provide benefits to the soldiers who have fought to win the Iraqi country, but who can pay other soldiers assigned to guard the country's borders. The latter must be important, it was not only for the whole people but also for the country, which does need to be protected from infiltration and attacks from outsiders.<sup>14</sup> As we know that the bright and brave ijihad of Umar received a hard opposition from some very textual of the Prophet's Sahaba. Their reason claimed that Umar has ignored a provision (Law of Fiqh) which is explicitly contained in the Qur'an (Al-Hashr: 7) and also in the Sunnah (hadith) of the Prophet. Hujjah lafdhiyyah (textual) is of course strong. But by holding on to hujjah maknawiyah (substantial - maslahah) Umar believe has much stronger argumentation. Actually, people who say that Islamic law must be sourced from the Qur'an and the hadith fully is true as long as a teaching that directly or indirectly confirms basic spiritual and moral principles such as: Oneness of God, justice, faithfulness to promises / agreements, equality before the law, deliberation, and principles other principles of equal, which as a whole boils down to the benefit of the life of the human world and its afterlife. But I need to emphasize, that the Qur'an and Hadith appear as a basis or certain legal propositions of course have certain backgrounds as well. When the situation and conditions are no longer in suitable with beginning situation and conditions of its released time, then it should be necessary to hold a reinterpretation / understanding to overcome the need of human being in current times. The law cannot be based on law. Legal (legal) must be based on something that must not be called law, but more basic than just law. That is a value system that we consciously take as a belief that must be fought for prosperity and justice. The process of legal basis (which is lower) of law (which is of a higher level) can only be understood in the context of analogy, qiyas. However, as we know, qiyas must also be illat, something that is more a rule of law but not the law itself. The structure of Islamic legal thinking (fiqh) has been precisely the "cycle" logic. We do know what is called the "basis" or "source" of the law. However, what we mean by the legal basis / source turns out to be that law as well, not the actual legal basis / source, namely spiritual-moral values that are universal and fundamental. Therefore it is not surprising that our baseless Islamic world of law (fiqh) is characterized by very questionable characteristics and character.<sup>15</sup> First, the character of fiqh thinking that is juziyah, casuistic and micro oriented. Because of this strong character, we are familiar with the statement fiqh does have to be juzziyah, far'iyah.<sup>16</sup>

<sup>14</sup> Masdar F.Mas'udi, " Memahami Ajaran Suci Dengan Pendekatan Transformasi" at *Polemik Reaktualisasi Ajaran Islam*, (Jakarta: Pustaka Panjimas, 1988) pg. 178.

<sup>15</sup> *Ibid.*, pg. 179, see at the book Munawir Sjadzali, *Ijtihad kamanusiaan*, pg. 35

<sup>16</sup> Wael B. Hallaq, *An Introduction To Islamic Law*, cet. II (New York; Cambridge University Press, 2010), pg. 25.

Everywhere the fiqh efforts always starts from a case to then seek its legal status (ethics) through *ilhaq* (*qiyas*) to other cases that have been predetermined by legal status, either by *nash* (verses or *ahkam hadith*). This is the most standard legal tracking process that is felt in implementing this standard procedure, then offered a defense mode such as *istihsan* from Imam Hanafi and *Maslahah* from Imam Malik. The Islamic law hierarchy offered by Imam Shafi'i fully represents the logic of fiqh thought mentioned before. For him, after the Qur'an (read the verses of *Ahkam*) and the Hadith of the Prophet (*Ahkam hadith*) there is no other authority except *ijtihad* which is nothing but "*qiyas*": *al-Ijtihad huwa al qiyasi* (*Ijtihad* is nothing but doing *qiyas*). Ahmad bin Hambal, inherited the spirit of orthodoxy from Imam Shafi'i, even at a much higher level, arguing that "theoretically, *qiyas* is indeed a procedure of legal thought that can be justified. But historically, it is not really necessary. As we know, contrast from these three other *Madhhab* Imam, Imam Ahmad lived in an era where almost all of his needs for the hadith needed by jurists in his day were provided. Besides basically, he is indeed more an observer of hadith than a legal thinker. Of course this casuistic legal thinking is only useful for dealing with problems, as a second feature, post-incident. It became like a knocker whose to straighten small curves as far as possible. That is, if the curvature has been so severe and he himself does not feel able to straighten it out, then what happens is one of two: a) With his scripturalistic attitude he continues to state his rejection of the bend, even though he is aware that he cannot do anything what, or b) with his realism he is willing to accept, and with his relations even able to justify and reconcile with the existing curvature.<sup>17</sup> It can be ascertained that, Islamic law thinking which is only oriented to the handling of cases will tend to be characteristic which ignores the handling of strategic problems precisely because of its nature which requires a *kulliyat* and systematic approach. There is no harm in Islamic legal thinking to pay attention to the questions that are micro (*juziyat*). But it is a big mistake if his attention to micro things makes him forget to deal with macro matters. Islamic law thinkers who only use the textual-formalistic approach in understanding Islamic teachings, but never touch the substance and spirit of the teachings themselves, will ignore and forget that the benefit of humanity and humanity as the ultimate goal revealed revelation. Another characteristic of textual law thinking is its formalism. This law logic will never confirm for what a law is set, for whose interests, and where it has that interest. What is important for him is that a law thought regarding any case can be formally accounted for the sound of a particular text (*nash*). It does not really matter, whether the law in its historical reality has the background (*asbab al-Nuzul*) that touches the benefit of the interests of a group of people. Or even when Originally formally contained text that could be used as a reference, then a legal thought, in our fiqh tradition until now, has been considered valid even though it is no longer relevant to the current situation or condition. In the beginning, many people were attracted to the principle of scientific objectivity. But over time there came the realization that the principle of neutrality in the scientific world, especially religious scholarship, was something naive. Because if neutrality is considered to be found in the body of science as science, then science itself is basically a tool that will be subject to the subjective choices of decision makers. That is, if the neutrality of science can be maintained at the axiological level in the hands of practitioners and decision makers, neutrality is completely gone. I agree with the approach states that the principles of neutrality are often put forward by scientists, especially in the field of law (*fiqh*), in essence it is an irresponsible attitude. Scientists like this are like a master who defines his responsibility solely on the making of *Keris* (Javanese Sword) or swords with high slashing abilities. While in reality the *Keris* and sword were used by many people to kill other people at all he did not want to know. What is important for him is making *Keris* and swords, as sharp as possible. but he never thought how and for what the sword was made, meaning, that something was made must have certain goals in terms of Islamic law, of course, in order to create the benefit of the entire human race without

<sup>17</sup> *Ibid.*, pg. 36

exception. In Islam, the moral responsibility as formulated in the last question is actually clear. That all of them must be carried out with a double commitment: Vertically, responsibility to God; horizontally, it is the responsibility of realizing the benefit of the universe, this is in accordance with the duty of the Apostle as "rahmatan lil 'alamin". If the targets are so universally questioned as the priority scale, then surely for the people or the people who (when the law thinking is formulated) is at the farthest position from the *maslahah* or strictly the priority is on "those who are in a position of danger", which in the political language of the Qur'an itself is called the class of people who *mustad'afin* (people who need help).<sup>18</sup> Therefore, it is clear that the basis of the building of Islamic law thought is benefit, the benefit of universal humanity, or in a more operational expression of "social justice". Any offer of theoretical / *ijtihadi* and however whether it is supported by a text or not which can guarantee the realization of humanitarian benefit, in the eyes of Islam is legitimate, Muslims are bound to take it and realize it. On the other hand, any theoretical / *ijtihadi* offer that is (supported by text or not) which conclusively does not support the guarantee of benefit, especially that opens up the possibility of harm, in the eyes of Islam is a fascist and Muslims are individually or join the group to prevent it. With this paradigm, the rules which have been held by the world of *fiqh* which read: "idza ashahhal hadith fa huwa madzhaby (if a hadith (teaching text) has proven its validity, that is my madzhab", convincingly needs to be rethought. but it is placed on the program, in proportion, this rule is proportional if we place it as a reference to legal thinking in the *amaliyah* area that is personal which is usually *ghair ma'qulil ma'na*. In short, for the law thought area of *ubudiyah mahdhal* (prayer, fasting, hajj) or close to him. But for the world of law thought between human beings *muamalat*, and especially the law thought of *siyasah ijtima'iyah*, the reference paradigm that we use is *Idza sahhati maslahahu fa huwa madzhaby* (if the demand for benefit, justice has become legitimate - through agreement in deliberations - then that's my madzhab). In the area of *mu'amalah* between humans this text (*nash*) binding doctrine is only fundamental (fundamental), regarding moral principles. While those that are instrumental (technical and institutional) are basically open to changes in adjustments.<sup>19</sup> With an offer of rules emphasized more on substance, it is common good of justice, it does not mean that the formal and textual aspects of law provisions must be ignored. Legitimate legal-formal-textual provisions, however, must be a reference for human behavior in shared life. But at the same time, it must be realized as deeply as possible that the legal-formal and textual benchmark is only the way in which the ideal of benefit, justice is actualized in real life. This means that formal-textual provisions, which somehow and come from any source, must always be open or believed to be open to, if necessary, amended or updated in accordance with the demands of the benefit and ideals of justice. If we want to re-actualize Islamic law with the offer of the above concept, then we must see that *fiqh* is the dominant product of reason rather than revelation, which can therefore be amendment with, changed and even thrown away in order to answer the changing challenges of the times to always be in accordance with the situation and conditions under which the law was stipulated. The divisions of the *mazhab* for modernist *mujtahids* are not something sacred. Borrowing the term Hallaq "takhayyur-cum-talfiq", the models of *ijtihad* from each *Mazhab* is combined and interpreted by prioritizing the surrounding context.<sup>20</sup>

#### 4. REINTERPRETING THE CONCEPT OF QATH'I AND DHANNIY

It is familiar to *ulama* (Islamic Scholar) 'with the terms *Qath'iy* and *Dhanniy* according to an opinion both terms are actually not derivate from the Qur'an or the hadith of the Prophet.

<sup>18</sup> Amir Mu'allim et al., *konfigurasi Pemikiran Hukum Islam*, (Yogyakarta: UII Press, 1999). pg. 68. see at book Prof. Dr. Munawir Sjadzali, *Ijtihad Kemanusiaan*.

<sup>19</sup> Mun'im A. Sirry, *Sejarah Fiqih Islam Sebuah Pengantar*, (Surabaya: Risalah Gusti, 1995), pg. 43

<sup>20</sup> Wael B. Hallaq, *An Introduction To Islamic Law*, pg. 117.

It is not clear who first brought up the two terms with the aim of categorizing verses of the Qur'an and the hadith of the Prophet. However, almost no one has ever questioned the existence of these two terms, according to Masdar F. Mas'udi because of the strong similarity with the category of muhkam and mutasyabihat which was introduced by the Qur'an itself. Both of them depart from an understanding of the teaching texts from a semantic perspective, language. Not from the idea ordered by the teaching text. There is only a difference in its use, if Qathiy-Dhanniy is used in the verses of Ahkam while Muhkamat-mutasyabihat is used for non-legal verses.<sup>21</sup> If this understanding is true, then basically we also need to review our understanding of the concept of ushul fiqh about what has been called qath'iy (which is certain and cannot be changed by ijihad) and what is called dhanniy (which not / less certain and can be changed by ijihad) in Islamic law. Our Fiqh has said that the qathy is nothing (laws) that are clearly designed by the Qur'an / Hadith of the Prophet while dhanniy is nothing (law) the instructions for the text are not sarif, ambiguous and contain meanings that can be different. Some scholars' argued that the qathiy in Islamic law, in accordance with the meaning harfiyah (as something that is definite, unchanging) is the value of benefit or dhanniy category (uncertain and changeable) are all technical provisions or institutions intended as an effort to describe the qath'iy (value of benefit or justice) in everyday real life. So if it is said that ijihad cannot occur for the qath'iy area, and can only be done for things that are dhanniy, it is true. The idea of "prosperity and justice" as a matter of qathiy in Islamic law is certainly certainly not, even unnecessary, carried out by ijihad in order to determine its legal position, whether obligatory, change or so on.<sup>22</sup> What we have to think about with all our abilities is the things that are dhanniy, which are uncertain, which we must continually update in accordance with the demands of space and time that also keep moving, they are:

1. Definition and ontological concept of benefit, justice, in a certain space and time context which is relative to where we are;
2. An adequate normative framework as the embodiment of the ideals of the benefit of justice in the context of a particular space and time and
3. An adequate institutional framework for the means of actualizing the norms of welfare-justice, referred to in point 1-2, in the relevant social reality.

To make it easier to understand, I gave an illustration of Shari'at zakat. The purpose of shari'at zakat (obligatory alms) is clear: namely the realization of social justice and prosperity along with a strong principle of helping the weak. Here there is no need at all to do ijihad in order to determine the law to uphold justice as aspired by the concept of zakat. What ijihad needs to do is in terms of:

1. The conception of social justice and welfare distribution in a particular context of space and time, for example the context of the Indonesian nation in the decade of the 90s.
2. How much burden should be borne by those who are able (*miqdarus shadaqah*) on the basis of any prosperity, when to be paid (*waqtul`ada*) and who and where is the address that in real and definitive terms must benefit from the obligatory alms and sectors anything that is also real and definitive must be supported by alms funds and so on.
3. What kind of institution should be available in Indonesia's socio-political realities that can support the realization of social justice with the commandments of charity, how the mechanism of its formation, its work and its control..<sup>23</sup>

<sup>21</sup> Masdar F. Mas'udi, "Memahami Ajaran Suci dengan Pendekatan Transformasi" in *Polemik Reaktualisasi Ajaran Islam*, (Jakarta: Pustaka Panjimas, 1988), pg.184

<sup>22</sup> *Ibid.*, pg.186. see at book *Kearah Fiqih Indonesia*, ed., Yudian W. Asmin by syamsul Anwar, pg. 57

<sup>23</sup> Masdar F. Mas'udi, "Meletakkan Kembali Masalah Sebagai Acuan Syari'ah", *Jurnal Ilmu dan Kebudayaan, Ulumul Qur'an*, No. 3. Vol.VI year. 1995, pg.77

Various provisions contained in the teaching texts or in the *aqwal* (sayings) of the *ulama* regarding these issues in point 1, 2 and 3 according to Masdar there are no *qath'iy*; everything is *dhanniy* and because of that it cannot even be inevitable to be adjusted, changed, whenever the demand for justice desires. For example about *amwal zakawi* (Income obligation); It is not fair for today, we are only wearing obligatory alms levies or dates and wine, while "oil palm, apples, coffee, tobacco" that we are just as economical. It is also unfair that we impose obligatory alms burdens on the income of the agricultural sector while we are free from the industrial and service sectors.<sup>24</sup> Other examples of goods can be used as an illustration, if in the past people were allowed to break their fast, making prayer even *qashar* (shorten the number of *sholat*) due to traveling by reason of *musyaqah* (difficulties) then what about hard workers now, such as pedicab drivers, construction workers, stone worker and so on is much heavier (*musyaqah*), does it still have to be placed outside of people who have no right to get dispensation (*rukhsah*)?, If so, justice which is the initial goal of *Sharia* is reduced by the understanding methodically should be questioned.

## 5. LIMITATION AND CLASSIFICATION OF MASLAHAH

Perhaps we all agree that the objectives of Islamic law are set in order to bring benefit and reject damage to the life of humanity on this earth. But this question is what kind of benefit and damage is the measure and who has the authority to determine it. The emergence of questions like this is a natural thing and needs to be answered. Failing to answer this question will again lead us to say the benefit of justice as the goal of the *shari'ah* (law) while what actually happens is that the *shari'ah* has been made our goal for itself. Benefit - justice is just an empty jargon. The majority of scholars have agreed that to establish Islamic law against a *mukallaf* act which is a legal consideration is a problem. Problems that are the principle to become the basis of legal considerations are (1) Having a relationship with fulfilling the needs of the need (urgent interest), (2) relating to fulfilling the needs in accordance with the requirements (*hajiyyat*), and (3) fulfilling with aesthetic feasibility needs (*tahsiniyyat*) According to Imam Syathibi, what is meant by *maslahah* is a provision containing goodness for humanity. It is understandable, that Islamic law was revealed to bring benefits and common good in addition to eliminating distress both in the world and in the hereafter. Masdar F. Mas'udi<sup>25</sup> classifies *maslahah* into three categories (1) personal-subjective *maslahah*, (2) personal-inter-subjective *maslahah*, and (3) social-objective *maslahah*. What is intended by personal-subjective *maslahah* is *maslahah* which is basically limited to the person of the actor as an autonomous individual. Therefore, rational-objective considerations cannot be manipulated to change the religious provisions of this category. For example about the location of the *Hajj*, which according to the provisions of the *Qur'an* was carried out in Mecca with its core part, *Arafah*. Rational-objective considerations, for example concerning the weather conditions, might recommend that the place be moved, no longer in the hot Makkah, but in other places, for example in Bandung, which is cool. This cannot be happen. Similarly, it relates to the number of prayers per day and the procedure. All of that let it be fulfilled as guided to us. If in this case people disagree, let each one fulfill it according to the procedure believed. If only there is a change due to consideration of the problem, let the religion regulate it. Such as dispensation in the implementation of prayers for the sick or traveling, concessions in the form of no provisions in terms of the number and procedures for the collection of *zakat*, restrictions and distribution. In the case of *zakat*, with the *Qur'an* which sets a minimum limit, it can be seen that Islam recognizes the existence of economic strata, namely the existence of parties who give and parties who receive. Islam recognizes the difference in quantity of income which is income between humans because this

<sup>24</sup> *Ibid.*, pg.78

<sup>25</sup> Masdar F. Mas'udi, "Memahami Ajaran Suci dengan Pendekatan Transformasi" in *Polemik Reaktualisasi Ajaran Islam*, (Jakarta: Pustaka Panjimas, 1988), pg. 186-188

is an objective social fact.<sup>26</sup> Regarding the second category of *maslahah*, internal-subjective benefit, what is meant is the benefit achieved by an individual as an autonomous person in his interaction with other individuals as an autonomous person (*mu'amalah baina افراد*). Entering this category is the one in *fiqh* known as *akhwal syakhsyiah* and the interaction between others is civil. Thus, as an autonomous individual initiative, an *akad* of marriage or sale and purchase, for example, must be guaranteed to take place with the free will of each party and according to the procedures chosen selectively by the individuals concerned. Then the third is Social *Maslahah*, which is a benefit that does not depend on the interests of individual people, but rather on the interests of many people. Therefore the benefit of this category is the subject not the individual's actions as an autonomous person, but the actions of social institutions or institutions, political, economic, cultural and so on. In the political field, for example, the main issue of the problem of this category is how people's lives must be regulated, who is sovereign to regulate, for whose interests, what institutions must functionally exist, how are the relationships between these institutions.<sup>27</sup> In the context of the interests of the third *maslahah*, many parties, especially the government or authorities, are required to regulate and provide binding policies such as the development of contemporary Indonesian legislation that is closely related to the development of a culture of Islamic law. Take the example of provisions for Indonesian Muslims, which say "marriage is not legal if it is not printed on the Marriage Registrar (KUA)," thus the provisions in the class *fiqh* that allow marriage to be *sirry* (silently) are not accommodated in the provisions of legislation in Indonesia, because it is suspected stronger brings more consciousness than the *maslahah*. Other examples, for example, in the field of marriage, are the permits for more than one wife, marriage permits for people who are not 21 years old, etc. These are all forms of government intervention for the benefit and common good. Thus, *fiqh* (Islamic jurisprudence) must be seen as a chain of unceasing changes without having to question its validity because in the end the *fiqh* only concerns the issue of religious understanding of *furu'iyah*. But to make the right choices, a number of conditions must be met, First, there is a level of education, a sense of responsibility and a high level of openness from the Muslim community itself. Second, there is courage among Muslims to take unconventional choices from the choice pairs mentioned above. Third, understanding the socio-cultural and political factors underlie the birth of a *fiqh* product, in order to understand the particularism of the legal thought product. Thus, if there are different particularist elements in other places, then the product of law thought must automatically be changed and adjusted. Thus the dynamics of law (*fiqh*) of Islam can continue to be maintained and developed. We also need to say that most of the positive legal laws currently used in Islamic societies are obsolete laws, which were made in the early 19th century. This law has been left behind and cannot be used for the current conditions. The law, in fact, can no longer overcome the new reality faced by Islamic society, even by the majority - if not the whole - developing countries or the third world.<sup>28</sup> This fact means *fiqh* needs a new reinterpretation so that can answer all the problems in line with the time, situation and condition in particular communities. It also needs to be constructed changes to positive law that still apply in Islamic countries to suit the situation and conditions the community itself.

## 6. CONCLUSION

With the *maslahah* in the system of Islamic law thought, the development of Islamic law can grow steadily. The science of *fiqh* has always evolved because this science has the task of evaluating *af'ala mukallafin* which continues to change.

<sup>26</sup> Muhammad Syahrur, *Prinsip dan dasar Hermeneutika Hukum Islam Kontemporer*, terj (Yogyakarta; eLSAQ Press, 2007), p. 74.

<sup>27</sup> Masdar F. Mas'udi, "Memahami Ajaran Suci, p.189

<sup>28</sup> *Ibid.*

Because it is rather difficult to accept an opinion, the door of *ijtihad* has been closed, because this knowledge uses a lot of thought energy and the human mind cannot be closed, as dammed by the ability to create and do human beings who have changed over time. What happens in *fiqh* is the lack of popularity of *ijtihad* at one time, the lack of a number of *mujtahids* and the lack of the spread of their *ijtihad* results due to imperialist political pressure on Islamic countries and economic pressure due to the occupation. Indeed, Islam teaches truth and values that are eternal and universal, which must be trusted and practiced by every Muslim, wherever he is and whenever he lives. But in its implementation and elaboration, Islam has the capacity to accommodate differences which are the nature of human life, and has flexibility to develop according to the civilization. It is necessary to have the courage to make a change in understanding of the texts so that Islamic law is always relevant and brings benefit to the life of humanity that continues to grow. Such things have been done by many rulers, figures, scientists, and Islamic law thinkers who always try to maintain the relevance of Islamic teachings, which are social or *mu'amalah* with the world in which we live today we should not always be attached to understanding *harfiyah* or textual.

#### LITERATURE:

1. Abstracted from Seyyed Hossein Nasr, *Antara Tuhan, Manusia, Dan Alam; Jembatan Filosofis Dan Religius Menuju Puncak Spiritual*, terj. Ali Noer Zaman, (Yogyakarta: IRCiSoD, cetakan kedua II, 2005)
2. Ahmad al-Raysuni and Muhamamad Jamal Barut, *Ijtihad; Antara Teks, Realitas, dan Kemaslahahan Sosial*, terj. Ibnu Rusydi and Hayyin Muhdza (Surabaya; Erlangga, 2002), pg. 16.
3. Amir Mu'allim et al., *konfigurasi Pemikiran Hukum Islam*, (Yogyakarta: UII Press, 1999). pg. 68. see at book Prof. Dr. Munawir Sjadzali, *Ijtihad Kemanusiaan*.
4. Ashgar Ali Engineer, *Islam dan Teologi Pembebasan* (Yogyakarta: Pustaka Pelajar, 2003)
5. Atih Rohaeti Dariah dkk, *A New Approach for Sustainable Development Goals in Islamic Prespective*, pg. 159-166.
6. Atih Rohaeti Dariah et al, *A New Approach for Sustainable Development Goals in Islamic Prespective* (JURNALProcedia: Social and Behavioral Science 219, 2016) pg. 159-166.
7. Hassan Hanafi, *Islamologi 3: Dari Teosentrisme ke Antroposentrisme*, terj. Miftah Faqih (Yogyakarta: LKiS, 2004).
8. *Ibid.*, pg.78
9. *Ibid.*, pg. 36
10. Ibnu Mandzur, *Lisanul Arab* (Beirut: Dar Ihya al-Turast al-Arabiy, s.a), pg. 227
11. Joseph Schacht. *An Introduction to Islamic Law* (London: Oxford University Press, 1965), h.11.
12. *Kearah Fiqih Indonesia*, ed., Yudian W. Asmin by syamsul Anwar, pg. 57
13. Masdar F. Mas'udi, "Meletakkan Kembali Masalah Sebagai Acuan Syari'ah", *Jurnal Ilmu dan Kebudayaan, Ulumul Qur'an*, No. 3. Vol.VI year. 1995, pg.77
14. Masdar F. Mas'udi, "Memahami Ajaran Suci dengan Pendekatan Transformasi" in *Polemik Reaktualisasi Ajaran Islam*, (Jakarta: Pustaka Panjimas, 1988), pg.184
15. Masdar F. Mas'udi, "Memahami Ajaran Suci dengan Pendekatan Transformasi" in *Polemik Reaktualisasi Ajaran Islam*, (.Jakarta: Pustaka Panjimas, 1988), pg. 186-188
16. Masdar F. Mas'udi, "Memahami Ajaran Suci, p.189
17. Masdar F.Mas'udi, " Memahami Ajaran Suci Dengan Pendekatan Transformasi" at *Polemik Reaktualisasi Ajaran Islam*, (Jakarta: Pustaka Panjimas, 1988) pg. 178.
18. Muhammad In`am Esha, *Teologi Islam: Isu-Isu Kontemporer*, pg. 63.
19. Muhammad Muslehuddin, *Philosophy of Islamic Law and The Orientalists*, (New Delhi: Markazi Maktaba Islami, 1985), pg. xi.

20. Muhammad Syahrur, *Metodologi Fiqih Islam kontemporer*, Cet VI (Yogyakarta: eLSAQ Press, 2010), pg. xi.
21. Muhammad Syahrur, *Prinsip dan dasar Hermeneutika Hukum Islam Kontemporer*, terj (Yogyakarta; eLSAQ Press, 2007), p. 74.
22. Mun'im A. Sirry, *Sejarah Fiqih Islam Sebuah Pengantar*, (Surabaya: Risalah Gusti, 1995), pg. 43
23. Munawir Sjadzali, *Ijtihad kamanusiaan*, pg. 35
24. Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: The University of Chicago Press, 1996), pg. 85.
25. Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: The University of Chicago Press, 1996), pgh. 175.
26. Wael B. Hallaq, *An Introduction To Islamic Law*, cet. II (New York; Cambridge University Press, 2010), pg. 25.
27. Wael B. Hallaq, *An Introduction To Islamic Law*, pg. 117.

# LITERATURE REVIEW ON MEDIATION/SULH IN RESOLVING CHILD CUSTODY DISPUTES IN THE SYARIAH COURT IN MALAYSIA

**Nora Abdul Hak**

*Ahmad Ibrahim Kulliyah of Laws  
International Islamic University Malaysia  
P.O. Box 10, 50728 Kuala Lumpur, Malaysia  
ahnora@iium.edu.my*

**Ahmad Mukhlis Bin Mansor**

*Ahmad Ibrahim Kulliyah of Laws  
International Islamic University Malaysia  
P.O. Box 10, 50728 Kuala Lumpur, Malaysia  
ahmadmukhlismansor@gmail.com*

**Roslina Che Soh**

*Ahmad Ibrahim Kulliyah of Laws  
International Islamic University Malaysia  
P.O. Box 10, 50728 Kuala Lumpur, Malaysia  
roslinac@iium.edu.my*

## **ABSTRACT**

*In previous studies conducted, mediation (sulh) has been reported to be a successful mechanism in reducing the backlog of cases and able to lessen cases or disputes being brought to court trial. However, based on a recent statistic especially, in cases of child disputes in the Syariah Courts throughout Malaysia, it shows that less than 50% of these cases have been settled at the sulh process. Furthermore, the statistic also reveals that 4,826 out of 15,243 cases of sulh in child custody disputes cannot proceed due to non-attendance of parties to the sulh proceeding. This has resulted in the cases being brought to the court for trial instead of being settled through sulh process. It is indicated that the mechanisms and the implementation of sulh in the Syariah Court are insufficient in dealing with the child custody issues. Moreover, it is also revealed that the current legal frameworks are insufficient to make sulh session a success. Therefore, as a preliminary study to the above issue, a literature review study on the topic has been conducted and it shows that there is insufficient research/writing specifically on the practice of sulh in child custody disputes in Malaysia. The aim of this article is to discuss and analyse all the relevant literatures on the topic in order to have a better understanding of the role and function of sulh/mediation in helping the parties resolving their child custody disputes. The methodology adopted is a library study to collect information, data and theories involved. Then, the data were analyzed by using content analysis method.*

**Keywords:** *ADR, child custody dispute, mediation, sulh, syariah court*

## **1. INTRODUCTION**

As a multiracial, multireligious and multicultural nation, Malaysia practices dual systems of family law, one for Muslims and another for non-Muslims. Due to this diversity, different court structures are established, mainly to administer family law for Muslims and non-Muslims separately<sup>1</sup>.

---

<sup>1</sup> Marzuki Mohamad, "Contesting Syariah Laws in Malaysia: Religion, Human Rights and the State's Response," *Journal of Politics and Law* 10, No. 5 (2017): 140, <https://doi.org/10.5539/jpl.v10n5p140>.

Family is defined by Hammudah (1995) as “a special kind of structure whose principles are related to one another through blood ties and/or marital relationships, and whose relatedness is of such a nature as to entail “mutual expectations” that are prescribed by religion, reinforced by law, and internalized by the individual”<sup>2</sup>. Whenever there exists a family conflict, the society and the relevant authorities have to take relevant action to ensure public stability<sup>3</sup>. Research conducted by Kelly found that, due to parents’ separation, the children to the marriage suffer many psychological symptoms and have more adjustment problems than those kids who their parents are not involved in divorce<sup>4</sup>. Children of parents who are having family disputes not only suffer trauma, but also develop many social problems and eventually give impact to their natural development. Therefore, child custody disputes that arise after the divorce of parents should be handled effectively and amicably to avoid more negative effect on the development of the child. Michael J. Albano in his article commented that the legal issues in family law cases not only involve the legal aspect, but also other disciplines of studies. The competent judges and lawyers who are involved in family law disputes must also possess adequate knowledge of mediation, the law of arbitration, corporation, pensions, taxation, juvenile crime, domestic violence, and not to forget knowledge in psychology<sup>5</sup>. The concept and practice of dispute settlement outside the court are increasingly accepted by contemporary society. This is an alternative to the court trial that has long been practised in an adversarial system which usually takes a long time, costs a lot to the parties and also requires a lot of procedural steps in the litigation process<sup>6</sup>. Due to these procedural and technical difficulties, the emergence of alternative ways to resolve disputes, like mediation, becomes a good option for the disputing parties to settle their disputes amicably<sup>7</sup>. As for the civil court, the practice of mediation is an alternative way to resolve legal disputes other than going to the courts for trial, or bringing the disputes to the arbitration centres. It is a voluntary and informal process which involves an impartial third party as the mediator, who plays the role of assisting the disputing parties in reaching a mutually satisfactory resolution<sup>8</sup>. Many countries like USA<sup>9</sup>, Singapore, New Zealand and Australia<sup>10</sup> make it a mandatory requirement for parents to go through the mediation process in child custody disputes before litigation process commence. A similar practice is also available in Malaysian Syariah Courts whereby upon receipt of an application for custody of a child, the court will set a date for both parents to attend a mediation process conducted by a mediator or Sulh Officer<sup>11</sup>.

<sup>2</sup> Hammudah, Abd al-Ati (1995). *The Family Structure in Islam*, American Trust Publications, p. 19.

<sup>3</sup> ‘Ain Husna Mohd. Arshad Roslina Che Soh @Yusoff The Need For Establishment Of A Family Court In Malaysia: An Appraisal, *IUM Law Journal*, Vol. 20, No. 2, 2012, p. 197

<sup>4</sup> Joan B Kelly, “Children’s Adjustment in Conflicted Marriage and Divorce: A Decade Review of Research,” *Journal of the American Academy of Child & Adolescent Psychiatry*, Vol. 39, No. 8 (August 1, 2000): 963–73, <https://doi.org/10.1097/00004583-200008000-00007>.

<sup>5</sup> Michael J. Albano, “Children - The Innocent Victims of Family Breakups: How the Family Law Attorney, the Courts, and Society Can Protect Our Children,” *University of Toledo Law Review* 26 (1995): 787–804, <https://heinonline.org/HOL/Page?handle=hein.journals/utol26&id=797&div=41&collection=journals>.

<sup>6</sup> Syed Khalid Rashid, *Alternative Dispute Resolution in Malaysia* (Kulliyah of Laws, IUM, 2000).

<sup>7</sup> Nurah Sabahiah Binti Mohamed, “Mediation in the New Dispute Resolution Landscape; a Case for the Enhancement of Its Application in Malaysia” (Ph.D thesis, University Malaya, 2013), 1.

<sup>8</sup> Kamarudin Abdul Rani and Ab Aziz Norjihan, “Mediation in Malaysia : Is It Facilitative, Evaluative or Transformative?” *West East Journal of Social Sciences* 3, No. 1 (2014): 8–13.

<sup>9</sup> Nora Abdul Hak, “Mediation In Custody Disputes: Challenges And Prospect In Malaysia,” *International Journal of Social Policy and Society* 9 (2012): 59.

<sup>10</sup> Ahmad Sa’odah and Abdul Hak Nora, “Family Mediation and Sulh: An Alternative Dispute Resolution in Malaysia,” *International Journal of Social Policy and Society* 7, No. January (2010): 66–79, [https://www.researchgate.net/profile/Saodah\\_Ahmad/publication/299336872\\_FAMILY\\_MEDIATION\\_AND\\_SULH\\_AN\\_ALTERNATIVE\\_DISPUTE\\_RESOLUTION\\_IN\\_MALAYSIA/links/56f0fa5308aedbe3ce45797.pdf](https://www.researchgate.net/profile/Saodah_Ahmad/publication/299336872_FAMILY_MEDIATION_AND_SULH_AN_ALTERNATIVE_DISPUTE_RESOLUTION_IN_MALAYSIA/links/56f0fa5308aedbe3ce45797.pdf).

<sup>11</sup> Sa’odah Ahmad, “User Satisfaction With Sulh (Mediation) in the Selangor Syariah Judicial Department,” *Malaysian Journal of Consumer* 19, No. December (2012): 125–41,

[https://s3.amazonaws.com/academia.edu.documents/44936808/Saodah\\_A\\_-\\_User\\_Satisfaction\\_with\\_Sulh\\_Mediation\\_in\\_the\\_Department\\_of\\_Syariah\\_Judiciary\\_Selangor..pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1503204740&Signature=sRo7qZ7Dmm94fioSXQVLoqSSYpQ%25](https://s3.amazonaws.com/academia.edu.documents/44936808/Saodah_A_-_User_Satisfaction_with_Sulh_Mediation_in_the_Department_of_Syariah_Judiciary_Selangor..pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1503204740&Signature=sRo7qZ7Dmm94fioSXQVLoqSSYpQ%25).

In Malaysia, the practice of mediation is not new, it has been implemented in banking and insurance disputes and then later introduced in matrimonial disputes.<sup>12</sup> Mediation services in Malaysia are available in respective institutions for the purpose of dispute resolution such as in insurance disputes<sup>13</sup>, banking disputes<sup>14</sup>, community disputes<sup>15</sup>, family disputes including court-annexed<sup>16</sup>, mediation under the Mediation Act 2012<sup>17</sup>, mediation under the Malaysian Mediation Centre set up by the Bar Council of Malaysia, and mediation under the Legal Aid Bureau<sup>18</sup>. In the Islamic legal system, the concept and practice of alternative dispute resolution have long been available since the arrival of Islam. Islam encourages parties in disputes to settle their conflicts by way of Sulh because of its ability to resolve the dispute without negatively affecting the existing relationship among parties. This can be seen in verses of al-Qur'an<sup>19</sup> and the prophetic traditions as well as Ijma' (unanimous opinion of Muslim jurists)<sup>20</sup>. Due to a backlog of cases in Syariah courts, the Malaysian government in 2002 has made a progressive initiative of introducing Sulh (mediation) in Syariah Courts throughout Malaysia with the aim to provide amicable, speedy and inexpensive settlement to the disputing parties without having to resort to litigation<sup>21</sup>. Section 99 of the Syariah Court Civil Procedure (Federal Territories) Act 1998 provides that the parties to the dispute at any stage of the proceeding may hold Sulh (mediation) to settle their dispute. The Sulh council will be led by a Sulh officer whereby the parties will discuss and decide their dispute in an amicable way. The Sulh officer does not have the authority to decide on the case. If the parties are unable to reach a mutual agreement, then the case will be brought to the court for trial.<sup>22</sup> Based on literature review, there is insufficient study specifically on the practice of mediation in child custody disputes. Many researchers like Abdul Razak<sup>23</sup>, Abdul Shukor<sup>24</sup>, Mohd Radzi<sup>25</sup> Nor Hanim<sup>26</sup>, Ghazali<sup>27</sup>, Raihanah<sup>28</sup>, Mohd

<sup>12</sup> Abdul Rani and Norjihan, "Mediation in Malaysia: Is It Facilitative, Evaluative or Transformative?"

<sup>13</sup> Nurjannah@ Chew, L. H., "The Role of Financial Mediation Bureau in Resolving Disputes on insurance Claims in Malaysia", *Malayan Law Journal*, vol. 1, (2013): 222.

<sup>14</sup> Yong, Y. C., "Extending Mediation Practice to the Banking Industry", *Malayan Law Journal*, vol. 3 (2002): 100.

<sup>15</sup> Ili Liyana Mokhtar, "The Appointment Of Community Mediators Is Based On High - Risk And Problematic Areas", *New Straits Times*, 17 July 2012 at <<http://www.nst.com.my/nation/general/selangor-penang-kuala-lumpur-and-johor-have-most-number-of-mediators-1.108899>>.

<sup>16</sup> The Practice Direction No 5 of 2010 by the Chief Justice of Malaysia and Rules for Court Assisted Mediation

<sup>17</sup> It only applicable to private mediation where mediators are not judges or judicial officers.

<sup>18</sup> Faridah bt Ibrahim, "Mediation: The BBG Experience in Malaysia" in *Mediation & Arbitration in Asia Pacific: Conference Proceedings*, edited by Syed Khalid Rashid and Syed Ahmad Idi, (Kuala Lumpur: IIUM Press, 2009), 191.

<sup>19</sup> Verse 128 *Surah An-Nisa (Women)*. The Quran encourages parties to use sulh in order to resolve their disputes: 'reconciliation between them, and reconciliation is better' and Verse 9 in *Surah al-Hujurat (The Chambers)* whereby the verse mentioned 'If two parties among the Believers fall into a quarrel, make ye peace between them . . . make peace between them with justice, and be fair: For God loves those who are fair and just.' Also verse 114 *Surah An-Nisa (Women)*.

<sup>20</sup> Hammad Mohamad Dahalan and Mohamad Azhan Yahya, "Perjanjian Sulh Di Antara Pihak-Pihak Bertikai Di Mahkamah Syariah Sebagai Pilihan Atau Persetujuan Yang Perlu Dipatuhi?," November (2016): 256.

<sup>21</sup> Jabatan Kehakiman Syariah Malaysia, "Kajian Keberkesanan Majlis Sulh Di Mahkamah Syariah Seluruh Malaysia," 2013.

<sup>22</sup> Ramizah Wan Muhammad, "Sulh (Mediation) in the Malaysian Syariah Courts," in *Mediation in Malaysia: The Law and Practice*, ed. by Mohammad Naqib Ishan Jan and Ashgar Ali Ali Mohamed, (Petaling Jaya: Lexis Nexis, 2010), 424; see Official Website of Federal Territory Syariah Court available at [http://www.mswp.gov.my/index.php/en/warga-mswp-3/aplikasi-online/helpdesk-e-syariah/124about\\_mswp/division-unit/223-sulh-section](http://www.mswp.gov.my/index.php/en/warga-mswp-3/aplikasi-online/helpdesk-e-syariah/124about_mswp/division-unit/223-sulh-section)

<sup>23</sup> Abdul Razak bin Mat Nayan, "Peranan Sulh Dalam Mengatasi Penceraian Dan Krisis Rumah Tangga (Kajian Di Mahkamah Syariah Negeri Sembilan Darul Khusus)" (International Islamic University Malaysia, 1994).

<sup>24</sup> Abdul Shukur bin Abdul Hamid, "Konsep Dan Peranan Al-Sulh: Tinjauan Mengenaunya Di Dalam Enakmen Kanun Prosedur Mal Syariah Negeri Selangor" (International Islamic University Malaysia, 1997).

<sup>25</sup> Mohd Radzi bin Haji Abdul Latif, "Pelaksanaan Sulh Di Mahkamah Syariah: Kajian Di Mahkamah Syariah Di Negeri Sembilan Darul Khusus" (International Islamic University Malaysia, 1999).

<sup>26</sup> Nor Hanim Bt Abdul Halim, "Amalan Sulh Dalam Sistem Pentadbiran Undang-Undang Islam Di Malaysia: Kajian Mengenai Amalan Sulh Di Mahkamah Syariah Wilayah Persekutuan Kuala Lumpur" (International Islamic University Malaysia, 2000).

<sup>27</sup> Ghazali Abdul Rahman, "Sulh Dalam Perundangan Islam," 2000; Ghazali Abdul Rahman, "Sulh: Amalannya Dalam Perundangan Islam," 2001; Ghazali Abdul Rahman, "Sulh Dalam Pentadbiran Mahkamah Syariah: Cabaran Masa Depan," 2002.

<sup>28</sup> Raihanah Haji Azhari, "Sulh Dalam Perundangan Islam: Kajian Di Jabatan Kehakiman Syariah Selangor (JAKESS)" (Malaya University, 2005).

Fuad<sup>29</sup>, Atlas<sup>30</sup>, Nor Fadzlina<sup>31</sup> and Hammad<sup>32</sup> focus their studies on the general practice of Sulh in the Syariah court. In addition to that, Sa'odah<sup>33</sup> and Jabatan Kehakiman Syariah Malaysia<sup>34</sup> concentrated their studies on analysing the effectiveness of Sulh in the Syariah Court as a whole. Recent studies conducted by Nurah Sabahiah<sup>35</sup>, Alwi<sup>36</sup>, Nor Fadzlina<sup>37</sup> and Christina Ooi<sup>38</sup> focus on the suitability of mediation in Malaysia for private and court-annexed mediation, the development of mediation in Malaysia and other jurisdictions, a proposal on legislating court-directed mediation in civil court of Malaysia since there is inadequate guidelines on court-directed mediation and the need for a common set of guidelines and standard on the operation of mediation. Moreover, Nadia Murshida and Alias<sup>39</sup> in their qualitative study concentrates on the practice of Sulh in child custody disputes (hadhanah) in Syariah Court of Pulau Pinang only. It is observed that, there is inadequate research conducted on the application of mediation in child custody issue in Syariah. The issue of child custody is a never-ending dispute between parents. If such disputes can be resolved amicably for instance by way of mediation, the benefits are not only for the children but also for parents. The Malaysian government is concerned about the wellbeing of children in this country as they are the next generation of Malaysian society<sup>40</sup>.

## 2. STATEMENT OF THE PROBLEM

It has been reported that sulh practice in the Syariah Court is able to resolve the backlog of cases, however particularly in child custody disputes, the successful rate of sulh is not high. Based on the statistics provided by Jabatan Kehakiman Syariah Malaysia (JKSM), between the year 2013 until 2017 it is reported that only 43.76%, or a total number of 6,671 cases out of 15,243 of the child custody dispute cases brought to sulh process at the Syariah court throughout Malaysia, were successful<sup>41</sup>. The statistics also show that a total number of 2,084 cases were reported as unsuccessful due to parties being unable to reach into a mutual agreement on the child custody disputes during the sulh proceeding. Also, it is also revealed that 4,826 cases or 31.66% of sulh in child custody disputes could not proceed due to the failure of one or both parties to attend the sulh proceeding. With the positive acceptance of mediation as an alternative dispute resolution (ADR), there is a need for this study to be conducted on how mediation as an ADR mechanism has contributed to or facilitated settlement of disputes, particularly in child custody cases.

<sup>29</sup> Mohd Fuad Mohd Salleh, "Proses Penyelesaian Konflik Melalui Perundingan Sulh," 2006.

<sup>30</sup> Atlas Mohamad Zin, "Pengalaman Pelaksanaan Majlis Sulh Di Jabatan Kehakiman Syariah Negeri Selangor (JAKESS)," 2009.

<sup>31</sup> Nor Fadzlina Nawi, "Towards the Development of a Mandatory Family Mediation Program in the Malaysian Civil Legal System: Learning From Australia" (La Trobe University, Victoria, Australia, 2012).

<sup>32</sup> Hammad Mohamad Dahalan and Mohamad Azhan Yahaya, "Perjanjian Sulh Di Antara Pihak-Pihak Bertikai Di Mahkamah Syariah Sebagai Pilihan Atau Persetujuan Yang Perlu Dipatuhi?"

<sup>33</sup> Sa'odah Ahmad, "The Effectiveness of Mediation and Sulh in Resolving Family Disputes: A Study of Parties' Satisfaction with Sulh in the State of Selangor" (International Islamic University Malaysia, 2010).

<sup>34</sup> Jabatan Kehakiman Syariah Malaysia, "Kajian Keberkesanan Majlis Sulh Di Mahkamah Syariah Seluruh Malaysia."

<sup>35</sup> Nurah Sabahiah Mohamed, "Mediation in the New Dispute Resolution Landscape; a Case for the Enhancement of Its Application in Malaysia."

<sup>36</sup> Alwi Abdul Wahab, "Court-Annexed and Judge-Led Mediation in Civil Cases: The Malaysian Experience" (PhD Thesis, Victoria University of Melbourne, 2013).

<sup>37</sup> Nor Fadzlina Nawi, "Towards the Development of a Mandatory Family Mediation Program in the Malaysian Civil Legal System: Learning From Australia."

<sup>38</sup> Christina Ooi Su Siang, "Mediation and the Courts on Settlement of Disputes: An Analysis on Legislating Court-Directed Mediation in Malaysia" (University Malaya, 2017), at <http://tinyurl.com/yd99ywer>.

<sup>39</sup> Nadia Murshida Abd Azzis and Alias Azhar, "Pendekatan Mediasi Dalam Tuntutan Hadanah: Kajian Di Mahkamah Tinggi Syariah Pulau Pinang," *International Journal of Law, Government and Communication* 3, No. 9 (2018): 36-45.

<sup>40</sup> Rojanah Kahar and Najibah Mohd Zin, "Child Related Policy and Legislative Reforms in Malaysia," *International Journal of Social Policy and Society*, 2011.

<sup>41</sup> Statistic by Jabatan Kehakiman Syariah Malaysia revealed that between 2013 until 2017 from a total number of 52155 cases of Sulh being registered at the Syariah Court throughout Malaysia, there is a total of 15243 cases of hadhanah or child custody disputes which is equivalent to 29.23% of total number of Sulh cases being registered in the Syariah Court.

The study should also identify obstacles and shortcomings in the sulh process so that better suggestions and recommendations can be made to enhance the practice of mediation as an alternative way. It is important to note that, skilled and knowledgeable mediators are among the factors contributing to the success of mediation, as the court in one decided case mentioned that “skilled mediators are now able to achieve results satisfactory to both parties...which are quite beyond the power of lawyers and courts to achieve”<sup>42</sup>. The literature shows that there is insufficient research conducted on the practice of mediation in child custody disputes, hence the need for such a study. The future of our nation depends on building on the integrity of the family institution, contributing to the wellbeing of society.

### 3. LITERATURE REVIEW

The literature shows that previous studies mostly deal with the general overview of sulh in theory and practice. They are mainly, papers for seminars and conferences and projects conducted by students at the undergraduate and masters level. There are also studies conducted by looking at the statistical data on the achievement of sulh and also the effectiveness of sulh in general. Previous studies also focus on the effectiveness of sulh in speeding up the settlement in Syariah court thus, reducing the backlog of cases. A recent article written by Nadia Murshida and Alias, however, deals with child custody mediation (sulh), but such research only concentrates on the State of Pulau Pinang, and there is no quantitative method employed in such study<sup>43</sup>. Nadia Murshida in PhD research focuses on the procedure in the Hadhanah claims and welfare of the child in the Syariah courts of Northern States, with special reference to the Maqasid Syariah. Therefore, there is yet a study specifically focuses on the practice of mediation in child custody disputes in Malaysia. The issue of child custody is very practical and relevant to be addressed at this point of time. If the issue related to child custody can be resolved quickly, this can bring benefits to the children themselves and also the society at large. An unresolved issue of custody will cause psychological trauma to the children, and will increase the social problems among them especially the youths and eventually affecting their positive development. Children who are the victims in family disputes between parents usually live miserable lives. The discussion under the literature review is divided into several subtopics as below;

#### 3.1. Introduction to Mediation

Mediation is one of the alternative dispute resolution (ADR) processes, which is an alternative to litigation in the court proceeding. The process is less formal and intends to reach a mutual consensus by the needs and interests of the disputing parties. The mediation process will become success once the parties can work together on a workable solution, instead of disputing on who is right and/or wrong<sup>44</sup>. According to the Oxford Dictionary of Law, mediation is “a form of alternative dispute resolution in which an independent third party assists the parties involved in a dispute or negotiation, to achieve a mutually acceptable resolution of the points of conflict. The mediator, who may be a lawyer or a specially trained non-lawyer, has no decision-making powers and cannot force the parties to accept a settlement”<sup>45</sup>. The advantages of mediation are the parties’ satisfaction in terms of speedy process, freedom to choose a mediator, flexibility as to time and place, low cost, privacy and confidentiality, mutually acceptable results and lastly the parties themselves controlling the outcome of such

<sup>42</sup> *Dunnett v Railtrack* [2002] All ER 850.

<sup>43</sup> Nadia Murshida Abd Azzis and Alias Azhar, “Pendekatan Mediasi Dalam Tuntutan Hadanah: Kajian Di Mahkamah Tinggi Syariah Pulau Pinang.”

<sup>44</sup> Jay Folberg and Alison Taylor, *Mediation: A Comprehensive Guide to Resolving Conflicts Without Litigation*, (USA: Jossey-Bass Publishers, 1984), p. 10.

<sup>45</sup> Oxford Dictionary of Law, (UK: Oxford University Press, 7th ed, 2009), p. 348.

negotiation<sup>46</sup>. The establishment of family court in a number of countries was due to the reason that the features of family disputes are different as compared to other civil disputes. In family court, it involves third-party interest, for instance the children who are directly affected when there is a family crisis<sup>47</sup>. Besides promoting the application of alternative dispute resolution such as mediation, conciliation and arbitration<sup>48</sup>, some writers suggested that the family court should introduce a therapeutic approach<sup>49</sup>. The practice of mediation and/or conciliation as an alternative family dispute resolution encourages the parties to resolve their cases amicably and harmoniously. The Family Court mediation has been proven successful in Singapore since the establishment of its family court in 1995. It was reported that in 1995, out of 5452 cases, a total number of 4640 cases were successfully mediated, which is equivalent to 85.1%<sup>50</sup>. In ensuring the success of mediation, the parties will be given ample time to negotiate and discuss the terms that they disagree. Once they reach a mutually consensual agreement, it will be recorded as a consent order<sup>51</sup>. As mediation becomes one of the vital elements of Singapore's Family Court process, parties will only go for trial if there is a failure in the mediation process. Having strong networking with external partners such as the Singapore Mediation Centre, the Ministry of Community Development, Youth and Sports, Family Service Centres and other voluntary welfare organizations are among the success elements of Family Court in Singapore<sup>52</sup>. In Australia, the Family Court of Australia was established on 5<sup>th</sup> January 1976 by virtue of the Family Law Act 1975<sup>53</sup>, and started to provide a mediation service as an alternative way of dispute resolution in January 1992. In contrast to the adversarial court system, the primary dispute resolution (PDR) focused on parental responsibility and cooperation<sup>54</sup>. In 2006, there was a substantial reform in the Australian family law with the enactment of the Family Law Amendment (Shared Parental Responsibility) Act 2006. Besides encouraging shared parental responsibility after separation which is consistent with the best interests of the child, the new Act promotes resolution of disputes outside court, promotes less adversarial method in parenting disputes and more child-focused approach<sup>55</sup>. A family consultant who is a mediator will observe the court proceeding and play their role as an expert adviser to the judge and parties. The parties will provide their input to the judge on their case and what they want for their children. By having this, the judge will decide how the trial will be conducted<sup>56</sup>. As for Egypt, the Family Court in Egypt was introduced in 2004 with the aim of establishing the non-adversarial legal system, attentive to the best interests of the family, accessible, and affordable<sup>57</sup>.

<sup>46</sup> Charles B. Parselle, "The Satisfactions Of Litigation," Mediate.com, 21 June 2006, at <https://www.mediate.com/articles/parselle10.cfm>.

<sup>47</sup> Dame Brenda Hale, David Pearl, Elizabeth J. Cooke & Philip D. Bates (2002). *The Family, Law and Society Cases and Materials*, 5<sup>th</sup> Edition, Lexis Nexis, p. 227.

<sup>48</sup> Ain Husna Mohd. Arshad and Roslina Che Soh @ Yusoff, "The Need for Establishment of a Family Court in Malaysia: An Appraisal Keperluan Menubuhkan Sebuah Mahkamah Keluarga Di Malaysia: Satu Penilaian," *International Islamic University of Malaysia Law Journal*, Vol. 20 (2012): p. 195–218.

<sup>49</sup> Molly Cheang, "Family Court: Let's Have It" [1985] MLJ Jan-Jun cxlviii, p. clii.

<sup>50</sup> Lim Lan Yuan & Liew Thiam Leng, *Court Mediation in Singapore*, Singapore, 1997, p. 53. Petra

<sup>51</sup> Leong Wai Kum, *Principles of Family Law in Singapore*, Butterworth Asia, 2000, pp. 11-12.

<sup>52</sup> 'Ain Husna Mohd. Arshad Roslina Che Soh @Yusoff, *The Need For Establishment Of A Family Court In Malaysia: An Appraisal*, IUM Law Journal Vol. 20, No. 2, 2012, p. 210

<sup>53</sup> Patrick Parkinson, *Australian Family Law in Context, Commentary and Materials*, 4<sup>th</sup> Ed., Thomson Reuters (Professional) Australia Limited, 2009, p. 186.

<sup>54</sup> Dale Bagshaw, "The Move Towards Primary Dispute Resolution in Family Law: The Role of Government and Implication for Justice" Vol. 2 (1997) *Flinders Journal of Law Reform* 1.

<sup>55</sup> Chambers of the Honourable Diana Bryant "Family Court of Australia Annual Report 2005-2006: Part 1- Chief Justice's Review" <[www.familycourt.gov.au](http://www.familycourt.gov.au)> (accessed 27 February 2011).

<sup>56</sup> "Less Adversarial Trials" Family Court of Australia:

<http://www.familycourt.gov.au/wps/wcm/connect/FCOA/home/about/LAT/> (Accessed 20 August 2011).

<sup>57</sup> Mulki Al Sharmani, "Family Courts in Egypt: Pathway of Women's Empowerment?" via <http://www.pathwaysofempowerment.org/Familycourts.pdf> (accessed 27 February 2011).

Before the existence of the Family Court in Egypt, the Egyptian court faced a huge number of delay and backlog of cases with ineffective systems and overloaded courts<sup>58</sup>. However, there are obstacles faced by the mediation officers in the family court due to inadequate proper legal structure, less training and resources and inefficiency of enforcement mechanisms. The appointment of judges to hear the cases also are those who are not specialized in family law disputes resulting in the ineffectiveness of family court in Egypt<sup>59</sup>. In Malaysia, Section 2 of the Legal Aid Act 1971<sup>60</sup> provides that mediation “includes the undertaking of any activity for the purpose of promoting the discussion and settlement of disputes”. Section 3 of the Mediation Act 2012<sup>61</sup> states that mediation is “a voluntary process in which a mediator facilitates communication and negotiation between parties to assist the parties in reaching an agreement regarding a dispute.” Family disputes may be resolved through the mediation process as regulated by the Legal Aid Act 1971<sup>62</sup> and the Legal Aid (Mediation) Regulations 2006. Section 29A of the Legal Aid Act 1971 allows the minister to authorize the Director General of Legal Aid to provide mediation services to aided persons. A written and the signed agreement concluded by parties in mediation is binding and enforceable<sup>63</sup>. The Mediation Act 2012 is the governing statute with its legislative intents aiming to; “... promote and encourage mediation as a method of alternative dispute resolution by providing for the process of mediation, thereby facilitating the parties in disputes to settle disputes in a fair, speedy and cost-effective manner and to provide for related matters”. The Act 2012 is not applicable in criminal cases, any mediation conducted by judges and the Legal Aid Department<sup>64</sup>. Therefore, it can be construed that the Malaysian Mediation Act 2012 provisions will not be referred to in the court-annexed mediation system. By virtue of the Practice Direction No. 4 of 2016 (Practice Direction on Mediation), issued by the Chief Registrar of the Federal Court of Malaysia, judges may encourage parties to settle their disputes even after a trial has commenced. Mediation in child custody cases provides a good solution either for the parents and/or the children. In Australia, any case involving a minor will not be accepted to be filed at the court before the parents or the guardians go through a discussion on the settlement of their child's case. Negotiation based on the mediation principles are carried out, and prevent such issue being published in public, with the hope that a better solution for the child can be achieved<sup>65</sup>. Zainul Rijal also suggested that Malaysia should take positive action as initiated by Australia to ensure the welfare of the children is well protected. He further criticised that in this country particularly in Syariah court, the confidentiality of identification of parents and children are not well observed as compared to other countries<sup>66</sup>.

### 3.2. Sulh in the Syariah Court in Malaysia

Currently, the concept of dispute settlement outside the court is increasingly being accepted by society. Within the Malay-Muslim society, there are two modes of mediation in family disputes that have been and are in practice. The first one is the informal mediation conducted by imams, village headmen and family members. Another mode of family mediation is a structured mediation conducted by the Syariah Courts<sup>67</sup>.

<sup>58</sup> Dawoud S. El-Alami, “Establishment of Islamic Courts in Egypt” Vol. 11 [2004-2005] Yearbook of Islamic and Middle Eastern Law 229.

<sup>59</sup> Mulki Al-Sharmani, n. 51.

<sup>60</sup> Legal Aid Act (Act 26) 1971.

<sup>61</sup> Mediation Act (Act 749) 2012.

<sup>62</sup> The Legal Aid 1997 was amended in 2006.

<sup>63</sup> Section 29D of the Legal Aid 1997.

<sup>64</sup> Section 2 of Mediation Act 2012.

<sup>65</sup> Zainul Rijal Abu Bakar, “Perlindungan Anak Bawah Umur,” *Sinar Harian*, October 7, 2016, <http://www.sinarharian.com.my/kolumnis/zainul-rijal-abu-bakar/perlindungan-anak-bawah-umur-1.570211>.

<sup>66</sup> *ibid.*

<sup>67</sup> Raihanah, 2010.

The Malaysian government in 2002 has introduced sulh (mediation) in Syariah Courts throughout Malaysia with the aim of providing amicable, speedy and inexpensive settlement to parties without having to resort to the litigation system. Sulh is a peaceful and rewarding solution to each other. The parties to the dispute of a matter are requested to attend a discussion process in a consultative event arranged by a court official. The sulh is a process of negotiation which is guided and conducted by the will of Syara' and the law being enforced. This sulh not only saves cost and time of the parties, but it also resolves a dispute openly and voluntarily, without any element of force or threat. Any settlement achieved by both sides will be recorded before the judge and will be made an order which is binding. The sulh proceeding is assigned under the jurisdiction of the Syariah Subordinate Court and the High Court in respective states in Malaysia. In general, the application of sulh in Federal Territories is governed by legislations and procedures as follows<sup>68</sup>:

1. Section 99 of The Syariah Court Civil Procedure Federal Territory Act 1998;
2. The Syariah Court Civil Procedure (Sulh) (Federal Territories) Rules 2004; The Sulh Work Manual (JKSM) 2002;
3. The Sulh Officer Ethical Code (JKSM) 2002;
4. The Practice Direction (JKSM) 3/2002 (Application of Sulh);
5. The Practice Direction (JKSM) 7/2002 (Method of Storing and Dissolving Sulh Record);
6. The Practice Direction (JKSM) 8/2002 (Sulh Notice Procedure)

If the parties agree with what has been decided in the Sulh Council, they may continue to record the agreement at any time, without having to go through the trial process, as provided in section 131 of the Syariah Court Civil Procedure Federal Territory Act 1998 which reads: "Judgment on the acknowledgement or consent of the parties, including Sulh, may be recorded by the Court at any time." Generally, all civil cases can be brought to the Sulh Council except for the cases of dissolution of marriage, as prescribed in Sub Rule 1(3) of the Syariah Court Civil Procedure (sulh) (Federal Territories) Rules 2004 and the case involving nasab. For cases other than divorce and nasab application, it is a duty and responsibility of the Court's Registrar or the Assistant Court's Registrar to determine whether the claim or application is required to undergo sulh. Among the claims or applications that can be resolved through sulh are claims for breach of engagement, claims arising from a divorce such as mut'ah, maintenance of wife and children, matrimonial property, outstanding mahar, claims of child custody, application for execution of court order and other matters as the Registrar thinks suitable. Success or failure is not the prime measure of having sulh. The real success or the main goal for sulh is the ability to create a process which is fair for both parties to negotiate, rather than simply reach to a solution. For a successful of sulh, any agreement reached will be brought before the judge to be recorded as a court order. Such agreement shall be made in the form of the Draft of Agreement (Settlement Agreement), signed by both sides before the chairman of the Sulh Council. In a situation where sulh fails, either in whole or part of the dispute, it will go through the process of mention and trial. Rules 7 and 8 of the Syariah Court Civil Procedure (sulh) (Federal Territories) Rules 2004 provides that the sulh chairman shall send a report to the court to inform on the failure of the Sulh Council and the court will take action by setting a date for the mention and trial of such case. According to Mohd Fuad, sulh is very effective in resolving mal disputes amongst Malay married couples due to talented negotiation skills of the Sulh officers<sup>69</sup>. The effectiveness of Sulh officers in assisting conflicting parties with strong Shariah ruling and in an unbiased manner leads to promoting Islam as the best way in resolving conflicts.

<sup>68</sup> A. Ahmad et al., "Akademia Baru Hak Penyertaan Kanak – Kanak Dalam Prosiding Sulh ( Mediasi ) Di Mahkamah Syariah The Voice of the Child in Sulh ( Mediation ) Proceeding Akademia Baru," *Journal of Advanced Research Design*, vol. 15, No. 1 (2015): 1–14.

<sup>69</sup> Mohd Fuad Mohd Salleh, (2006). *Conflict Resolution Through Sulh Negotiation*. Doctoral dissertation, Universiti Putra Malaysia, Serdang, Selangor.

According to statistics by the Sulh Council of Syariah Court Federal Territories, from year 2011 until 2014 cases on Hadhanah constitute the highest number of cases being filed for Sulh in the Syariah Court Federal Territories of Kuala Lumpur, Labuan and Putrajaya, consisting of 1503 cases as compared to other cases like maintenance of children of 987 cases, muta'ah of 483 cases, harta sepencarian of 412 cases and nafkah iddah of 376 cases<sup>70</sup>. Mohd Na'im commented that if the court judges were not wise in using their discretionary power, the child custody disputes would become the most difficult cases to be resolved by the court since they involve family emotions. Although there is a positive outcome with the practising of sulh in terms of reducing the backlog of cases, however, research conducted by Jabatan Kehakiman Syariah Malaysia revealed that the failure rate of sulh cases is still high<sup>71</sup>. Various strategies have been formulated, and many recommendations have been made to address issues on the implementation of sulh, yet the issues remain and much needs to be done. Therefore, further research is necessary to look into the problems and obstacles that contribute to the failure of the Sulh Council.

### 3.3. Welfare of the Child

Children are defined as boys/girls who need care and attention because they cannot manage themselves on their own<sup>72</sup> and considered as not mumaiyiz<sup>73</sup>. In Islam, the care of children are not neglected. Childrens dignity are honored since they are in the womb until they reach adulthood. Allah says in the Quran to the effect that: "Mothers may breastfeed their children two complete years for whoever wishes to complete the nursing [period]. Upon the father are the mothers' provision and their clothing according to what is acceptable. No person is charged with more than his capacity. No mother should be harmed through her child, and no father through his child. And upon the [father's] heir is [a duty] like that [of the father]. And if they both desire weaning through mutual consent from both of them and consultation, there is no blame upon either of them. And if you wish to have your children nursed by a substitute, there is no blame upon you as long as you give payment according to what is acceptable. And fear Allah and know that Allah is Seeing of what you do"<sup>74</sup>. The above verse asserts that Islam calls for all parents to fulfil the needs and welfare of their children. The mother is responsible for breastfeeding a child until the child is two years old and the father is under responsible for providing the needs for breastfeeding. In a hadith narrated from Abdullah ibn Amr who described a woman came to the Prophet and complained: "O Messenger of Allah my womb was resting place of this son of mine, my breast a drinking place for him and lap a soothing place for him, but his father divorced me and wishes to snatch him away from me. The Messenger of Allah s.a.w said: 'You have got more right to take him till you marry someone else'"<sup>75</sup>. The above hadith is a proof that in Islam, the mothers are the ideal person and is given priority over the custody of a child after the divorce of parents. This is because, the mother sacrifices a lot during pregnancy, birth and suckling of the baby. At the same time, a baby or child needs his mother to rely on during his or her early age<sup>76</sup>. The selection of the mother as the best guardian is based on the argument that the mother should suckle her baby. Islam also teaches that the perfect breastfeeding period for a kid should be up to the age of two years. While the role of the father is to provide the need for breastfeeding according to his ability.

<sup>70</sup> Asmidah Ahmad et al., "Hak Penyertaan Kanak-Kanak Dalam Prosiding Sulh (Mediasi) Di Mahkamah Syariah," *Journal of Advanced Research Design* 15, No. 1 (2015): 11.

<sup>71</sup> Jabatan Kehakiman Syariah Malaysia, "Kajian Keberkesanan Majlis Sulh Di Mahkamah Syariah Seluruh Malaysia."

<sup>72</sup> Zariah Binti Noor, *Agama Dan Akhlak: Satu Analisa Kelayakan Pengasuh Dalam Kes Hadhanah*, 45

<sup>73</sup> Mumayyiz means the age at which a child can discern between right and wrong, and (the age at which) he or she knows of the differences between a man and a woman.

<sup>74</sup> Surah al-Baqarah: verse 233. Translation from <https://quran.com>

<sup>75</sup> Sunan Abu Dawud, *Kitab al-Talaq*, (t.t), 2: 616.

<sup>76</sup> Ahmad Ibrahim, *Family Law In Malaysia*, (Kuala Lumpur: Malayan Law Journal Sdn. Bhd., 3<sup>rd</sup> Ed.,1997), 333. Section 81(1), Islamic Family Law (Federal Territories) Act 1984.

A father is also under responsibility to provide food, clothes, and shelter to the child<sup>77</sup>. All these expenses are to be provided continuously until the child reaches the age of puberty (baligh)<sup>78</sup>. Both parents are under full responsibility for the welfare of their children.

### 3.3.1. *The Meaning of Welfare in Deciding Child Custody Dispute*

What is the meaning of welfare? Welfare are interactions and relationships between parents and children, siblings and close families for the best interest<sup>79</sup>. The welfare of the child is the paramount consideration in custody issue even if the parties are of different faiths, religion and skin colour<sup>80</sup>. Emotional and economic stability in nurturing the kids are the vital elements in deciding on the custody issue<sup>81</sup>. Ibnu Qudamah in his book *al-Mughni* mentioned that the main objective in a child custody case is to ensure the welfare of the child is well protected<sup>82</sup> and this is the main consideration for the court in deciding the issue of custody cases. In conclusion, both Islamic and Civil laws concern on the welfare issue in family institution especially those involved with the interest of children.

### 3.3.2. *Welfare of Children is the Paramount Consideration in Deciding Custody Dispute*

Children are easy to be influenced by others and do not have autonomy in making decisions. Children are individuals who expect the attention of parents, families and governments who can provide good facilities and environment<sup>83</sup>. The term welfare of children is also known as "best interest of the child" in Civil Law. In the United Kingdom, the welfare of the child is a major consideration, and also referred to as "paramount consideration". In the case of *J and Others v C. and others*<sup>84</sup> the House of Lords defined the word "paramount consideration" as; "That the phrase refers to the process whereby, when all the relevant facts, relationship, claims and wishes of the parents, risks, choices and other circumstances are taken into account and weighed, the course to be followed will be that which is utmost in the interest of the children's welfare as that term is understood; that is the first consideration because it rules upon or determines the course to be followed."<sup>85</sup> By virtue of section 1(3), Child Act 1989 of the United Kingdom which provides: "In the circumstances mentioned in subsection (4), a court shall have regard in particular to (a) the ascertainable wishes and feelings of the child concerned (considered in the light of his age and understanding); (b) his physical, emotional and educational needs." In Australia, the welfare of children also a major consideration in the deciding child custody case. Section 85(1) (a), of the Australian Matrimonial Causes Act 1959-1966 reads as follows "the court shall regard the interests of the children as the paramount consideration." This Act provides the welfare of the parents are of secondary issue to be considered compared to the welfare of the child in taking into account the child custody.<sup>86</sup> However, Judge Megarry in *ReF (An Infant)*<sup>87</sup> case affirms that paramount terms are not exclusive rights, as follows: ... "paramount" does not mean "exclusive", and the court should

<sup>77</sup> Wahbah al-Zuhaili, *Fiqh al-Islami Wa Adillatuhu*, ed. Ke-4, (Dimashq: Dar al-Fikr, 1997), 10: 7295.

<sup>78</sup> Zainul Rijal Abu Bakar, *Kedudukan Kebajikan Dan Hak Anak Bukan Islam Apabila Ibu Atau Bapa Memeluk Islam: Pendekatan Perundangan Syariah Dan Perlembagaan Malaysia*, 5.

<sup>79</sup> Noel Myricks dan Donna L. Ferullo, "Race And Child Custody Disputes", *Journal Of Family Relation; National Council On Family Relations*, Vol. 35, No. 2, (1986), 325.

<sup>80</sup> *Ibid*, 326.

<sup>81</sup> *Ibid*, 327.

<sup>82</sup> Normi, Abdul Malek, "Factors Determining Welfare Of The Child In Malaysian Civil Law Of Custody: An Analysis Of Decided Cases", *Jurnal Undang-undang Dan Masyarakat* 15, (2011), 2. See also Section 86(2) Islamic Family Law (Federal Territories) Act 1984 which provides "In deciding in whose custody a child should be placed, the paramount consideration shall be the welfare of the child".

<sup>83</sup> Mogana Sunthari Subramaniam, *In The Welfare Of The Child*, 63.

<sup>84</sup> [1970] AC 668.

<sup>85</sup> *Ibid*, pp. 710-711.

<sup>86</sup> Frank Bates, "Two Recent Australian Custody Cases", *Journal Of The International And Comparative Law Quarterly* 25, No. 2, (1976), 441.

<sup>87</sup> [1969] 2 All ER 766.

consider and weigh all the circumstances that are of any relevance, giving the welfare of the infant a special weight. Nevertheless, this process cannot be analysed or carried out according to any formula and must depend on the exercise of a judicial discretion after all relevant factors have been considered.”<sup>88</sup> In Singapore, the definition of welfare is full protection or attention and supervision provided by both parents. Mr Justice Arunalandom of the Court of Justice of Singapore has pointed out this in *Teh Eng Kim v. Yew Peng Siong's case*<sup>89</sup> that observation towards the minor is the main thing to be aware of in deciding a case involving the child custody and the religion of the child. The court also stressed that in ensuring that the welfare of the child is prioritized, the right of care and custody of the child would not be given to the inactive parent. In Malaysia, section 30(5), Child Act 2001 describes the welfare of the child as the paramount consideration in deciding on a custody case: “(5) In determining what order to be made under subsection (1), the Court For Children shall treat the best interests of a child as the paramount consideration.” Parents should provide adequate protection to the children. A good environment will help in curbing the children from being involved in unhealthy activities.<sup>90</sup> For better development, children need a happy family and a conducive atmosphere. There are some welfare criteria to be considered by the court as prescribed in section 30(6)(a) of the Child Act 2001 (Act 611): “(a) shall contain such information as to the family background, general conduct, home surrounding, school record and medical history of a child as may enable the Court for Children to deal with the case in the best interests of the child;” The interest or welfare of the child is the main things highlighted under the Law Reform (Marriage and Divorce) Act 1976 and the Shariah in deciding custody dispute. Both laws recognize that the custody of a young child should be given to the mother since the mother is more affectionate, loving to the children, has more experience and knowledge in handling a young child<sup>91</sup>. In addition, good shelter and a comfortable environment are the elements that are set and emphasized by the court in child custody cases. In the case of *K. Shanta Kumari v. Vijayan*<sup>92</sup> the court ruled that the welfare criteria in deciding child custody case are the comfort, care, attention, joy and health of children<sup>93</sup>. Besides those mentioned elements, a guardian should have good physical health and high morality to ensure the perfect development of the child<sup>94</sup>. Even though the wishes of the child will be considered by the court, the welfare of the parents cannot be ignored. Section 88(2) of the Law Reform (Marriage and Divorce) Act 1976 provides that in deciding where the custody of a child should be placed, the paramount consideration shall be the welfare of the child and subject to this the court shall have regard to the wishes of the parents of the child and to the wishes of the child, where he or she can express an independent opinion. One of the considerations on the welfare of the child is the status quo of the child. In a situation where the child has been living in an environment which is familiar with him, the court will remain the custody order. This can be seen in the case of *Masam v Salina Saropa & Anor*<sup>95</sup>, the biological mother had asked for custody of her son from the foster parents who had been taking care of him since he was 9 days old for almost two years. The High Court later in deciding the case decided that the custody of the child is to be given to the foster parents since the foster parents had taken care of the infant with love and affection. In conclusion, the welfare of children must be looked at comprehensively, not just on the physical wellbeing of the child<sup>96</sup>.

<sup>88</sup> *Ibid.*, 768.

<sup>89</sup> [1977] 1 MLJ 234.

<sup>90</sup> Anisah Che Ngah, “Akta Perlindungan Kanak-kanak 1991”, *Malaysian Journal of Law and Society I*, (1997), 104.

<sup>91</sup> Nora Abdul Hak, 2009.

<sup>92</sup> [1986] 2 MLJ 216.

<sup>93</sup> *Ibid.*, 218.

<sup>94</sup> [2002] JMCL 1. See Ahmad Ibrahim, *Family Law*, (1997), 136.

<sup>95</sup> [1974] 2 MLJ 59.

<sup>96</sup> Kamala Bhaie a/p M.G. Pillai, *Protection Of The Children*, 40.

Children are very valuable asset not only to the family but also to the nation. Therefore their welfare needs to be given utmost emphasis while the rights of the parents are also not to be neglected<sup>97</sup>.

### 3.4. Right of a Child to Choose a Custodian

When parents break up, they do not always agree on who will have custody of the children. Sometimes the children have an opinion about how much time they want to spend with each parent or they might not want to see one parent at all. In this case, should a child's preference about custody be considered? By referring to the decided cases, the child's wishes are among the considerations of the court in deciding on the issue of child custody. In the case of *L v. S*,<sup>98</sup> the court in deciding on the issue had looked into the wishes of the child. In this case, Judge Lord Mac Dermott pointed out that the relationship between the child and the guardian should be taken into account by the court when deciding on custody. In order to ensure that no hiccups develop later on, the demands and desires of a child should be considered by the court. For example, the judge has the right to ask some pertinent questions to the child regarding child care. In the cases of *S Thaiyalnayagam v. G M Kodaguda*<sup>99</sup> and *Manickam v. Interahnee*,<sup>100</sup> the court had conducted interview sessions with the children to hear about their desires and wishes on the issue of custody.<sup>101</sup> In another case of *Chang Ah Mee*<sup>102</sup> the court ruled that the custody of the child be given to the mother. However, later on appeal, the court found that the child was comfortable to live with the father and therefore, chose to live with him. The court later ruled that, the custody was given to the father in order to ensure the welfare of the child. Thus, the relationship between the child and the parent are among several aspects to be taken into account by the court in deciding the right to choose a guardian or custodian.

## 4. CONCLUSION

Both Civil and Syariah courts emphasise that the welfare of the child is the main consideration in deciding cases involving custody of a child. The question of child custody is closely related to "care and control" rights and the deliverance of religious education of children. In addition, the child's desire and opinions should be taken into consideration by the court to prioritize the welfare of children in relation to the interests of parents or guardians. Based on the experiences of the Singapore Family Court, it is found that mediation has become the most effective solution for speedy disposal of cases because it has been integrated into the court process. The existence of cooperation between experts in family affairs and other fields of specialization in Singapore, Australia and Egypt is a contributing factor towards the success of family dispute resolution in those countries. It is hoped that Malaysia will promote less adversarial process in resolving family disputes and emphasize the practice of alternative dispute resolution method like mediation as a priority in handling the child custody disputes. It is important that the issue of minor children in court whether in civil or Shariah be addressed wisely as they are the asset of the country, contributing to the future of the nation.

<sup>97</sup> Mogana Sunthari Subramaniam, *In The Welfare Of The Child Courts And Adoption Agencies As Guardians Of The Welfare Of The Child Principle: A Japan – UK Comparison*, 72.

<sup>98</sup> [2002] 6 CLJ 106.

<sup>99</sup> [1983] 1 MLJ 242.

<sup>100</sup> [1985] 1 MLJ 56.

<sup>101</sup> Mary Ann Watson, *Defining The Best Interest Of The Children*, 474.

<sup>102</sup> *Chang Ah Mee v Jabatan Hal Ehwal Agama Islam, Majlis Ugama Islam Sabah & Ors* [2003] 5 MLJ 106.

**LITERATURE:**

1. A. Ahmad, A. Yaakob, K. W. Mohd, N. A. Mohd Awal and M. A. A. Samuri. (2015). Akademia Baru Hak Penyertaan Kanak-Kanak Dalam Prosiding Sulh (Mediasi) Di Mahkamah Syariah (The Voice of the Child in Sulh (Mediation) Proceeding Akademia Baru). *Journal of Advanced Research Design*, Vol. 15, No. 1: 1–14.
2. Abdul Rani, Kamarudin and Ab Aziz Norjihan. (2014). Mediation in Malaysia: Is It Facilitative, Evaluative or Transformative? *West East Journal of Social Sciences*, Vol. 3, No. 1: 8–13.
3. Abdul Razak bin Mat Nayan. (1994). *Peranan Sulh Dalam Mengatasi Penceraian Dan Krisis Rumah Tangga: Kajian Di Mahkamah Syariah Negeri Sembilan Darul Khusus* (Diploma thesis). International Islamic University Malaysia, Kuala Lumpur, Malaysia.
4. Abdul Shukur bin Abdul Hamid. (1997). *Konsep Dan Peranan al-Sulh: Tinjauan Mengennainya Di Dalam Enakmen Kanun Prosedur Mal Syariah Negeri Selangor* (Diploma thesis). International Islamic University Malaysia, Kuala Lumpur, Malaysia.
5. Abdul Wahab, Alwi. (2013). *Court-Annexed and Judge-Led Mediation in Civil Cases: The Malaysian Experience* (PhD Thesis). Victoria University of Melbourne, Australia.
6. Ahmad, Asmidah, Adzidah binti Yaakob, Kamilah Wati Mohd, Nor Aziah Mohd Awal, and Mohd. Al Adib Samuri. (2015). Hak Penyertaan Kanak-Kanak Dalam Prosiding Sulh (Mediasi) Di Mahkamah Syariah. *Journal of Advanced Research Design*, Vol. 15, No. 1: 1–14.
7. Ahmad, Sa'odah. (2010). *The Effectiveness of Mediation and Sulh in Resolving Family Disputes: A Study of Parties' Satisfaction with Sulh in the State of Selangor* (PhD Thesis). International Islamic University Malaysia, Kuala Lumpur, Malaysia.
8. Ahmad, Sa'odah. (2012). User Satisfaction with Sulh (Mediation) in the Selangor Syariah Judicial Department. *Malaysian Journal of Consumer*, Vol. 19, No. December: 125–41.
9. Ain Husna Mohd. Arshad, and Roslina Che Soh @Yusoff. (2012). The Need for Establishment of a Family Court in Malaysia: An Appraisal Keperluan Menubuhkan Sebuah Mahkamah Keluarga Di Malaysia: Satu Penilaian. *International Islamic University of Malaysia Law Journal*, Vol. 20: 195–218.
10. Albano, Michael J. (1995). Children - The Innocent Victims of Family Breakups: How the Family Law Attorney, the Courts, and Society Can Protect Our Children. *University of Toledo Law Review*, Vol. 26: 787–804.
11. Atras Mohamad Zin. (2009). Pengalaman Pelaksanaan Majlis Sulh Di Jabatan Kehakiman Syariah Negeri Selangor (JAKESS).
12. Azahari, Raihanah. (2010). The Development of Family Mediation in Malaysian Muslim Society. *European Journal of Social Sciences*, Vol. 18, No. 2: 220–30.
13. Azzis, Nadia Murshida Abd, and Alias Azhar. (2018). Pendekatan Mediasi Dalam Tuntutan Hadanah: Kajian Di Mahkamah Tinggi Syariah Pulau Pinang. *International Journal of Law, Government and Communication*, Vol. 3, No. 9: 36–45.
14. Hak, Nora Abdul Hak. (2012). Mediation In Custody Disputes: Challenges And Prospect In Malaysia. *International Journal of Social Policy and Society*. Vol. 9: 59–72.
15. Hammad Mohamad Dahalan, and Mohamad Azhan Yahaya. (2016). Perjanjian Sulh Di Antara Pihak-Pihak Bertikai Di Mahkamah Syariah Sebagai Pilihan Atau Persetujuan Yang Perlu Dipatuhi? in *Muzakarah Fiqh & International Fiqh Conference 2016*, p. 254–61.
16. Ilker Etikan, and Sulaiman Abubakar Musa Rukayya Sunusi Alkassim. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, Vol. 5, No. 1: 1–4. at <https://doi.org/10.11648/j.ajtas.20160501.11>.
17. Jabatan Kehakiman Syariah Malaysia. (2013). Kajian Keberkesanan Majlis Sulh Di Mahkamah Syariah Seluruh Malaysia.

18. KELLY, JOAN B. (2000). Children's Adjustment in Conflicted Marriage and Divorce: A Decade Review of Research. *Journal of the American Academy of Child & Adolescent Psychiatry*, Vol. 39, No. 8 (August 1): 963–73. at <https://doi.org/10.1097/00004583-200008000-00007>.
19. Marzuki Mohamad. (2017). Contesting Syariah Laws in Malaysia: Religion, Human Rights and the State's Response. *Journal of Politics and Law*, Vol. 10, No. 5: 140. at <https://doi.org/10.5539/jpl.v10n5p140>.
20. Mohd Radzi bin Haji Abdul Latif. (1999). Pelaksanaan Sulh Di Mahkamah Syariah: Kajian Di Mahkamah Syariah Di Negeri Sembilan Darul Khusus (Diploma Thesis). International Islamic University Malaysia, Kuala Lumpur, Malaysia.
21. Nor Fadzlina Nawli. (2012). *Towards the Development of a Mandatory Family Mediation Program in the Malaysian Civil Legal System: Learning From Australia* (PhD Thesis). La Trobe University, Victoria, Australia.
22. Nor Hanim Bt Abdul Halim. (2000). Amalan Sulh Dalam Sistem Pentadbiran Undang-Undang Islam Di Malaysia: Kajian Mengenai Amalan Sulh Di Mahkamah Syariah Wilayah Persekutuan Kuala Lumpur (Diploma thesis). International Islamic University Malaysia, Kuala Lumpur, Malaysia.
23. Nurah Sabahiah Mohamed. (2013). *Mediation in the New Dispute Resolution Landscape; a Case for the Enhancement of Its Application in Malaysia* (PhD thesis). University Malaya, Kuala Lumpur, Malaysia.
24. Raihanah Haji Azhari. (2005). *Sulh Dalam Perundangan Islam: Kajian Di Jabatan Kehakiman Syariah Selangor (JAKESS)* (PhD Thesis). Malaya Univeristy, Kuala Lumpur, Malaysia.
25. Rashid, Syed Khalid. (2000). *Alternative Dispute Resolution in Malaysia*. Kulliyyah of Laws, IIUM Press, Kuala Lumpur, Malaysia.
26. Sa'odah, Ahmad and Abdul Hak, Nora. (2010). Family Mediation and Sulh: An Alternative Dispute Resolution in Malaysia. *International Journal of Social Policy and Society*, No. 7, January: 66–79.
27. Siang, Christina Ooi Su. (2017). *Mediation and the Courts on Settlement of Disputes: An Analysis on Legislating Court-Directed Mediation in Malaysia* (PhD Thesis). University Malaya, Kuala Lumpur, Malaysia.
28. Z. Bakar, Zainul Rijal Abu. (2016). Perlindungan Anak Bawah Umur. *Sinar Harian*, October 7. at <http://www.sinarharian.com.my/kolumnis/zainul-rijal-abu-bakar/perlindungan-anak-bawah-umur-1.570211>.



VISOKA ŠKOLA ZA INSPEKCIJSKI  
I KADROVSKI MENADŽMENT U SPLITU



كلية العلوم الاقتصادية والاجتماعية - سلا  
FACULTÉ DES SCIENCES ÉCONOMIQUES ET SOCIALES-SALÉ  
Faculté des sciences juridiques  
économiques et sociales-salé