

BUSINESS AND APPLIED ECONOMICS

BOOK OF ABSTRACTS

Editors

**Ivana Domazet
Jovan Zubović**

**International Scientific Conference:
THEORETICAL AND EMPIRICAL ASPECTS OF ECONOMIC SCIENCE –
60 YEARS OF CHALLENGES AND OPPORTUNITIES**
Belgrade, 2018





BUSINESS AND APPLIED ECONOMICS

BOOK OF ABSTRACTS

Editors

Ivana Domazet

Jovan Zubović

International Scientific Conference:
THEORETICAL AND EMPIRICAL ASPECTS OF ECONOMIC SCIENCE –
60 YEARS OF CHALLENGES AND OPPORTUNITIES
Belgrade, Serbia, 1 November 2018

Publisher:

Institute of Economic Sciences

Zmaj Jovina 12, Belgrade, Serbia

www.ien.bg.ac.rs

office@ien.bg.ac.rs

For publisher:

PhD Jovan Zubović, Director

Reviewiers:

Marta Simoes, PhD, University of Coimbra, Coimbra, Portugal

Carmine D'Arconte, PhD, IUSM, Università degli Studi di Roma, Foro Italico, Italy

Nadia Abaoub Ouertani, PhD, Ecole Supérieure de Commerce, Université de Manouba, Tunisia

Jean-Vasile Andrei, PhD, Petroleum and Gas University of Ploiesti, Prahova, Romania

Aleksandar Grubor, PhD, Faculty of Economics, Subotica, University of Novi Sad

Printed by:

DonatGraf, Belgrade

Circulation:

200

ISBN 978-86-89465-42-6

This Book of Abstracts is a part of research projects numbers III 47009 (European integrations and social and economic changes in Serbian economy on the way to the EU) and OI179015 (Challenges and prospects of structural changes in Serbia: Strategic directions for economic development and harmonization with EU requirements), financed by the Ministry of Science and Technological Development of the Republic of Serbia.

Copyright© 2018 by Institute of Economic Sciences Belgrade. All rights reserved.

INTERNATIONAL SCIENTIFIC COMMITTEE

- **Ivana Domazet, PhD**, Institute of Economic Sciences, Serbia,
- **Jovan Zubović, PhD**, Institute of Economic Sciences, Serbia
- **Mario Holzner, PhD**, The Vienna Institute for International Economic Studies, Vienna, Austria
- **Mustafa Özer, PhD**, Anadolu University, Faculty of Economics Administrative Sciences, Turkey
- **Sabri Boubaker, PhD**, South Champagne Business School, France
- **Nadia Abaoub Ouertani, PhD**, Ecole Supérieure de Commerce, Université de Manouba, Tunisia
- **Jean-Vasile Andrei, PhD**, Petroleum and Gas University of Ploiesti, Prahova, Romania
- **Fateh Belaïd, PhD**, School of Pont & Chaussées and Littoral University, France
- **Antonio Portugal, PhD**, University of Coimbra, Coimbra, Portugal
- **Bogdan Dima, PhD**, Faculty of Economics and Business Administration, West University of Timisoara, Romania
- **Damien Bazin, PhD**, University Nice Sophia Antipolis, Nice, France
- **Stefana Maria Dima, PhD**, East European Center for Research in Economics and Business, Faculty of Economics and Business Administration, West University of Timisoara, Romania
- **Carmine D'Arconte, PhD**, IUSM, Università degli Studi di Roma, Foro Italico, Italy
- **Krum Krumov, PhD**, University "St. Kliment Ohridski", Bulgaria
- **Marta Simoes, PhD**, University of Coimbra, Coimbra, Portugal
- **Mirela Panait, PhD**, Petroleum and Gas University of Ploiesti, Prahova, Romania
- **Xavier Richet, PhD**, University Sorbonne Nouvelle – Paris 3, Paris, France
- **Horst Brezinski, PhD**, Technische Universität Bergakademie Freiberg, Freiberg, Deutschland
- **Rochdi Feki, PhD**, Sfax Business School, University of Sfax, Tunisia
- **Driss Guerraoui, PhD**, University Mohammed V, Rabat, Morocco
- **Jovan Zafiroski, PhD**, Ss. Cyril and Methodius University in Skopje, Macedonia
- **Maks Tajnikar, PhD**, University of Ljubljana, Slovenia
- **Dubravka Jurlina Alibegović, PhD**, Institute of Economics, Zagreb, Croatia
- **Maruška Vizek, PhD**, Institute of Economics, Zagreb, Croatia
- **Andriana Rogošič, PhD**, Faculty of Economics, Split, Croatia
- **Ana Mugoša, PhD**, Faculty of Economics, Podgorica, Montenegro

- **Jovan Ateljević, PhD**, Faculty of Economics, Banja Luka, Bosnia and Herzegovina
- **Drini Imami, PhD**, Faculty of Agriculture, Tirana, Albania
- **Nouri Chtourou, PhD**, Faculty of Economics and Management, University of Sfax, Tunisia
- **Vasileios Kallinterakis, PhD**, University of Durham, United Kingdom
- **Alen Host, PhD**, University of Rijeka, Rijeka, Croatia
- **Marianna Sinicakova, PhD**, Technical University of Kosice, Slovakia
- **Diego Begalli, PhD**, University of Verona, Italy

NATIONAL SCIENTIFIC COMMITTEE

- **Mirjana Radović-Marković, PhD**, Institute of Economic Sciences, Belgrade
- **Božo Drašković, PhD**, Institute of Economic Sciences, Belgrade
- **Ivan Stošić, PhD**, Institute of Economic Sciences, Belgrade
- **Aleksandar Grubor, PhD**, Faculty of Economics, Subotica, University of Novi Sad
- **Hasan Hanić, PhD**, Belgrade Banking Academy, Belgrade
- **Srdjan Redžepagić, PhD**, Belgrade Banking Academy, Belgrade
- **Andrea Andrejević Panić, PhD**, Educons University, Sremska Kamenica
- **Isidora Ljumović, PhD**, Institute of Economic Sciences, Belgrade
- **Aleksandra Bradić-Martinović, PhD**, Institute of Economic Sciences, Belgrade
- **Jelena Minović, PhD**, Institute of Economic Sciences, Belgrade
- **Slavica Stevanović, PhD**, Institute of Economic Sciences, Belgrade
- **Sonja Đuričin, PhD**, Institute of Economic Sciences, Belgrade
- **Isidora Beraha, PhD**, Institute of Economic Sciences, Belgrade
- **Vladimir Simović, PhD**, Institute of Economic Sciences, Belgrade
- **Olja Munitlak-Ivanović, PhD**, Institute of Economic Sciences, Belgrade
- **Vesna Aleksić, PhD**, Institute of Economic Sciences, Belgrade
- **Pere Tumbas, PhD**, Faculty of Economics, Subotica, University of Novi Sad
- **Dejan Petrović, PhD**, Faculty of Organizational Sciences, Belgrade
- **Vladimir Obradović, PhD**, Faculty of Organizational Sciences, Belgrade
- **Srđan Marinković, PhD**, Faculty of Economics, University of Niš
- **Jonel Subić, PhD**, Institute of Agricultural Economics, Belgrade
- **Boris Kuzman, PhD**, Institute of Agricultural Economics, Belgrade
- **Marko Jeločnik, PhD**, Institute of Agricultural Economics, Belgrade
- **Petar Veselinović, PhD**, Faculty of Economics, University of Kragujevac
- **Vladan Pavlović, PhD**, Faculty of Economics, University of Priština, Kosovska Mitrovica

ORGANIZING COMMITTEE

- **Aida Hanić, MA**, Institute of Economic Sciences, Belgrade
- **Olivera Jovanović, MA**, Institute of Economic Sciences, Belgrade
- **Petar Mitić, MA**, Institute of Economic Sciences, Belgrade

TABLE OF CONTENTS

PREFACE	15
PART I	
BUSINESS ECONOMICS	17
<hr/>	
1.1. DIGITAL TRANSFORMATION OF THE BUSINESS ENVIRONMENT <i>Ivana Domazet</i>	19
1.2. IT ENTREPRENEURSHIP ENVIRONMENT IN SERBIA: HAVE WE DONE ENOUGH? <i>Vladimir Simović, Mirjana Radović Marković</i>	23
1.3. IMPORTANCE OF EGOVERNMENT ACCEPTANCE - THE PERCEPTION OF BUSINESS ENTITIES IN SERBIA <i>Jasmina Đurašković, Dušan Đurašković</i>	26
1.4. CONVERGENCE CHALLENGES IN DIGITAL BUSINESS ENVIRONMENT OF WESTERN BALKAN COUNTRIES <i>Boban Stojanović, Zorana Kostić</i>	30
1.5. ANALYSIS OF THE IMPACT OF DIGITAL ARCHIVES IN SOCIAL SCIENCES – CASE STUDY RRPP DATA IN SERBIA <i>Jelena Banović</i>	33
1.6. DIGITAL SALES CHANNELS AND REALIZATION OF BANK'S KPI TARGETS <i>Slađana Neogradi</i>	35
1.7. THE IMPACT OF THE ALLOCATION OF HIGHER DEFENSE FUNDS IN RELATION TO MATERIAL WELFARE IN THE CURRENT ECONOMIC CONTEXT <i>Oana Ramona Glont, Adina Alexandra Darmaz-Guzun</i>	39
1.8. PRODUCTIVE SPECIALISATION AND GROWTH IN THE EU15: EXPLORING AN EDUCATION BASED SECTORAL TAXONOMY <i>Marta Simões, Andrea Araujo</i>	43
1.9. ANALYSIS OF THE COMPETITIVENESS OF SEE COUNTRIES <i>Sandra Kamenković, Marija Lazarević Moravčević</i>	46
1.10. COMPETITIVENESS OF THE SERBIAN ECONOMY THROUGH THE PRISM OF TAX INCENTIVES FOR FOREIGN INVESTORS <i>Darko Marjanović, Mihailo Paunović</i>	49

1.11. THE INFLUENCE OF THE TRANSITION REVIEW ON ECONOMIC DEVELOPMENT THE REPUBLIC OF SERBIA	53
<i>Brankica Todorović</i>	
1.12. THE FINANCIAL MANAGEMENT AND CONTROL SYSTEM AS A BASIS OF THE EFFICIENT PUBLIC SECTOR	56
<i>Zvonko Brnjas</i>	
1.13. CHALLENGES AND DILEMMAS OF IMPLEMENTING CORPORATE RESTRUCTURINGS IN SERBIA AND WESTERN BALKAN COUNTRIES	59
<i>Ivan Stošić</i>	
1.14. EVOLUTION AND ADEQUACY OF PRINCIPLES FOR STAKEHOLDERS IN CORPORATIONS	63
<i>Spartak Keremidchiev</i>	
1.15. APPLICATION OF ETHICAL MODEL ON HUMAN RESOURCE MANAGEMENT PROCESSES	66
<i>Azra Sućeska</i>	
1.16. CORPORATE SOCIAL RESPONSIBILITY IN BANKING: THE EVIDENCE FROM RESEARCH AND ACADEMY AREAS	69
<i>Aida Hanić</i>	
1.17. SATISFACTION AND LOYALTY OF CLIENTS TOWARDS BANKING PRODUCTS AND SERVICES	72
<i>Milica Raičević, Dijana Medenica Mitrović</i>	
1.18. AN ANALYSIS OF THE DEVELOPMENT OF ENTREPRENEURSHIP IN THE REPUBLIC OF SERBIA WITH A SPECIAL FOCUS ON FEMALE ENTREPRENEURSHIP	75
<i>Jelena Petrović, Snežana Radukić</i>	
1.19. ANALYSIS OF THE INSTITUTIONAL SUPPORT FOR THE DEVELOPMENT OF SMALL AND MEDIUM ENTERPRISES IN THE REPUBLIC OF MACEDONIA	78
<i>Marija Magdincheva-Shopova, Magdalena Miceva</i>	
1.20. WOMEN ENTREPRENEURSHIP IN SERBIA – POTENTIALS AND CONSTRAINTS	81
<i>Olivera Jovanović, Milena Lazić</i>	
1.21. GREEN JOBS-POTENTIAL FOR EMPLOYMENT IN THE REPUBLIC OF SERBIA	84
<i>Simonida Vukadinović, Siniša Domazet</i>	

Table of Contents

1.22. REGIONAL DEVELOPMENT OF AGROBUSINESS SMES IN SERBIA <i>Olivera Jovanović</i>	87
1.23. IMPROVEMENT OF THE MARKETING CHANNELS FOR AGRO-FOOD PRODUCTS - INTERNATIONAL EXPERIENCES <i>Katica Radosavljević</i>	90
1.24. DEVELOPMENT AND IMPLEMENTATION OF THE INTERGATED MARKETING COMMUNICATIONS CONCEPT <i>Tatjana Cvetkov Čikošev</i>	93
1.25. STRATEGIC MARKETING APPROACH IN NON-PROFIT ORGANIZATIONS <i>Milica Kovačević</i>	96
1.26. E-MAIL MARKETING CAMPAIGNS EFFECTIVNESS <i>Aleksandar Grubor, Nenad Đokić</i>	99
1.27. CUSTOMER PERCEPTION OF FACEBOOK MARKETING SIGNIFICANCE IN DIFFERENT PHASES OF THEIR CUSTOMER JOURNEY <i>Ines Djokić, Nikola Milićević</i>	101
1.28 DIGITAL MARKETING USAGE IN SMES IN MACEDONIA, AN EMPIRICAL STUDY <i>Dimitar Jovevski, Snezana Ristevska Jovanovska</i>	103
1.29. THE ROLE OF DIGITAL MARKETING IN SERBIAN HOTEL INDUSTRY <i>Saša Virijević Jovanović, Vesna Pijevac</i>	107
1.30. WEB-BASED PROJECT MANAGEMENT EDUCATION IN STUDENT POPULATION <i>Dragan Bjelica, Dejana Pavlović</i>	110
1.31. IMPLEMENTATION OF GAMIFICATION IN HEIS IN THE REPUBLIC OF MACEDONIA <i>Martin Kiselicki, Saso Josimovski</i>	113
1.32. BUSINESS NETWORKS AND TECHNOLOGY TRANSFER – A CASE STUDY OF TOYOTA MOTOR THAILAND <i>Isidora Beraha</i>	116
1.33. ASSESSING THE RESIDUAL VALUE OF ASSETS AS A PART OF FINANCIAL ANALYSIS <i>Mališa Đukić</i>	119
1.34. POST-MERGER PERFORMANCE IN FINANCIAL SERVICE INDUSTRY: A CASE OF THE REPUBLIC OF SERBIA <i>Dejan Erić</i>	122

1.35. STRUCTURE OF CORPORATE BOARDS AND FINANCIAL PERFORMANCE OF SELECTED COMPANIES IN SERBIA	125
<i>Slavica Stevanović, Grozdana Marinković</i>	
1.36. EVALUATION OF THE PROBABILITY OF BANRKUPTCY OF MEDIUM-SIZED ENTERPRISES IN THE REPUBLIC OF SERBIA	128
<i>Sonja Đuričin</i>	
1.37. THE DEVELOPMENT OF INSURANCE MARKET IN SERBIA	131
<i>Mladenka Balaban, Dušanka Talić</i>	
1.38. STRESS MANAGEMENT AMONG EMPLOYEES IN LOGISTICS SECTOR	135
<i>Kiril Postolov, Lidija Pulevska Ivanovska</i>	
1.39. ECONOMIC EFFECTS OF INVESTMENT IN HYDRO-ELECTRIC POWER PLANTS IN THE REPUBLIC OF SERBIA AND BOSNIA AND HERZEGOVINA	139
<i>Zdravko Bijelić, Dragan Miletić</i>	
1.40. SECURING STATIONARY FUEL SUPPLY AND GAS DIVERSIFICATION IN HUNGARY AND POLAND	142
<i>Csaba Weiner</i>	
PART II	
APPLIED ECONOMICS	147
<hr/>	
2.1. DUAL EDUCATION IN THE EHEA COUNTRIES – EXPERIENCES AND RESULTS	149
<i>Mirko Savić</i>	
2.2. DISCRETE ALGORITHMS FOR BLACK SCHOLES OPTION PRICING ECONOMIC MODEL	152
<i>Murat Sari, Aniela Bălăcescu</i>	
2.3. EVALUATING THE MEDIUM TERM EFFECTS OF AN EDUCATIONAL PROGRAM	156
<i>Marianna Battaglia, Lara Lebedinski</i>	
2.4. PUBLIC DEBT GROWTH, THE GREAT RECESSION AND FISCAL CONSOLIDATION-THE SERBIAN EPISODE	159
<i>Vladimir Andrić, Jelena Minović</i>	
2.5. ASSESSMENT OF DIRECT AND CROSS PRICE ELASTICITY OF CONSUMER DEMAND IN SERBIA	163
<i>Hasan Hanić</i>	

Table of Contents

2.6. THE ROLE OF CREDIT DEFAULT SWAPS IN THE TRANSMISSION OF FINANCIAL CRISES: THE TUNISIAN CONTEXT	166
<i>Abaoub Ouertani Nadia, Ghabara Hela</i>	
2.7. BOOTSTRAP PANEL CAUSALITY ANALYSIS OF RELATIONSHIPS BETWEEN CURRENT ACCOUNT DEFICITS AND ECONOMIC GROWTH IN SOUTHEASTERN EUROPEAN COUNTRIES	169
<i>Hatice Altınok, Mustafa Özer</i>	
2.8. VALUE BASED RISK MANAGEMENT-THE CASE OF AN INSURANCE COMPANY	172
<i>Blagoje Paunović, Jelena Kočović</i>	
2.9. DIGITAL SKILLS IN SERBIA - DO WE HAVE PROGRESS?	175
<i>Aleksandra Bradić-Martinović</i>	
2.10. IMPACT OF THE FINANCIAL SECTOR ON ECONOMIC GROWTH IN EMERGING COUNTRIES	178
<i>Hasan Hanić, Milica Bugarčić</i>	
2.11. EVALUATION OF YOUTH POLICY IN SERBIA OVER THE PERIOD 2015-2017 – RESULTS, CHALLENGES AND PERSPECTIVES	181
<i>Mihajlo Đukić, Duško Bodroža</i>	
2.12. BUSINESS SECTOR INNOVATION AND ECONOMIC GROWTH: A COMPARATIVE ANALYSIS BETWEEN EU COUNTRIES	184
<i>Cláudia Caseiro, Marta Simões</i>	
2.13. THE RELATIONSHIP BETWEEN CO2 EMISSIONS AND REAL GDP IN SEE COUNTRIES	188
<i>Petar Mitić, Slobodan Cvetanović</i>	
2.14. THE ROLE OF SOCIO-PSYCHOLOGICAL VARIABLES IN MIGRANTS' LABOUR MARKET INTEGRATION: A QUANTITATIVE APPROACH*	191
<i>GrațIELA Georgiana Noja, Nebojša Petrović</i>	
2.15. THE COMPETITIVENESS OF INSURANCE MARKET IN SERBIA	195
<i>Tijana Kaličanin, Edin Hanić</i>	
2.16. LEGISLATIVE REGULATIONS AND FINANCIAL FACTORS AS SIGNIFICANT FACTOR IN SCIENTIFIC PRODUCTION IN SERBIA	198
<i>Jelena Ješić, Andrea Andrejević Panić</i>	
2.17. DO BUSINESS REGULATIONS PROMOTE GROWTH IN LOW-INCOME COUNTRIES?	201
<i>Bogdan Dima, Ștefana Maria Dima</i>	

2.18. RESEARCH OF THE ECONOMIC EFFECTS OF INVESTMENT IN HYDROELECTRIC POWER PLANTS IN THE REPUBLIC OF SERBIA AND BOSNIA AND HERZEGOVINA <i>Zdravko Bijelić, Dragan Miletić</i>	205
2.19. ANALYSIS OF THE EFFICIENCY OF HIGHER EDUCATION SECTOR IN THE CENTRAL EASTERN EUROPE <i>Andrea Andrejević Panić, Simonida Vukadinović</i>	208
2.20. CAN MIGRATION REDUCE THE POSITIVE EFFECT OF INVESTMENTS IN EDUCATION? EVIDENCE FROM EUROPEAN UNION <i>Aleksandar Jovičić, Ljubiša Stamatović</i>	211
2.21. BOOTSTRAP PANEL CAUSALITY ANALYSIS OF RELATIONSHIPS BETWEEN FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH IN EMERGING MARKETS <i>Ayşegül Akça, Mustafa Özer</i>	214
2.22. THE INFLUENCE OF EDUCATION LEVEL ON ECONOMIC GROWTH IN CEE REGION <i>Tijana Kaličanin, Milica Bugarčić</i>	217
2.23. FARMERS' PROFIT MAXIMIZATION USING THE PRODUCTION FUNCTION <i>Boris Kuzman, Radivoj Prodanović</i>	220
2.24. EVALUATING MONETARY POLICY RESPONSE FUNCTION - THE CASE OF SERBIA <i>Milena Lazić</i>	223
2.25. POST-TRANSITIONAL DEVELOPMENT IN THE SOUTHEAST EUROPE BANKING INDUSTRIES <i>Srđan Marinković</i>	227
2.26. EFFICIENCY ENHANCERS AS FDI DETERMINANTS IN EMERGING AND DEVELOPING EUROPEAN COUNTRIES: A PANEL DATA ANALYSIS <i>Biljana Stankov, Jelena Vapa Tankosić</i>	230
2.27. ASSESSING ORGANIZATIONAL MATURITY IN PREDICTIVE ANALYTICS OF TELECOMMUNICATION COMPANIES IN THE REPUBLIC OF MACEDONIA <i>Kalina Trenevaska Blagoeva, Marina Mijoska</i>	234
2.28. FISCAL CONSOLIDATION EFFECTS ON LABOR MARKET TRANSITIONS IN SERBIA <i>Marko Vladislavljević</i>	237

Table of Contents

2.29. IN SEARCH FOR RESEARCH AND INNOVATION STRATEGY FOR SMART SPECIALIZATION OF THE REPUBLIC OF SERBIA: CHALLENGES BETWEEN THEORY AND REALITY	240
<i>Đuro Kutlača</i>	
2.30. AGRICULTURAL CREDIT MARKET DEVELOPMENT IN SERBIA: ASSUMPTION FOR INVESTMENTS IN AGRICULTURAL SECTOR	244
<i>Vesna Paraušić, Jonel Subić</i>	
2.31. FDI AS A FACTOR FOR ECONOMIC DEVELOPMENT IN SOME EUROPEAN COUNTRIES	247
<i>Srdjan Redžepagić</i>	
2.32. INTERNAL MIGRATION DETERMINANTS: EVIDENCE AT NUTS-3 LEVEL IN ROMANIA	250
<i>Marian Zaharia, Aniela Bălăcescu</i>	
2.33. SERVICE QUALITY MANAGEMENT IN BANKING SECTOR IN CRISIS AREA: CASE STUDY OF NORTHERN KOSOVO	253
<i>Isidora Ljumović, Krsto Jakšić</i>	
2.34. IMPACT OF CHANGES IN EXCISE POLICY ON DISTRIBUTION OF HOUSEHOLD INCOME IN SERBIA	256
<i>Jovan Zubović</i>	

PREFACE

Dear colleagues,

It is with great pleasure that we present you the *Book of Abstracts* from the jubilee 10th International Conference titled “*Theoretical and Empirical Aspects of Economic Science – 60 Years of Challenges and Opportunities*”.

2018 Conference is especially significant for the Institute of Economic Sciences in Belgrade, marking its 60th anniversary of the establishment, and it has included three working sessions covering particularly important economic topics:

- 1. Business Economics**
- 2. Applied Economics**
- 3. Economic Theory 1958-2018**

A total of 96 papers have been accepted for the conference. Such a great response from the international and domestic scientific community, where 178 authors from 21 different countries submitted their papers, speaks of the reputation and significance of the Institute of Economic Sciences as an international scientific and research institute.

This publication includes 74 abstracts that received a positive review and are thematically focused in two out of three conference sessions “Business Economics” and “Applied Economics”. In the second conference proceedings there are 22 abstracts focusing on the topic of Economic Theory 1958-2018 included.

We thank all authors, reviewers, program committee and organizing committee members for their contribution so this Book of Abstracts can fulfill our common goal – publication of high-quality scientific results.

We hope that the results presented at our conference will help the development of economic science as a whole, as well as improvement of public policies in the field of economics.

EDITORS



Part I

BUSINESS ECONOMICS

1.1. DIGITAL TRANSFORMATION OF THE BUSINESS ENVIRONMENT

Ivana Domazet¹

Institute of Economic Sciences, Belgrade, Serbia

OBJECTIVES

Digitization of business as well as business processes within the company is a source of macro-competitive advantages of national economies and a key factor of micro-competitiveness and better market positioning of companies. Therefore, the objective of this paper is to highlight, through the analysis of the prerequisites for the development of the digital environment and the benefits that the digitalization of business and business processes ensures, the necessity of investments of state and companies in improving the economic environment, automation of business processes and digitization in all segments of the economy of the Republic of Serbia.

METHODOLOGY

The methodology used in this paper is based on the desk method of collecting and analyzing secondary data with the conducted survey and collection of primary data in order to determine the level of development of information and communication technologies (as the driver of digitization) in Serbia, compared to other EU countries. In particular, after an extensive desk research and analysis of secondary data, in the period February-May 2018, we conducted an empirical research on the level of development and implementation of modern information and communication technologies in Serbia. The method used for primary data collection was an online survey. The respondents were mid-level managers from 42 medium and large companies operating in Serbia and 44 employees from the IT sectors in the state (public) administration of the Republic of Serbia. The survey was conducted by filling in a pre-prepared and partially structured questionnaire, with a couple of open questions. All questions were oriented towards the level of

¹Senior Research Associate, e-mail: ivana.domazet@ien.bg.ac.rs

development, implementation and use of modern information and communication technologies (ICT).

RESULTS

The results of the conducted research indicate that in Serbia, the potential for the intensive development of the digital economy and the ICT sector is not fully exploited, and it should be the core and the driver of digitalization of the business environment. The Serbian economy has a great need for the development and implementation of modern ICT solutions, and the role of the state that needs to create an institutional framework and provide strategic preconditions for the development of the digital economic environment, in parallel with education of IT experts and modernization of the education system, with the aim of accelerating digital transformation of the Serbian economy, is crucial.

IMPLICATIONS

The results of the research presented in this paper are primarily intended for policy makers, but also for the expert public and top managers. Changes in the business environment and the application of new digital technologies, which digitization as a concept implies, are extremely fast and complex, and as such can represent a real conceptual, but also a financial challenge. In the entire process of digital transformation, the role and responsibility of the state is dominant, with the necessary support of the economy i.e. companies from, first and foremost, the ICT sector.

ORIGINALITY VALUE

The scientific contribution of the paper is to point out the strategic benefits of digital transformation, that is, the necessity of digitization in business and business processes, resulting from accelerated technological changes, since it is necessary to understand how the technology is changing and defining new business environment. Digitization of the business environment, and meeting the challenges that the digital revolution 4.0 brings, is a prerequisite to the development of science and modern economy. Additionally, the advancement of micro-competitiveness through the implementation of modern business process models represents a unique leverage of profitable business operations.

KEY WORDS

Digitalization, business environment, digital transformation, ICT, competitiveness, Serbian economy

REFERENCES

1. Anđelić S, Brnjas Z, Domazet I. (2016). Education and entrepreneurship, In Monograph: „Insights and potential sources of new entrepreneurial growth“, Ed: Zanadu L et al. Filodiritto Publisher Inforomatica, Bologna, Italy, pp. 383-393.
2. Brousseau E, Penard, T. (2016). The economics of digital business models: A framework for analyzing the economics of platforms. *Review of Network Economics*, 6 (2), pp. 81-110.
3. Domazet I, Neogradi S. (2018). Digital Marketing and Service Industry: Digital Marketing in Banking Industry, International Monograph „Managing Diversity, Innovation, and Infrastructure in Digital Business“, Ed: Nilanjan Ray. IGI Global, Business Science Reference, Hershey, USA, pp. 21-41.
4. Domazet I, Stošić I, Hanić A. (2016). New technologies aimed at improving the competitiveness of companies in the services sector, International Monograph „Europe and Asia: Economic Integration Prospects“. CEMAFI International, Nice, France 2016, pp. 363-377.
5. Domazet I, Lazić M. (2017). „Information and communication technologies as a driver of the digital economy“, Proceedings from International Scientific Conference „Strategic Management and Decision Support Systems in Strategic Management, Subotica“. Faculty of Economics Subotica. 19. May 2017, pp. 11-19.
6. Domazet I. (2016). Unapređenje konkurentnosti preduzeća implementacijom CRM modela, In: Minović J. et al. Ed. *Pravci strukturnih promena u procesu pristupanje Evropskoj uniji*. Institute of Economic Sciences, Belgrade, pp. 225-241.
7. Domazet I, Lazić M, Simović V. (2014). Mogućnosti i pretpostavke za razvoj IKT industrije u Srbiji, In: Drašković B. Ed. „Deindustrijalizacija u Srbiji: mogućnost revitalizacije industrijskog sektora“, Institute of Economic Sciences, Belgrade, pp. 619-637.
8. Domazet I, Lazić M, Zubović J. (2018). Driving Factors of Serbian Competitiveness: Digital Economy and ICT. *Strategic Management: International Journal of Strategic Management and Decision Support Systems in Strategic Management*, Vol 23, No. 1(2018): pp. 20-28.
9. Paraušić V, Domazet I, Simeunović I. (2017). Analysis of the Relationship Between the Stage of Economic Development and the State of Cluster Development. *Argumenta Oeconomica* Vol. 39, No 2: pp. 279-305.
10. PKS, Udruženje informatičke delatnosti, *Analiza IT sektora Srbije*, 2017.
11. Proskuryakova, L., Meissner, D., Rudnik P. (2015). The use of technology platforms as a policy tool to address research challenges and technology transfer. *The Journal of*

Part I

- Technology Transfer*. Retrieved March 18th 2017 from <http://link.springer.com/article/10.1007/s10961-014-9373-8#/page-1>.
12. RZS (2017). *Upotreba informaciono komunikacionih tehnologija u Srbiji*. 2016. Retrieved April 19th 2018 from <http://webrzs.stat.gov.rs/WebSite/public/PublicationView.aspx?pKey=41&pLevel=1&pubType=2&pubKey=3772>.
 13. Statista Digital Market Outlook (2018).
 14. *Strategija razvoja industrije informacionih tehnologija za period od 2017. do 2020. godine*, "Sl. glasnik RS", br. 95/2016.
 15. World Bank (2018.) Global Financial Inclusion (Accessed April 22nd, 2018).

1.2. IT ENTREPRENEURSHIP ENVIRONMENT IN SERBIA: HAVE WE DONE ENOUGH?

Vladimir Simović¹

Institute of Economic Sciences, Belgrade, Serbia

Mirjana Radović Marković²

Institute of Economic Sciences, Belgrade, Serbia

OBJECTIVES

The development of IT entrepreneurship in a national economy leads to popularization of digital economy, creation of new jobs and greater investments. Therefore, for each country the development of favorable IT entrepreneurship environment represents a strategic goal in terms of gaining a competitive edge in a modern business world. This paper investigates the characteristics of IT entrepreneurship environment in Serbia. The main focus of the paper is in analyzing the measures undertaken by Serbian government in terms of promoting and developing favorable IT entrepreneurship environment. Also, the paper reveals the results of the research on attitudes of IT entrepreneurs and their views on key success factors for IT startups. Finally, the results of similar studies in other countries are analyzed and compared with Serbian case.

METHODOLOGY

The research presented in this paper is based on analysis of foreign and domestic scientific literature in the area of IT entrepreneurship. Besides the analysis of relevant scientific literature, a special attention will be given to the analysis of the measures undertaken by the Serbian government in recent years in terms of building favorable IT entrepreneurship environment. A comparative method is used to compare those measures against similar measures undertaken by other EU countries. In order to investigate the attitudes of the existing IT entrepreneurs in Serbia and their views on key success factors for IT startups, an interview and

¹ Research Associate, corresponding author: vladimir.simovic@ien.bg.ac.rs

² Full Professor

questionnaire will be used. Finally, the method of concretization will be used in order to define the key success factors for IT entrepreneurs in Serbia, both personal and systemic.

RESULTS

The results of the research conducted within this paper suggest that the Serbian government has recognized the importance of IT entrepreneurship development but that there is a significant space for improvements and especially when compared with other EU countries and measures undertaken by their governments. The importance of this research and its results lies in the fact that all tangible prerequisites for successful IT entrepreneurship development are identified and thoroughly explained, both from government's and existing IT entrepreneurs' perspective.

IMPLICATIONS

Besides scientific community, the results of this research are especially important for Serbian public policy makers since they encompass the measures and the effects of those measures undertaken in other EU countries thus representing a specific roadmap for Serbian decision makers in terms of building a favorable IT entrepreneurship environment. This paper and its results are also important to prospect IT entrepreneurs in Serbia looking for key success factors as specific guidelines for their future endeavors.

ORIGINALITY VALUE

The originality of this research lies in the fact that, to our knowledge, there is no available data on similar researches which are identifying and analyzing IT entrepreneurship key success factors, both from systemic (i.e. government's) and personal (i.e. entrepreneur's) level.

KEY WORDS

IT entrepreneurship environment, IT startups, key success factors

REFERENCES

1. Bruton, G. D., Ahlstrom, D., & Li, H. L. (2010). Institutional theory and entrepreneurship: where are we now and where do we need to move in the future? *Entrepreneurship theory and practice*, 34(3), pp. 421-440.

2. Domazet I, Lazić M, Simović V. (2014). Mogućnosti i pretpostavke za razvoj IKT industrije u Srbiji, In: Drašković B. Ed. „Deindustrializacija u Srbiji: mogućnost revitalizacije industrijskog sektora“, Institute of Economic Sciences, Belgrade, pp. 619-637.
3. Domazet I, Lazić M, Zubović J. (2018). Driving Factors of Serbian Competitiveness: Digital Economy and ICT. *Strategic Management: International Journal of Strategic Management and Decision Support Systems in Strategic Management*, Vol 23, No. 1(2018), pp. 20-28.
4. Domazet I, Lazić M. (2017). Information and communication technologies as a driver of the digital economy, Proceedings from International Scientific Conference „Strategic Management and Decision Support Systems in Strategic Management, Subotica“. Faculty of Economics Subotica. 19. May 2017, pp. 11-19.
5. Domazet I, Simović V. (2014) Mogućnosti i pretpostavke za razvoj IKT industrije u Srbiji, u Drašković B. Ur. Zbornik radova „Deindustrializacija u Srbiji: mogućnost revitalizacije industrijskog sektora“, Institut ekonomskih nauka, Beograd, pp. 619-637.
6. European Commission (2013). European Commission (EC), Digital Entrepreneurship study; Project Description, 2013, available at: <https://ec.europa.eu/growth/tools-databases/dem/monitor/project-description>
7. European Commission (2014). Fuelling digital entrepreneurship in Europe, Background paper. At http://ec.europa.eu/geninfo/query/resultaction.jsp?QueryText=EU+vision%2C+strategy+and+actions&query_source=GROWTH&swlang=en&x=18&y=8
8. Jiamin Y, Wenyu D. (2018). Establishing an Ecosystem for Digital Entrepreneurship: A Case of Zhongguancun. Digital Enablement, pp. 139-162.
9. Markus M., Loebbecke, C. (2013). Commoditized Digital Processes and Business Community Platforms: New Opportunities and Challenges for Digital Business Strategies, *MIS Quarterly* Vol. 37 No. 2, June 2013.
10. Pate S. S., Adams M. (2013). The Influence of Social Networking Sites on Buying Behaviors of Millennials, *Atlantic Marketing Journal*, vol. 2, pp. 92-108.
11. Sigfusson T., Chetty, S. (2013). Building international entrepreneurial virtual networks in cyberspace, *Journal of World Business* (48), pp. 260-270.
12. Zhao F., Wallis, J. and Singh, M. (2015). E-government development and the digital economy: A two-way Relationship, *Internet Research: Electronic Networking, Applications and Policy*, 25(5), pp. 734-766.

1.3. IMPORTANCE OF EGOVERNMENT ACCEPTANCE - THE PERCEPTION OF BUSINESS ENTITIES IN SERBIA

Jasmina Đurašković¹

Faculty of Engineering Management, Belgrade, Serbia

Dušan Đurašković²

Faculty of Technical Sciences, Novi Sad, Serbia

OBJECTIVES

With the growing focus of the state on the implementation of the eGovernment system, during the last decade, the role of business entities is emphasized in achieving the highest acceptance of eGovernment services.

The objective of this paper is to provide an answer to the following questions: 1) Whether business entities consider e-government an important channel of communication with the state? 2) What is the level of investments for business entities in IT training? 3) What is the level of investments of business entities in modern equipment needed for the use of electronic public services?

METHODOLOGY

The survey was conducted by the method of surveying business entities, using a closed questionnaire, which was distributed electronically. Interviewed employees in companies are in managerial positions, who are familiar with eGovernment services or they are directly in charge of communicating with the state and therefore able to provide all necessary information. The survey covers 509 representatives of the small, medium and large enterprises operating in the private sector on the territory of the Republic of Serbia. Frequency distribution in the sample, according to the type of activity, indicates the high share of enterprises operating in the service sector (49%), while percentage of production (25%) and trade enterprises (26%) is approximately the same. In addition to

¹ PhD

² MSc, corresponding author: dusan.djuraskovic@gmail.com

descriptive statistics, the analysis used the hi-square test, t-test and single-factor analysis of variance, and the results are presented in tabular and graphical form.

RESULTS

According to the results of the survey, business entities are interested in accepting e-Government, in the first place for investing in equipment and software solutions needed for the use of e-services, they are less attached to the overall concept of e-government and all the opportunities provided by the digital administration, while giving the least attention to the training and education of employees for the use of electronic public services.

IMPLICATIONS

Implications of new knowledge are useful both for policy makers and researchers and scientists. From a practical point of view, research results can help policymakers in defining basic guidelines for creating future development measures and activities in the field of e-government implementation, in order to ensure greater acceptance of electronic services. The scientific contribution is reflected in the improvement of the theoretical framework, which provided a good basis for further research in the mentioned field.

ORIGINALITY VALUE

The originality of this research is reflected in the lack of research of a similar character in the domestic business and social environment. A review of the relevant literature noted that relatively few papers focus on business entities and their use of eGovernment, with particular emphasis on investing in the knowledge and expertise of employees.

KEY WORDS

E-government, education of employees, information literacy, business entities, Serbia

REFERENCES

1. Abu-Shanab, E., & Bataineh, L. Q. (2016). Key Success Factors of E-Government Projects: Jordanians' Perceptions. *International Journal of Information Technology Project Management (IJITPM)*, 7(1), pp. 32-46.

Part I

2. Arendsen, R., Peters, O., Ter Hedde, M., & Van Dijk, J. (2014). Does e-government reduce the administrative burden of businesses? An assessment of business-to-government systems usage in the Netherlands. *Government information quarterly*, 31(1), pp. 160-169.
3. Ashaye, O. R. & Irani, Z. (2014). E-Government Implementation Factors: A conceptual framework. *Journal of Modern Accounting and Auditing*, 10(2), pp. 241-247.
4. Bilbao-Osorio, B., Dutta, S., and Lanvin, B., 2013. The global information technology report 2013: growth and jobs in a hyperconnected world. World Economic Forum and The Business School for the World, *Insight Report*, Geneva, Switzerland.
5. Brown, M. M., 2007. Understanding E-Government Benefits An Examination of Leading-Edge Local Governments. *The American Review of Public Administration*, 37(2), pp.178-197.
6. Cicvarić-Kostić, S., Okanović, M., Milosavljević, M., & Vukmirović, J. (2013). Antecedents of citizens' satisfaction with local administration in Serbia. *Transylvanian Review of Administrative Sciences*, 40, pp. 22-34.
7. Davies, R. (2015). eGovernment - Using technology to improve public services and democratic participation. EPRS | European Parliamentary Research Service, European Union
8. Direkcija za elektronsku upravu. (2016). Podrška unapređenju eUsluga na lokalnom nivou u Republici Srbiji: Predlog osnovnog skupa elektronskih usluga lokalne samouprave i Predlog Indeksa razvoja eUprave jedinica lokalne samouprave. Beograd: Direkcija za elektronsku upravu, Tim za socijalno uključivanje i smanjenje siromaštva.
9. European Commission. (2013). Progress Report 2013 for Serbia (commission staff working document). Brussels: European Commission. Retrieved on 4th October 2014, from http://ec.europa.eu/enlargement/pdf/key_documents/2013/package/sr_rapport_2013.pdf
10. Eurostat. Statistics database. Retrieved from http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database.
11. Hermana, B., & Silfianti, W. (2011). Evaluating e-government implementation by local government: digital divide in internet based public services in Indonesia. *International Journal of Business and Social Science*, 2(3), pp. 156–163.
12. Horsburgh, S., Goldfinch, S., & Gauld, R. (2011). Is public trust in government associated with trust in e-government? *Social Science Computer Review*, 29(2), pp. 232–241.
13. Ibrahim, O. A., & Zakaria, N. H. (2014). Towards a model of e-government services adoption among employees in developing countries. *Journal of information systems research and innovation*, 8 (1), pp. 66-74.
14. Iskender, G., & Yıldırım, S. Ö. (2014). A Quantitative Analysis on the Opinions of Different Stakeholder Groups in Turkish e-Government Transformation. In *Measuring E-government Efficiency*. Springer New York. pp. 233-256.

15. Lalić D., Marjanović U., Lalić B.: The influence of social networks on communication satisfaction within the organizations. In: M.M. Cruz-Cunha, P. Goncalves, N. Lopes, E.M. Miranda and G.D. Putnik, ed. Handbook of Research on Business Social Networking: Organizational, Managerial, and Technological Dimensions., New York, Business Science Reference (IGI Global), 2012, pp. 545-566.
16. NALED (2016). Strateški okvir za razvoj e-uprave u Republici Srbiji. www.naled-serbia.org/upload/.../FINAL_Strateski_okvir_za_e_upravu_u_Srbiji.docx (Accessed 5.11.2016).
17. Napitupulu, D., & Sensuse, D. I. (2014). The critical success factors study for e-Government implementation. *International Journal of Computer Applications*, 89(16), pp. 23-32.
18. OECD (2003a). The Case for E-Government: Excerpts from the OECD. Report "The E-Government Imperative". *OECD Journal on Budgeting*, 3(1), pp. 61-96.
19. Paoli, A. D., & Leone, S. (2015). Challenging Conceptual and Empirical Definition of e-Government Toward Effective e-Governance. *International Journal of Social Science and Humanity*, 5(2), pp.186-194.
20. Reddick, C. G., & Roy, J. (2013). Business perceptions and satisfaction with e-government: Findings from a Canadian survey. *Government Information Quarterly*, 30(1), pp. 1-9.

1.4. CONVERGENCE CHALLENGES IN DIGITAL BUSINESS ENVIRONMENT OF WESTERN BALKAN COUNTRIES

Boban Stojanović¹

Faculty of Economics, University of Niš, Republic of Serbia

Zorana Kostić

Faculty of Economics, University of Niš, Republic of Serbia

OBJECTIVES

The importance of the research stems from the fact that the possible convergence scenarios for Western Balkan countries depend on, among many other factors, the character of changes in the business environment. One of the main aims of the research is to examine key convergence challenges among Western Balkan countries in digital business environment by multiple dimensions. Taking into account the process of digital transformation, the research tests whether the selected business indicators became synchronized in analyzed countries, and how the amplitude of those indicators diverged.

METHODOLOGY

The methodological approach of the paper is a combination of qualitative and quantitative research based on relevant data sources. Using comparative analysis and benchmarking, the paper gives an overview on the trends of selected business environment indicators (*GDP per capita, Ease of doing business, Digitalization index and obstacles to digital transformation measured by Network Readiness Index*) that suggest the convergence potential of the Western Balkans countries. The paper is focused on the application of modern statistical and software solutions for quantitative data analysis.

¹ PhD, corresponding author: dr.boban.stojanovic@gmail.com

RESULTS

Selected indicators describing the quality of business environment and the pace of digital transformation show a similar pattern: synchronizing more over time, but with divergent amplitudes. Differences in the average speed of convergence between countries can be explained by a model of absolute convergence which suggests that countries with initially lower levels of economic development should grow faster than higher income countries. The results also reveal whether the pace of income convergence is followed by digital convergence.

IMPLICATIONS

The conducted research can present a good basis for further research in this field due to respecting current trends of digital transformation, sums up regional progress in quality of business environment and gives country specific policy recommendations which could improve convergence performance. In addition, it can be useful for policy makers and practitioners in Western Balkan countries to develop analytical capacities during the accession process towards the European Union.

ORIGINALITY VALUE

Appreciating the wider context of the research, the paper evaluates position of the Western Balkan region and emphasizes the lack of business sophistication. Sensibly channeled research, which combines a set of relevant indicators, defines the character of digital convergence in selected business environments. Existing significant economic gap between the European Union countries and Western Balkans countries suggests that the speed of catching up process refers to countries' ability to adapt to digital changes in the business environment.

KEY WORDS

Convergence, business environment, digital transformation, Western Balkan countries

REFERENCES

1. Barbić, T., Bieber, F., Broz, T. et al. (2018). *The Impact of Digital Transformation on the Western Balkans: Tackling the Challenges towards Political Stability and Economic Prosperity*. Graz/Zagreb.

Part I

2. Dabrowski, M., & Myachenkova, Y. (2018). The Western Balkans on the road to the European Union. *Bruegel Policy Contribution*, (04), 22.
3. European Commission (2018). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, A Credible Enlargement Perspective for and Enhanced EU Engagement with the Western Balkans*. Strasbourg.
4. European Commission (2018). *European Union Statistics on Income and Living Conditions* (EU-SILC Survey) Available at <http://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions> (Accessed on May 2018).
5. European Commission. (2017). *Economic Reform Programmes of Albania, the former Yugoslav Republic of Macedonia, Montenegro, Serbia, Turkey, Bosnia and Herzegovina and Kosovo**. *The Commission's Overview and Country Assessments*. Luxembourg: Publications Office of the European Union.
6. Kostić, Z. (2018). Innovations and digital transformation as a competition catalyst. *Ekonomika*, Vol. 64 (1), pp. 13-23.
7. Sanfey, P., & Milatovic, J. (2018). *The Western Balkans in transition: diagnosing the constraints on the path to a sustainable market economy*. European Bank for Reconstruction and Development. London.
8. World Bank Group. (2017). *The Western Balkans: Revving Up the engines of growth and prosperity*. Washington.
9. Stojanović, B. & Kostić, Z. (2015). Convergence of Economic Performance in the European Union. *Researching Economic Development and Entrepreneurship in Transitional Economies*, Karl-Franzens Universität Graz, Faculty of Economics in Banja Luka, Graz. Austria, pp. 55-66.
10. Stojanović, B., Kostić, Z., & Šaranović, J. (2018). Integration engineering and convergence of the GDP per capita in the European Union and the Eurasian economic union. Book: *Economic Integrations, Theory, Cooperation and Perspectives; Integrations reforms and business challenges*, pp. 203-213.

1.5. ANALYSIS OF THE IMPACT OF DIGITAL ARCHIVES IN SOCIAL SCIENCES – CASE STUDY RRPP DATA IN SERBIA

Jelena Banović¹

Institute of Economic Sciences, Belgrade, Serbia

OBJECTIVES

The main objective of this paper is the importance of digital archives and their impact on social sciences research. Digital archives are repositories for processing, storage and reuse of the data. The aim of this research is to measure the impact and to indicate the significance of this archives for scientific institution but also for researchers as well.

METHODOLOGY

Impact assessment of data services in social sciences is very challenging process. For that purpose, Charles Beagrie Ltd, London with The Centre for Strategic Economic Studies, University Victoria, US in 2012 published the first version of methodology on “Economic Impact Evaluation of the Economic and Social Data Service”. Within HORIZON2020 - CESSDA SaW project they continued to develop the methodology and a toolset of documents in order for this to be applicable to a range of European countries. Data for the analysis were drawn from desk-research and interviews, and online surveys were conducted as well.

RESULTS

According to the results of this analysis the most important benefits of RRPP data (data that had been collected during the RRPP project cycle in Serbia), direct and indirect, with higher impact on Social Science in Serbia are: Long-term re-use of well curated data, Possibility of international comparisons, visibility and use of national research data, Benefits to sponsor of data service provider, Reduction of potential duplication of effort and No loss of future research opportunities. It is also important to note that the open data collection is important for future

¹ Research Trainee, e-mail: jelena.banovic@ien.bg.ac.rs

interregional cooperation, bearing in mind that the available data has been collected within multinational projects.

IMPLICATIONS

Findings in this paper will be helpful for making regulations that prescribe that every scientific institution must have a digital archive. The paper will also give possible recommendations for public policies.

ORIGINALITY VALUE

Digitization contributes to improvement of science. Scientists in Serbia have started to deal with the phenomenon of digital archives. There is not that much research with same topic and this research is a step further because it represents the significance of archives and data that are preserved in archives.

KEY WORDS

Digitization, archives, digital archives, researchers

REFERENCES

1. Duranti, L. (2001). The impact of digital technology on archival science. *Archival Science*, 1, pp. 39-55.
2. Cunningham, A. (2008). Digital Curation/Digital Archiving: A View from the National Archives of Australia. *The American Archivist*, 71, pp. 530-543.
3. Beer, D., Burrows, R. (2013). Popular Culture, Digital Archives and the New Social Life of Data. *Theory, Culture & Society*, 30(4), pp. 47-71.
4. Jeurgens, C. (2013). The Scent of the Digital Archive: Dilemmas with Archive Digitisation. *Low Countries Historical Review*, 128(4), pp. 30-54.
5. Borgman, C.L. (1999). What are digital libraries? Competing Visions. *Information Processing and Management*, 35, pp. 227-243.
6. Beagrie, C. (2012) Economic Impact Evaluation of the Economic and Social Data Service. *Center for Strategic Economic Studies (CSES), University of Victoria*.
7. Ali Shiri, (2003) "Digital library research: current developments and trends", *Library Review*, 52(5), pp. 198-202.

1.6. DIGITAL SALES CHANNELS AND REALIZATION OF BANK'S KPI TARGETS

Sladana Neogradi¹

Addiko bank, Belgrade, Serbia

OBJECTIVES

The aim of the paper is to explore the impact of digital banking on enhancing the bank's business performance, in regard to improving the market position of the bank and achieving defined KPI goals (fulfillment of current account targets, sales loans, deposits, cards and insurance, etc.). In addition, it will indicate the advantages of digital banking, in terms of increasing the number of clients and their loyalty. This research will also provide an analysis of the impact of digital channels of sales and distribution of financial services, on the performance of the bank and the possibility of optimizing the sales portfolio, which should result in high quality of delivery and low costs of providing the bank's services.

METHODOLOGY

The paper will use general and special scientific methods, which involves the modeling method, combined with certain techniques that affect the increase in sales. Special scientific methods used in the paper are analytical-synthetic methods, method of concretization, comparative method and method of qualification. The research is based on the analysis of foreign and domestic literature, with special attention being paid to practical research through a case study. The use of comparative analysis is used to compare the results of research on customer attitudes about the impact of digital technology and its application in providing quality services. The results will be analyzed and concrete conclusions will be made based on a sample of over 100 clients of a Serbian bank, Data-related constraints arise from the missing or incorrect responses of the respondents to specific questions in the survey, but the size of the sample and the

¹ E-mail: sneogradi@gmail.com

assumed coincidence of error in responses, significantly compensate for the adverse consequences of assessing this type of restriction.

RESULTS

The results of the conducted research indicate that the optimal combination of digital marketing and sales channels of communication affects the improvement of banks' performance. The banking sector, in order to redirect and redesign its business, is using technological innovations that make less accessible and more demanding users reachable. The research results show the extent to which the bank effectively defines its digital sales portfolio, and whether there are common items in that process, which are used by all banks, and that represents a starting point for further development of digital communication with clients.

IMPLICATIONS

Research results presented in this paper are primarily intended for bank's managers. The results of the conducted research in the application of digital banking bring with them new elements and possibilities for expanding the portfolio of bank's services, and thus new opportunities for increasing profit. The possibilities for improving the business results are reflected through technological solutions for better communication and interaction with clients, analytical insight into the habits, needs and possibilities of the client adequately adapted to the bank's offer, and automation and high efficiency of business processes.

ORIGINALITY VALUE

The scientific contribution of the paper is reflected in the proposals for improving the process of managing sales and distribution channels of financial services, based on the application of digital technologies in banks. It is also taking into account all the contextual constraints, imposed by current legislative frameworks, market conditions, organizational and financial challenges that would be faced by the bank that wants to improve its distribution channels through the use of available digital technologies. In addition, this paper proposes solutions to the challenges faced by banks regarding the use of credit bureaus in terms of time constraints for the credit products application based on 24/7 model.

KEY WORDS

Digital channels, digital banking, electronic banking, KPI goals, sales channels

REFERENCES

1. Batra R, Keller K.L. (2016). Integrating Marketing Communications: New Findings, New Lessons and New Ideas, *Journal of Marketing*, doi: 10.1509/jm.15.0419
2. Chen C. F, Tseng W. S. (2010). Exploring Customer - Based Airline Brand Equity: Evidence from Taiwan. *Transportation Journal*, winter, pp. 24-34.
3. Couldry N. (2012). *Media, Society, World: Social Theory and Digital Media Practice*. Cambridge: Polity Press.
4. Cvijović J, Kostić M, Janičić M. (2014). Implementation of data bases in advertising, *Quarterly Marketing Journal*, vol. 45, pp. 299-311.
5. Domazet I, Hanić H, Simeunović I. (2012). Marketing communication efficiency and effectiveness of the media for various target groups, International Scientific Conference-Management 2012, Fakultet za industrijski menadžment, Univerzitet Union, Mladenovac, pp. 791-796.
6. Domazet I, Lazić M, Simović V. (2014). Mogućnosti i pretpostavke za razvoj IKT industrije u Srbiji, In: Drašković B. Ed. „Deindustrijalizacija u Srbiji: mogućnost revitalizacije industrijskog sektora“, Institute of Economic Sciences, Belgrade, pp. 619-637.
7. Domazet I, Lazić M, Zubović J. (2018). Driving Factors of Serbian Competitiveness: Digital Economy and ICT. *Strategic Management: International Journal of Strategic Management and Decision Support Systems in Strategic Management*, Vol 23, No. 1(2018), pp. 20-28.
8. Domazet I, Lazić M. (2017). „Information and communication technologies as a driver of the digital economy“, Proceedings from International Scientific Conference „Strategic Management and Decision Support Systems in Strategic Management, Subotica“. Faculty of Economics Subotica. 19. May 2017, pp. 11-19.
9. Domazet I, Neogradi S. (2018). Digital Marketing and Service Industry: Digital Marketing in Banking Industry, International Monograph „Managing Diversity, Innovation, and Infrastructure in Digital Business“, Ed: Nilanjan Ray. IGI Global, Business Science Reference, Hershey, USA.
10. Domazet I, Simović V. (2014). Mogućnosti i pretpostavke za razvoj IKT industrije u Srbiji, u Drašković B. Ur. Zbornik radova „Deindustrijalizacija u Srbiji: mogućnost revitalizacije industrijskog sektora“, Institut ekonomskih nauka, Beograd, pp. 619-637.
11. Domazet I, Stošić I, Hanić A. (2016). New technologies aimed at improving the competitiveness of companies in the services sector, in Richet et. al, ed. Europe and Asia: Economic Integration Prospects, CEMAFI, Nice, France, pp. 363-377.
12. Domazet I, Stošić I, Hanić A. (2016). New technologies aimed at improving the competitiveness of companies in the services sector, International Monograph „Europe and Asia: Economic Integration Prospects“. CEMAFI International, Nice, France 2016, pp. 363-377.

Part I

13. Ferris M. (2013). Insights on Mobile Advertising, Promotion, and Research, *Journal of Advertising Research*, vol. 47, pp 28-37, doi: 10.2501/S0021849907070043
14. Milojević A. (2016). Two-way symmetrical public relations and digital communication technologies: between theory and practice, *CM: Communication and Media Journal*, vol. 10, pp. 81-108.
15. Neogradi S. (2014). Rating and Empirical Models, Internacionalna Majska konferencija o strategijskom menadžmentu, zbornik radova, Bor.
16. Pate S. S. & Adams M. (2013), The Influence of Social Networking Sites on Buying Behaviors of Millennials, *Atlantic Marketing Journal*, vol. 2, pp. 92-108.

1.7. THE IMPACT OF THE ALLOCATION OF HIGHER DEFENSE FUNDS IN RELATION TO MATERIAL WELFARE IN THE CURRENT ECONOMIC CONTEXT

Oana Ramona Glont¹

Doctoral School of Economics and Business Administration, West University of Timisoara, Timisoara, Romania

Adina Alexandra Darmaz-Guzun²

Doctoral School of Economics and Business Administration West University of Timisoara, Timisoara, Romania

OBJECTIVES

The overall objective of the proposed research paper is to highlight defense expenditures in literature, to link them with economic development in NATO and EU member countries. The results of our study have a positive connotation of the political implications this defense sector generates in terms of governments' efforts to ensure the interstate security of the individual in the current political context.

METHODOLOGY

The analysis of our study is based primarily on the "Systematic Analysis Methodology". For the systemic review of the literature, electronic databases were used based on the key words for the descriptors specific to our research for the 35 NATO and EU member states during 2009-2016, which led to the use of 1,395 primary studies resulting from the title and abstract of the papers. Out of the 70 possible research papers discovered in the second search step, only 7 studies effectively highlight the correlation between military spending and economic development, while the rest of the studies may be considered negligible in our analysis, reporting the effects of some states' governance, tax policies as whole, related strategies of the 18th century. The results of the analyses and

¹ PhD Student, corresponding author: oanaramona.glont@gmail.com

² PhD Student

verifications of the papers in the literature have led us to the idea that in all these studies, the researchers started from partial parameters of the magnitude of the effect, resulting from the multivariate analyses.

RESULTS

The systematic analysis of data on military spending and GDP shows that primary studies tend to report bi-directional positive effects on capital and economy (for Portugal), direct relations between military expenditure and GDP with negative effects on the economy for Greece, cohesive direct relations in the case of Turkey, a country where the economy has developed a lot lately, or relationships with negative effects on the economy in countries targeting the production of weapons.

IMPLICATIONS

Although this study has the potential to include as many variables as possible to re-examine the relationship between defense spending and economic growth in countries in the Euro Atlantic structures, this is another area of research that helps us go beyond the scope of this research papers in which we will conclude that the potential variables are savings, investment, corruption, inequalities, education, health, external debt and political instability.

ORIGINALITY VALUE

As a general conclusion of this study, corroborated with what is currently happening in the Euro-Atlantic geopolitical area, the results of the analysis of this paper can have important political implications with effects in the macroeconomic area of both the EU and NATO member states at this time, of the future states that will join these formations. In these crucial moments of defense of states, it is preferable to "the inter-state security of the individual," to the detriment of the other indicators of economic well-being, investments, with an emphasis on the increase of the defense budgets.

These findings ensure the continuation of national policies, the national security objectives of EU and NATO member states, and implicitly Romania, materialized by ensuring the effectiveness of national systems for crisis prevention, internal and external, military or civilian.

KEY WORDS

Defense, economic development, Euro - Atlantic countries, systematic reviews.

REFERENCES

1. Awawor, S. and Siew, Ling Yew, 'The Effect of Military Expenditure on Growth: An Empirical Synthesis', 2014, *Monash University, Department of Economics*, ISSN 1441-5429, P25/14.Bartle
2. Chang, H-C, Huang, B-N., Yang, C.W., "'Military Expenditure and Economic Growth Across Different Groups: A Dynamic Panel Granger-Causality Approach'", 2011,' *Economic Modelling*', 28(6), pp. 2416-2423
3. Chang, T., Lee, C-C., Hung, K., Lee, K-H., "'Does Military Spending Really Matter for Economic Growth in China and G7 Countries: The Roles of Dependency and Heterogeneity'", 2014' *Defence and Peace Economics*', 25(2), pp. 177-191.
4. Crow, R.T. (1970) "Military expenditure and the economic growth of the northeast corridor", B. Udis (ed.), *Adjustments of the US Economy to Reductions in Military Spending*, Washington DC: United States Arms Control and Disarmament Agency.
5. Droff J, Paloyo A, "Assessing the Regional Economic Impacts of defence Activities: A Survey of Methods", *Journal of Economic Surveys* (2015) Vol. 29, No. 2, pp. 375-402
6. Dunne, J.P. and Smith, R.P. (1984) "The economic consequences of reduced uk military expenditures", *Cambridge Journal of Economics* 8(3), pp. 297-310.
7. Daicoff, D.W., McQuiggage, M.M., Warriner, C.K. and Olsen, R.R. (1970) "Economic Impact of Military Base Closings", Prepared for U.S. Arms Control and Disarmament Agency, ACDA/E-90, Vols. I and II, April 1970.
8. Huang, J-T., Kao, A-P., "'Does Defence Spending Matter to Employment in Taiwan', 2005,' *Defence and Peace Economics*', 16(2), pp. 101-115.
9. Huang, Tsai-Yuan, Po-Chin Wu, and Shiao-Yen Liu. "Defense-Growth Causality: Considerations of Regime-Switching and Time- and Country-Varying Effects", *Defence and Peace Economics*, 2016.
10. Gangopadhy P, Elkanj N, *Politics of Defence Spending and Endogenous Inequality* , 2009, Volume 15, Issue 1, 2009 Berkeley Electronic Press.
11. Korkmaz S (2015), *The Effect of Military Spending on Economic Growth and Unemployment in Mediterranean Countries*, *International Journal of Economics and Financial Issues*, Vol. 5, No. 1, 2015, pp.273-280.
12. Pan, C-l., Chang, T., Wolde-Rufael, Y., "'Military Spending and Economic Growth in the Middle East Countries: Bootstrap Panel Causality Test', 2014 'Defence and Peace Economics', Practices. Chicago, IL: Wolters Kluwer.
13. Pradhan, R.P., Arvin, M.B, Norman, N.R., Bhinder, H.K., "'Military Expenditure and Economic Growth: Using Causality, Cointegration and Missing Variables', 2013, 'International Journal of Computational Economics and Econometrics', 3(3-4), pp. 164-186.

Part I

14. Sandino R (2017), Military Expenditure and Growth in Conict: An Instrumental Approach, Economics Undergraduate Honors Thesis, Stanford University.

1.8. PRODUCTIVE SPECIALISATION AND GROWTH IN THE EU15: EXPLORING AN EDUCATION BASED SECTORAL TAXONOMY

Marta Simões¹

CeBER and Faculty of Economics, University of Coimbra, Coimbra, Portugal

Andrea Araujo²

Faculty of Economics, University of Coimbra, Coimbra, Portugal

OBJECTIVES

This paper analyzes the relationship between productive specialization and economic growth in the 15 older European Union member states between 1970 and 2005. The sectoral taxonomy proposed by Peneder (2007) is used to classify the different sectors of activity according to the educational levels of the respective workforce and establish a comparison between the manufacturing and the services sector, based on their potential contribution to productivity improvements.

METHODOLOGY

Member states that remained in the bottom positions in terms of real GDP per capita rankings at the end of the period are also the ones where activities classified as very low and low in terms of education requirements are relatively more important. The empirical model for the analysis of the productive specialization-growth nexus corresponds to a growth regression where the employment share of the different sectors is the main explanatory variable taken alongside other control variables identified in the empirical growth literature as robust growth determinants. The model is estimated with the fixed effects method. Fixed effects is adequate when, although there are common variables that affect the behavior of the countries under analysis, there are also characteristics intrinsic to each country that influence the respective behavior and that are different across countries, while remaining constant over time.

¹ PhD, corresponding author: mcsimoes@fe.uc.pt

² MSc

RESULTS

A higher weight of manufacturing activities that use mostly very-low and low skilled labor presents a negative association with growth. Services activities that require low-educated workers (not very low) make a negative growth contribution. Manufacturing activities with high and medium-high education requirements have a positive growth influence, while in the case of services only activities that require highly-educated workers (not very high) show a positive correlation with growth.

IMPLICATIONS

Specialization in manufacturing and services activities that employ highly-educated workers promote growth due to their higher potential for productivity improvements. The policy advice that can be extrapolated from this study contemplates the design of industrial policies that promote manufacturing activities such as chemicals, telecommunications and transports equipment, and services such as financial intermediation, audit, tax consulting, engineering and legal activities.

ORIGINALITY VALUE

We show that a structural change pattern that leads to different productive specialization structures in terms of the relative weight of activities with different education requirements can have important implications for the dynamics of output.

KEY WORDS

Productive specialization; economic growth; sectoral taxonomy; education; European Union

REFERENCES

1. Baumol, W. (1967). Macroeconomics of Unbalanced Growth: The Anatomy of Urban Crisis. *American Economic Review*, 57(3), pp. 415–426.
2. Baumol, W., Blakman, A, & Wolff, E, (1985). Unbalanced Growth Revisited: Asymptotic Stagnancy and New Evidence. *American Economic Review*, 75, 806 - 817.
3. Dietrich, A., (2012). Does growth cause structural change, or is it the other way round?: a dynamic panel data analyses for seven OECD countries. *Empirical Economics*, 43(3), pp. 915–944.

BUSINESS AND APPLIED ECONOMICS

4. Eichengreen, B. & Gupta, P. (2013). The two waves of service-sector growth. *Oxford Economic Papers*, 65, pp. 96–123.
5. Marelli, E. (2004). Evolution of employment structures and regional specialisation in the EU. *Economic Systems*, 28, pp. 35-59.
6. Maroto-Sánchez, A., & Cuadrado-Roura, J.R. (2009). Is growth of services an obstacle to productivity growth? A comparative analysis. *Structural Change and Economic Dynamics*, 20(4), pp. 254–265.
7. Pavitt, K. (1984). Sectoral patterns of technical change: towards a taxonomy and a theory. *Research Policy*, 13, pp. 353–369.
8. Peneder, M. (2003). Industrial structure and aggregate growth. *Structural Change and Economic Dynamics*, 14, pp. 427-448.
9. Peneder, M. (2007). A sectorial taxonomy of educational intensity. *Empirica*, 34(3), pp. 189-212.
10. Rodrik, D. (2013). Structural change, fundamentals, and growth: an overview. *mimeo*, Institute for Advanced Study.
11. Silva, E. G. & A. A. C. Teixeira (2008). Surveying structural change: seminal contributions and a bibliometric account. *Structural Change and Economic Dynamics*, 19, pp. 273–300.
12. Silva, E.G. & A.A.C. Teixeira (2011). Does structure influence growth? A panel data econometric assessment of ‘relatively less developed’ countries, 1979-2003, *Industrial and Corporate Change*, 20(2), pp. 433-455.
13. Teixeira, A., & Fortuna, N. (2011). Human capital, R&D, trade, and long-run productivity. Testing the technological absorption hypothesis for the Portuguese economy, 1960–2001. *Research Policy*, 39(3), pp. 335- 350.
14. Tidd, J., Bessant, J., & Pavitt, K. (2005). *Managing innovation: integrating technological, market and organizational change*. New York: Wiley.

1.9. ANALYSIS OF THE COMPETITIVENESS OF SEE COUNTRIES

Sandra Kamenković¹

Belgrade Banking Academy, Belgrade, Serbia

Marija Lazarević Moravčević²

Belgrade Banking Academy, Belgrade, Serbia

OBJECTIVES

The objective of this analysis is to assess the degree of competitiveness of Serbia, as well as its position in relation to the surrounding countries. The countries involved in the analysis are characterized by scarcity of resources necessary for economic growth and development, so they are inevitably addressed to the international market. Higher level of competitiveness of the country enables its easier access to foreign resources and a better negotiating position in all types of arrangements.

METHODOLOGY

The authors analyzed eight Southeast European countries in the period 2011-2016. Due to the lack of comprehensive method that could present all the necessary aspects and components of international competitiveness, different analyses are used in practice. In this paper, a multicriterial approach is used, which, in addition to quantitative data, also uses the so-called soft data, which are derived from standardized surveys. Despite certain disadvantages, such as the degree of objectivity of the appraisal results, this method is increasingly popular. It is concerned with a number of relevant institutions, such as the World Economic Forum (WEF), the International Institute for Management Development (IMD), the World Bank (WB), etc.

¹ Assistant Professor, corresponding author: sandra.kamenkovic@bba.edu.rs

² Assistant Professor

RESULTS

The analysis shows that the position of Serbia during this six-year period is slowly improving, since in 2012 and 2013, Serbia had the worst position in this group of countries. The greatest progress had been made during the 2015 and 2016, in the segment of macroeconomic stability, infrastructure and legal regulations, but the quality of business environment in Serbia can not yet be assessed as satisfactory.

IMPLICATIONS

The analysis identifies critical factors that need to be improved in order to increase the competitiveness of the economy. When choosing an investment destination, foreign investors consider competitiveness as one of the key parameters which points out to the significance of its improvement.

ORIGINALITY VALUE

The authors analyze the overall value of the indicator in detail, but also each indicator individually. A detailed analytical approach in the research provides the possibility of identifying critical factors of national competitiveness and finding a solution whose implementation would improve Serbia's position in the international market.

KEY WORDS

Competitiveness, Global Competitiveness Index, macroeconomic stability

REFERENCES

1. Annual Report on European SMEs 2016/2017, <https://ec.europa.eu/>
2. Delgado, M., Ketels, C., Porter, M., & Stern, S. (2012). The Determinants of National Competitiveness, *NBER Working Paper* No. 18249.
3. The World Bank, Doing Business 2018, The World Bank, www.worldbank.org
4. European Commission, Europe 2020 – Background Information for the Informal European Council, http://ec.europa.eu/commission_2010-2014/president/news/statements/pdf/20100210_3_en.pdf
5. European Commission, Europe 2020, Strategy for smart, sustainable and inclusive growth, <http://eur-lex.europa.eu>
6. European Commission, European Innovation Scoreboard 2017, <http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards>
7. Filipović, S. (2003). Ograničavajući faktori razvoja MSP u Srbiji, *Industrija 3-4*, pp.25-36.

Part I

8. Kamenković, S., & Lazarević-Moravčević, M. (2018). *Ocena kvaliteta okruženja i njegov uticaj na poslovanje sektora MSPP u Srbiji*, Institut ekonomskih nauka, Beograd.
9. Orszaghova, L., Savelin, L., & Schudel, W. (2012). External Competitiveness of EU Candidate Countries (December 6, 2012). *ECB Occasional Paper* No. 141. Available at SSRN: <https://ssrn.com/abstract=2185897>
10. Sanfey, P., & Zeh, S. (2012). Making sense of competitiveness indicators in south-eastern Europe, European Bank for Reconstruction and Development, *Working Paper* No.145.
11. WEF, (2018). *Competitiveness Report 2016–2017*, World Economic Forum, Geneva.
12. WEF, (2017). *Competitiveness Report 2015–2016*, World Economic Forum, Geneva.
13. WEF, (2016). *Competitiveness Report 2015–2014*, World Economic Forum, Geneva.
14. WEF, (2015). *Competitiveness Report 2014–2013*, World Economic Forum, Geneva.
15. WEF, (2014). *Competitiveness Report 2013–2012*, World Economic Forum, Geneva.
16. WEF, (2013). *Competitiveness Report 2012–2011*, World Economic Forum, Geneva.

1.10. COMPETITIVENESS OF THE SERBIAN ECONOMY THROUGH THE PRISM OF TAX INCENTIVES FOR FOREIGN INVESTORS

Darko Marjanović¹

Institute of Economic Sciences, Belgrade, Serbia

Mihailo Paunović²

Innovation Centre of Faculty of Technology and Metallurgy, Belgrade, Serbia

OBJECTIVES

To make Serbia the most attractive investment destination, comparing to the countries in the region, special attention should be paid to the current tax incentives granted to foreign investors. Hence the aim of this paper is to discover, through appropriate research and analysis, the opinions and attitudes of foreign investors regarding the significance of tax reliefs for their investment in Serbia. Tax incentives are one of the most important tax instruments that can have a decisive impact on foreign investors when choosing an investment location, and therefore play an important role in increasing competitiveness of the Serbian economy.

METHODOLOGY

Research on the impact of tax incentives on foreign investors in their choice of Serbia as an investment destination, was carried out with a quantitative approach with the use of test methods, and survey technique. The questionnaire via e-mail was chosen due to the quality and quantity of the data obtained, as well as the convenience of this type of survey research for the selected target group. The survey involved the 300 largest foreign investors who invested their capital in Serbia in the past 15 years. The respondents were exclusively managers in charge of investments or operations in foreign markets, general managers or business owners. The questionnaire consisted of closed-type questions, since they can provide more detailed answers that can be coded and analyzed at a later stage. In order to determine the possible existence of statistically significant differences in

¹ PhD, corresponding author: darko.marjanovic@ien.bg.ac.rs

² Research Assistant

the evaluation of investigated issues among different groups of foreign investors, a single-factor analysis of the variance of different groups and t-test of independent samples were used.

RESULTS

The results of the conducted research indicate that tax incentives for investing in underdeveloped regions, operating in free zones, and the establishment of small and medium-sized enterprises, have more significance for foreign investors who entered the Serbian market through direct investment. Looking at the amount of investments, tax incentives for companies that export and operate in free zones are more important for foreign investors who invested up to 10 million euros in Serbia. These results should be a clear guide to what needs to be done in order to make the Serbian market attractive for foreign investors.

IMPLICATIONS

The results of the research presented in this paper are primarily intended for the authors of tax policy in Serbia. It is very important to timely notice the weaknesses of the tax system, and adequately respond to the demands and attitudes of investors expressed through this research, in the forthcoming period. This is very important for the Serbian economy, because it will show a clear signal to foreign investors that, with the introduction of new tax incentives, and appropriate corrections of the existing ones, Serbia is the best investment destination for them.

SCIENTIFIC VALUE

The scientific value of this paper is reflected in the definition and systematic presentation of the importance of tax incentives in certain areas, depending on the level of investment and the aspect from which the foreign investor enters the Serbian market. It is important to note that this topic has not been given enough attention from a scientific-research point of view in the previous period. For this reason, the significance of the work is even greater, given that the obtained results will indicate how and to what extent tax incentives can contribute to the improvement of the business environment in Serbia.

KEY WORDS

Tax incentives, foreign direct investments, competitiveness, Investors, market

REFERENCES

1. Baskaran, T., Feld, L.P., Schnellenbach, J. (2016). *Fiscal federalism, decentralization, and economic growth: a meta-analysis*, Economics Inquiry, Volume 54, Issue 3, pp. 1445-1463.
2. Castro, V. (2011). *The impact of the European Union fiscal rules on economic growth*, Journal of Macroeconomics 33, pp. 313–326.
3. Collis, D., Young, D., Goold, M. (2012). *The Size and Composition of Corporate Headquarters in Multinational Companies: Empirical Evidence*, Journal of International Management 18, pp. 260–275.
4. Cooper, D.J., Ezzamel, M. (2013). *Globalization discourses and performance measurement systems in a multinational firm*, Accounting, Organizations and Society 38, pp. 288–313.
5. Domazet, I, Lazić, M, Hanić, H. (2014). *Foreign exchange rate as a factor to improve the business environment: the case of Serbia*, In: „Contemporary trends and prospects of economic recovery“ Ed. Angelova B. et al. Izdavač: CEMAFI International, Nice, France, pp. 395-410.
6. Domazet, I. (2018). „Improving competitiveness and economic development through FDI“, International Scientific Conference „Developmental State and Millennium Development Goals“, The International Institute of Development Studies (IIDS) Brisbane, Australia, 5-8. jun 2018, pp. 93-107.
7. Domazet, I., Marjanović D. (2017). Foreign direct investment in the function of economic development: Example of selected countries in the Western Balkan, *International Letters of Social and Humanistic Sciences* 79(2017), pp 1-15.
8. Domazet, I., Marjanović D. (2018). FDI as a Factor of Improving the Competitiveness of Developing Countries: FDI and Competitiveness, International monograph „Foreign Direct Investments (FDIs) and Opportunities for Developing Economies in the World Market“, Ed: Venkataramanaiah Malepati, IGI Global, Business Science Reference, Hershey, USA, pp. 82-104.
9. Domazet, I., Marjanović, D. (2016). *Improving the business environment in Serbia through tax incentives for foreign investors*, International scientific conference „Impact of economic policies on attaining resilient growth, Institute of Economic Science, Belgrade.
10. Domazet, I., Marjanović, D. (2017). *Tax incentives as a factor of economic growth*, The state and the market in economic development: in pursuit of millennium development goals, The IIDS Australia Inc, Australia, pp. 93-107.
11. Easson, A., Eric M.Z. (2003). *Tax Incentives*, World Bank Institute, Washington D.C, pp. 1-35.
12. Harger, K., Ross, A. (2016). Do capital tax incentives attract new businesses? Evidence across industries from the new markets tax credit, *Journal of Regional Science*, Volume 56, Issue 5, pp.733-753.

Part I

13. Li, Q. (2016). *Fiscal decentralization and tax incentives in the developing world*, Review of International Political Economy, Volume 23, pp. 232-260.
14. Marjanović, D., Pjanić, M. (2012). *The Effects Of Tax Competition On The Operations Of Multinational Companies*, Tehnološki fakultet "Mihajlo Pupin", Zrenjanin, pp. 211-216.
15. Marjanović, D., Radičić, M. (2012). *Uticaj poreske konkurencije na strane direktne investicije u Srbiji*, Anali Ekonomskog fakulteta u Subotici, Subotica, pp. 57-69.
16. Radojević, P., Marjanović, D. (2014). The Impact of Firm's Characteristics on Export Barriers Perception - A Case of Serbian Exporters, *Prague Economic Paper, University of Economics in Prague, Czech Republic, No. 4/2014*, pp. 426-445.
17. Willis, G. (2016). *Tax incentives and investment in the UK*, Oxford Economics Paper, Volume 68, Issue 2, pp. 465-483.
18. Zolt, E. (2015). *Tax Incentives: Protecting the tax base*, Paper for Workshop on Tax Incentives and Base Protection, United Nations, New York, pp. 1-45.

1.11. THE INFLUENCE OF THE TRANSITION REVIEW ON ECONOMIC DEVELOPMENT THE REPUBLIC OF SERBIA

Brankica Todorović¹

School of Economics, Užice, Serbia

OBJECTIVES

The economic system of the Republic of Serbia, after several decades of reversals, economic and social problems, has begun starting to develop as a market system at the beginning of the 21st century. The paper examines the influence of the economic system in which the previous state regulations were developed from the aspect of the stimulating or limiting factor of development. Also, the economic aspects of the functioning of the market economy system from the transition turnaround in the Republic of Serbia were considered.

METHODOLOGY

In order to achieve the main goal of the paper, instruments and the empirical analysis were used to understand the economic effects of different systems. The analysis is based on the use of specific indicators and variables which are combined in order to create an optimal model of economic development in conditions of transition.

RESULTS

The results confirmed the argument that the transition and the market economy had been bringing better and more efficient results from the aspect of the functioning of the national economy. However, the introduction of the market economy system didn't itself solve all economic and social problems due to which the key shortcomings and problems of the current system were examined. The results also included the analysis of economic aggregates from the aspect of integration and fulfillment of the obligations of the Republic of Serbia in the segment of the functioning of the market economy.

¹ PhD, e-mail: bdanica@neobee.net

IMPLICATIONS

The research in the paper has enabled a distinction between the consideration of the stimulating and limiting role of the economic system in the overall economic development. Based on the analysis of numerous literature, studies, reports and statistical data in this area, a direct link was observed between the market mechanism, a more equitable distribution and the realization of material well-being. This impact is reflected also in the conduct of economic and foreign trade policy.

ORIGINALITY VALUE

The paper establishes a link between the past, the present and the future from the aspect of economic development. The analysis of the European Commission's Reports from the aspect of functioning of the market economy enabled the analysis of the achieved level of economic development in the segment of the existence of a functioning market economy, as well as the achievement of the key preconditions for its functioning in the Republic of Serbia.

KEY WORDS

Economic system, economic development, transition

REFERENCES

1. Bićanić, I., Škreb, M. (1994). The Yugoslav Economy From Amalgamation to Disintegration. Failed Efforts at Molding a New Economic Space 1919-91, in Good, F.D. (ur.). *Economic Transformation in East and Central Europe. Legacies From the Past and Policies for the Future*. Routledge, London and New York.
2. Čobeljić, N. (1959). *Policy and methods (1947-1956) economic development of Yugoslavia*, Nolit, Belgrade.
3. Drašković B. (2004). Kriza preduzeća u tranziciji, *Ekonomski vidici*, vol. 9, iss. 2, pp. 243-248.
4. Đuričin, D.N. (2006). *Tranzicija, stabilizacija i održivi razvoj - perspektiva Srbije*. Savez ekonomista Srbije.
5. *Federal Constitution (1974)*. The Federal Assembly, Round XI, Vol. 2-3, Belgrade.
6. Grupa autora (2010). *Poskrizni model ekonomskog rasta i razvoja Srbije 2011-2020*. Beograd: USAID.
7. Zeković, V., Novakovic, S. (1962). *Economics of Yugoslavia*, Publishing company "Work", Belgrade.
8. Nikolić, I. (2012) *Privatizacijau Srbiji*. Beograd: Ekonomski institut.

BUSINESS AND APPLIED ECONOMICS

9. *Platform for the preparation of opinions and decisions of the X Congress of SKJ (1973)*. Communist, Belgrade.
10. *Public Finance Bulletin* (2016). no. 141, May 2016 Ministry of Finance, Republic of Serbia.
11. *Report on progress European Commission Brussels* (2015). Republic of Serbia, 10. November 2015.
<http://www.seio.gov.rs/dokumenta/eu-dokumenta.211.html>
12. Republic Statistical Office (2016). Database
<http://webzrs.stat.gov.rs/WebSite/public/ReportView.aspx>
13. Simon, Jr. G. (2013). *Some aspects of economic development of Serbia*. Budapest: Corvinus Univesrity
14. *Social plan of economic development of Yugoslavia from 1961 to 1965* (1961). Ed. "Official List"
15. World Bank (2008). *Doing business 2009*.
<http://www.doingbusiness.org/~media/WBG/DoingBusiness/Documents/Annual-Reports/English/DB09-FullReport.pdf>

1.12. THE FINANCIAL MANAGEMENT AND CONTROL SYSTEM AS A BASIS OF THE EFFICIENT PUBLIC SECTOR

Zvonko Brnjas¹

Institute of Economic Sciences, Belgrade, Serbia

OBJECTIVES

The Financial Management and Control System (FMC) is a concept developed by the European Commission and as such is a standard in financial management, as well as the overall functioning of the public sector at all levels of the state (both at the central and the lower levels, including level of local self-government). The paper presents the basic theoretical and methodological elements of the FMC system, and then using the example from practice, one of the local self-governments in Serbia, presents the key phases and characteristics of its introduction process.

METHODOLOGY

The paper is based on the analysis of international and domestic literature in the area of public finance. Since the empirical part of work is related to one of the local self-governments in Serbia, the focus in the analysis is put on the management of local budget-finance systems. Significant attention is also devoted to the analysis of the relevant EU legal regulations, and then to the domestic regulations developed in Serbia by the relevant institutions (primarily the Ministry of Finance and within it, the Central Harmonization Unit - CJH) responsible for these issues. The Case Study was used to describe the experiences of one of the local self-governments in Serbia that entered the process of introducing the FMC system into its administrative budget system and based on it certain conclusions were drawn regarding the importance of introducing of such an advanced control system in the public sector in Serbia to the whole.

¹ Full Professor, e-mail: zvonko.brnjas@ien.bg.ac.rs

RESULTS

The final conclusions in the paper show that the introduction of the FMC system is very important for all public sector entities in Serbia and that this process can significantly improve the efficiency of budgetary resources management as well as its overall resources. It is therefore, not only the use of public resources in accordance with the law and regulations, but also the improvement of their efficiency and effectiveness, the goal of introduction of FMC in public sector.

IMPLICATIONS

In addition to the importance of the paper in addressing one of the most advanced, contemporary concepts of public sector management control, the conclusions presented in the paper can be especially useful both for the creators of the financial system in public finances in Serbia and for their holders in practice (managers in public finances, as well as public officials). Considering that the introduction of FMC is a mandatory part of European integrations, experience and conclusions can be of special importance to the participants in this process in Serbia.

ORIGINALITY VALUE

The paper deals with a topic that is quite a novelty in Serbia. The FMC system can be considered as an advanced modern control system in more developed societies, primarily in the EU, and as such, theoretical, methodological and practical experience related to its significance, the process of its implementation and the initial experience in its application in Serbia has a clear original value.

KEY WORDS

Financial management, public finance control, budgeting system, control environment

REFERENCES

1. Brnjas Z., Stošić I., Milivojević S., (2014). *Finansiranje aktivnosti zaštite životne sredine jedinica lokalne samouprave u Srbiji*, journal *Ecologica*, Belgrade, god. 21, br. 76, pp. 635-639.
2. Brnjas Z., Dedeić P., (2013). *Local Government Budgeting Practices in Serbia - Present State and Perspectives, in Post crisis recovery*; Faculty of Economics Tuzla, Bosnia and Herzegovina, pp. 470-486.

Part I

3. Brnjas Z. (2012). *Economic Integration and Development of Local Public Sector in Serbia*, in *European Integration Process In Western Balkan Countries*, Faculty of Economics of the University of Coimbra & Institute of Economic Science, Belgrade, pp. 624-647.
4. Brnjas Z., Dedeić P., (2011), *Intergovernmental transfer system in Serbia : current issues and challenges*, in: *Contemporary issues in the integration processes of Western Balkan countries in the European Union*, International Center for Promotion of Enterprises, Ljubljana, Slovenija, pp. 237-255.
5. *Guidelines for Internal Control Standards for the Public Sector* (2004), INTOSAI General Secretariat, Vienna, Austria.
6. *Public Internal Financial Control*, European Commission (2008), General DG Budget
7. *Nacionalni program za integraciju u EU*, zaključak Vlade 05, broj 011-8132/2007-11, 2008.
8. *Međunarodni računovodstveni standardi za javni sektor*, SRRS, Beograd, 2005.
9. Strategija razvoja interne finansijske kontrole u javnom sektoru u Republici Srbiji, („Službeni glasnik RS”, br. 55/05, 71/05-ispravka, 101/07i 65/08)
10. *Pravilnik o zajedničkim kriterijumima i standardima za uspostavljanje i funkcionisanje sistema finansijskog upravljanja i kontrole u javnom sektoru*, Sl. gl. RS, br. 82/2007.
11. Vigvari A., Raičević B., Brnjas Z., (2003). *The Principle of Budgeting and Local Government Finance*, European Movement in Serbia, Belgrade/ Prometej, Novi Sad, p. 293.
12. *Zakon o budžetskom sistemu* („Sl. glasnik RS”, br. 54/2009, 73/2010, 101/2010, 101/2011, 93/2012, 62/2013, 63/2013 - ispr., 108/2013, 142/2014, 68/2015 - dr. zakon, 103/2015 i 99/2016).
13. *Zakon o radu* („Sl. glasnik RS”, br. 24/2005, 61/2005, 54/2009, 32/2013, 75/2014 i 13/2017 - odluka US).
14. *Zakon o državnim službenicima* („Sl.glasnik RS”, br. 7 79/2005, 81/2005 - ispr., 83/2005 - ispr., 64/2007, 67/2007 - ispr., 116/2008, 104/2009 i 99/2014).
15. *Zakon o državnoj upravi*, („Sl. glasnik RS”, br. 79/2005, 101/2007, 95/2010 i 99/2014).
16. *Zakon o javnom dugu* („Sl.glasnik RS”, br. 61/2005,107/2009, 78/2011 i 68/2015).
17. *Zakon o javnim nabavkama* („Sl.glasnik RS”, br. 124/12; 14/2015 i 68/2015).
18. *Zakon o lokalnoj samoupravi*, („Sl. glasnik RS”, br. 129/2007 i 83/2014).
19. *Zakon o načinu određivanja maksimalnog broja zaposlenih u javnom sektoru*, ("Sl. glasnik RS", br. 68/2015 i 81/2016).
20. *Zakon o finansiranju lokalne samouprave*, ("Sl. glasnik RS", br. 62/2006, 47/2011, 93/2012, 99/2013).

1.13. CHALLENGES AND DILEMMAS OF IMPLEMENTING CORPORATE RESTRUCTURINGS IN SERBIA AND WESTERN BALKAN COUNTRIES

Ivan Stošić¹

Institute of Economic Sciences, Belgrade, Republic of Serbia

OBJECTIVES

Restructuring is not a new phenomenon considering that in the past three or four decades, numerous companies underwent different forms of significant changes in their structure and business operation. However, in recent years, particularly after the beginning of the global economic crisis, restructuring processes have become more intense, have acquired new forms and encompass an ever-growing number of companies. Bearing all this in mind, the main goal of this paper is to present the current trends in the implementation of the enterprise restructuring process, with a special emphasis on the analysis of characteristic developments in this area in Serbia, as well as in Western Balkan countries.

METHODOLOGY

Restructuring in strategic terms can be approached in at least two different ways – narrower and broader ones. The narrower approach observes phenomenon as a one-time event related to taking partial measures, i.e. financial, organizational, and the like. The much better approach to restructuring is in broader way, since all its complexity can be thus covered, while planning and implementation of adopted programs can bring a better performance. In case of broader approach to restructuring, it includes a number of individual activities involving mergers, acquisitions and taking over other organizations, changes in the business portfolio, product and service offerings, changes to the capital structure and financial structure, privatization, and other activities changing the ownership structure, the domain of control over the company (purchase of shares, LBO,

¹ Principal Research Fellow, e-mail: ivan.stosic@ien.bg.ac.rs

ESOP, etc.), as well as series of organizational changes, changes in the technical and technological nature, new marketing strategies, etc.

The research methodology employed in this paper included a systematic overview and a comparative analysis of relevant scientific literature and specific empirical research on the Western Balkan region contemporary restructuring trends, especially those related to the state of crisis. Furthermore, the paper is founded on of the empirical (field) research conducted in certain number of Serbian firms that underwent major structural changes.

RESULTS

Although restructuring is a global phenomenon, there are certain differences in its interpretation in various countries and regions. It should be noted that special attention was devoted to the phenomenon of restructuring within the EU under the conditions of the global crisis which affected most member states, especially since 2010. In addition, deep changes were noticed in the economic and competitive environment, structural changes in the EU economy, and recently also an impact of “Ukrainian crisis” and sanctions in a trade with Russia.

Unlike the EU and the USA, restructuring is less viewed from a macroeconomic and lot more from strategic and financial aspects. The focus is individual businesses and achieving their primary objective function – creating wealth (shareholder value) for the owners. A large number of individual goals of restructuring are pointed out, and they are differently understood and interpreted. Some differences in relation to the EU will be discussed in this paper. But the paper will be focused on present trends of restructuring in Western Balkan region. The presentation and analysis of characteristic challenges and obstacles that occur in the realization of structural changes, as well as the dilemmas of implementing various ways of restructuring will be the main results of this paper.

IMPLICATIONS

The purpose of restructuring is to save resources and to re-deploy resources to more efficient use. In market-oriented economies, such restructuring is usually motivated by an attempt to restore or regain competitiveness and enhance long-term shareholder value in response to a radical change in the business environment or to a gradual erosion of competitiveness.

However, there are many controversies about the implication of restructuring:

- Restructuring leads to (or at least aims at) improving economic performance of the company through increasing its efficiency and effectiveness;
- Restructuring brings about (most often) negative social effects due to a very frequent practice of downsizing, outsourcing, M&A in which the number of employees is reduced as well.

Consequently, some authors argue for mild changes (that could be illustrated by a famous quote: “*Change, change, why do we need change? Things are quite bad enough as they are.*” Lord Salisbury to Queen Victoria).

ORIGINALITY VALUE

Though not a new phenomenon, restructuring has faced many changes in terms of the way and intensity of its implementation. The purpose of this paper is to serve as a basis for discussion on contemporary tendencies in the field of corporate restructuring and their effects, particularly in Serbia. The originality of this paper lies in its results obtained through the analytical and especially empirical research of the key characteristics of the restructuring process. Namely, in Serbia, and according to the author’s knowledge in the Western Balkans, empirical research is almost non-existent in the field of corporate restructuring.

KEYWORDS

Corporate restructuring, financial crisis, structural changes, market performance, Western Balkan countries

REFERENCES

1. Bartlett, W. & Monastiriotes, V. (2010), *South East Europe after the Economic Crisis: a New Dawn or back to Business as Usual?* LSEE – Research on South Eastern Europe European Institute, LSE.
2. Beaujolin-Bellet, R. & Schmidt, G. (2012), *Les restructurations d’entreprises*. Paris. La Decouverte.
3. Bradač, H. (2013), Characteristics of Innovations in Companies: Comparison of Croatia and Slovenia. *China-USA Business Review*, ISSN 1537-1514 May 2013, Vol. 12, No. 5, pp. 494-504.
4. Bueno, R.A. (2010), Assessing economic transition in Eastern Europe after twenty years. *Transformation in business & economics*, 2 (20).

Part I

5. *Checklist on Restructuring Processes*. (2009) European Commission. Brussels.
6. Erić, D. & Stošić, I. (2013), *Korporativno restrukturiranje*, Institute of Economic Sciences, Belgrade Banking Academy, Belgrade, Čigoja štampa.
7. Erić, D., Stošić, I. & Redžepagić, S. (2012) Restructuring of Public Enterprises as Source of Increasing Competitiveness in Serbia and South-Eastern Europe Region. *Economic Integrations, Growth Prospects and Enlargement*, University of Rijeka - Faculty of Economics, University of Ljubljana - Faculty of Economics, Jean Monnet Centre of Excellence, pp. 608-623.
8. *European Economic Forecast (2009-2015)*, European Commission Directorate-General for Economic and Financial Affairs.
9. Köper, B. & Richter, G. (2012), *Restructuring of Organisations and Potential Implications for their Staff*, Available from: www.baua.de Bundesanstalt für Arbeitsschutz und Arbeitsmedizin.
10. *Privatisation in the 21st Century: Recent Experiences of OECD Countries* (2009).
11. *Restructuring as a prerequisite for competitiveness - Management summary for restructuring and financing study – Serbia* (2012), Roland Berger Strategy Consultants.
12. *Restructuring Study 2013-Croatia* (2013), Roland Berger Strategy Consultants.
13. *Restructuring Study 2013-German and European Competitiveness* (2013), Roland Berger Strategy Consultants.
14. *Restructuring Survey-After the economic crisis UK* (2010), Roland Berger Strategy Consultants.
15. *South East Europe Regular Economic Report (2009-2017)*, International Bank for Reconstruction and Development/The World Bank.
16. *The Global Competitiveness Report*, World Economic Forum Geneva, Switzerland
17. *The Global Crisis: Causes, Responses and Challenges* (2011), International Labour Office, Geneva, ISBN: 978-92-2-124579-7.
18. *The Western Balkans: 15 years of economic transition* (2015), Zuzana Murgasova, Nadeem Ilahi, Jacques Miniane, Alasdair Scott, Ivanna Vladkova-Hollar, and an IMF staff team – Washington, D.C. International Monetary Fund, 2015.

1.14. EVOLUTION AND ADEQUACY OF PRINCIPLES FOR STAKEHOLDERS IN CORPORATIONS

Spartak Keremidchiev¹

Economic Research Institute at BAS, Sofia, Bulgaria

OBJECTIVES

The paper deals with two characteristics of the principles of stakeholders that are applied in corporate governance practices - evolution and adequacy. These principles have undergone substantial changes in recent years. The aim of the paper is to evaluate application of these principles in terms of their adequacy and evolution and, if necessary, to propose amendments to help corporations better interact with stakeholders.

METHODOLOGY

The methodology of study includes a set of methods for the extraction, processing, analysis and synthesis of quantitative and qualitative information, such as analytical study of documentary sources, research and publications; surveys of experience in European countries and companies, content analysis of literature, benchmarking, analysis of data from empirical sociological studies of public and non-public enterprises; methods of verification of results, methods of transfer of best experience and practices, synthesis of processed information and data.

RESULTS

The degree of relevance of stakeholder principles proposed by OECD and implemented in EU countries in line with development of theory and business practice has been established. It has been shown that, despite their positive evolution and alignment with the achievements of theory and practice, these principles do not fully reflect the provisions regarding the understanding of the

¹ PhD, e-mail: keremidas@gmail.com

nature of the corporation, the interests and conflicts between the parties concerned.

IMPLICATIONS

The results achieved could be applied in the practice of corporate governance in European companies as well as in the corporate governance codes and in communication and work with stakeholders. Another positive effect is development and enrichment of scientific knowledge on corporate governance.

ORIGINALITY VALUE

Proposals have been made to incorporate new principles as well as substantive improvements and revision of existing principles. The novelty here is related to formulating the main task of managers, managing immanent interests and conflicts between stakeholders, and promotion of employee participation.

KEY WORDS

Corporate governance, principles, stakeholders, corporations

REFERENCES

1. Austrian Working Group for Corporate Governance. (2015). *Austrian Code of Corporate Governance*. Retrieved from <http://www.corporate-governance.at/uploads/u/corpgov/files/code/corporate-governance-code-012015.pdf>
2. Belgian Corporate Governance Committee. (2009). *The 2009 Belgian code on corporate governance*. Retrieved from <https://www.corporategovernancecommittee.be/sites/default/files/generated/files/page/corporategovukcode2009.pdf>
3. Bucharest Stock Exchange. (2015). *Code of Corporate Governance*. Retrieved from http://bvb.ro/info/Rapoarte/Diverse/ENG_Corporate%20Governance%20Code_WEB_revised.pdf
4. Central European Corporate Governance Association (2016). *Corporate Governance Code for Slovakia*. Retrieved from http://cecga.org/wp-content/uploads/Kodex-2016_EN_final-1.pdf
5. Corporate Governance Committee of the Budapest Stock Exchange Company Limited by Shares. (2012). *Corporate Governance recommendations*. Retrieved from <https://www.bse.hu/Issuers/Corporate-Governance-Recommendation>

BUSINESS AND APPLIED ECONOMICS

6. Croatian financial services supervisory agency, The Zagreb stock exchange. (2012). *Corporate governance code*. Retrieved from <http://www.zse.hr/default.aspx?id=17606>
7. Cyprus stock exchange. (2014). *Corporate governance code*.
8. Czech Securities Commission. (2004). *Corporate Governance Code based on the OECD Principles*. Retrieved from <http://www.ecgi.global/code/corporate-governance-code-based-oecd-principles-2004>
9. Financial reporting council. (2016). *The UK Corporate Governance Code*. Retrieved from <https://www.frc.org.uk/getattachment/ca7e94c4-b9a9-49e2-a824-ad76a322873c/UK-Corporate-Governance-Code-April-2016.pdf>
10. Financial Supervision Authority Tallinn Stock Exchange. (2015). *Corporate Governance Recommendations*. Retrieved from http://www.nasdaqbaltic.com/files/tallinn/bors/press/HYT_eng.pdf
11. Joint Initiative Hellenic Exchanges- SEV Hellenic Federation of Enterprises. (2013). *Hellenic corporate governance code for listed companies*. Retrieved from http://www.helex.gr/documents/10180/2227279/HCGC_EN_20131003.pdf/c32f35ac-2f4b-459a-989f-4f41618cfdc5
12. Ljubljana Stock Exchange Inc., the Slovenian Directors' Association and the Managers' Association of Slovenia. (2009). *Corporate Governance Code*. Retrieved from
13. Malta Financial Services Authority. (2014). *Corporate Governance Manual for Directors of Investment Companies and Collective Investment Schemes*. Retrieved from <http://ccpsmalta.com/corporate/corporate-governance-manual-for-directors-of-investment-companies-and-collective-investment-schemes/>
14. *OECD, G20 principles of corporate governance*. (2015). Paris: OECD.
15. *OECD principles of corporate governance: 2004*. (2004). Paris: OECD.
16. Regierungskommission Deutscher Corporate Governance Kodex. (2017). *German Corporate governance Code*. Retrieved from https://www.dcgk.de//files/dcgk/usercontent/en/download/code/170214_Code.p
17. Swedish Corporate Governance Board. (2016). *The Swedish Corporate Governance Code*. Retrieved from http://www.corporategovernanceboard.se/UserFiles/Archive/486/The_Swedish_Corporate_Governance_Code_1_December_2016.pdf

1.15. APPLICATION OF ETHICAL MODEL ON HUMAN RESOURCE MANAGEMENT PROCESSES

Azra Sućeska¹

Belgrade Banking Academy, Belgrade, Serbia

OBJECTIVES

The aim of this paper is to point out the importance of the ethical principles and potentials of the human resource management process in generating ethical behavior of the management and the organization itself towards employees, then to explore the implications of ethically problematic practices and procedures in transitional economies and societies and to consider the possibilities of applying policies and procedures of the original concept of human resources management. Ethics is an integral component in business. One of the aims of this paper is to investigate the impact of applying ethical model on human resource management processes and organization performance.

METHODOLOGY

Desk research and the questionnaire-based survey are used in this research. The survey was conducted in 2014. The structured questionnaire is used as the main instrument for collecting primary data provided by managers from Serbia and Bosnia and Herzegovina with the aim of determining the impact of the application of ethical principles on the management processes of human resources, as a prerequisite for the success of organization. The sample size was 325 respondents. Response rate was 28% for 1,160 questionnaire respondents. Target group are managers of all levels, HR managers and executives. The descriptive statistics, correlation analysis and statistical conclusion validity are used primarily for testing the research hypotheses. Factor analysis and other multivariate analysis techniques are used in data processing and analysis. Operating data was processed in SPSS statistical software package.

¹ PhD, e-mail: azra.hanic@bba.edu.rs

RESULTS

The results of the conducted research indicate that in Serbia and Bosnia and Herzegovina ethical principles in the process of human resources management are not sufficiently applied. 73% of respondents believe that the basic criteria in the selection are knowledge and skills of the candidates. 65% of respondents believe that the development and training are investment, not an expense. 57% believe that the improvement and development depends on the operating results. The statement that assessment and evaluation is performed according to the predetermined criteria is confirmed by 54% of respondents. Statement that earnings are determined on the established system that everyone is familiar with, was confirmed by 64% of respondents. There are 62% of respondents who believe that before dismissal an employee has an opportunity to correct a problem. Result shows that the state owned enterprises use at least ethical practice, while small private organizations have high ethical standards.

IMPLICATIONS

Based on the research results, key dimensions of the ethical model relevant to human resource management processes can be identified and measures can be defined in terms of affirmation of the concept of business ethics and particularly ethical principles in human resource management, such as requiring approval of entrepreneurship and start up incentive training of entrepreneurs in the domain of human resources management and business ethics, networking of the existing professionals in the field of human resources management and business ethics, etc.

ORIGINALITY VALUE

Based on the study of the relevant literature and the analysis of selected cases from the practice, an original ethical model of human resources management has been created in this paper, which includes basic processes and procedures. The special originality of this research is in identifying the criteria for evaluating the ethics of human resource management practices through theoretical concept and empirical verification of these assessments.

KEY WORDS

Ethical model, ethical principles, ethical criteria, processes of human resources management, ethics of human resource management practices

REFERENCES

1. Boxall, P., & Purcell, J. (2011). *Strategy and human resource management*. Palgrave Macmillan.
2. Bratton, J., & Gold, J. (2017). *Human resource management: theory and practice*. Palgrave.
3. Briscoe, D., Tarique, I., & Schuler, R. (2012). *International human resource management: Policies and practices for multinational enterprises*. Routledge.
4. Cascio, W. (2018). *Managing human resources*. McGraw-Hill Education.
5. Dessler, G. (2005). *Human Resource Management*. New Jersey, USA: Pearson-Prentice Hall.
6. Zupan, N., & Kaše, R. (2005). *Strategic human resource management in European transition economies: building a conceptual model on the case of Slovenia*. *Human Resource Management*, 16 (6), pp. 882–906.
7. Winstanley, D., & Woodall, J. (2000). The ethical dimension of human resource management. *Human Resource Management Journal*, 10(2).
8. Thiroux, J. P. (2004). *Ethics: Theory and practice (8th ed.)*. Upper Saddle River, USA: Prentice Hall.
9. Torrington, D., et al. (2004). *Human Resource Management*. Beograd, Srbija: Data Status.
10. Pinnington, A., Macklin, R., & Campbell, T. (2007). *Human Resource Management. Ethics and Employment*. Oxford, UK: Oxford University Press.
11. Scott, E. (2016). Ethics and human resource management. In *Practicing professional ethics in economics and public policy* (pp. 215-221). Springer Netherlands.

1.16. CORPORATE SOCIAL RESPONSIBILITY IN BANKING: THE EVIDENCE FROM RESEARCH AND ACADEMY AREAS

Aida Hanić¹

Institute of Economic Sciences, Belgrade, Serbia

OBJECTIVES

Corporate social responsibility (CSR) is not any more just a phrase or a concept that needs to be considered. With time it became necessity for every sector and industry in modern business. Although CSR academic development started in 1953 with Bowen's "*Social Responsibilities of the Businessman*", the question that arises is what the level of CSR research representation is in the scientific aspect? Special emphasis is on the banking sector because of its importance due to its role in society. Therefore, the objective of this paper is to analyze the degree of CSR research done in the field of banking.

METHODOLOGY

Depending the period of its development, CSR was considered either as a tool to increase profit or as a moral and social guideline for the company. In order to analyze the level of CSR representation in scientific research, a bibliometric analysis was used. In the first step, author searches literature related to CSR by using search engines Scopus and Web of Sciences (WoS). The analysis covered the period 1996-2017. This research provides descriptive statistics that includes: a) number of publications per year, b) type of publication, c) subject area, and d) key word. The research was done by using "article title" as the main characteristic including "all type of documents".

RESULTS

In the period 1996–2017 in Scopus data base, a total of 34 documents that included "Corporate social responsibility in banking" were found. As mentioned before, "article title" was the main characteristic in searching process. When it comes to the number of publications per year, the most studies were done in

¹ Research Assistant, e-mail: aida.hanic@ien.bg.ac.rs

2015 (14), while the results for other years are as follows: 2007 (1), 2009 (1), 2011 (1), 2012 (1), 2013 (6), 2014 (4), 2016 (11), 2017 (7). Observing the aspect of type of publication, number of articles was 26, book chapter (7) and conference paper (1). Having in mind the subject area, 26 studies related to the field of Business, Management and Accounting. The most represented keywords were Corporate Social Responsibility (26), banking (3), banking industry (3), banking sector (3), etc.

In the period 1996–2017 in WoS data base, a total of 48 documents that included “Corporate social responsibility in banking” was found. The main characteristic in searching process was “title”. When it comes to the number of publications per year, the most studies were done in 2015 (seven), while the results for other years are as follows: 2006 (1), 2007 (1), 2009 (2), 2010 (5), 2012 (1), 2013 (3), 2014 (5), 2015 (7), 2016 (4), 2017 (5). Observing the aspect of type of publication, number of articles was 31 and proceedings paper (17). Having in mind the subject area, 18 studies related to the field of Business, Management (15), Business Finance (13) and Economics (12).

IMPLICATIONS

The results of the research presented in the paper showed that corporate social responsibility in banking is still inefficiently explored. For instance, if we analyze only the “corporate social responsibility”, in the mentioned period, the result would be 5,044 documents published in Scopus and 3,582 in Wos. It implies that banking sector is still in the process of understanding and implementing the basic values of CSR.

On the other hand, it is also important to notice that if we made our analysis by using the title “Corporate social responsibility and banking” the number of studies done in this area would increase; Scopus (53) and WoS (76). This means that the type of phrases used in the research process can also implicate the final outcome.

ORIGINALITY VALUE

The scientific contribution of the paper is to show the degree of CSR presence in scientific research regarding the banking sector. The research was based on data retrieved from Scopus, which is considered to be the largest abstract and citation database of peer-reviewed literature as well as Web of Sciences, with access to over 18,000 high impact journals. Regarding this facts, the paper gives us a closer look at the correlation between CSR and banking.

KEY WORDS

Corporate social responsibility, banking, research, Scopus database, Wos database

REFERENCES

1. Berrone, P., Surroca, J., & Tribo, J. A. (2007). Corporate ethical identity as a determinant of firm performance: A test of the mediating role of stakeholder satisfaction. *Journal of Business Ethics*, 76(1), pp. 35-53.
2. Carroll, A.B. (1999). Corporate social responsibility- Evolution of a definitional construct. *Business & Society*, Vol. 38, No. 3, pp. 268–295.
3. Crane A., McWilliams A., Matten D., Moon J., Siegel D. (2008). *The Oxford Handbook of Corporate Social Responsibility*. Oxford University Press.
4. Decker, S. & Sale, C. (2009). An Analysis of Corporate Social Responsibility, Trust and Reputation in the Banking Profession In: IDOWO, S. & FILHO, W. (eds.) *Professionals' Perspectives of Corporate Social Responsibility*. London New York: Springer.
5. Hadžić, F., & Hanić, A. (2017). *The concept of Corporate Social Responsibility from the Islamic perspective*. In: 5th international scientific conference "Economy of integration": The Role of Economic Thought in Modern Environment", ICEI 2017. University of Tuzla, Faculty of economics, Tuzla, pp. 34-34. ISBN 2233-0445.
6. Hanić A. (2017). Process of Internationalization in Islamic Banking: The Case of Serbia, *Economic Analysis*, Institute of Economic Sciences, Vol. 50 No 3-4, pp. 66-74.
7. Moser, Donald V., & Martin, P. R. (2012). A broader perspective on corporate social responsibility research in accounting. *The Accounting Review*, 87, pp. 797–806. doi:10.2308/accr-10257.

1.17. SATISFACTION AND LOYALTY OF CLIENTS TOWARDS BANKING PRODUCTS AND SERVICES

Milica Raičević¹

*Faculty of Business Studies "Montenegro Business School", Mediterranean University,
Podgorica, Montenegro*

Dijana Medenica Mitrović²

Faculty for Business Management, Bar, Montenegro

OBJECTIVES

Transformation of the banking sector has led to banks providing a complete financial service today both at domestic and international level. The focus of their operations is the client on whose loyalty the bank's business operations depend. The aim is to indicate that there is a direct link between the quality of the banking service that affects the satisfaction and loyalty of the client, which directly affects the operations of the bank and its competitive advantage and profit.

METHODOLOGY

The paper provides a theoretical and practical overview of the quality of service, satisfaction and loyalty of clients, and the successful performance of the bank, which depends on its clients. The theoretical part defines the concept of the client, his/her significance and specific features related to his/her influence on the bank's operations, through his/her satisfaction and loyalty to the bank.

The empirical part deals with the analysis of the client's satisfaction and loyalty for the banking products and services in Montenegro and to what extent the quality of banking services has an impact on the satisfaction and loyalty of the client. Based on the collected data, an analysis of the factual situation will be carried out, the conclusions will be drawn and recommendations made to improve the quality

¹ MSc, corresponding author: milica.raicevic@unimediterranean.net

² Associate Professor, PhD

of the service, which will contribute to the greater satisfaction of clients, and therefore the loyalty towards the specific bank.

RESULTS

The conducted research into the quality of banking services revealed a difference between the received and expected quality of the banking product, and that there is room for improvement of the quality of the service which will directly affect the customer satisfaction and loyalty, the bank's competitiveness and profit. Enhanced quality of the bank can be seen through: improved bank-client relationship; increased service innovativeness; greater transparency of banking products, etc.

IMPLICATIONS

The contribution of the paper is reflected in the analysis of banking products, the measurement of the quality of the service and how it affects the satisfaction and loyalty of the clients in Montenegro. The paper will define the characteristics of the banking product in Montenegro, as well as the advantages and shortcomings in the present practice of banks' services and the direction in which the banking products and services should be improved.

ORIGINALITY VALUE

The paper will provide an overview of banking services and their impact on customer satisfaction and loyalty. Recommendations will be provided, which can help decision-makers in creating a strategy to improve or develop a new service. The contribution will be made through the analysis of the available data in terms of what specific products are most represented, what are the advantages and disadvantages of the existing banking products and what should be done to increase the satisfaction.

KEY WORDS

Quality of service, satisfaction, loyalty, client, banking sector, marketing

REFERENCES

1. Domazet I, Đokić I, Milovanov O. (2018). The Influence of Advertising Media on Brand Awareness, Management: Journal of Sustainable Business and Management Solutions in Emerging Economies, 23(1), pp. 13-22.

Part I

2. Domazet I, Kovačević M. (2018). The Role of Green Marketing in Achieving Sustainable Development, International Monograph „Sustainable growth and development in small open economies“. Institute of World Economics, Budapest, Hungary, pp. 57-73.
3. Domazet I, Simović V. (2015). Creation of green jobs: Opportunity to reduce high unemployment in Western Balkans, Monograph: *Toward Green Economy: Opportunities and Obstacles for Western Balkan Countries*, Xlibris LLC, USA. pp. 82-100.
4. Domazet I, Stošić I, Hanić A. (2016). New technologies aimed at improving the competitiveness of companies in the services sector, International Monograph „Europe and Asia: Economic Integration Prospects“. CEMAFI International, Nice, France 2016, pp. 363-377.
5. Hanić H, Domazet I, Drašković B. (2011). Razvoj i upravljanje odnosima sa klijentima u industriji finansijskih usluga, *Poslovna ekonomija*, 9(2), pp. 131-150.
6. Hanić H, Domazet I. (2012). Specifičnosti marketinga finansijskih organizacija, *Marketing* 43(1), pp. 3-14.
7. Hill, N., Alexander, I. (2006). *Customer Satisfaction and Loyalty Measurement*, Gower Publishing Limited, Hampshire.
8. Kotler, P. (1999). *Upravljanje marketingom*, Informator, Zagreb.
9. Maričić, B. (2005). *Ponašanje potrošača*, Ekonomski fakultet, Beograd.
10. Marinković, V. (2012). *Marketinski aspekti satisfakcije i lojalnosti*, Ekonomski fakultet, Univerzitet u Kragujevcu
11. Rajola, F. (2004). *Customer Marketing Management*, Organizational and Technological Perspectives, New York, USA.
12. Veljković, S. (2006). *Marketing usluga*, CID Ekonomskog fakulteta u Beogradu.
13. Zelenović, V. (2015). *Marketing u bankarstvu*, Proleter a.d. Bečej, Subotica.

1.18. AN ANALYSIS OF THE DEVELOPMENT OF ENTREPRENEURSHIP IN THE REPUBLIC OF SERBIA WITH A SPECIAL FOCUS ON FEMALE ENTREPRENEURSHIP

Jelena Petrović¹

University of Niš, Faculty of Science and Mathematics, Niš, Republic of Serbia

Snežana Radukić²

University of Niš, Faculty of Economics, Niš, Republic of Serbia

OBJECTIVES

The purpose of the paper is to analyze the impact of economic growth on the development of entrepreneurship in the Republic of Serbia. The main goals of the paper are: 1) analysis of the development of entrepreneurship in the Republic of Serbia during the 21st century – total, male and female; and 3) analysis of the impact of gross domestic product on the development of entrepreneurship in the Republic of Serbia - total, male and female.

METHODOLOGY

The following methods were used in the paper: correlation and regression analysis. The correlation analysis enabled the analysis of the interdependence between the number of entrepreneurs and the gross domestic product in the Republic of Serbia, as well as the analysis of the interdependence between the number of female entrepreneurs and the gross domestic product in the Republic of Serbia. In order to quantify the impact of economic growth on the development of female's entrepreneurship in the Republic of Serbia, the regression analysis is applied in the paper. The research will use the official data of the Statistical Office of the Republic of Serbia on the number of entrepreneurs by the sex and region in the Republic of Serbia.

¹ PhD

² PhD, corresponding author: snezana.radukic@eknfak.ni.ac.rs

RESULTS

Number of entrepreneurs in the 21st century is decreasing. The largest number of entrepreneurs was recorded in 2008, and the smallest in 2015. The results indicated that there is a statistically significant negative correlation between the gross domestic product and the number of entrepreneurs in the Republic of Serbia. Also, the results indicated that gross domestic product has a significant impact on the development of male and female entrepreneurship in the Republic of Serbia.

IMPLICATIONS

Bearing in mind that during the 21st century the total number of entrepreneurs is reduced, it is necessary to apply adequate measures in order to stimulate the development of entrepreneurship in the Republic of Serbia. Based on the analysis of problems in the development of entrepreneurship in the Republic of Serbia, concrete solutions should be proposed for elimination of economic, legal and administrative barriers in order to stimulate the development of entrepreneurship and economic growth.

ORIGINALITY VALUE

The originality of the paper is reflected in the fact that the influence of economic growth on the development of entrepreneurship in the Republic of Serbia will be explored. Particular emphasis will be put on the analysis of the development of entrepreneurship by the gender and region within the Republic of Serbia. We will try to identify the basic problems in order to propose the necessary measures to stimulate the development of entrepreneurship.

KEY WORDS

Entrepreneurship, female entrepreneurship, economic growth, correlation analysis, regression analysis, Republic of Serbia

REFERENCES

1. Acs, Z.J., & Amoros, J.E. (2008). Entrepreneurship and competitiveness dynamics in Latin America. *Small Business Economics*. 31(3), pp. 305-322.
2. Delmar, F. (2003). Women entrepreneurship: assessing data availability and future needs. Paper for the workshop "*Improving Statistics on SMEs and Entrepreneurship*",

- OECD, Paris, 17-19 September 2003. <http://www.oecd.org/std/business-stats/14723090.pdf> (Accessed 12.06.2015).
3. Faggio, G., & Silva, O. (2014). Self-employment and entrepreneurship in urban and rural labour markets. *Journal of Urban Economics*. 84: pp. 67–85
 4. Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-Related Values*, Beverly Hills CA: Sage Publications.
 5. Marlow, S., Colette, H., & Carter, S. (2009). Exploring the Impact of Gender upon Women's Business Ownership: Introduction. *International Small Business Journal*, 27(2), pp. 139-148.
 6. Morris, M.H. (1998). *Entrepreneurial Intensity: Sustainable Advantage for Individuals, Organizations and Societies*. Quorum, Westport: CT.
 7. Republički zavod za statistiku, <http://www.stat.gov.rs/sr-latn/>(accessed 12.04.2018)
 8. Ruminska-Zimny, E. (2002). Women's entrepreneurship and labour market trends in transition countries, in: *Women's Entrepreneurship in Eastern Europe and CIS Countries*. UNECE, Geneva: United Nations.
 9. Smallbone D and Welter F (2006) Conceptualizing entrepreneurship in a transition context. *International Journal of Entrepreneurship and Small Business* 3(2): 190-206.
 10. Smallbone, D., & Welter, F. (2009). *Entrepreneurship & Small Business Development in Post-Socialist Economies*. London & New York: Routledge.
 11. Ward, K.B., & Pampel, F.C. (1985). Structural determinants of female labor force participation in developed nations, 1955-1978. *Social Science Quarterly* 66(3), pp. 654-667.
 12. Watson, J. (2002). Comparing the Performance of Male and Female Controlled Businesses: Relating Outputs to Inputs. *Entrepreneurship, Theory and Practice*, 26(3): pp. 91-100.
 13. Welter, F., Smallbone, D., Isakova, N., Aculai, E., & Schakirova, N. (2004). Female entrepreneurship in the Ukraine, Moldova and Uzbekistan: Characteristics, Barriers and Enabling Factors and Policy Issues" in UNECE (eds.) *Access to Financing and ICT: Women Entrepreneurs in the ECE Region*, pp. 93-52, Geneva: United Nations.
 14. Wennekers, A.R.M., & Thurik, F.C. (1999). Linking entrepreneurship and economic growth. *Small Business Economics*, 13(1) pp. 27-55.
 15. Whitley, R. (1992). *European Business Systems; Firms and Markets in Their National Contexts*. London: Sage Publications.

1.19. ANALYSIS OF THE INSTITUTIONAL SUPPORT FOR THE DEVELOPMENT OF SMALL AND MEDIUM ENTERPRISES IN THE REPUBLIC OF MACEDONIA

Marija Magdincheva-Shopova¹

*Assistant Professor, University Goce Delcev, Faculty of Tourism and Business Logistics,
Gevgelija, Republic of Macedonia*

Magdalena Miceva²

*Master's student, Faculty of Tourism and Business Logistics, University Goce Delcev,
Gevgelija, Republic of Macedonia*

OBJECTIVES

SMEs have a significant role in the economic growth and development of all countries, especially in developing countries facing major challenges and high unemployment. From the analysis on the current situation related to the role of small and medium enterprises in the economic development in the Republic of Macedonia, as a developing country, it can be concluded that the number of small enterprises is increasing in recent years, as well as the need for institutional support.

METHODOLOGY

The subject of research of this paper is an analysis of the opportunities that SMEs have as a result of the institutional support of small and medium enterprises in the Republic of Macedonia. In the process of researching and displaying the obtained results, several scientific methods will be used: method of analysis and synthesis, method of classification, descriptive method and comparative method. Through the conducted research, the role of small and medium enterprises in the economic development of the Republic of Macedonia, the legal framework and the business environment in the development of small and medium-sized enterprises, with particular emphasis on the institutional and financial support,

¹ PhD

² Corresponding Author: magdalenamiceva@gmail.com

will be considered. As a result of the obtained results from the conducted analysis of the situation, conclusions and recommendations will be given which can be applied by all entities and institutions related to small and medium enterprises in the Republic of Macedonia.

RESULTS

The results that will be presented in this paper are obtained from the conducted survey in the period from 01.04.2018 until 01.05.2018. The survey questionnaire was conducted electronically and was sent to 150 people, of which 135 answered the questions. Most of the respondents (85%) think it is necessary to improve the institutional support in order to ensure the smooth functioning of SMEs in real work, i.e. to overcome administrative, bureaucratic, tax and other obstacles.

IMPLICATIONS

Priority in the support of SMEs in the Republic of Macedonia should be aligning the SME development policies with current EU policies by adopting the principles defined in the Small Business Act (SBA) and the Strategy for Smart, Sustainable and Inclusive Economic Growth Europe 2020 as well as other EU acts concerning SMEs, redefining the priorities of SMEs in the Republic of Macedonia, the preparation of a new national strategy for the development of small and medium-sized enterprises.

ORIGINALITY VALUE

The key contribution of this paper is to present the possibilities of the institutional support system for SMEs in Macedonia. The obtained results indicate the need to further strengthen and improve policy support and development for start-up enterprises by developing new forms of non-financial support in combination with financial instruments, which will enable a larger number of newly established SMEs to survive their first years of operation and create a reliable base for further operation.

KEY WORDS

Entrepreneurship, small and medium enterprises, institutional support, legal framework

REFERENCES

1. Bateman, M. (1999). Small Enterprise. Development and the role of business. Support Centers in the transition economies. Skopje.
2. Besan, J., Tid, J. (2012). Innovation and Entrepreneurship. Skopje.
3. Bruno, Z. (1991). Insuition and subduction in economic theory. Economic center. Zagreb.
4. Gjorgjiovski, B. (1998). Management Information Systems. Faculty of Economics. Skopje.
5. Jovcevski, K. (2003). Family owned businesses - choice of the legal structure. Foundation Friedrich Ebert. Skopje.
6. Magdincheva-Shopova, M. (2017). Modern Entrepreneurship. University Goce Delcev". Stip.
7. Fiti, T., Hadzi Vasileva - Markovska, V. (1994). Entrepreneurship and Entrepreneurial Management. Faculty of Economics. Skopje.
8. Fiti, T., Hadzi Vasileva - Markovska, V., Beitman, M. (1999). Entrepreneurship. Faculty of Economics. Skopje.
9. Shuklev, B. (2003). Small Business Management. First Edition. Faculty of Economics. Skopje.
10. Shuklev, B. (2004). Management. First Edition. Faculty of Economics. Skopje.
11. Shuklev, B. (2006). Small Business Management. Second edition. Faculty of Economics. Skopje.
12. Shuklev, B. (2006). Management. Second edition. Faculty of Economics. Skopje.

1.20. WOMEN ENTREPRENEURSHIP IN SERBIA – POTENTIALS AND CONSTRAINTS

Olivera Jovanović¹

Institute of Economic Sciences, Belgrade, Serbia

Milena Lazić²

Belgrade Banking Academy, Belgrade, Serbia

OBJECTIVES

In today's modern society, entrepreneurship is considered to be the driver of economic and social development and the important source of competitive advantage. With that regard and taking into account the empirically proven positive relationship between the gender equality and the level of sustainable economic and social development, the subject of this paper is the assessment of the position of women entrepreneurs in Serbia. The main objective is to identify business and environmental barriers with which female entrepreneurs are confronted.

METHODOLOGY

Besides standard desk research method and the analysis and comparison of secondary data, the survey method was also conducted in this paper. As a starting point (population) for selection of sampling units, the data available on the website of the Association of Business Women in Serbia was used. The research was conducted in period March - May 2018. On this occasion, a semi-structured questionnaire was used to collect primary data. Questionnaire was sent to the respondents via e-mail and, where possible, an interview was conducted with the aim of collecting additional information. The questionnaire used for the purposes of this research consists of three parts. Within the first group of questions, general information about the level of education and basic characteristics of the company owned by women entrepreneurs in Serbia has been collected. The

¹ Research Assistant

² Teaching Assistant, corresponding author: milena.lazic@bba.edu.rs

second group of questions was conceived to provide an insight into the business performances of these companies, while the third group dealt with the analysis of the barriers which women entrepreneurs in Serbia were facing in their everyday business.

RESULTS

The results of conducted research suggest that there exists a huge potential for the development of women entrepreneurship in Serbia. The women entrepreneurs in Serbia are confronted to significant barriers in their everyday business activities especially taking into account the difficulties in accessing the necessary information about potential markets and technology and even the potential sources for their financing. At the same time they are facing with family care activities and other social norms within the community in which they live.

IMPLICATIONS

The results of the research conducted in this study are primarily intended for the policy makers, but also for the women entrepreneurs who want to achieve a better position on the market and to find a better way of getting financial help. Furthermore, the results are useable for creating supportive and encouraging environment for entrepreneurship in Serbia, especially for women-owned enterprises during business development.

ORIGINALITY VALUE

This paper provided a detailed overview of women entrepreneurs in Serbia based on data obtained through conducted research. Except interesting analysis of current position of women in business, original value of this research paper is found in recommendation given for their future business activities and planning based on their answers in questionnaires.

KEY WORDS

Women entrepreneurship, gender equality, financial performances, business barriers, competitiveness, Serbia

REFERENCES

1. Babović M. (2012), Profil preduzetnica u Srbiji: Skraćeni izveštaj po osnovu Polazne studije o preduzetništvu žena u Srbiji, Beograd: Program Ujedinjenih nacija za razvoj.

BUSINESS AND APPLIED ECONOMICS

2. Cvijanović J., Vojnović B., Lazić J. (2011), Istraživanje zainteresovanosti žena za preduzetništvo u agrobiznisu, *Economics of Agriculture 58 (1)*, Institute for Agricultural Economics, Belgrade, pp. 67-79.
3. Đuričin S., Pantić O. (2015), The Development of Micro-crediting as a Factor of Promoting Women's entrepreneurship in Serbia, *Journal of Women's entrepreneurship and Education (1-2)*, Institute of Economic Sciences, Belgrade, pp. 50-66.
4. Fond socijalne i demokratske inicijative (2013), Rodna ravnopravnost, životna sredina i razvoj, Studija o rodnom pristupu pitanjima zaštite životne sredine, Beograd: Fond socijalne i demokratske inicijative.
5. Jovanović O. (2016), Institucionalna podrška razvoju preduzetništva poljoprivrede tokom strukturnih promena u Srbiji, *Pravci strukturnih promena u procesu pristupanja Evropskoj uniji*, Institute of Economic Sciences, Belgrade, pp. 393-404.
6. Maksimović G., Otović S., Demirović D., Vermezović T. (2016), A review investigating agrarian female entrepreneurship in the Republic of Serbia, *Economics of Agriculture 63 (1)*, Institute for Agricultural Economics, Belgrade, pp. 29-46.
7. Mehmti I., Dobranja D., Hashani A., Beqiri G. (2017), Žensko preduzetništvo – Analiza poslovanja na Kosovu, Priština: Reinvest institute.
8. Popović Pantić S. (2014), Žensko preduzetništvo u Srbiji: Evolucija od socijalne ka ekonomskoj kategoriji, *Poslovna ekonomija, VIII (II)*, pp. 143-162.
9. Radović-Marković M. (2016), Empowering employment of women and marginalized people through entrepreneurship education in Serbia, *Journal of Women's entrepreneurship and Education (1-2)*, Institute of Economic Sciences, Belgrade, pp. 3-17.
10. Vukmirović N. (2005), Modeli podrške razvoju ženskog preduzetništva, *Industrija 33(4)*, Economics Institute, Belgrade. pp. 1-18.

1.21. GREEN JOBS-POTENTIAL FOR EMPLOYMENT IN THE REPUBLIC OF SERBIA

Simonida Vukadinović¹

EDUCONS University, Faculty of Business Economy, Sremska Kamenica, Serbia

Siniša Domazet²

EDUCONS University, Faculty of Security Studies, Sremska Kamenica, Serbia

OBJECTIVES

The paper is about a circular economy, the model of the 21st century, in the field of employment, as a great chance for not only making employment rate higher, but for ecological protection and budget savings as well. This topic is important for the Republic of Serbia (Serbia), a candidate country for the European Union (EU), and in that context greening the economy is obligatory. Also, state aid for training of employees is one of the key measures for increasing (green) employment.

METHODOLOGY

Beside the professional and scientific literature, statistical and other relevant data, the following methods have been used: - Descriptive method, which was used in defining the most important categories related to the subject of research and determining certain phenomena related to the analysis of field of research (Serbian green employment, unemployment rate, recycling sector); The method of collecting primary data by field research, in order to collect empirical data on the state and trends of employment indicators and the green labor market situation in Serbia; Authors will also do correlation analysis with the Hausman test and the Fixed / Random effect model as well as normative methods and legal and logical methods of induction and deduction, the Case Study Method. Statistical methods and Comparative method are also used.

¹ PhD, corresponding author: simonida.vukadinovic@gmail.com

² PhD

RESULTS

Statistics of the EU emphasizes the highest employment in Denmark - around 300,000 people in green jobs (11 % of its workforce).

In Serbia, estimation is that about 250 million euros are lost annually, due to inadequate waste treatment. Only 1.25% of employees in our country work in green jobs (potential is twice higher), and the least number of people is still employed in the gray economy. The Government has to encourage not only increasing employment, but also ecological protection, achieving great savings for economy and nature.

IMPLICATIONS

The study is intended for the government, and all the entrepreneurs that will by wide spreading of circular economy implementation, contribute to better quality of living. In 2015, there were 38,117 people in green jobs in Serbia. Furthermore, the study will be useful for EU-integration (case of competition).

ORIGINALITY VALUE

The paper summarizes latest data on the green labor market and legislation frameworks in Serbia and in the EU in the field of sustainable development during the EU integration process, especially in the case of state aid measures for training of employees. It points to the importance of implementation of this process, and its benefits as well (employing around 30,000 workers from grey to legal economy –that way directly providing the budget for these workers - social benefits).

KEY WORDS

Green economy, green jobs, Serbia, EU, recycling, law

REFERENCES

1. Bermudez, A.G. Galand, C. (2007). Recent training aid cases in car industry, *Competition Policy Newsletter*, 1, pp. 104-109.
2. Blauburger, M. (2008). From Negative to Positive Integration? European State Aid Control Through Soft and Hard Law, *MPIfG Discussion Paper*, 4, Retrieved May 13, 2018, from http://www.mpifg.de/pu/mpifg_dp/dp08-4.pdf.
3. Bozic, N., Aleksic, M.(2016). *Green economy - challenges and opportunities*, Belgrade, Ecology Union UNECO. pp. 5-6.

Part I

4. Government of the Republic of Serbia (2017) .*Statistical Office of the Republic of Serbia*, pp. 64-66.
5. EEA (2015). The European environment — state and outlook 2015: synthesis report, *European Environment Agency*, Copenhagen. pp. 14-168.
6. Foecking, J., Majcher-Williams, J. (2010). State aid for training: criteria for compatibility analyses in notifiable cases, *Competition policy Newsletter*, 1, pp. 16-20.
7. Mariñas, N. (2005). Enforcement of State aid recovery decisions, *Competition Policy Newsletter*, 2, pp. 18-19.
8. Mederer, W. (1996). The Future of State Aid Control, *Competition Policy Newsletter*, 3, pp. 12-14.
9. Mörth, U. (2004). *Soft Law in Governance and Regulation: An Interdisciplinary Analysis*, Department of Political Science, Stockholm University, Stockholm: Edward Elgar Publishing, pp. 11-36.
10. Organization for Security and Co-operation in Europe, (2016). *Circular economy as a chance for the development of Serbia*, 10.05.2018. pp.12-21. <https://www.osce.org/sr/serbia/292311?download=true>
11. Radić, J. (2011), *Labor Economics and Social Policy of the European Union*, Faculty of Economics Subotica, p. 140.
12. Stocker, A, Gerold, S, et al, (Decembre 2015). *A scoping study, The interaction of resource and labour productivity*, 05.05.2018. <http://ec.europa.eu/environment/enveco/jobs/pdf/Study%20Resource%20labour%20productivity%20.pdf>.
13. Smith, M.P. (1998). Integration in small Steps: The European Commission and the Development of State Aid Policy, *Journal of Common Market Studies*, 36, pp. 55-78.
14. Von Buttlar, L., Medghoul, S. (2008). The principle of incentive effect applied to training aid-Some recent cases, *Competition Policy Newsletter*, 3, pp. 85-88.
15. Vukadinović, S. (2016). Employment as a factor of economic development of The Republic of Serbia *Monographic documentation: textual printed material: doctoral dissertation, authorial reprint*, pp. 1-293. University Educons. Sremska Kamenica.

1.22. REGIONAL DEVELOPMENT OF AGROBUSINESS SMES IN SERBIA

Olivera Jovanović¹

Institute of Economic Sciences, Belgrade, Serbia

OBJECTIVES

Small and medium enterprises are considered as economic growth holders in transition countries and can make better use of the national geographical potential. Also, they successfully can reduce regional inequalities and poverty with appropriate institutional and financial support. The main aim of this paper is to determine the regional development of SMEs in agribusiness along with cluster analysis of their distributions and potential for future development and cooperation.

METHODOLOGY

Basic research method which is used in this paper is descriptive statistics. Relevant data about SMEs are collected from the Statistical Office of Serbia and Business Register Agency for period 2012-2016. Tables and graphs present main information about SMEs in agribusiness. Special part of analysis is SMEs in agriculture, because of significant contribution to national economic and sustainable development. Second research method which is used in this paper is cluster analysis of agricultural SMEs and householders. Main parameters for enterprises and regions development were identified and used in the calculation. Based on Euclidean distance, regions were grouped into clusters. Clusters analysis is one way for identifying potentials for regional development between similar regions, so the author gives recommendations for their future cooperation.

RESULTS

The research results which are presented in this paper show that agribusiness SMEs are very important for sustainable development and overall economy.

¹ Research Assistant, e-mail: olivera.jovanovic@ien.bg.ac.rs

Number of SMEs in this sector can be higher if financial and advisory support is more accessible. Regional development of SMEs varies by regions in Serbia, differences between poorer and richer areas lead to disproportions in number of employers, distribution of incomes and migrations from devastated areas.

IMPLICATIONS

The research results which are presented in this paper are dedicated to the owners of small and medium enterprises in agribusiness, especially in agriculture because they can use it to identify potential business activities. Furthermore, the research results can be used by economic policy makers and decision makers to achieve the harmonization of uneven regional development and reduction of inequality.

ORIGINALITY VALUE

In this paper, the author provides research about important sector for economic development in Serbia. Research conclusions are based on descriptive statistical analysis and cluster analysis, so original value can be found in the overview of SMEs sector in agribusiness, especially in agriculture during last years and in recommendations for their future regional business activities.

KEY WORDS

Agribusiness, regional development, SMEs sector, sustainable development, Serbia

REFERENCES

1. Erić D., Đuričin S., Pantić O. (2015). Development of SMEs and small farms in agribusiness in Serbia, *Final Workshop report on "SMEs and small farms in agribusiness in the Black Sea economic cooperation region"*. Konrad- Adenauer-Stiftung. Chisinau. pp. 218-237.
2. Jakopin E. (2015). Regional drivers of economic growth, *Ekonomika preduzeća 63(1-2)*, Savez ekonomista Srbije, Beograd. pp. 99-113.
3. Jovanović O. (2016). Institucionalna podrška razvoju preduzetništva poljoprivrede tokom strukturnih promena u Srbiji, *Pravci strukturnih promena u procesu pristupanja Evropskoj uniji*, Institute of Economic Sciences, Belgrade. pp. 393-404.
4. Jovin S., Eremić Đodić J., Laban B., Milić D. (2017). Financial and business advisory services for small and medium enterprises and entrepreneurs in agribusiness in Serbia, *Industrija 45(4)*, Economics Institute, Belgrade. pp. 93-112.

5. Maletić R., Popović B., Paunović T. (2014). Regional aspect of agribusiness SMEs development in Serbia, *Ekonomske teme 38 (4)*, Ekonomski fakultet Univerziteta u NIšu. pp. 1445-1456.
6. Mitrović M., Janković M. (2012). Značaj klasterizacije za rast i razvoj sektora malih i srednjih preduzeća, *Ekonomski vidici 17(2)*, Društvo ekonomista Beograda, Beograd. pp. 243-255.
7. Panić D. (2014). Preduzetništvo u formi afirmacije malih i srednjih preduzeća u agrobiznisu, *Ekonomika 60 (3)*, Društvo ekonomista "Ekonomika", Niš. pp.215-224
8. Pantić O., Filimonović D. (2013). Analysis of the development of small and medium enterprises in the agri-food system in Serbia, *Economic Science on the Crossroad*, Institute of Economic Sciences, Belgrade. pp. 576-585.
9. Popović B., Maletić R. (2017). Sagledavanje regionalnih sličnosti okruga Srbije primenom odgovarajućih statističkih metoda, *Megatrend revija 14(2)*, Univerzitet "Džon Nezbit", Beograd. pp. 23-42.
10. Sedlak O., Jovin S., Pejanović R., Ćirić Z., Eremić Đodić J. (2016). Access to finance for micro, small and medium business units in Serbian Agribusiness, *Economics of Agriculture 63 (4)*, Institute for Agricultural Economics, Belgrade. pp. 1219-1235.

1.23. IMPROVEMENT OF THE MARKETING CHANNELS FOR AGRO-FOOD PRODUCTS - INTERNATIONAL EXPERIENCES

Katica Radosavljević¹

Research Associate, Belgrade, Republic of Serbia

OBJECTIVES

The research aims to point the possibilities of efficient placement of agro-food products of the Republic of Serbia as one of the major strategic goals of socio-economic development. A continuous supply of consumers in the food market, savings in distribution costs and productivity increase are the goals whose achievement leads to the economic growth.

METHODOLOGY

The research is based on evidence produced using analytical instruments. The entire research is based on the application of several methods of modern quantitative and qualitative analysis. Information from secondary sources was processed by a descriptive and comparative approach. The comparative method and statistical comparison of world practice with the practice of the Republic of Serbia show the development, productivity and competitiveness of the agribusiness of the Republic of Serbia.

RESULTS

Well-coordinated production and consumption take strategic importance in making business decisions. More rigorous customer demands for quality products imply an effective marketing channel design that allows fast delivery. France, as an agriculturally developed country, achieves a competitive advantage in the placement of food through the inclusion of Intertek global operator in the channel of marketing. The result of the analysis of international experiences is the

¹ PhD, e-mail: katica@ekof.bg.ac.rs

proposal of the institutional solution, the sustainable development of the channel of marketing of agro-food products.

IMPLICATIONS

One of the consequences of the conducted research is the identification of the influence of marketing channels on agribusiness, depending on the degree of agricultural development of the country. Fast, flexible and vertically integrated food marketing channels play a decisive role in competitiveness in the domestic and international market of agribusiness.

ORIGINALITY VALUE

Increasing competitiveness at domestic, regional and international level is the outcome of the research. By examining the results of structural changes and involving Intertek operators in the food supply chain at the international level, we are pointing to the possible directions of the development of the agribusiness system in the Republic of Serbia. The way to create competitive advantages is to establish, innovate and strengthen links between the subjects of the agribusiness marketing channel as an inseparable component of the reproductive process in the agricultural and food industries.

KEY WORDS

Marketing channels, agriculture, Intertek global operator, competitiveness

REFERENCES

1. Andrić, N., Tomić, D., Vlahović, B., (2011). Neki aspekti finansiranja ruralnog razvoja Evropske unije, Zbornik radova, ured: D. Tomić, M. Ševarlić, S. Zekić: Agrarna i ruralna politika u Srbiji nužnost ubrzanja reformi, pp. 11-24, Beograd, Novi Sad, DAES.
2. Alonso, A.D., & Northcote, J. (2013). Investigating farmers' involvement in value-added activities: A preliminary study from Australia. *British Food Journal*, 115(10): pp 1407 – 1427. doi: 10.1108/BFJ-04-2011-0104.
3. Brochure of the Chamber of Commerce and Industry of Serbia (2013), Serbia – Your Business Partner, Belgrade, Chamber of Commerce and Industry of Serbia, Retrieved from <http://www.pks.rs/SADRZAJ/Files/CMIP/Brosura%20PKS%20sr.pdf> (Accessed 5 May 2014).
4. Brown, C. & Miller, S., (2008). The impacts of local markets: A review of research on farmers markets and community supported agriculture (CSA), *American Journal of Agricultural Economics*, vol. 90, issue 5: pp. 1298 –1302.

Part I

5. Cejvanović, F., Rozman, Č., (2004). Finansijska ocena konkurentne sposobnosti voćarske proizvodnje u Bosni i Hercegovini, *Ekonomski anali*, 161, pp. 193-203.
6. Darkow, IL., Foerster, B., & Von der Gracht, H.A. (2015). Sustainability in food service supply chains: future expectations from European industry experts toward the environmental perspective. *Supply Chain Management: An International Journal*, 20 (2):163 –178., doi: 10.1108/SCM-03-2014-0087.
7. Dimitri, C., Oberholtzer, L., & Pressman, A. (2016). Urban agriculture: connecting producers with consumers. *British Food Journal*, 118(3):603-617. <http://dx.doi.org/10.1108/BFJ-06-2015-0200>.
8. Esper, T. L., Ellinger, A.E., Stank, T.P., Flint, D.J., & Moon, M. (2010). Demand and supply integration: a conceptual framework of value creation through knowledge management. *Academy of Marketing Science*, 38 (1),:5 –18. doi: 10.1007/s11747-009-0135-3.
9. Giampietri, E., Finco, A., & Del Giudice, T. (2016). Exploring consumers' behaviour towards short food supply chains. *British Food Journal*, 118(3): 618-631. doi: 10.1108/BFJ-04-2015-0168.
10. Janet Howieson , Meredith Lawley , Kathleen Hastings , (2016). "Value chain analysis: an iterative and relational approach for agri-food chains", *Supply Chain Management: An International Journal*, 21(3), pp. 352-362.
11. Lusine H. Aramyan, Alfons G.J.M. Oude Lansink, Jack G.A.J. van der Vorst, Olaf van Kooten, (2007). "Performance measurement in agri-food supply chains: a case study", *Supply Chain Management: An International Journal*, 12(4): pp. 304-315.
12. Marsden, T., Banks, J. and Bristow, G., (2002). The social management of rural nature: understanding agrarian-based rural development, *Environment and Planning A*, 34(5): pp. 809–825.
13. Martin, H., & Adam, L. (2013). Value in food and agriculture. *British Food Journal*, 115(10). <http://dx.doi.org/10.1108/BFJ-05-2013-0116>.
14. Martinez, S., et al (2010). *Local Food Systems: Concepts, Impacts, and Issue*, Economic Research Service, U.S. Department of Agriculture, No. (ERR-97), pp. 1–80.
15. Philip Leat Cesar Revoredo-Giha, (2013). "Risk and resilience in agri-food supply chains: the case of the ASDA PorkLink supply chain in Scotland", *Supply Chain Management: An International Journal*, 18(2): pp. 219-231.
16. Radosavljević, K. (2015). *Agribusiness Marketing Channel Development Strategy in the Republic of Serbia*. Doctoral dissertation. Kragujevac: Faculty of Economics, University of Kragujevac.
17. Serbia Investment and Export Promotion Agency (SIEPA). *Doing Business in Serbia 2015*. Retrieved from: <http://siepa.gov.rs/en/>

1.24. DEVELOPMENT AND IMPLEMENTATION OF THE INTERGATED MARKETING COMMUNICATIONS CONCEPT

Tatjana Cvetkov Čikošev¹

NIS a.d. Marketing Division, Belgrade, Serbia

OBJECTIVES

Understanding consumers' needs implies creating adequate supply, which leads to good and sustainable relations over time. Consumers, under the influence of (new) technologies change their habits, attitudes and behavior while using certain product or service, as well as the way they communicate. The objective of this paper is to analyze the effects of created communication on brand through developing IMC model. Taking into account consumers' demographic structure, not only the points at their path to purchase, usage or recommendation, the effects among different groups will be analyzed.

METHODOLOGY

The results of primary research conducted in May 2018, about consumer behavior and influence of certain ways of communication on their behavior are used in this paper. Respondents were visitors of 85. International Agricultural Fair in Novi Sad, from 15-21 May 2018, that are exposed to at least one way of communication. Beside, the results of the tracking study from October 2015 (3-30.10. 2015), November 2016 (14.10.2016-14.11.2016) and November 2017 (24.10-24.11.2017) are also used for this paper, in order to show the brand development, it's awareness and usage in the population of potential users. Both researches were conducted by using structured questionnaire, face to face. Questions that are important for this paper are about awareness of brands in the category, noticeability of certain ways of communication, and the influence of that communication on behavior is measured. The ultimate goal of every communication is sales and repeated sales, but in that process potential users should be introduced to brand, create need and want to use that brands, to be

¹ E-mail: tatjana.cvetkov@nis.eu

satisfied, loyal and be it's ambassadors. Beside usage of the results of primary research, desk method of collecting and analyzing is also used, in order to have detailed insight of certain aspects that are related to the objective of this paper.

RESULTS

The results of conducted research indicate that implementation of integrated marketing communications leads to additional sale and better brand positioning, as well as company positioning in the market. Additionally, effectively integrated communications positively influence brand positioning and consumers' satisfaction is in positive relation with repeated purchase of the brand.

IMPLICATIONS

The results of the conducted research presented in this paper are foremost intended for marketers, but also for the expert community. The only constants are changes in business environment as well as new technologies, on the one hand, and the changes of consumers, on the other hand. Hence, the organizations should be ready to adequately respond to those challenges. Sending an intended message to a consumer that leads to intended action in that kind of challenging environment, and being economical, effective and efficient is the goal of every marketer, and this paper shows that this goal is achievable.

ORIGINALITY VALUE

The scientific contribution of this paper is to present the integrated marketing communication model that combines two views – top down and bottom up – as well as its implementation. Furthermore, having in mind new media, this paper shows what instruments, that from marketing aspect, give the most efficient, economical and profitable result for the organization. This approach leads towards modernization of business operations, that is necessary to perform for the implementation of trends and innovations, as well as continuous development and improvement.

KEY WORDS

Integrated marketing communications, brands, positioning, consumers

REFERENCES

1. Chang, Y., Thorson, E. (2004). Television and web advertising synergies. *Journal of Advertising*, 33 (2), pp. 75–84.
2. De Bruyan, A. & Lilien, G., L. (2008). A multi-stage model of word-of-mouth influence through viral marketing. *International Journal of Research in Marketing*, 25:151-163.
3. Domazet I, Neogradi S. (2018). Digital Marketing and Service Industry: Digital Marketing in Banking Industry, International Monograph „Managing Diversity, Innovation, and Infrastructure in Digital Business“, Ed. Nilanjan Ray, IGI Global, Business Science Reference, Hershey, USA.
4. Domazet I, Stošić I, Hanić A. (2016). New technologies aimed at improving the competitiveness of companies in the services sector, International Monograph „Europe and Asia: Economic Integration Prospects“, CEMAFI International, Nice, France 2016, pp. 363-377.
5. Domazet I. (2012). Marketing komunikacije finansijskih organizacija, Institut ekonomskih nauka. pp. 1-245.
6. Domazet I., Đokić I., Milovanov O. (2018). The Influence of Advertising Media on Brand Awareness, *Management: Journal of Sustainable Business and Management Solutions in Emerging Economies*, 23(1):13-22.
7. Fašková V, Kretiková E. (2015). Online i offline consumer. *Marketing Identity* (2015)2: pp. 53-65.
8. Hanić H., Domazet., I. i Simeunović, I. (2012). Efikasnost marketing komunikacija i efektivnost medija za različite ciljne grupe, International Scientific Conference: Management 2012. ICIM plus Beograd, pp. 791-796.
9. Kerr, G, & Patti, C. (2015). Strategic IMC: From abstract concept to marketing management tool, *Journal of Marketing Communications*, 21(5): 317–339.
10. Kotler F., Keller K.L. (2009). *Marketing Management*, Pearson Prentice Hall, New Jersey.
11. McGrath, J. M. (2010). Using Means-End Analysis to Test Integrated Marketing Communications Effects. *Journal of Promotion Management*, 16(4): 361–387.
12. Pickton D., Broderick A. (2004). *Integrated Marketing communications*, Pearson Educations Ltd, London.
13. Porcu L, Del Barrio-García S., Kitchen P. (2017). Measuring integrated marketing communication by taking a broad organisational approach: The firm-wide IMC scale, *European Journal of Marketing*, 51(3): 692-718.
14. Batra R., Keller K.L. (2016). Integrating Marketing Communications: New Findings, New Lessons, and New Ideas, *Journal of Marketing*, 80(6): 122-145.
15. Weilbacher, W. M. (2001). Point of view: Does advertising cause a „hierarchy of effects“? *Journal of Advertising Research*, 41(16): 19–26.

1.25. STRATEGIC MARKETING APPROACH IN NON-PROFIT ORGANIZATIONS

Milica Kovačević¹

*Faculty of Business Studies "Montenegro Business School", Mediterranean University,
Podgorica, Montenegro*

OBJECTIVES

Non-profit organizations make a significant contribution to the development of each society. The main objective of this paper is to demonstrate how the application of a strategic marketing approach in non-profit organizations contributes to the improvement of their operations, from a theoretical and practical point of view, through the experience of non-profit organizations in Montenegro. The paper also outlines the specific features of the marketing concept in non-profit organizations.

METHODOLOGY

The applied methodology is primarily focused on the analysis of existing theoretical concepts, partly in the direction of empirical analysis and recognition of new strategies and methods for better operations of non-profit organizations, through the application of a strategic marketing approach. Through an analytical review of the practical experience of non-profit organizations primarily in Montenegro, the importance of applying the strategic marketing approach for their work and sustainability will be demonstrated. A secondary data analysis was carried out for the needs of the paper, as well as the methods of observation and comparison. An in-depth interview was also conducted with the representatives of well-established non-profit organizations in Montenegro. The paper also contains recommendations concerning new strategic models of application of the marketing concept in non-profit organizations, which can contribute to their better positioning and more successful operations.

¹ MSc, e-mail: milica.kovacevic@unimediterran.net

RESULTS

Non-profit organizations do not sufficiently apply the strategic marketing concept in their operations, which results in their disappointing performance. The reasons for this are the lack of awareness of the importance of applying the marketing approach, as well as the lack of resources, both human and financial, which would enable this. An analysis has shown that they have specific goals and ways of doing business, which requires adapting the application of marketing in their activities.

IMPLICATIONS

As the field of application of the strategic marketing concept in non-profit organizations is less explored compared to its application in profit organizations, this paper will therefore contribute to the analysis of the application of marketing concept in non-profit organizations and will be beneficial to researchers working in this field. Since the paper will give recommendations for a more successful operation of non-profit organizations, it will benefit this type of organizations.

ORIGINALITY VALUE

Theoretical systematization of knowledge about the strategic marketing approach, as a factor for enhancing the operations of non-profit organizations, represents originality of this research paper. A special contribution of the research is reflected in the analysis of application of the marketing approach in non-profit organizations in Montenegro. The added value is provided by recommendations, which can be used in the practical operations of non-profit organizations.

KEY WORDS

Marketing concept, strategic marketing approach, non-profit organizations, marketing instruments

REFERENCES

1. Brace-Govan J, Brady E, Brennan L, Conduit J. (2011). Market Orientation and marketing in nonprofit organisations – Indications for fundraising from Victoria. *International Journal of Nonprofit and Voluntary Sector Marketing*, Vol. 16, No. 1, pp. 84-98.
2. Dolnicar S, Lazarevski K. (2009). Marketing in non-profit organizations: an international perspective. *International Marketing Review*, Vol. 26 (3), pp. 275 - 291.

Part I

3. Domazet I, Đokić I, Milovanov O. (2018). The Influence of Advertising Media on Brand Awareness. *Management: Journal of Sustainable Business and Management Solutions in Emerging Economies*, 23(1): 13-22.
4. Domazet, Kovačević M. (2018). The Role of Green Marketing in Achieving Sustainable Development. *International Monograph „Sustainable growth and development in small open economies“*. Institute of World Economics, Budapest, Hungary, pp. 57-73.
5. Frumkin P, Kim M. (2001). Strategic Positioning and the Financing of Nonprofit Organizations: Is Efficiency Rewarded in the Contributions Marketplace. *Public Administration Review*, Vol. 61, No. 3, pp. 266-276.
6. Hanić H, Domazet I. (2012). Specifičnosti marketinga finansijskih organizacija, *Marketing* 43(1): 3-14.
7. Kong E. (2008). The development of strategic management in the non-profit context:
 - a. Intellectual capital in social service non-profit organizations. *International Journal of Management Reviews*.
8. Kostić M. (2009). Značaj marketing koncepcije za neprofitne organizacije. *Međunarodni simpozijum Menadžment i razvoj preduzeća*, Vrnjačka Banja.
9. Lettieri E, Borga F, Salvoldelli A. (2004). Knowledge management in non-profit organizations. *Journal of Knowledge Management*, vol. 8, no. 6.
10. Kotler F, Roberto N, Li N. (2008). Socijalni marketing. Clio, Beograd.
11. Micheli P, Kennerley M. (2005). Performance measurement frameworks in public and non-profit sectors. *Production Planning & Control: The Management of Operations*, 16(2), pp. 125-134.
12. Pavičić J. (2003). Strategija marketinga neprofitnih organizacija. Masmedia, Zagreb.
13. Pope J. A, Sterrett Isely E, Asamoia F. (2009). Developing a Marketing Strategy for Nonprofit Organizations: An Exploratory Study. *Journal of Nonprofit & Public Sector Marketing*, 21(2), pp. 184-201.
14. Rodwell J, Teo S. (2004). Strategic HRM in for-profit and non-profit organizations in a knowledge intensive industry, *Public Management Review*, 6(3), 311-331.
15. Sameera H, Veena R, Soobramoney P. (2014). The applicability of relationship marketing at non-profit organizations: a developing country perspective. *Problems and Perspectives in Management*, Volume 12, Issue 4.

1.26. E-MAIL MARKETING CAMPAIGNS EFFECTIVENESS

Aleksandar Grubor¹

University of Novi Sad, Faculty of Economics in Subotica, Subotica, Serbia

Nenad Đokić²

University of Novi Sad, Faculty of Economics in Subotica, Subotica, Serbia

OBJECTIVES

The main goal of the research is to examine whether there are statistically significant differences in regard to e-mail marketing campaigns effectiveness when comparing e-mail marketing campaigns formulated in accordance to permission marketing approach and e-mail marketing campaigns formulated in accordance to interruption marketing approach. Furthermore, the goal is to research additional potential determinants of e-mail marketing effectiveness.

METHODOLOGY

Structured personal interview with the use of the questionnaire is implemented in May, 2018. The convenience sample consists of 200 respondents belonging to student population in Serbia. Independent samples t-test is applied in order to research whether there are statistically significant differences in regard to reactions to e-mail marketing campaigns in all stages of consumers' relation to the brand (attention, interest, desire, action) when comparing e-mail marketing campaigns formulated in accordance to permission marketing approach and in accordance to interruption marketing approach. Tests of differences and relations are used to consider the results in the context of socio-demographic characteristics of respondents.

RESULTS

There are statistically significant differences in regard to e-mail marketing campaigns effectiveness when comparing e-mail marketing campaigns formulated

¹ Full Professor

² Assistant Professor, corresponding author: djokicn@ef.uns.ac.rs

in accordance to permission marketing approach and interruption marketing. These differences are present in all stages of consumers' relation to the brand (attention, interest, desire and action). Furthermore, there is difference/relation when considering these relations in the context of socio-demographic characteristics of respondents.

IMPLICATIONS

Companies using e-mail marketing in their promotion should rely on permission marketing approach in order to achieve better results in all phases of consumers' relation to their brand. This approach might be to some extent more difficult to be implemented, especially in the early stages, but is inevitable for favorable results.

ORIGINALITY VALUE

The research belongs to rare e-mail marketing academic research in domestic conditions.

KEY WORDS

E-mail marketing, Permission marketing, Interruption marketing, AIDA, Serbia

REFERENCES

1. Kavassalis, P., Spyropoulou, N., Drossos, D., Mitrokostas, E., Gikas, G., & Hatzistamatiou, A. (2003). Mobile Permission Marketing: Framing the Market Inquiry. *International Journal of Electronic Commerce*, 8(1):55-79.
2. Krishnamurthy, S. (2001). *A Comprehensive Analysis of Permission Marketing*. Accessed May 8th, 2018 from Journal of Computer-Mediated Communication, 6(2): <https://academic.oup.com/jcmc/article/6/2/JCMC623/4584249>.
3. Marinova, A., Murphy, J., & Massey, B. L. (2002). Permission E-mail Marketing as a Means of Targeted Promotion. *Cornell Hospitality Quarterly*, 43 (1):61-69.
4. Opreana, A., & Vinerean, S. (2015). A New Development in Online Marketing: Introducing Digital Inbound Marketing. *Expert Journal of Marketing*, 3 (1):29-34.
5. Seth, G. (1999). *Permission marketing: Turning strangers into friends and friends into customers*. New York: Simon & Schuster.
6. Shukla, T. (2010). Factors Affecting 'Internet Marketing' Campaigns with Reference to Viral and Permission Marketing. *The IUP Journal of Management Research*, 9 (1): 26-37.
7. Tezinde, T., Smith, B., & Murphy, J. (2002). Getting permission: Exploring factors affecting permission marketing. *Journal of Interactive Marketing*, 16 (4): 28-36.

1.27. CUSTOMER PERCEPTION OF FACEBOOK MARKETING SIGNIFICANCE IN DIFFERENT PHASES OF THEIR CUSTOMER JOURNEY

Ines Djokić¹

University of Novi Sad, Faculty of Economics in Subotica, Subotica, Serbia

Nikola Milićević²

University of Novi Sad, Faculty of Economics in Subotica, Subotica, Serbia

OBJECTIVES

The basic objective of the paper is to analyze customer evaluations of significance of Facebook marketing activities during different phases of customer journey (awareness, consideration, decision). In addition, the objective is to investigate additional potential influences on these evaluations.

METHODOLOGY

The convenience sampling was used. There were 200 students interviewed in May 2018 through structured personal interviews with the use of the questionnaire. The questionnaire included general perception of respondents about the significance of Facebook campaigns in different phases of their customer journey (awareness, consideration, decision). Furthermore, these evaluations were rated in the context of less/more attractive campaigns and different situational factors. Socio-demographic characteristics of respondents were gathered as well. Appropriate tests of differences and relations were used within statistical analysis.

RESULTS

The greatest influence of Facebook marketing is in earlier stages of customer journey, although respondents rate them as important in later phases as well, but less in some extent. Situational variables, respondents' socio-demographic

¹ Assistant Professor, corresponding author: mines@ef.uns.ac.rs

² Assistant Professor

characteristics, as well as the attitude toward a certain Facebook campaign can also be brought in relation to these evaluations.

IMPLICATIONS

Companies should follow their customers in different stages of their journey and implement Facebook marketing and other digital and offline marketing media accordingly. The success of marketing campaign can depend on how this process is adequately performed.

ORIGINALITY VALUE

Academic marketing researches within the area of digital marketing, including Facebook marketing, are still scarce in Serbia.

KEY WORDS

Facebook Marketing, Customer Journey, Serbia

REFERENCES

1. Bruce, N, Murthi, S, and Rao, R. (2017). A Dynamic Model for Digital Advertising: The Effects of Creative Format, Message Content, and Targeting on Engagement, *American Marketing Association Journal of Marketing Research*, Vol. LIV (April), pp. 202–218.
2. Johnson, G Lewis, R and Nubbemeyer, E. (2017). Ghost Ads: Improving the Economics of Measuring Online Ad Effectiveness. *American Marketing Association Journal of Marketing Research*, Vol. LIV (December), pp. 867–884.
3. Kumar, A, Bezawada, R Rishika, R, Janakiraman, R, and Kannan, P.K. (2016). From Social to Sale: The Effects of Firm-Generated Content in Social Media on Customer Behavior, *Journal of Marketing*, 80 (January), pp. 7–25.
4. Leslie, J, Emrich, O, Gupta, S, and Norton, M. (2017). Does “Liking” Lead to Loving? The Impact of Joining a Brand’s Social Network on Marketing outcomes. *American Marketing Association Journal of Marketing Research*, Vol. LIV (February), 144–155.
5. Mochon, D, Johnson, K, Schwartz, J, and Ariely, D. (2017). What Are Likes Worth? A Facebook Page Field Experiment, *Journal of Marketing Research*, Vol. LIV (April), pp. 306–317.
6. Naylor, R, Lamberton, C, and West, P. (2012). Beyond the ‘Like’ Button: The Impact of Mere Virtual Presence on Brand Evaluations and Purchase Intentions in Social Media Settings, *Journal of Marketing*, 76 (November), pp. 105–120.

1.28 DIGITAL MARKETING USAGE IN SMES IN MACEDONIA, AN EMPIRICAL STUDY

Dimitar Jovevski¹

Ss. Cyril and Methodius University, Faculty of Economics, Skopje, Republic of Macedonia

Snezana Ristevska Jovanovska²

Ss. Cyril and Methodius University, Faculty of Economics, Skopje, Republic of Macedonia

OBJECTIVES

The main goal of this research is to confirm or deny that: Small and medium companies in the Republic of Macedonia take advantage and possibilities of digital marketing. Other objectives of this research are: Importance of digital marketing in the conduct of business; determining the characteristics of digital marketing in small companies; the extent of using digital marketing in relation to traditional forms of marketing in small companies; advantages and disadvantages of digital marketing in small companies; examination of the mistakes that are made in the formation of marketing strategies and testing how the use of digital marketing will affect the operation of the email companies.

METHODOLOGY

In order to satisfy the objectives of the paper, a survey based on a written questionnaire was conducted to collect relevant data, and later compare with similar research from the authors. The questionnaire is divided into three groups of questions: the first set of questions provides basic information about the enterprise; the second set of questions concerns the marketing activities of the company; the third set of questions gives the answer how small companies use the new trends in digital marketing.

¹ PhD, corresponding author: dimitar.jovevski@eccf.ukim.edu.mk

² PhD

Part I

This questionnaire examines a number of issues. First, issues related to the demographic and size of the company, than the lever of redines of the SME's for using the digital marketing in their working.

The survey was conducted in the period March-April 2018 among a randomly chosen sample of more than 100 companies.

The survey was conducted in the period March-April 2018 among a randomly chosen sample of more than 100 companies.

RESULTS

The survey data reveals that businesses use different strategies for building and maintaining relationships with others in order to keep consumers interested. Also more than 75% are recognizing social media channels as a relevant media comperre with 60% in 2017. More than 80% have digital marketing strategy compare to 56% back in 2017. SME's are spending more and more money through digital channels and expecting to gain more customers compare to other channels.

IMPLICATIONS

In the last few years, the issue of the significance and level of influence of effectively established digital marketing in the operations of today's companies and the development of their business has been significantly raised.

Accordingly, there are a significant number of start-up companies, especially small and medium-sized enterprises, which belong to the small business sector, which are already significantly focused on the implementation of digital marketing and implementation of successful, modern marketing strategies in order to make it easier to reach its potential consumers and users of the given products and services.

ORIGINALITY VALUE

Digital marketing is an important issue in the past few years especially in the SME's in Republic of Macedonia. The subject of this paper is defining the level of reediness and the level of usage of digital marketing in R. of Macedonia and also there is a comparison with previous studies from the authors. The scientific

contribution of this paper is perceived in the need of emphasizing the level of usage of digital marketing in SME's in their day to day working.

KEY WORDS

Digital marketing, online sales, small and medium enterprises, entrepreneurship, startup businesses, the Republic of Macedonia, marketing strategy, internet promotion, social networks, digital market.

REFERENCES

1. A. Payne (2000). *The Essence of Services Marketing*, Prentice Hall International Ltd.
2. Alistair, D. & Copulsky, J. (2013) Managing webmavens: relationships with sophisticated customers via the Internet can transform marketing and speed innovation. *Journal: Strategy and Leadership*.
3. Allen, E. & Fjermestad, (2011) J. E-commerce marketing strategies: a framework and case analysis. *Logistics Information Management (Vol.14)*.
4. Andrea C. Wojnicki, (2005). Word-of-Mouth and Word-of-Web: Talking About Products, Talking About Me. *Advances in Consumer Research, (Vol. 33)*.
5. Davis, M.; Eshelman, E.R.; M'kay, M. (2008), *The relaxation and stress reduction workbook*, 6-th edition, New Harbinger Publications, Inc, Oakland.
6. Fernandes, C., Christo, F.V., Kumar, S. & Mekoth, N. (2008), Social Transaction at Workplace: Impact of Social Support on Role Stress, *ICFAI Journal of Organizational Behavior, (Vol.7 Issue 1, pp.41-48)*.
7. Groves, D. (2004). *Stress reduction for busy people*, New World Library, Novato.
8. Hargrove, M.B., Quick, J.C., Nelson, D.L. & Quick, J.D. (2011), The Theory of preventive stress management: a 33-year review and evaluation, *Stress & Health. Journal of the International Society for the Investigation of Stress, (Vol. 27 Issue 3, pp.182-193)*.
9. Kotler, P. (2003) *Marketing Management*. Eleventh edition, Pearson Education Canada.
10. Kuada, J & O.J Sørensen (2001) *Internationalization of Companies from Developing Countries*, International Business Press.
11. McMillan & Sally J. (2005). *Internet Advertising: One Face or Many?* Manuscript prepared for Internet Advertising: Theory and Research.
12. Mohammed, R. A., Fisher, R. J., & Jaworski, B. J. (2003) *Internet Marketing: Building advantage in a networked economy*. Second edition, Mc Graw Hill/ Irwin.
13. Rappaport & Stephen D. (2007). Lessons from Online Practise: New Advertising Models. *Journal of Advertising Research 2007*.
14. Reijonen, H. (2010). Do all SMEs practice same kind of marketing? *Journal of Small Business and Enterprise Development, 17(2)*

Part I

15. Reyneke, M., Pitt, L., & Berthon, P. R. (2011). Luxury wine brand visibility in social media: An exploratory study. *International Journal of Wine Business Research*, 23(1)
16. Thomson, K., K. Purcel, & L. Rainie. (2016). *Arts organisations and digital technologies*. International Business Press.
17. Universal McCann. (2016). Wave 8: The Language of Content.
18. Verma, D. P. S. & Varma, G.(2013). On-line pricing: concept, methods and current practices, *Journal of Services Research. Gurgaon, (Vol. 3)*.

1.29. THE ROLE OF DIGITAL MARKETING IN SERBIAN HOTEL INDUSTRY

Saša Virijević Jovanović¹

Faculty of Applied Management, Economics and Finance, Belgrade, Serbia

Vesna Pijevac²

High school for tourism, Belgrade, Serbia

OBJECTIVES

The aim of this paper is to demonstrate the impact of digital marketing on customer buying behavior in the hotel industry in Serbia. In order to respond to the requirements of the paper topic, we have designed the research, which will present the current statistical data on the application of digital marketing in hotels in Serbia, as well as a survey that has included hotel guests as respondents, who answered the questions about the impact of social digital media on their buying behavior.

METHODOLOGY

The research combines the theoretical and empirical approaches in order to find the answer to the question about the impact of digital marketing in Serbian hotel industry. Therefore, various methods and techniques are applied in the paper, such as content analysis, comparative method, survey and statistical methods. The empirical research is conducted on the sample of 150 respondents that included domestic and foreign guests in hotels in Serbia. During the statistical data processing, the following techniques and methods were implemented: the descriptive statistical measures (frequencies and percentage, arithmetical midranges), the measures of variability - AS, SD, MIN and MAX. In order to show the significance of the achievement differences in questionnaires, the test t was used for the independent samples and the significance (t and p) and ANOVA and significance (F and p) in the program for the statistical data processing SPSS.

¹ Associate Professor, corresponding author: sasavirijevic12@gmail.com

² Lecturer

RESULTS

The survey indicated that over 80% of respondents used digital marketing channels in order to obtain information relevant to making a decision about the choice of the hotel. The findings of the study, also showed that, in the overall sample, the most important reasons for using digital marketing in purchasing process of customers in hotel industry in Serbia are: booking and finding information about travel experiences on review sites.

IMPLICATIONS

This research is a significant cognitive basis, which can be used by a variety of subjects, starting with the hotel customer relationship management (CRM) to researchers that monitor the implications of digital marketing. The results of the research presented in this paper indicate that there are great possibilities of using digital marketing in the hotel industry in Serbia, which should be recognized and valued in time.

ORIGINALITY VALUE

In the area of the hotel industry, digital marketing opens up new opportunities for connecting with consumers, which are still insufficiently explored both on theoretical and practical levels. Therefore, this paper represents an original contribution towards the further learning of the application of digital marketing, bearing in mind that it points to its actual application in hotels in Serbia, and examines the impact of social media on making a decision about hotel choice.

KEY WORDS

Digital marketing, social media marketing, hotel industry, social networks in tourism, online hotel booking

REFERENCES

1. A.T. Kearney Inc. (1999). *Creating a high-impact digital customer experience*. Chicago: A.T. Kearney.
2. Bardi J.A. (2003). *Hotel front office management*. New Jersey: John Wiley & Sons.
3. Borowski C. (2015). What a Great Digital Customer Experience Actually Looks Like. Retrieved from <https://hbr.org/2015/11/what-a-great-digital-customer-experience-actually-looks-like>

4. Buhalis, D. (1998). Strategic use of information technologies in the tourism industry. *Tourism Management* 19(5): 409-421.
5. Grant Thornton (2015). Hotels 2020: Welcoming tomorrow's guests. Grant Thornton International Ltd.
6. Hollensen S., Kotler Ph., Opresnik M. O. (2017). *Social Media Marketing. A Practitioner Guide*. Great Britain: Opresnik Management Consulting.
7. Holt D. (2016). Branding in the Age of Social Media. Retrieved from <https://hbr.org/2016/03/branding-in-the-age-of-social-media>
8. Kietzmann J. H., Hermkens K., McCarthy I. P., Silvestre B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Journal Business Horizons, Kelley School of Business*, 54, pp. 241-251.
9. McKinsey & Company (2017). *Customer experience: New capabilities, new audiences, new opportunities*. United States of America: McKinsey & Company.
10. Minazzi, R. (2015). *Social Media Marketing in Tourism and Hospitality*. Switzerland: Springer.
11. Sayre K., Rastogi V., Zwillenberg P., Visser J., Sheerin A. (2012). *Marketing Capabilities for the Digital Age*. New York: The Boston Consulting Group.
12. Tuten T. L., Solomon M. R. (2014). *Social Media Marketing*. London: Pearson Education.
13. Virijević Jovanović S., Mladenović D. (2016). Mogućnosti digitalnih kanala marketinga za efikasnije brendiranje. *Zbornik radova SM2016*, Ekonomski fakultet, Subotica, pp. 720-726.
14. Weber L. (2009). *Marketing to the Social Web: How Digital Customer Communities Build Your Business*. Hoboken, NJ: Wiley.
15. World Tourism Organization (2014). *Online Guest Reviews and Hotel Classification Systems*. Madrid: World Tourism Organization.
16. World Tourism Organization (2018). European Union Tourism Trends. Retrieved from <http://publications.unwto.org/publication/european-union-tourism-trends>

1.30. WEB-BASED PROJECT MANAGEMENT EDUCATION IN STUDENT POPULATION

Dragan Bjelica¹

Faculty of Organizational Sciences, University of Belgrade, Belgrade, Serbia

Dejana Pavlović²

Institute of Economic Sciences, Belgrade, Serbia

OBJECTIVES

The aim of the research is to show how contemporary trends in project management through web-based application tools on the market contribute to more efficient and effective implementation of projects in terms of budget, time and scope. According to Obradovic et al. (2014) web-based project management tools have aimed to integrate knowledge management issues with collaboration tools, focusing on the relationship between employees, project portfolio managers, different stakeholders and top management.

METHODOLOGY

The methodology was based on the survey which was conducted among student population in Master studies at the Faculty of Organizational Sciences, University of Belgrade. Students are asked to fill opened questions that are oriented towards their level of web-based project management. Each year, the Master Program for Project Management is attended by about 70 students. We collected the sample of 60 respondents, which is about 85% of the population. Most of the students are already employed in the positions of project managers and have a significant influence on the selection of team members, time management, costs, and scope of projects. In addition, the part of methodology contained the descriptive analysis of data obtained from the Survey. Mann-Whitney and Kruskal-Wallis test are used for group comparisons.

¹ PhD

² Ma, corresponding author: dejana.pavlovic@ien.bg.ac.rs

RESULTS

Key results imply that adequate education in project management improves later project results and performances. Comparative analysis shows the statistical difference in the level of knowledge and competencies of those using web tools against those who don't use it. The research results show statistically significant differences in the level of project manager's competencies between industrial branches and the number of projects that the organization implements on an annual basis. Theoretical and practical implications in the paper will be discussed.

IMPLICATIONS

Results could be useful for project managers as well as decision makers because appropriate people recruitment with project management competencies, especially with web-based project management knowledge, is directly related with software selection and methodology which will be applied in the company. The bridge that connects two sides particularly influences the education model and competencies improvement in student population.

ORIGINALITY VALUE

The main contribution of the paper is the reduction of a large number of issues in the field of web-based project management as well as the great importance for the education sector of the Republic of Serbia.

KEY WORDS

Project Management, Web-Based Knowledge, Education

REFERENCES

1. Ahlemann, F. (2009). Towards a conceptual reference model for project management information systems, *International Journal of Production Management*, vol. 27, pp. 19-30.
2. Akram, J.K., (2011). Project Management Information Systems (PMIS) factors: an empirical study of their impact on Project Management Decision Making (PMDM) performance, *Research Journal of Economics, Business and ICT*, vol. 2, pp. 22-27.
3. Braglia, M. and Frosolini, M. (2014). An integrated approach to implement Project Management Information Systems within the Extended Enterprise, *International Journal of Project Management*, 32 (2014), pp. 18-29.

Part I

4. Professional Competency Standards for Project Management. (2008). Australian Institute of Project Management.
5. Project Manager Competency Development Framework. (2007). Project Management Institute.
6. Seul-Ki, L. and Ho, J. (2012). Success model of project management information system in construction, *Automation in Construction*, vol. 25, pp. 2-93.
7. Thomas, J. and Mengel, T. (2008). Preparing project managers to deal with complexity – Advanced project management education, *International Journal of Project Management*, volume 26, issue 3, pp. 304-315.
8. Turner, R. and Mueller, R. (2005). The project manager's leadership style as a success factor on projects: a literature review. *Project Manage*, 36(1): pp. 49-61.
9. Wang, E., Chou H., and Jiang, J. (2005). The impacts of charismatic leadership style on team cohesiveness and overall performance during ERP implementation. *Project Management*, 23(3): 173-80.
10. Weigel, V. (2000). E-learning and the tradeoff between richness and reach in higher education. *Change 2000*, 32(5): pp. 10-5.
11. Williams, T.M. (2005). Assessing and building on project management theory in the light of badly over-run projects. *IEEE Trans Eng Manage*, 52(4): 497-508.
12. Winter, M, Thomas, J. (2005). *Understanding the lived experience of managing projects: the need for more emphasis on the practice of managing*. In: Jeffrey Pinto, Denis Slevin, David Cleland, editors. *Frontiers of project management research*. Newtown (PA): PMI Publishing.

1.31. IMPLEMENTATION OF GAMIFICATION IN HEIS IN THE REPUBLIC OF MACEDONIA

Martin Kiselicki¹

Integrated Business Faculty, Skopje, Macedonia

Saso Josimovski²

Faculty of Economics – Skopje, Macedonia

OBJECTIVES

Gamification is the use of elements from video games and a way of thinking in an environment that has nothing to do with video games. According to statistics in the EU and the US, only 56% of students complete their four-year studies within the predicted six-year period. The benefits of gamifying the study process are the creation of higher levels of interaction, immersion and motivation among students in activities during and outside the classroom.

METHODOLOGY

The main hypothesis is that there is a direct correlation between the implementation of gamification in HEIs and the increase in student's motivation to participate and complete activities related to the subjects. As a sub-hypothesis, the claim is that if gamification is introduced, teaching staff will be able to effectively implement it. The motivation of the students will be analyzed through secondary research, which covers the available data by analyzing the types of motivation (internal and external) and the methods for increasing it, while the primary research will be conducted through a questionnaire on higher education institutions on the territory of the Republic of Macedonia. The questionnaire will be composed of both open and closed questions, to better examine and understand various aspects of gamification and motivational techniques, as well as to give accurate predictions for implementation of gamified systems in HEIs (Higher Educational Institution).

¹ MSc

² PhD, corresponding author: sasojos@eccf.ukim.edu.mk

RESULTS

Results demonstrate that gamification offers great advantages for students and staff by increasing the level of internal motivation and the degree of completion of subjects. The research uncovers gamification mechanics and elements that would work best for HEIs, as well as to outline the biggest motivational problems students have. The disadvantages identified include difficulties in the implementation process, as well as the prejudices from administrative staff.

IMPLICATIONS

The contribution of the paper is two-sided - recommendations for optimal ways of implementing gamified systems in higher education are given, and it presents an adapted model of gamification, suitable for the educational process. Gamification in education implemented by redefining the four core elements, as well as introducing cycles of interest (rewards for encouraging a certain type of behavior of students) and cycles of progression (a stepwise increase in the weight of the activities).

ORIGINALITY VALUE

Through the primary research conducted for this paper, the first public available information on the introduction of gamification in higher education in Macedonia is available. Gamification in education is relatively new, with only a few papers addressing it in detail, especially in the Balkan region. With the popularity this concept encompasses in the business sector, it is beneficial to research how it can adapt to the educational process.

KEY WORDS

Gamification, higher education, internal motivation, external motivation, motivators, barriers

LITERATURE

1. Aparicio, A.F. et al., 2012. Analysis and application of gamification. Proceedings of the 13th International Conference on Interacción Persona-Ordenador - INTERACCION '12, pp.1-2.
2. Coonradt, C. (2007). The Game of Work: How to Enjoy Work as Much as Play. Gibbs Smith.

3. Hamari J., Sarsa H., Koivisto J., (2014), Does Gamification Work? — A Literature Review of Empirical Studies on Gamification, 47th Hawaii International Conference on System Sciences.
4. Detering S., Dixon D., Khaled R., Nacke L., (2011), From Game Design Elements to Gamefulness: Defining “Gamification”, MindTrek’11, September 28-30, 2011, Tampere, Finland.
5. Kapp K. M. (2012). Games, Gamification, and the Quest for Learner Engagement. *T+D*, 66(6), pp. 64-68.
6. Kappen D.L. & Nacke L.E., (2013), The kaleidoscope of effective gamification: deconstructing gamification in business applications. Proceedings of the First International Conference on Gameful Design, Research, and Applications - Gamification ’13, pp. 119–122.
7. Kocadere S., (2017), Gamification in Education, Hacettepe University, Whitepaper
8. Muntean, C. (2011). Raising engagement in e-learning through gamification. 6th International Conference on Virtual Learning ICVL, pp. 323-329.
9. Ryan R., Deci E., (2000), Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions, *Contemporary Educational Psychology* 25, 54–67
10. Sheldon L., (2012). *The Multiplayer Classroom: Designing Coursework as a Game*. Boston, MA: Cengage Learning.
11. Van Der Boer, P. (2011), Introduction to Gamification, whitepaper, available at <https://www.cdu.edu.au/olt/ltresources/downloads/whitepaper-introductiontogamification-130726103056-phpapp02.pdf> (accessed on 20.03.2018).
12. Werbach K., (2014), (Re)Defining Gamification" Springer Lecture Notes in Computer Science Vol. 8462, available at: http://works.bepress.com/kevin_werbach/3/ (accessed on 18.03.2018).

1.32. BUSINESS NETWORKS AND TECHNOLOGY TRANSFER – A CASE STUDY OF TOYOTA MOTOR THAILAND

Isidora Beraha¹

Institute of Economic Sciences, Belgrade, Serbia

OBJECTIVES

The main objective of the paper is to analyze how business networks provide mechanism for technology transfer to SMEs, and particularly what is the role of large enterprises in that process. The paper aims to use the case study of Toyota Motor Thailand. Also, this paper aims to provide theoretical background on business networks, subcontracting and technology transfer.

METHODOLOGY

The methodology used in the research is the qualitative case study approach. Toyota Motor Thailand (TMT) is selected as the case study because in automotive industry, perhaps more than it is the case in some other industries, business networks are a very common form of association of participants in various stages of the value chain, thus promoting the establishment of subcontracting linkages between large enterprises and SMEs. The case of TMT is an example of the importance of business networks for establishing close linkages between large enterprise and SMEs in order to achieve technology transfer from MNC to local SMEs.

RESULTS

The most important finding of the case study refers to the importance of strong commitment of a MNC to supply all parts and components locally, as well as to the significance of measures aimed at enhancing SME production and management capabilities, upgrading skills, exchanging information and adopting technology and know-how. Furthermore, it is clear from the case study that subcontracting through business networking is a successful mechanism of

¹ PhD, e-mail: isidora.beraha@ien.bg.ac.rs

technology transfer and of management skills, competitiveness and production efficiency enhancement for SMEs.

IMPLICATIONS

The findings of the case study suggest what steps and measures MNCs are to take in order for business networks to be created in the automotive industry, as well as how technology and know-how is successfully transferred to local SMEs. This can serve as a solid basis for policy makers in developing countries in order for local SMEs to take full advantage of FDIs. Also, it can serve as a valuable source of information for automotive manufactures willing to create local supply chains.

ORIGINALITY VALUE

The paper extends and refines the existing theory by combining theoretical and empirical evidence on business networks, subcontracting and technology transfer.

KEY WORDS

Business networks, technology transfer, small and medium sized enterprises, large enterprises, Toyota Motor Thailand

REFERENCES

1. Dodourova, M., Bevis, K. (2012), Comprehensive role of networks and clusters in the European car industry, Producer services for the European Sustainability and Competitiveness, Innovation and Environment Regions of Europe Sharing Solutions
2. Elfring, T., Hulsink, W. (2003), Networks in Entrepreneurship: The case of high-technology firms, *Small Business Economics*, 21, pp. 409-422.
3. Hatch, W., Yamamura, K. (1996), *Asia in Japan's Embrace, Building a Regional Production Alliance*, Cambridge University Press.
4. Jarillo, J.C. (1989), Entrepreneurship and growth: the strategic use of external resources, *Journal of Business Venturing*, 4, pp. 133-147.
5. Komolavanij, S., Jeenanunta, C. and Ammarapala, V. (2010), Thai Automotive Industry: Opportunities and Challenges, Intarakumnerd, P. (ed.), *Fostering Production and Science and Technology Linkages to Stimulate Innovation in ASEAN*, ERIA Research Project Report 2009-7-4, Jakarta: ERIA. pp. 230-270.
6. Kumar, R.S., Subrahmanya, B. (2007), Subcontracting relationships of Indian SMEs with global TNCs. Do SMEs gain? How?, *Journal of Asian Economics*, 5 (39).
7. Minović, J., Lazarević Moravčević, M., Beraha, I. (2016), Strategic orientation of SMEs: Empirical research, *Management*, No. 81, pp. 15-26.

Part I

8. Moller, K. (2005), Role of Partnership and Networks in SME Innovation and Growth, Industrial Marketing and Purchasing group, the 21st IMP-conference in Rotterdam.
9. Morcos, J.L. (2003), International Subcontracting versus delocalization, A survey of the literature and case studies from the SPX network, United Nations Industrial Development Organization.
10. Muramatsu, Y. (2000), Toyota's strategy towards SME suppliers, UNCTAD
11. OECD (2000), Enhancing the Competitiveness of SMEs through Innovation, Conference for Ministers responsible for SMEs and Industry Ministers.
12. OECD (2001), Innovative Networks: Co-operation in National Innovation Systems.
13. OECD (2004), Promoting Entrepreneurship and Innovative SMEs in a Global Economy, Second OECD Conference of Ministers Responsible for SMEs, Executive Summary of the Background Reports, Istanbul, 3-5 June.
14. Petrin, T., Kotnik, P. (2014), Government support to Cluster development: The Case of Slovenia, Cluster Development in the Czech Republic and Slovenia, Faculty of Economics, Ljubljana.
15. Punyasavatsut, C. (2008), SMEs in the Thai Manufacturing Industry: Linking with MNEs, Lim, H. (ed.), SME in Asia and Globalization, ERIA Research Project Report 2007-5, pp. 287-321.
16. Robson, P., Bennet, R. (2000), SME growth: The relationship with business advice and external collaboration, Small Business Economics, 15, pp. 193-208.
17. Schmitz, H., Knorringer, P. (2000), Learning from Global Buyers, The Journal of Development Studies, 37 (2), pp. 177-205.
18. Tambunan, T. (2009,) Promoting innovation in SMEs through transfer of technology, Lessons from a metalworking industry cluster in Indonesia, Tech monitor, Special Feature: innovation in SME clusters, pp. 30-36.
19. UNCTAD (2001,) World Investment Report: Promoting Linkages between foreign affiliates and domestic firms, Part 2. Geneva: ILO.
20. Wong P. (1992), Technological Development through Subcontracting Linkages: Evidence from Singapore, Scandinavian Business International Review, 1 (3): 28-40.

1.33. ASSESSING THE RESIDUAL VALUE OF ASSETS AS A PART OF FINANCIAL ANALYSIS

Mališa Đukić¹

Belgrade Banking Academy, Belgrade, Serbia

OBJECTIVES

The objective of the paper is to assess the residual value of investment cost items of an infrastructure project for the purpose of performing financial analysis. Regardless of the sector of the investment project, it is often the case that the reference period of the economic and financial analysis is different from the life time of investment items. Therefore, it is necessary to estimate the useful value of the assets whose life time is greater than the analysis period.

METHODOLOGY

There are various methods of assessing the residual value of investment project fixed assets. Depending on the sources of financing, the methodologies differ and may provide different results. When assessing the economic and financial feasibility, the project proponent should take into account the methodology adopted by the institutions that are likely to finance the project implementation. For this purpose, the methodology that is adopted by the European Commission would be used. The methodology is contained in the relevant EU regulations. According to Article 18 (Residual value of the investment) of Commission Delegated Regulation (EU) No. 480/2014, for project assets with economic lifetimes in excess of reference period, their residual value shall be determined by computing the net present value of cash flows in the remaining life years of the operation.

RESULTS

The results of the assessment are used as an input for calculating economic and financial performance indicators. In case of EU co-financing they affect the

¹ PhD, e-mail: malisa.djukic@bba.edu.rs

amount that is financed from EU budget as a financial assistance and therefore are of significant importance for the financial sustainability.

IMPLICATIONS

The implications of assessing the residual value include the effects on the overall economic and financial performance of the proposed investment project. Depending on the project sector, the assessment could affect the financial plan, i.e. sources of financing as well as the tariff/price policy of the services that would be offered following the project implementation.

ORIGINALITY VALUE

In the international and Serbian literature there is a small number of published papers dealing with this topic, objectives and result. The results of the paper could be used by both scientists and professionals working in this field of economics and finance.

KEY WORDS

Residual value, financial analysis, economic analysis, financing plan

REFERENCES

1. Belli, P., Anderson, J.R., Barnum, H.N., Dixon, J.A., Tan, J-P (2001). *Economic Analysis of Investment Operations. Analytical Tools and Practical Applications*, WBI, World Bank, Washington D.C.
2. Boardman, A.E., Greenberg, D.H., Vining, A.R. and Weimer, D.L. (2006). *Cost-Benefit Analysis: Concepts and Practice*, 3rd edition, Upper Saddle River, New Jersey: Pearson Prentice Hall.
3. Commission Delegated Regulation (EU) No 480/2014 of 3 March 2014 supplementing Regulation (EU) No 1303/2013 of the European Parliament and of the Council laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund
4. European Investment Bank (2013). *The Economic Appraisal of Investment Projects at the EIB*. Available at: <http://www.eib.org/infocentre/publications/all/economic-appraisal-of-investment-projects.htm>
5. Florio, M. (2014). *Applied Welfare Economics: Cost-Benefit Analysis of Projects and Policies*, Routledge.

BUSINESS AND APPLIED ECONOMICS

6. JASPERS Working Paper (2010). *Combining EU Grant Funding with PPP for Infrastructure: Conceptual Models and Case Examples*. Available at: <http://www.jaspersnetwork.org/plugins/servlet/documentRepository/displayDocumentDetails?documentId=181>
7. JASPERS Working Paper (2010). Evaluation of Major Project Applications. Guidance for evaluators. Available at: <http://www.jaspersnetwork.org/plugins/servlet/documentRepository/displayDocumentDetails?documentId=225>

1.34. POST-MERGER PERFORMANCE IN FINANCIAL SERVICE INDUSTRY: A CASE OF THE REPUBLIC OF SERBIA

Dejan Eric¹

Belgrade Banking Academy, Belgrade, Serbia

OBJECTIVES

The main objective of this paper is to analyze key financial performance in some financial institutions after mergers and acquisitions (M&A) made by foreign institutions in the Republic of Serbia. The analysis will cover the period after the so-called democratic changes in 2000 when real transformation processes of Serbian financial system have started. The main actors in these M&A activities were banks and insurance companies. This is the reason why the focus of research will be on post-merger performance of these two types of financial institutions.

METHODOLOGY

There are so many different approaches of how to analyze post-merger performance. Literature offers variety of methodological tools. Problem of doing research in a transitional country is the lack of data and reliable information. In this paper public data obtained from official financial statements will be used. In order to determine key performance after M&A of domestic financial institutions, basic financial ratios will be calculated and they will be compared before and a few years after mergers and acquisitions. The empirical study will cover period between 2005 (when huge number of domestic banks started to be sold to foreign investors) and 2017. Ratio analysis will cover few areas: liquidity, profitability, solvency, leverage and stock markets indicators.

RESULTS

Many empirical studies have shown the problematic results of the undertaken M&A activities. Similar findings were obtained by research in this paper. On the one side, the arrival of foreign banks and insurance companies led to the

¹ PhD, e-mail: dejan.eric@bba.edu.rs

consolidation of the Serbian financial services market. Numerous strategic advantages have been achieved and lots of weaknesses have been eliminated. Overall quality of financial services has been raised. However, in a number of cases, problematic financial results have been identified, even failure.

IMPLICATIONS

One of the very common arguments used during the opening period of the domestic financial system was that the arrival of foreign financial institutions should have led to an increase in efficiency and effectiveness of business. Unfortunately, the analysis of previously made decisions in Serbian financial system is very scarce. Hence, this paper represents the first attempt to look at the real effects of sales of domestic financial institutions to foreign investors.

ORIGINALITY VALUE

So far there has been no systematic research of post-merger performance of financial institutions in the Serbian financial system. This is the first attempt to begin research in this area. In this way, this paper might serve as the basis for further research into the efficiency of the model of privatization of domestic banks and insurance companies and their implications for the overall economic activity are set.

KEY WORDS

Mergers and acquisitions, financial performance, post-merger performance, financial markets, financial institutions

REFERENCES:

1. Erić, D. and Djukić M. (2012), *Finansijska tržišta u uslovima krize*, Institut ekonomskih nauka i Beogradska bankarska akademija, Beograd.
2. Fixler, D. J. and Zieschang K. D. (1993), An Index Number Approach to Measuring Bank Efficiency: An application to Mergers, *Journal of Banking and Finance*, Vol. 17, pp. 437-450.
3. Knapp, M. Gart, A. and Ghaudhry M. (2006), The impact of mean reversion of bank profitability on post-merger performance in the banking industry, *Journal of Banking and Finance*, Vol. 30, pp. 3503–3517.
4. Kyriazopoulos, G. and Drymbetas, E. (2015), Do domestic banks Mergers and Acquisitions Still Create Value? Recent Evidence from Europe, *Journal of Finance and Bank Managemen*, June, Vol. 3, No. 1, pp. 100-116.

Part I

5. Lai, K. Y., Ling, T. P., Eng, T. K, Cheng, L. S. and Ting, L. F. (2015), Financial Performance of Malaysia Local Banks: During Periods of Pre-Merger and Post-Merger, *Journal of Economics, Business and Management*, Vol. 3, No. 9, September, pp. 826-831.
6. Mager, F. and Meyer-Facler, M. (2017), Mergers and Acquisitions in Germany: 1981-2010, *Global Finance Journal*, 34, pp. 32-42.
7. Masoumi, A. H., Min, Yu and Nagurney, A. (2017), Mergers and Acquisitions in Blood Banking Systems: A supply chain network approach, *International Journal of Production Economics*, 193, pp. 406-423.
8. Usman Kemal M. (2011), Post-Merger Profitability: A Case of Royal Bank of Scotland (RBS), *International Journal of Business and Social Science*, Vol. 2, No. 5, pp. 157-164.
9. Vallascas, F. and Hegendorff, J. (2011), The Impact of European Bank Merger on Bidder Default Risk, *Journal of Banking and Finance*, Vol. 35, pp. 902-915.
10. Vander Venet, R. (1996), The Effect of Merger and Acquisitions on the efficiency and Profitability of EC credit institutions, *Journal of Banking and Finance*, Vol. 20, pp. 1531-1558.

1.35. STRUCTURE OF CORPORATE BOARDS AND FINANCIAL PERFORMANCE OF SELECTED COMPANIES IN SERBIA

Slavica Stevanović¹

Institute of Economic Sciences, Belgrade, Serbia

Grozdana Marinković²

Belgrade Banking Academy, Belgrade, Serbia

OBJECTIVES

The aim of this paper is to analyze the structure of corporate boards in selected joint-stock companies doing business in Serbia, with special focus on gender structure of boards of directors and executive boards. The specific objective of the paper refers to analysis of the relation between the corporate boards' gender characteristics and financial performance of selected enterprises. The research is based on comparison of financial performance of joint-stock companies with one or more women on corporate boards and performance of companies without female board members.

METHODOLOGY

The research methodology includes qualitative and quantitative methods, with regard to the aim and the subject of our analyses. This paper provides an overview of existing studies on corporate boards structure, as well as on relation between gender diversity of corporate boards on one hand and financial performance of companies on the other hand. The content analysis is followed by financial analysis. We analyze the percentage of women on the corporate boards on a sample of 42 joint-stock companies from processing industry operating in Serbia. The shares of analyzed companies are quoted on the Belgrade Stock Exchange. Analyzing the relationship between the percentage of women on the corporate board and the financial performance, we use return on sale and return on assets, based on cash flow and accrual accounting approach. The accounting

¹ PhD, corresponding author: slavica.stevanovic@ien.bg.ac.rs

² PhD

measures of financial performance are determined by financial statements information disclosed by the Serbian Business Registers Agency. The quantitative and qualitative analysis covers the period from 2010 to 2015. The comparison of financial performance between two groups of joint-stock companies is observed over a six-year period, but on annual and average level too.

RESULTS

About 59% of analyzed joint-stock companies in Serbia has a single-tier management system, and 41% of companies are with a two-tier management system. About 45% the companies with a single-tier management system do not have any female member in directors' boards, while 36% of the companies with a two-tier management system has no women on their executive boards at all. Among enterprises that have gender-diverse boards, women have 32% seats in boards of directors and almost 30% executive boards' seats. The financial performance of selected joint-stock companies shows different relations between classified enterprises depending on used indicators and observed year.

IMPLICATIONS

The authors in this paper contribute to both the corporate governance literature and financial analysis literature. The paper should be of interest to readers in academic areas and to readers in industry practice. The research results can be of interest to a variety of enterprises stakeholders, including financial analysts, policy makers, and researchers.

ORIGINALITY VALUE

Our research lies in analysis of the boards of directors' and executive boards' gender structure in enterprises doing business in Serbia. This research is relevant because it examines whether gender diversity of corporate boards is associated with financial performance. The special contribution lies in a fact that the analysis is focused on selected joint-stock companies operating in proceeding industry in Serbia.

KEY WORDS

Corporate boards, female boards members, financial performance, joint-stock companies, Serbia

REFERENCES

1. Adams, R.B. & Ferreira, D. (2009). Women in the Boardroom and their Impact on Governance and Performance. *Journal of financial economics*, 94(2), pp. 291-309.
2. Belgrade Stock Exchange, retrieved from: <http://www.belex.rs/>
3. Burgess, Z. & Tharenou, P. (2002). Women Board Directors: Characteristics of the Few. *Journal of business ethics*, 37(1), pp. 39-49.
4. Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate Governance, Board Diversity, and Firm Value. *Financial review*, 38(1), pp.33-53.
5. Erhardt, N. L., Werbel, J. D., & Shrader, C. B. (2003). Board of Director Diversity and Firm Financial Performance. *Corporate governance: An international review*, 11(2), pp. 102-111.
6. European commission (2016). Gender Analysis for Serbia, retrieved from: http://europa.rs/files//Gender_Equality/Gender-Analysis-Serbia-dec-2016.pdf
7. Joy, L., Carter, N. M., Wagner, H. M., & Narayanan, S. (2007). The Bottom Line: Corporate Performance and Women's Representation on Boards. *Catalyst*, 3(1).
8. Radović-Marković, M. (2017). Female Entrepreneurship: Theoretical Approaches. *JWEE*, (1-2), pp. 1-9.
9. Securities Commission of Republic of Serbia, Registar javnih društava, retrieved from: <http://register.sec.gov.rs/>
10. Serbian Business Registers Agency, Registar finansijskih izveštaja pravnih lica i preduzetnika, retrieved from: <http://www.apr.gov.rs/>
11. Sila, V., Gonzalez, A., & Hagendorff, J. (2016). Women on Board: Does Boardroom Gender Diversity Affect Firm Risk? *Journal of Corporate Finance*, 36, pp. 26-53.
12. Statistical Office of the Republic of Serbia (2017). Žene i muškarci u Republici Srbiji, retrieved from: http://webzrs.stat.gov.rs/WebSite/userFiles/file/Aktuelnosti/Zene%20i%20muskarci%20u%20Republici%20Srbiji_web_2017.pdf
13. Stevanović, S., & Simović, V. (2017). Financial Performances of the Serbian Enterprises Depending on the Director's Gender. *JWEE*, (3-4), pp. 45-64.
14. 2020 Women on Boards Gender Diversity Index, retrieved from: <https://www.2020wob.com/sites/default/files/2020GDI-2015Report.pdf>.

1.36. EVALUATION OF THE PROBABILITY OF BANKRUPTCY OF MEDIUM-SIZED ENTERPRISES IN THE REPUBLIC OF SERBIA

Sonja Đuričin¹

Institute of Economic Sciences, Belgrade, Serbia

OBJECTIVES

The main objective of the research is to evaluate the probability of bankruptcy of medium-sized enterprises registered on the territory of the Republic of Serbia in the following sectors: C – Manufacturing industry, G – Wholesale and retail trade and repair of motor vehicles and motorcycles, F – Construction, and A – Agriculture, forestry and fishing.

METHODOLOGY

The Altman's Z-score model (Altman, E., I., 1968; Altman, E., I., 2000, pp. 25; Đuričin, S. and Bodroža, D., 2013) was used for the purpose of evaluating the likelihood of bankruptcy. The research was conducted on the sample of 803 enterprises i.e. all medium-sized enterprises registered in the sectors C, G, F and A. The selection of sectors was determined by the number of operating medium-sized enterprises. Accounting for 37%, enterprises registered in the C sector dominate in the structure of all medium-sized enterprises in the Republic of Serbia. The second largest segment refers to G sector which accounts for 27%, the third segment are enterprises registered in the F sector (8%), and finally enterprises in the A sector account for 7% of all medium-sized enterprises (Đuričin, S., et al., 2018). The subject of the research are official financial statements of medium-sized enterprises for the year of 2015, which are publically available on the web site of the Serbian Business Registers Agency (SBRA) (Neogradi, S., 2017; Đuričin, S., et al., 2018.). Since the results of the Altman's Z-score model testing indicated decreasing accuracy in evaluating bankruptcy risk when extending the time period of analysis, only one year was taken into consideration. The focus of the research is on medium-sized enterprises because

¹ PhD, e-mail: sonja.djuricin@ien.bg.ac.rs

of their significant contribution to growth and development of the national economy.

RESULTS

The research results show that the majority of enterprises in the black zone of bankruptcy are recorded in the A sector. 22% of enterprises in sector A operated with high probability of bankruptcy, while in sectors F, C and G the number of enterprises operating with high probability of bankruptcy referred to 15%, 11% and 10% respectively. The largest number of enterprises in the grey zone of bankruptcy, which is characterized by the 50% probability of bankruptcy, is recorded in the F sector. 48% of all enterprises in F sector operated in the grey zone, while in sectors A, C and G it accounted for 45%, 42% and 27% respectively. The majority of enterprises with negligible probability of bankruptcy are recorded in the G sector. 64% of all enterprises in G sector operated in the white zone, while in sectors C, F and A it accounted for 47%, 36% and 33% respectively.

IMPLICATIONS

The research results have multiple applications. Apart from the fact that they represent inputs for further scientific research, they can also be used in practice. In practice, the results can be useful to macroeconomic policy makers in the Republic of Serbia, as well as to managers of medium-sized enterprises. The research results can also serve as a basis for public policy making in analyzed sectors and for determining priorities in strategic documents of analyzed enterprises.

ORIGINALITY VALUE

The implementation of Altman's Z-score model when evaluating the probability of bankruptcy provides the possibility to analyze the entire profile of an enterprise based on five key indicators of business success. By avoiding separate examination of every characteristic of an enterprise by calculating large number of financial indicators, bankruptcy prediction is significantly simplified. The results obtained by the implementation of the accredited method in selected sectors can encourage new and enrich existing scientific researches in this field.

KEY WORDS

Altman's Z – score model; medium-sized enterprises, probability of bankruptcy, sectoral analysis

REFERENCES

1. Altman, E., I. (1968), Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy, *The Journal of Finance*, Vol. XXIII, No. 164, available: <http://www.jstor.org/discover/10.2307/2978933?uid=3738928&uid=2129&uid=2&uid=70&uid=4&sid=21101478893553>, [Accessed 20/03/18]
2. Altman, E., I. (2000), Predicting Financial Distress of Companies: Revisiting the Z-Score and Zeta Models, Stern School of Business, New York University, Paper is adapted and updated from E. Altman, "Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy," *Journal of Finance*, September 1968; and E. Altman, R. Haldeman and P. Narayanan, "Zeta Analysis: A New Model to Identify Bankruptcy Risk of Corporations," *Journal of Banking & Finance*, 1, 1977, available: <http://libra.msra.cn/Publication/3596289/predicting-financial-distress-of-companiesrevisiting-the-z-score-and-zeta-models>, [Accessed 20/03/18]
3. Đuričin, S. and Bodroža D. (2013). The impact of drought on yield position of the group of enterprises from agriculture sector. *Economics of agriculture*, The Balkan Scientific Association of Agrarian Economists, Institute of Agricultural Economics, Belgrade and Academy of Economic Studies, 2013 (Vol. LX, No.1), pp. 25-39, Bucharest, Romania.
4. Đuričin, S., Beraha, I. and Bodroža D. (2018). Alternatives for exiting the loss zone for mediumsized agricultural enterprises in the Republic of Serbia. *Economics of agriculture*, The Balkan Scientific Association of Agrarian Economists, Institute of Agricultural Economics, Belgrade and Academy of Economic Studies, 2018 (Vol. LXV, No.1), pp. 391-410, Bucharest, Romania.
5. Đuričin, S., Stevanović, S., Ljumović, I., and Simović, V. (2017), *Nacionalna mreža srednjih preduzeća u Republici Srbiji*, Vol. 2., Institut ekonomskih nauka, Beograd.
6. Neogradi, S. (2017). Methodology of Credit Analysis Development. *Economic Analysis*, Vol 50, No. 3-4, pp.75-85.
7. The Serbian Business Registers Agency (SBRA), available: <http://www.apr.gov.rs/> [Accessed 25/03/18].

1.37. THE DEVELOPMENT OF INSURANCE MARKET IN SERBIA

Mladenka Balaban¹

Institute of Economic Sciences, Belgrade, Serbia

Dužanka Talić²

GrECo JLT RS, Belgrade, Serbia

OBJECTIVES

The scientific goal of this research is to achieve scientific knowledge about the state of the insurance sector in Serbia, the countries from the Region and the member states of the European Union in the conditions of the global economic crisis, as well as prospects of their future development.

The research should contribute to: 1) a better understanding of the relationship between macroeconomic and social indicators; 2) more precise consideration of the role and significance of the insurance sector in the domestic financial market; 3) improvement of the activity and position of the insurance sector in the financial market of Serbia.

METHODOLOGY

The work uses scientific methods of description and classification to describe the insurance market and the way of its creation, determine the objectives and tasks of functioning. An analogy is used to compare data on economic and demographic trends, and the basic parameters of the functioning of insurance in certain groups of countries (developed, transition and developing countries), or certain forms or product of life insurance. Statistical methods were applied when analyzing demographic and economic risks and basic parameters of development of insurance.

¹ PhD, corresponding author: mladenka.balaban@ien.bg.ac.rs

² Ma

RESULTS

The insurance sector significantly influences the development of the country's economy. There is a close and reciprocal relationship between the insurance business on the one hand and the economic and social development of the country on the other. The insurance sector significantly contributes to the development of the financial market, and to capital markets in Serbia. The domicile insurance market can be said to be developing, but it has huge potential opportunities, primarily for the development of life insurance. By introducing new life insurance products, we would encourage the development of this segment of insurance, which traditionally has a small share in the insurance structure. The existing financial system in Serbia can be characterized as a bank-centric one.

IMPLICATIONS

The research should contribute to:

- a better understanding of the relationship between macroeconomic and social indicators on the one hand and the financial system and the insurance sector on the other;
- more precise consideration of the role and significance of the insurance sector in the domestic financial market in the context of future development opportunities;
- improvement of the activity and position of the insurance sector in the financial market of Serbia;
- identifying the need for introducing new life insurance products and encouraging the development of this segment of insurance, which traditionally has a small share in the insurance structure;
- defining the position of the domestic insurance market through comparison with the countries in the region and developed European countries.

ORIGINALITY VALUE

The ratio of the total premium per capita (gains ratio) increases year by year, and the indicator of the life insurance premium also grows. The share of total premium in GDP increased, while the penetration of insurance in the next three years has remained unchanged. However, the current share of insurance premiums in GDP is an indication of the potential of the domestic insurance market, since the projections show that for the next two years the penetration

indicator will not be reduced, which is encouraging and inspiring in a sense that the domicile market will gradually come closer to the countries of the EU.

KEY WORDS

Insurance, macroeconomic factors, insurer, companies, saving, market, product

REFERENCES

1. Avdalović V. (2007), *Osiguranje*, Beogradska bankarska akademija, Beograd.
2. Balaban M. (2008) *Osiguranje u savremenom svetu*, samostalno izdanje autora, Novi Sad.
3. Balaban M. (2015), *Uticaj osiguravajućih kompanija na stabilnost finansijskog sektora u Srbiji*, Strukturne promene u Srbiji – dosadašnji rezultati I perspective, Institut ekonomskih nauka, Beograd.
4. Balaban M. (2014), *Role of insurance company as institutional investors, Contemporary Trends and Prospects of Economic Recovery*, CEMAFI International Association, University Sophia Antipolis, Nice, France.
5. Business Insurance Monitor, (2009), *Serbia Insurance Report 2010 Including 5-year industry forecast to 2014*, www.businessmonitor.com
6. CEA, (2016), *Annual Report 2015-2016*, Brussel, www.cea.eu
7. David S. Kidwell, Richard L. Peterson, David W. Blackwell, David A. Whidbee (2003), *Financial Institutions, Markets and Money*, John Wiley and Sons, New York.
8. European Commission, (2010), *European Economic Forecast*, Spring 2010, European Economy, No. 2.
9. Eurostat, (2010), *Impact of the crisis on unemployment so far less pronounced in the EU than in the US*, 1Q 2010, No. 20.
10. Harrington S. (2009), *The Financial Crisis, System Risk and the Future of Insurance Regulation*, The Journal of Risk and Insurance, Vol.76, No.4.
11. Marković M. i Balaban M. (2013), *Mergers and acquisitions between bank and insurance as a consequence of the financial crises*, Book of Proceedings from International Scientific Conference Economic Sciences on the Crossroad, Institut ekonomskih nauka, Beograd.
12. Mishkin F.(2005), *The Economics of Money, Banking and Financial Markets*, Haper Collins, New York.
13. Narodna banka Srbije, (2016), *Izveštaj o finansijskom sistemu za 2015. godinu*.
14. Narodna banka Srbije, (2017), *Izveštaj o finansijskom sistemu za 2016. godinu*.
15. Narodna banka Srbije, (2018), *Izveštaj o finansijskom sistemu za 2017. godinu*.
16. Nolte C. (2004), *Delivering the Brand Promise at Hollard Insurance*, Strategic Communication Management, Vol.8 Issue 3.
17. OECD, (2010), *Country Risk Classifications of the Participants to the Arrangement on Officially Supported Export Credits*.

Part I

18. OECD, (2010), *The Impact of the Financial Crisis on the Insurance Sector and Policy Responses*.
19. Ostojić S.(2007) *Osiguranje i upravljanje rizicima*, Data Status, Beograd.
20. Schich S., (2009), *Insurance Companies and the Financial Crisis*, OECD.

1.38. STRESS MANAGEMENT AMONG EMPLOYEES IN LOGISTICS SECTOR

Kiril Postolov¹

Ss. Cyril and Methodius University, Faculty of Economics, Skopje, Republic of Macedonia

Lidija Pulevska Ivanovska²

Ss. Cyril and Methodius University, Faculty of Economics, Skopje, Republic of Macedonia

OBJECTIVES

Stress causes absenteeism, fluctuation, communication issues, alienation, disloyalty, etc. Managers and employees should know how to manage the stress and to take actions to reduce the reasons of its occurrence. The aims of this paper are the identification of the sources of stress, its consequences, preventive stress management and ways of its administering at employees in the logistics sector. The importance of the paper derives from the need to establish adequate tools for the proper stress management.

METHODOLOGY

In order to satisfy the objectives of the paper, a survey based on a written questionnaire was conducted in order to collect relevant data. Thus, primary data related to stress is obtained by the respondents.

Questionnaire examines a number of issues. First, issues related to the demographic and educational characteristics of the employees were noted in terms of gender, age, level of education and workplace. Further questions were referred, by that processing of the answers will determine the sources of stress, to what extent the stress is expressed, and how to manage it. For the purpose of this research, a five-point Likert scale was used (from 1 – it's never stressful, to 5 – it's always stressful).

¹ Professor, corresponding author: kirilp@eccf.ukim.edu.mk

² Professor

Part I

The survey was conducted in the period February-April 2018 among a randomly chosen sample of 70 respondents (28 women and 42 men). The collected data was then analyzed with the statistical software SPSS.

The survey was conducted in the period February-April 2018 among a randomly chosen sample of 70 respondents (28 women and 42 men). The collected data was then analyzed with the statistical software SPSS.

RESULTS

The basic constraint in presenting results lies in the scope of researched phenomenon, i.e. in the sample size taken into account and the gender structure. The survey found that women are more susceptible to stress. From the obtained results, it can be concluded that the main cause of stress is the possibility of promotion at work (4,72) and the family support for the professional responsibilities (4,54). The most preferred strategies for stress reduction are selection of priorities (78%) and participation in relaxation trainings (71%). The general conclusion is that today different strategies for removing stress in relation to the past are preferred.

IMPLICATIONS

Stress management has the potential for rapid sustainable economic development. We find the paper significant for company managers in terms of human resource management. Its further importance lies in its applicability in the academic and professional literature, because of the fact that its topic has been elaborated in a special environment and the obtained results and conclusions can be duly used. We consider that this work can be used as a quality reading both by managers and in the academic and professional practice.

ORIGINALITY VALUE

Stress in general, and particularly stress at work is a complex phenomenon which has multiple reasons and consequences of the individual and organizational behavior.

The subject of this paper is defining the stress, determining its elements and features, the factors that cause it and the strategies for solving it.

The scientific contribution of this paper is perceived in the need of emphasizing the preventive stress management system, as well as the methods and manners of how to deal with the stress and how to decrease it. This issue has not been subject of research in the Republic of Macedonia yet, so this paper is a pioneer paper in this field in our country.

KEY WORDS

Logistics sector, stress, stressors, stress management, career, privacy, professionalism, balance

REFERENCES

1. Anderson, V. (2004). *Research Methods in Human Resource Management*, Chartered Institute of Personnel and Development, London.
2. Belevska, D. Trajkov, I. (2006). "Професионално согорување – burnout феномен", *Ментално здравје во заедницата – збирка на трудови*, pp.219-228.
3. Blaug, R.; Kenyon, A.; Lekhi, R. (2007). *Stress at work – A Report prepared for The Work Foundation's Principal Partners*, Work Foundation, London.
4. Bojadžioski, D.; Eftimov, Lj. (2009). *Менаџмент на човечките ресурси*, Економски Факултет, Скопје.
5. Byars, L.L.; Rue, W.L. (2004). *Human resource management*, The McGraw Hill Companies, New York.
6. Cartwright, S.; Cooper, C.L. (2000). *Managing workplace stress*, SAGE Publications, California.
7. Cong, L.; Spector, P.E.; Shi, L. (2007). "Cross-national job stress: a quantitative and qualitative study", *Journal of Organizational Behavior*, Vol.28 Issue 2, pp.209-239.
8. Davis, M.; Eshelman, E.R.; McKay, M. (2008). *The relaxation and stress reduction workbook*, 6-th edition, New Harbinger Publications, Inc, Oakland.
9. Fernandes, C.; Christo, F.V.; Kumar, S.; Mekoth, N. (2008). "Social Transaction at Workplace: Impact of Social Support on Role Stress", *ICFAI Journal of Organizational Behavior*, Vol.7 Issue 1, pp.41-48.
10. Groves, D. (2004). *Stress reduction for busy people*, New World Library, Novato.
11. Hargrove, M.B.; Quick, J.C.; Nelson, D.L.; Quick, J.D. (2011). "The Theory of preventive stress management: a 33-year review and evaluation", *Stress & Health: Journal of the International Society for the Investigation of Stress*, Vol.27 Issue 3, pp. 182-193.
12. Horiuchi, S.; Tsuda, A.; Kim, E.; Hong, K.S.; Park, Y.S.; Kim, U. (2010). "Relationships between stage of change for stress management behavior and perceived stress and coping", *Japanese Psychological Research*, Vol.52 Issue 4, pp. 291-297.
13. Jackson, E.S.; Schuler, R.S.; Werner, S. (2009). *Managing Human Resources*, 10-th edition, Mason, South-Western Cengage Learning.

Part I

14. Losey, M.; Sue, M.; Ulrich, D. (2005). *The Future of Human Resource Management*, John Wiley & Sons Inc., London.
15. Raitano, R.E.; Kleiner, B.H. (2004). "Stress management: stressors, diagnosis, and preventative measures", *Manag. Res. News*, Vol.27 Issue 4-5, pp. 32-38.
16. Scaward, B.L. (2006). *Managing stress: principles and strategies for health and well-being*, 5-th edition, Jones and Bartlett Publishers International, London. Svetlik, I. (2010), "Human resource Management in the Countries of the Former Yougoslavia", *Review of International Comparative Management*, Vol.11 Issue 5, pp. 807-833.
17. Torrington, D.; Hall, E.L.; Taylor, S. (2008). *Human Resource Management*, 7-th edition, Prentice Hall, London.
18. Vigoda, E. (2002). "Stress-related aftermaths to workplace politics: the relationships among politics, job distress, and aggressive behavior in organizations", *Journal of Organizational Behavior*, Vol.23 Issue 5, pp. 571-591.
19. Von Davans, B.; Fischbacher, U.; Kirschbaum, C.; Fehr, E.; Heinrichs, M. (2012). "The Social Dimension of Stress Reactivity: Acute Stress Increases Prosocial Behavior in Humans", *Psychological Science (Sage Publications Inc.)*, Vol.23 Issue 6, pp. 651-660.

1.39. ECONOMIC EFFECTS OF INVESTMENT IN HYDRO-ELECTRIC POWER PLANTS IN THE REPUBLIC OF SERBIA AND BOSNIA AND HERZEGOVINA

Zdravko Bijelić¹

IROE LOGOS CENTER in founding, Novi Sad, Serbia

Dragan Miletic²

"Center for Young Talents" Foundation, Novi Sad, Serbia

OBJECTIVES

Investment in the production of electricity is a chance for the development of the Republic of Serbia and Bosnia and Herzegovina. The Republic of Serbia and Bosnia and Herzegovina dispose of the unused hydropower potential for the construction of new hydropower plants of optimal capacity. The primary objective of this research is to show that it is economically justified to invest into hydroelectric plants where electricity could be produced for export into the industrialized European countries.

METHODOLOGY

In this research the following scientific research methods are used: observation in order to establish the existing state and assess the development possibilities; comparative method as a function of comparing the state of reference in the early 1970s with the current situation. In the research the mathematical modelling, statistical analysis, and contemporary methods for investment decision making, induction and deduction, and econometric measurement of the obtained results.

RESULTS

Conducted investigations point put that the utilization rate of hydro-energetic potentials is approximately 30 % of the total available potential in both countries.

¹ PhD

² PhD, corresponding author: dragan.miletic@cmt.edu.rs

In Republic of Serbia three river flows represent 80% of the total hydro-energetic potential, while in Bosnia and Herzegovina this share is about 90%. Obtained results indicate that the production of significant surpluses of electric energy for export to the regional markets and European Union is possible. This production would be profitable and price competitive.

IMPLICATIONS

Based on the long-term forecast, the paper shows that the investment in the hydropower sector will have a positive impact on stimulating the development of the industry based on new technological knowledge. Also, the development of the industry for technological and control equipment for the hydroelectric plants will result in the development of the SME, development of entrepreneurship, introduction of innovations and employment of highly educated professionals.

ORIGINALITY VALUE

The original scientific and research value of the paper lies in the knowledge that it is necessary to make a discrete developmental leap in the hydropower sector as a generator of the integrated growth and development of the Republic of Serbia and Bosnia and Herzegovina.

KEY WORDS

Investment, investment efficiency, hydroelectric power, systemic development, industrialization, entrepreneurship, innovation, employment

REFERENCES

1. Baković, M. & Popović, Z. (2012). *Matematičko modeliranje i optimizacija*. Beograd: Ekonomski fakultet.
2. Bijelić, Z. & Milanović, B. (2011). *Proizvodni i uslužni menadžment*. Novi Sad: Prometej.
3. Bijelić, Z., Milanović, B. & Bijelić, M. (2017). Integrisana nauka i integrisane poslovne studije u funkciji integrisanog razvoja. *Zbornik radova: Međunarodni naučni skup: Nauka & Praksa*, (pp.104-117). Banja Luka.
4. Bijelić, Z. & Cvijić, M. (2012). Own production technology as a key out of poverty. *Proceedings: The Third Scientific International Conference Capitalism in Transition* (pp. 181-190). Belgrade: Higher Educational Institution for Applied studies of Entrepreneurship.

5. Bijelić, Z., Milanović, B. & Novaković, S. (2017). Matematička optimizacija efikasnosti i rizika investicionog projekta. *Zbornik radova Međunarodne naučne konferencije Inovacijama do održivog razvoja* (pp. 164-172). Novi Sad: Univerzitet privredna akademija, Beograd: Fakultet MEF.
6. Bijelić, Z., Milanović, B. & Novaković, S. (2017). Znanjem do intenzivnog rasta i razvoja proizvodnje električne energije. *Zbornik radova Međunarodne naučne konferencije Inovacijama do održivog razvoja* (pp. 173–184). Novi Sad: Univerzitet privredna akademija, Beograd: Fakultet MEF.
7. Dakić, P., Dakić, V. & Ratković, Ž. (2011). Hidroenergetski potencijal Republike Srpske. In Jakupović, E. (ed.), *Proceedings of the International Scientific Conference Renewable Energy Sources and Sustainable Development* (pp. 143–147). Banja Luka: Pan-European University Apeiron.
8. Horvat, B. (2007). *Dinamičan ekonomski razvoj*. Beograd: Evropski centar za mir i razvoj (ECDP).
9. Madžar, Lj. & Jovanović A. (1995) *Osnovi teorije razvoja i planiranja*. Beograd: Savremena administracija.
10. Miletić, D. (2014). Cash flow statement: Assessment of situation and application problems in Serbia. *Industrija*, 42(4), pp. 99-114.
11. Miletić, D. (2015). Uticaj sektorske pripadnosti na tokove gotovine preduzeća u Republici Srbiji. *Revizor*, 18(72), pp. 91-102.
12. Miletić, D., Milojević, M. & Jović, Z. (2015). Strategije upravljanja gotovinom kao dobra praksa u globalnom poslovanju. *Proceedings of the Singidunum University International Scientific Conference Contemporary financial management* (pp. 177–181). DOI: <http://dx.doi.org/10.15308/finiz-2015-177-181>
13. Stojaković, D. (1977). *Matematičke metode u ekonomiji*. Beograd: Ekonomski fakultet.
14. Urošević, B. & Božović, M. (2009). Operaciona istraživanja i kvantitativne metode investicija. Beograd: Ekonomski fakultet.

1.40. SECURING STATIONARY FUEL SUPPLY AND GAS DIVERSIFICATION IN HUNGARY AND POLAND*

Csaba Weiner¹

Senior Research Fellow, János Bolyai Research Scholar, Institute of World Economics, Centre for Economic and Regional Studies, Hungarian Academy of Sciences, Budapest, Hungary

OBJECTIVES

EU-member Central and East European (CEE) countries are highly dependent on Russia for their energy supplies, and thus the alleged negative consequences of such reliance are the focus of fears. Energy policy decisions have long-term implications and entail enormous costs. Complex decisions need to be made, while simultaneously it is not easy to evaluate these decisions and achievements. In this paper, we concentrate on security of supply and gas diversification in two selected CEE countries, Hungary and Poland.

METHODOLOGY

We take the dimensional approach to assessing the security of the supply of stationary fuels, and we use our own scheme for gas diversification. Decisions on security of supply and diversification are regarded as the consequences of choices among different security of supply dimensions. These choices should be made on the basis of such influencing factors as the following: the energy perspective; the institutional context; the government's approach towards dependence and its perceptions and expectations of threat, as well as its relations with Russia. We review energy strategies as well as statements made by governments, members of the energy policy elites and other stakeholders on security of supply; analyse stated aspirations and progress made towards enhancing security of supply and gas diversification over the past ten years, and investigate the reasons behind the results.

* This paper was supported by the János Bolyai Research Scholarship of the Hungarian Academy of Sciences.

¹ PhD, e-mail: weiner.csaba@krtk.mta.hu

RESULTS

While the three-dimensional definition, encompassing availability, affordability and sustainability, is appropriate to address Hungarian supply security, it requires some modifications in the case of Poland because this country's approach to energy policy is securitized. While Poland is particularly sensitive regarding coal and gas, Hungary is centred on gas and nuclear energy. There is great uncertainty about energy policies and security of supply in these two countries, mostly because of the unclear future role of the particular fuels in the energy mixes.

IMPLICATIONS

Policymakers at different levels are advised to take into account that CEE countries have different conditions, priorities, and their energy policies therefore differ. There is no universally optimal choice or mix for enhancing security of supply and diversification. There are only different sets of choices and a large variation in the influencing factors that impact the prioritisation of different security of supply dimensions, with uncertain and different rewards both in the short and long term.

ORIGINALITY VALUE

In order to make a precise assessment, the paper gathers and defines different energy policy-related concepts as they are more complex than conventionally perceived. A scheme we have developed for understanding gas diversification along with the simple dimensional approach of supply security allow cross-country comparison through case studies. Currently, further CEE countries (Lithuania and Bulgaria) are being evaluated using the same methodology. This process makes it possible to arrive at some generalizations.

KEY WORDS

Poland, Hungary, security of supply, gas diversification, coal, gas, nuclear energy, renewables

REFERENCES

1. Andersen, S. S., Goldthau, A. & Sitter, N. (Eds.). (2017). *Energy Union: Europe's new liberal mercantilism?* London: Palgrave Macmillan.
2. APERC (2007). A quest for energy security in the 21st century: Resources and constraints. Tokyo: Asia Pacific Energy Research Centre (APERC). Retrieved from

Part I

- http://aperc.iecej.or.jp/file/2010/9/26/APERC_2007_A_Quest_for_Energy_Security.pdf
3. Buzan, B., Waeber, O. & de Wilde, J. (1998). *Security: A new framework for analysis*. Boulder, CO: Lynne Rienner Publishers.
 4. Cherp, A. & Jewell, J. (2011). The three perspectives on energy security: Intellectual history, disciplinary roots and the potential for integration. *Current Opinion in Environmental Sustainability*, 3, pp. 202–212.
 5. Felsmann, T. (2015). Can the Paks-2 nuclear power plant operate without state aid? A business economics analysis. Budapest: Energiaklub. Retrieved from https://energiaklub.hu/files/study/study_can_paks-2_operate_without_state_aid_energiaklub_2015.pdf
 6. Heinrich, A., Kuszniur, J., Lis, A., Pleines, H., Smith Stegen, K. & Szulecki, K. (2016). Towards a common EU energy policy? Debates on energy security in Poland and Germany. (ESPRi Policy Paper No. 2). Retrieved from https://www.forschungsstelle.uni-bremen.de/UserFiles/file/ESPRi_Policy_Paper_2_2016.pdf
 7. Herold, A., Siemons, A. & Wojtal, L. (2017). Climate and energy policies in Poland. Policy Department A: Economy and Scientific Policy and Quality of Life Policies European Parliament, PE 607.335. Retrieved from [http://www.europarl.europa.eu/RegData/etudes/BRIE/2017/607335/IPOL_BRI\(2017\)607335_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2017/607335/IPOL_BRI(2017)607335_EN.pdf)
 8. Jankowska, K. & Ancygier, A. (2017). Poland at the renewable energy policy crossroads: An incongruent Europeanization? In I. Solorio & H. Jörgens (Eds.), *A guide to EU renewable energy policy* (pp. 183–203). Cheltenham, UK & Northampton, MA, USA: Edward Elgar Publishing.
 9. Kamola-Cieślik, M. (2017). The government's policy in the field of hard coal mining restructuring as an element of Poland's energy security. *Polish Political Science Yearbook*, 46, 247–261. doi:10.15804/ppsy2017215.
 10. Schwartzkopff, J. & Schulz, S. (2017). Climate & energy snapshot: Poland – The political economy of the low-carbon transition. (Briefing Paper February 2017). Retrieved from https://www.e3g.org/docs/Climate_energy_snapshot_PL.pdf
 11. Smith Stegen, K. (2011). Deconstructing the “energy weapon”: Russia's threat to Europe as case study. *Energy Policy*, 39, 6505–6513. doi:10.1016/j.enpol.2011.07.051
 12. Sovacool, B. K. & Mukherjee, I. (2011). Conceptualizing and measuring energy security: A synthesized approach. *Energy*, 36, pp. 5343–5355.
 13. Stern, J. (2002). Security of European natural gas supplies. London: Royal Institute of International Affairs.
 14. Szulecki, K., Ancygier, A. & Szwed, D. (2015). Energy democratization? Societal aspects of de-carbonization in the German and Polish energy sectors. (ESPRi Working Paper No. 5). Retrieved from <http://ssrn.com/abstract=2575695>
 15. Szurlej, A. (2013). The state policy for natural gas sector. *Arch. Min. Sci.*, 58, 925–940. doi:10.2478/amsc-2013-0065.

16. Weiner, Cs. (2013). Central and Eastern Europe's dependence on Russian gas, western CIS transit states and the quest for diversification through the Southern Corridor. (IWE Working Papers No. 201). Budapest: Institute of World Economics, MTA KRTK. Retrieved from <http://real.mtak.hu/6810>.
17. Weiner, Cs. (2016). Central and East European diversification under new gas market conditions. (IWE Working Papers No. 221). Budapest: Institute of World Economics, MTA KRTK. Retrieved from <http://real.mtak.hu/33784/>.
18. Weiner, Cs. (2017). Managing energy supply security and gas diversification in Hungary: Putting theory into practice. (IWE Working Papers No. 238). Budapest: Institute of World Economics, MTA KRTK. Retrieved from <http://real.mtak.hu/73435>
19. Widera, M., Kasztelewicz, Z. & Ptak, M. (2016). Lignite mining and electricity generation in Poland: The current state and future prospects. *Energy Policy*, 92, pp. 151–157. doi:10.1016/j.enpol.2016.02.002.
20. Wierzbowski, M., Filipiak, I. & Lyzwa, W. (2017). Polish energy policy 2050: An instrument to develop a diversified and sustainable electricity generation mix in coal-based energy system. *Renewable and Sustainable Energy Reviews*, 74, pp. 51–70. doi:10.1016/j.rser.2017.02.046.



Part II

APPLIED ECONOMICS

2.1. DUAL EDUCATION IN THE EHEA COUNTRIES – EXPERIENCES AND RESULTS

Mirko Savić¹

University of Novi Sad, Novi Sad, Serbia

OBJECTIVES

Introduction of dual education into higher education represents new trend in recent years across countries of European Higher Education Area (EHEA). This trend has provoked significant amount of misunderstandings in public and especially in the academic community about new way of teaching and training. Beside lack of information, one of the reasons is definitely a wide spectrum of different approaches towards dual education in reality across Europe. It goes from strictly controlled process based on the contracts between stakeholders to completely free, flexible and non-regulated cooperation of companies, students and universities.

METHODOLOGY

The goal of this paper is to present the examples of dual education across Europe, especially in France, Austria and Poland, with realistic and evidence-based approach, and to contribute to disclosure of myth on dual education. Through implementation of panel analysis on Eurostat data, effects of dual education on labor market indicators in the European countries were analyzed.

RESULTS

General conclusion is that dual education has some significant advantages in certain fields in comparison with classic student internship and academic education, but only under condition if it is understood in right way and developed in the areas where it could have the expected effects.

¹ PhD, e-mail: savicmirko@ef.uns.ac.rs

IMPLICATIONS

Implications of introduction of dual education are difficult to predict precisely, but it should not have significant effect on the entire higher education regarding the number of enrolled students and new study programs. It must be focused on the small number of students in order to be effective and in specific fields where the growth of new skills and competences is fast and led by industry.

ORIGINALITY VALUE

The value of this paper lies in evidence based comparison of dual education across EHEA countries and empirical analysis of dual education effects on labor market. The added value refers to policy makers in the field of higher education, but also towards all stakeholders on the labor market.

KEY WORDS

Dual education, higher education, EHEA, panel analysis, labor market

REFERENCES

1. Bosch, G. & Charest, J. and Jean Charest (2006). Vocational training systems in ten countries and the influence of the social partners. Paper submitted to the IIRA World Congress. 2006. Unpublished paper.
2. Bourdieu, P. & Wacquant, L. (1992). *An Invitation to Reflexive Sociology*. Polity Press. Cambridge.
3. Clematide, B (2010). *Robuste erhvervsuddannelser – inspirationer udefra*. Danish Ministry of Education
4. Euler, D. (2013). *Germany's dual vocational training system: a model for other countries?*. Bertelsmann Stiftung.
5. Green, A., Wolf, A. & Leney, T. (2000). *Convergence and Divergence in European Education and Training Systems*. London: Bedford Way Papers.
6. Jørgensen, C. H. & Juul, I. (2010). *Bedre samspil mellem skolepraktik og ordinær virksomhedspraktik*. Danish Ministry of Education.
7. Koudahl, P. D. (2010). Vocational education and training: dual education and economic crises, *Procedia Social and Behavioral Sciences* 9 (2010), pp. 1900–1905.
8. Langthaler, M.(2015). *The transfer of the Austrian dual system of vocational education to transition and developing countries - An analysis from a developmental perspective*. Austrian Foundation for Development Research, Working Paper 53.
9. Maurer, M. & al. (2012). *Evaluation SDC's Vocational Skills Development Activities*. Zurich 2012.

BUSINESS AND APPLIED ECONOMICS

10. Stockmann, R. & Silvestrini S. (2013). Erwartungen, Hoffnungen und Ergebnisse zur Nachhaltigkeit der deutschen staatlichen Berufsbildungsförderung. Zeitschrift für Berufs- und Wirtschaftspädagogik (109).
11. Wieland, C. & Lezcano E. (2016). European case study - Cooperation in action: the dual vocational training system in Germany. Bertelsmann Stiftung.

2.2. DISCRETE ALGORITHMS FOR BLACK-SCHOLES OPTION PRICING ECONOMIC MODEL

Murat Sari¹

Faculty of Arts and Science, Yildiz Technical University, Istanbul, Turkey

Aniela Bălăcescu²

Faculty of Economics, Constantin Brâncuși University of Târgu-Jiu, Romania.

OBJECTIVES

This article aims at designing discrete algorithms based on high order finite difference schemes in analyzing the Black-Scholes option pricing models represented by a partial differential equation.

METHODOLOGY

To accomplish the objectives, the MacCormack method and a fourth order difference scheme have been taken into consideration in a comparative way. The model equation is given as follows

$$V_t + \frac{1}{2}\sigma^2 S^2 V_{SS} + rSV_S - rV = 0$$

where r , σ stand for the asset price volatility and risk-free interest rate, respectively. For the model equation the initial condition and boundary conditions are respectively

$$V(S, T) = \max(S - E, 0), \quad S > 0$$

$$V(0, t) = 0 \quad \text{and} \quad V(S, t) = S - Ee^{-r(T-t)} \quad \text{as} \quad S \rightarrow \infty.$$

¹ Associate Professor, corresponding author: sarim@yildiz.edu.tr

² Associate Professor

RESULTS

Various numerical tests are carried out using the proposed schemes, the MacCormack scheme and a fourth order difference scheme (DS). The computed results revealed that the current schemes are applicable, effective and easy to use. For the computations through the considered schemes, MATLAB codes have been produced. The validity of the discrete algorithms has been verified through the produced results.

IMPLICATIONS

After the exploration of impact of the discrete methods for solving real life problems such as economical problems, engineering problems, the corresponding methods have been applied to a wide range of processes. A productive model for the mechanisms in which various inputs take place has drawn considerable attention because the responses to real-world problems cannot be identified by just one input. In effectively solving the currently considered option pricing economic model, we propose the two schemes. This work is expected to provide a better understanding of behavioral impacts of the economic model represented by a partial differential equation that built upon a model having two input variables. This study could also help in targeting beginner groups in economical society for economical modelling.

ORIGINALITY VALUE

The aforementioned two discrete methods have been proposed to analyze the Black–Scholes option pricing models. To observe quantitative and qualitative behavior of the model processes, the computed results have presented in the following table and figures. The results for both schemes have been seen to be very good agreement both quantitatively and qualitatively.

Discrete Experiment: As seen Table 1, the quantitative behavior of the model equation for the difference scheme (DS) and the MacCormack scheme has been presented in a comparative way for the selection of the parameters $r = 0.2$, $\sigma = 0.25$, $S = 50$, $E = 20$, $T = 1$ and $h = 0.05$. Here Δt and h indicate the temporal and spatial increments in the discrete approaches.

Part II

Table. Quantitative behavior of the model equation for the difference scheme (DS) and MacCormack scheme

	DS	MacCormack	DS	MacCormack	DS	MacCormack
S	$\Delta t = 0.025$		$\Delta t = 0.02$		$\Delta t = 0.01$	
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	0.0871	0.0969	0.0891	0.0969	0.0930	0.0969
20	4.6738	4.6615	4.6713	4.6615	4.6665	4.6616
30	14.0916	14.0806	14.0893	14.0806	14.0850	14.0806
35	19.0279	19.0180	19.0259	19.0180	19.0219	19.0180
40	23.9363	23.9289	23.9348	23.9288	23.9318	23.9289
45	28.8009	28.7969	28.8000	28.7969	28.7985	28.7969

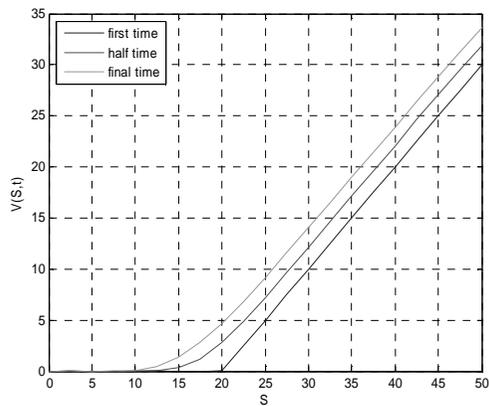
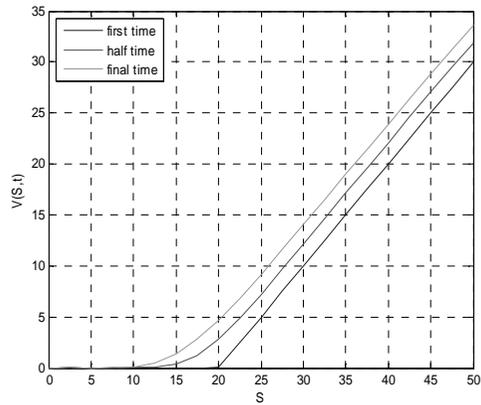


Figure. Qualitative behavior of the economic model by the difference scheme and the MacCormack scheme, respectively

KEY WORDS

Black-Scholes equation, economical modelling, applied economics, Finite difference scheme, MacCormack method

REFERENCES

1. Khan, M.U., Siraj, A. and Ravichandran, N. (2012). Derivation and suggested modification in Black-Scholes option pricing model. *IME Journal*, 1, pp. 19-26.
2. Black, F. and Scholes, M. (1973). The pricing of options and corporate liabilities. *Journal of Political Economy*, 81, pp. 637-654.
3. Cartos, J.C., Jodar, S.L. and Sevilla-Peris, R. (2005). A new direct method for solving the Black-Scholes Equation. *Applied Mathematics Letters*, 18, pp. 29-32.
4. Daound, Y. and Ozis, T. (2011). The operator splitting method for Black-Scholes equation. *Applied Mathematics*, 2, pp. 771-778.
5. Pooley, D. (2003). Numerical methods for nonlinear equations in option pricing, PhD Thesis, University of Waterloo.
6. Zeytinoglu, A. (2010). Some approximate solutions of Burgers equations, MSc Thesis, Suleyman Demirel University, Turkey.
7. Yildirim, T. (2016). Various finite difference solutions of option pricing models, MSc Thesis, Yildiz Technical University, Turkey.
8. Gunay, A. (2010). Finite difference solutions of fundamental problems in fluid mechanics, MSc Thesis, Pamukkale University, Turkey.
9. Leentvaar, C.C.W., (2003). Numerical solution of the Black-Scholes equation with a small number of grid points, MSc Thesis, Delft University of Technology.
10. Company, R., Navarro, E., Pintos, J.R. and Ponsoda, E. (2008). Numerical solution of linear and nonlinear Black-Scholes option pricing equations. *Computers and Mathematics with Applications*, 56, pp. 813-821.

2.3. EVALUATING THE MEDIUM TERM EFFECTS OF AN EDUCATIONAL PROGRAM

Marianna Battaglia¹

University of Alicante, Alicante, Spain

Lara Lebedinski²

Institute of Economic Sciences, Belgrade, Serbia

OBJECTIVES

The paper discusses the challenges of evaluating educational policies in the medium-term due to the difficulty of constructing a credible comparison group. We examine the Roma Teaching Assistant (RTA) Program as a case study and propose using the entropy balancing methodology for achieving a balanced treatment and control group sample. The goal of the study is to apply this novel approach and by doing so to estimate the causal effect of the RTA Program on schooling outcomes of Roma pupils.

METHODOLOGY

The empirical strategy exploits the fact that some schools were admitted to the program while others were not and thus the non-admitted schools provide the control group. In order to alleviate the selection problem, we preprocess the data with the entropy balancing method (Hainmueller, 2012).

We estimate the impact of the RTA Program using the following framework:

$$outcome_{is} = \beta_0 + \beta_1 treated_s + \beta_2 roma_{is} + \beta_3 treated * roma_{is} + \gamma_1 X_{is} + \varepsilon_{is}$$

where $outcome_{is}$ stands for the schooling outcome of pupil i in school s , $treated_s$ is a dummy capturing whether the school was treated, $roma_{is}$ is a dummy for the pupil i being of Roma ethnicity in school s , $treated * roma_{is}$ is a

¹ PhD

² PhD, corresponding author: lara.lebedinski@ien.bg.ac.rs

dummy for pupil i for being Roma and being in a treated school s . The set of exogenous individual characteristics is captured by X_{is} . The specification should establish whether there are differential effects between treated and non-treated Roma and thus the linear combination of $\beta_1 + \beta_3$ is of our main interest.

RESULTS

Our main finding suggests that treated Roma pupils are more likely to finish primary school and get better marks. The positive effect of the program cannot be found for standardized test scores. We argue that the reason is sample selection: only pupils who get all passing marks sit the standardized tests. In non-treated schools a larger share of Roma pupils is not granted to sit the final examination than in treated schools and such pupils are excluded from the estimations. Conditional on test scores, we do not find that teachers grade Roma pupils differently in treated than in control schools.

IMPLICATIONS

The study suggests that the RTA program has a statistically significant positive effect on Roma children and thus suggests to continue the program. The study also underscores the importance of medium term evaluations despite the problems of designing a credible control group.

ORIGINALITY VALUE

The importance of medium term evaluations is highlighted by Currie and Thomas (1995) who find that short term effects in the case of Head Start are quickly lost for groups of disadvantaged pupils. Long-term evaluations suggest that educational programs can have an effect on a large set of outcomes (Currie and Thomas, 1995; Garces et al., 2002).

The contribution of this paper is to add evidence to rare literature on medium term evaluations of educational programs.

KEY WORDS

Primary education, remedial education, Roma, ethnic minority, standardized test scores

REFERENCES

1. Currie, J. and D. Thomas (1995). Does head start make a difference? *American Economic Review*, 85 (3), pp. 341-64.
2. Hainmueller, J. (2012). Entropy balancing for causal effects: A multivariate reweighting method to produce balanced samples in observational studies. *Political Analysis*, 20 (01), pp. 25-46.
3. Garces, E., D. Thomas, and J. Currie (2002). Longer-term effects of Head Start. *American Economic Review*, 92 (4), pp. 999-1012.

2.4. PUBLIC DEBT GROWTH, THE GREAT RECESSION AND FISCAL CONSOLIDATION-THE SERBIAN EPISODE

Vladimir Andrić¹

Institute of Economic Sciences, Belgrade, Republic of Serbia

Jelena Minović²

Institute of Economic Sciences, Belgrade, Republic of Serbia

OBJECTIVES

We investigate the dynamics of public debt growth in Serbia between 2004Q3-2017Q4. Public debt-to-GDP ratio declined sharply before the crisis, but the growth of public debt accelerated after the spillover of global financial crisis to Serbia at the end of 2008. Faced with aforementioned public finance trends, the Serbian government launched a 3 year fiscal consolidation programme in 2014Q4. We search, hence, for structural breaks in the dynamics of public debt growth between 2004Q3 and 2017Q4.

METHODOLOGY

We implement the ordinary least squares (OLS) change point regression methodology outlined in Bai and Perron (1997, 1998, 2003) to detect and model potential structural breaks in the dynamics of public debt growth in Serbia between 2004Q3-2017Q4. In particular, we use the following 3-step algorithm to estimate linear OLS models with multiple structural changes: first, we specify the upper bound for the number of breaks M by varying the value of trimming percentage ϵ ; second, we test the null hypothesis of no structural break against the alternative of up to M potential breaks; third, we estimate several change point regression models via OLS method.

¹ Research Assistant, corresponding author: vladimir.andric@ien.bg.ac.rs

² Research Fellow

RESULTS

Our econometric estimates for the period 2004Q3-2017Q4 quantify the jump of public debt growth in Serbia from the onset of the Great Recession. In particular, the growth of public debt in Serbia trended around its mean value of -1.75% of GDP before the global financial crisis. After the crisis hit the Serbian economy in the second half of 2008, the growth of public debt has fluctuated around its mean value of 1.12% of GDP.

IMPLICATIONS

The results capture the slowdown of public debt growth in Serbia before the crisis, as well as its abrupt increase after the crisis. The findings do not change if we take into account the fiscal consolidation package initiated in 2014Q4. Policy makers managed to curb the growth of government debt in Serbia between 2014Q4-2017Q4, but the government must put further fiscal efforts to reduce its overall indebtedness in accordance with the fiscal rules and Maastricht convergence criteria.

ORIGINALITY VALUE

Our study adds two contributions: 1) this paper is one of the first to analyze the growth of public debt in the case of a small open economy from Southeastern Europe; 2) contrary to Krajewski et al. (2016), who consider a panel of 10 economies from Central Europe, we focus on a single country which enables us to analyze fiscal developments in a greater detail, with a particular emphasis on the Great Recession and the 3-year fiscal consolidation package launched in 2014Q4.

KEY WORDS

Public debt growth, Great Recession, fiscal consolidation, structural breaks, Serbia

REFERENCE

1. Afonso, A., Jalles, J.T. (2012). *Revisiting Fiscal Sustainability-Panel Cointegration and Structural Breaks in OECD Countries*. European Central Bank. ECB Working Paper No. 1465.
2. Andric, V., Arsic, M., Nojkovic, A. (2016a). Public Debt Sustainability in Serbia Before and During the Global Financial Crisis. *Economic Annals*, XVI (210), pp. 47-78. DOI: 10.2298/EKA1610047A.

3. Andric, V., Arsic, M., Nojkovic, A. (2016b). Fiscal Reaction to Interest Payments-The Case of Serbia. *Industrija*, 44 (3), pp. 117-144. DOI: 10.5937/industrija 44-12031.
4. Bai, J. (1997). Estimation of a Change Point in Multiple Regression Models. *The Review of Economics and Statistics*, 79 (4), pp. 551-563. DOI: 10.1162/003465397557132.
5. Bai, J., Perron, P. (2003). Computation and Analysis of Multiple Structural Change Models. *Journal of Applied Econometrics*, 18 (1), pp. 1-22. DOI: 10.1002/jae.659.
6. Bai, J., Perron, P. (1998). Estimating and Testing Linear Models with Multiple Structural Changes. *Econometrica*, 66 (1), pp. 47-78. DOI: 10.2307/2998540.
7. Bakker, B.B., Christiansen, L.E. (2011). Crisis and Consolidation-Fiscal Challenges in Emerging Europe, in Eller, M., Mooslechner, P., Ritzberger-Grünwall, D., ed., *Limited Fiscal Space in CESEE: Needs and Options for Post-Crisis Reform*. Vienna, Austria: Oesterreichische Nationalbank, pp. 25–41.
8. Berglöf, E., Korniyenko, Y., Plekhanov, A., Zettelmeyer, J. (2009). *Understanding the Crisis in Emerging Europe*. European Bank for Reconstruction and Development. EBRD Working Paper No. 109.
9. Bohn, H. (2005). *The Sustainability of Fiscal Policy in the United States*. Ifo Institute-Leibniz Institute for Economic Research at the University of Munich. CESifo working papers No. 1446.
10. Bornhorst, F., Dobrescu, G., Fedelino, A., Gottschalk, J., Nakata, T. (2011). *When and How to Adjust Beyond the Business Cycle? A Guide to Structural Fiscal Balances*. International Monetary Fund. IMF Technical Notes and Manuals 11/02.
11. Coccozza, E., Colabella, A., Spadafora, F. (2011). *The Impact of the Global Crisis on South-Eastern Europe*. International Monetary Fund. IMF Working Paper WP/11/300.
12. Darvas, Z. (2009). *The Impact of the Crisis on Budget Policy in Central and Eastern Europe*. Bruegel. Bruegel Working Paper 0904.
13. Elliott, G., Rothenberg, T.J., Stock, J.H. (1996). Efficient Tests for an Autoregressive Unit Root. *Econometrica*, 64 (4), pp. 813-836. DOI: 10.2307/2171846.
14. Hakkio, C.S., Rush, M. (1991). Is the Budget Deficit “Too Large?” *Economic Inquiry*, 29 (3), pp. 429-445. DOI: 10.1111/j.1465-7295.1991.
15. Jawadi, F., Sousa, R.M. (2013). Structural Breaks and Nonlinearity in US and UK Public Debts. *Applied Economic Letters*, 20 (7), pp. 653-657. Retrieved from <http://dx.doi.org/10.1080/13504851.2012.727967>.
16. Koczan, Z. (2015). *Fiscal Deficit and Public Debt in the Western Balkans: 15 Years of Economic Transition*. International Monetary Fund. IMF Working Paper No. WP/15/172.
17. Krajewski, P., Mackiewicz, M., Szymańska, A. (2016). Fiscal Sustainability in Central and Eastern European Countries-A Post Crisis Assessment. *Prague Economic Papers*, 25 (2), pp. 175-188. DOI: 10.18267/j.pep.553.
18. Ng, S., Perron, P. (2001). Lag Length Selection and the Construction of Unit Root Tests with Good Size and Power. *Econometrica*, 69 (6), pp. 1519-1554. DOI: 10.1111/1468-0262.00256.

Part II

19. Uctum, M.A., Thurston, T., Uctum, R. (2006). Public Debt, The Unit Root Hypothesis and Structural Breaks: A Multi-Country Analysis. *Economica*, 73 (289), pp. 129-156. DOI: 10.1111/j.1468-0335.2006.00451. x.
20. Von Hagen, J., Wolff, G.B. (2006). What Do Deficits Tell Us About Debt? Empirical Evidence on Creative Accounting with Fiscal Rules in the EU. *Journal of Banking & Finance*, 30 (12), pp. 3259-3279. Retrieved from <https://doi.org/10.1016/j.jbankfin.2006.05.011>.

2.5. ASSESSMENT OF DIRECT AND CROSS PRICE ELASTICITY OF CONSUMER DEMAND IN SERBIA

Hasan Hanić¹

Belgrade Banking Academy, Belgrade, Serbia

OBJECTIVES

The main goal of this paper is to evaluate direct and cross elasticity of demand for individual groups of products which make the basic components of personal consumption of households in Serbia. Methodologically, the aim of the paper is to point out the possibility of using the results of consumer demand theory for the empirical evaluation of price elasticity of demand and the importance of combining data from different sources in the process of statistical evaluation of parameters of the selected empirical specification of the demand model.

METHODOLOGY

In this research data were used regarding the structure of consumption of 6,457 households in Serbia in 2016, obtained by a questionnaire method conducted on a two-stage stratified sample in accordance with Eurostat's international standards and recommendations. Using the most appropriate forms of Engel's consumption functions, the initial elasticity for 12 groups of personal consumption products were assessed first; then, by combining the data of time series of market statistics and the household consumption survey made by a questionnaire, direct price elasticity of demand and the flexibility of money were estimated. In the end, using the Ragnar Frisch's calculation scheme, cross-price elasticity of demand was estimated, i.e. consumption of all 12 groups of product which constitute personal consumption of households: Food and non-alcoholic beverages, Alcoholic beverages and tobacco, Clothing and footwear, Housing, water, electricity, gas and other energy, House equipment and maintenance, Health, Transport, Communications, Recreation and culture, Education, Restaurants and hotels, and Other personal items and other services.

¹ Professor Emeritus, e-mail: hasan.hanic@bba.edu.rs

RESULTS

The results of the conducted research were presented in the form of a 12-dimensional vector of income elasticity and two matrices of price elasticity, of the format 12x12, on whose main diagonals direct elasticity is presented, while cross-elasticity is presented outside the main diagonal. The first matrix shows the numerical values of the so-called Cournot elasticity, which express the total impact of the price on demand, while the second matrix shows the elasticity by Slucki, which are the measure of the "pure" impact of the price on demand for certain groups of products and services.

IMPLICATIONS

The results of the theoretical model of consumer demand implicate certain relationships between income and price elasticity which help to better estimate the unknown cross-price elasticity of demand based on the income demand elasticity for individual groups of products and services from which personal households consumption consists. The results of the theoretical model implicate certain relations between the flexibility of money, on the one hand, and budget participation, income and direct price elasticity, on the other hand, which facilitate the econometric procedure of evaluating the complete matrix of price elasticity of demand.

ORIGINALITY VALUE

Having applied relevant theoretical findings, the original methodological procedure has been developed for estimating cross-price elasticity of demand based on known values of income and direct price elasticity of demand. The described procedure was applied to data obtained from the Household Spending Survey in Serbia, which was conducted in 2016, and data from time series of market statistics, from 2001 to 2016, and thus original estimates have been obtained of consumption elasticity for the 12 listed groups of products and services to which total personal consumption of households in Serbia is distributed.

KEY WORDS

Personal consumption, consumer demand, income demand elasticity, direct price elasticity of demand, cross price elasticity of demand, flexibility of money

REFERENCES

1. Barten, A. P. (1964). Consumer Demand Functions Under Almost Additive preferences, *Econometrica*, 49/1964.
2. Frisch, R. (1959). Complete Scheme of Computing All Direct and Cross Demand Elasticities in a Model with Many Sectors, *Econometrica*, 27/1959.
3. Gibson, J. (2002). Why Does the Engel Method Work? Food Demand, Economies of Size and Household Survey Methods. *Oxford Bulletin of Economics and Statistics*. 64.
4. Hanić, H. (1984). Teorija i modeli tražnje, Beograd: Sloboda.
5. Lewbel, A. (1991). The Rank of Demand Systems: Theory and Non-parametric Estimation. *Econometrica*, 59.
6. Lewbel, A., & Pendakur, K. (2008). Estimation of Collective Household Models With Engel Curves. *Journal of Econometrics*, 147.
7. Wolfharg, G. (2013). Beyond Engel's law - A cross-country analysis. *Journal of Socio-Economics*, 47.
8. Zavod za statistiku Republike Srbije. (2017). Ankete o potrošnji odmaćinstava 2016. *Bilten*, 627.

2.6. THE ROLE OF CREDIT DEFAULT SWAPS IN THE TRANSMISSION OF FINANCIAL CRISES: THE TUNISIAN CONTEXT

Abaoub Ouertani Nadia¹

Higher School of Trade, Tunisia, Tunisia

Ghabara Hela²

Finance at higher school of trade, Tunisia, Tunisia

OBJECTIVES

“The financial system” has been affected by “brutal crashes” and “financial crises”, the results of which were catastrophic, such as “the subprime” crisis which has caused major losses, even the bankruptcy of “several financial institutions”, and the financial hardship “the stock market sector”, which can be considered as an early stage of a “systemic crisis”.

Faced with such a phenomenon, theorists have agreed on the need to resume the debate on “the transmission of volatility” between “financial markets”.

The objective of this work is to study the “transmission of volatility shocks” between stock markets, and to identify the main transmission channels of “volatility shocks”, based on econometric models.

The objectives of our work are at three levels:

- Focus on the “theoretical underpinnings of stock market” volatility shocks.
- Econometric synthesis of “the transmission processes of volatility”
- Present the main channels of transmission of volatility shocks: “Credit Default Swaps “

In this framework of analysis, it is particularly a question of the causes of “the transmission of financial crises” and in what context the “Credit Default Swaps“

¹ PhD, corresponding author: nadiaabaoub@gmail.com

² PhD student

market have contributed to “the transmission of volatilities” between “the stock markets”.

METHODOLOGY

To address this issue, we will test the role of “Credit Default Swaps” in the “volatility transmission” of international stock markets to “the Tunisian stock market”, using a multivariate asymmetric model of “conditional volatility”.

The “MGARCH-BEKK” model, which is estimated with a VAR model, is considered as the “standard methodology” for detecting the effects of volatility on “the financial markets”.

RESULTS

CDS have been viewed as “financial protection contracts” for investors. Nevertheless, according to Laura Cardona, Marcela Gutiérrez, and Diego A. Agudelo (2016) “market players have debated the role of “Credit Default Swaps” (CDS) in the financial crisis”.

According to the results obtained, the market for (CDS) has grown much faster, this growth has affected the “stability of the financial system”.

After the political crisis in Tunisia, the cost of hedging against the risk of default on sovereign debt has risen sharply. “Credit Default Swap” (CDS) increased by “25 basis points” to “190 basis points”.

IMPLICATIONS

This document provides an answer as to the identification of the factors that played a role in the transmission of crisis. It also shows that certain relationships between financial assets varied greatly during the crisis. It is therefore essential to better understand correlation dynamics in order to minimize, in times of crisis, their “destabilizing” effects on “the financial markets”.

ORIGINALITY VALUE

The “problematic of this research” is interesting and topical, as long as it is related to the latest events observed on “international capital markets”

The empirical work on the interactions of “the financial markets”, and concerning “the phenomenon of the contagion” of “the financial crisis” are much richer on the explanation of their co-movements and “the transmission of information” than on “the transmission of their volatility”, and “the correlation”, “dependence” and “interdependence” of “financial market volatility”.

Thus, they focus on different global indices; it would be interesting to focus this research on “the Tunisian stock market index”, since few studies include Tunisian data in their sample.

KEYWORDS:

Transmission of volatility, MGARCH, decoupling hypothesis, Tunisian Stock Markets, financial integration, Credit Default Swaps

REFERENCES:

1. Abdullahi D. Ahmed (2016). Integration of Financial Markets, Financial Development and Growth: is Africa Different?. *Journal of International Financial Markets, Institutions and Money* (2016), <http://dx.doi.org/10.1016/j.intfin.2016.01.003>
2. Ahmad, W., Sehgal, S., et Bhanumurthy, N. R. (2013). Eurozone crisis and BRIICKS stock markets: Contagion or market interdependence. *Economic Modelling*, vol. 33, pp. 209–225.
3. Bang Nam Jeon, Maria Pia Olivero, Ji Wu, (2013). Multinational banking and the international transmission of financial shocks: Evidence from foreign bank subsidiaries. *Journal of Banking & Finance*, vol. 37, pp. 952–972.
4. Jian Chen, Fuwei Jiang, Yangshu Liu, et Jun Tu (2017). International volatility risk and Chinese stock return predictability. *Journal of International Money and Finance*, vol.70, pages 183–203.
5. Kamel Malik Bensafta et Gervasio Semedo (2013). Market Volatility Transmission and Central Banking: What Happened during the Subprime Crisis?. *International Economic Journal*, vol.28, pp. 559-588.
6. Laura Cardona,, Marcela Gutiérrez, et Diego A. Agudelo (2016). Volatility transmission between US and Latin American stock markets: Testing the decoupling hypothesis. *Research in International Business and Finance*, vol.39, pp. 115–127.

2.7. BOOTSTRAP PANEL CAUSALITY ANALYSIS OF RELATIONSHIPS BETWEEN CURRENT ACCOUNT DEFICITS AND ECONOMIC GROWTH IN SOUTHEASTERN EUROPEAN COUNTRIES

Hatice Altınok¹

Anadolu University, FEAS, Department of Economics, Eskişehir, Turkey

Mustafa Özer²

Anadolu University, FEAS, Department of Economics, Eskişehir, Turkey

OBJECTIVES

In this study, we test the existence of Granger causality between current account deficits and economic growth in Southeastern European countries (Albania, Bosnia Herzegovina, Bulgaria, Croatia, Greece, Macedonia, Montenegro, Romania, Serbia, Slovenia, and Turkey) by using annual panel time series data over the period of 2001-2016.

METHODOLOGY

To investigate the Relationships between Current Account Deficits and Economic Growth in Southeastern European Countries, we first test the presence of Cross sectional dependence tests and slope homogeneity by using cross sectional dependence and slope homogeneity tests. Finally, based on the results of these tests, we carry out Kónya Bootstrap Granger Panel causality test.

RESULTS

The results of the study provide mix evidences of direction and the signs of causality in countries included in sample. For most of the countries, real GDP growth Granger causes to current account deficits. There are evidences of bidirectional causality. There is no evidence of causality between two variables for

¹ Research Assistant

² PhD, corresponding author: muozer@anadolu.edu.tr

Bulgaria, Serbia and Slovenia. Also the results of the study indicate that sign of the relationship differs by countries.

IMPLICATIONS

Implications of the results will differ across the countries. But, since for the most countries in the panel, rising economic growth causes to increase in current account deficits, sooner the later, this will impose a constraint in their sustained growth efforts.

ORIGINALITY VALUE

To the best of our knowledge, this is the first attempt testing these relations by using this method for these countries.

KEY WORDS

Cross sectional dependence, slope homogeneity, Current account deficits, economic growth, Bootstrap panel causality.

REFERENCES

1. Bagnai, A. and Manzoocchi, S. (1999). Current-account reversals in developing countries: the role of fundamentals. *Open Economies Review*, 10, pp. 143-163.
2. Breusch, T. S. and Pagan, A. R. (1980). The Lagrange multiplier test and its applications to model specification in econometrics. *The Review of Economic Studies*, 47(1), pp. 239-253.
3. Calderon, C., Chong, A. and Loayza, N. (2000). Determinants of current account deficits in developing countries. *The Policy Research Working Paper No: 2398*, pp. 1-37.
4. Hsueh, S. J., Huu, Y. H. and Tu, C. H. (2013). Economic growth and financial development in Asian countries: a bootstrap panel Granger causality analysis. *Economic Modelling*, 32, pp. 294-301.
5. Kandil, M. and Greene, J. (2002). The impact of cyclical factors on the U. S. balance of payments. *IMF Working Paper*.
6. Kónya, L. (2006). Exports and growth: Granger causality analysis on OECD countries with a panel data approach. *Economic Modelling*, 23(6), pp. 978-992. doi: 10.1016/j.econmod.2006.04.008
7. Mutascu, M. (2016). A bootstrap panel Granger causality of energy consumption and economic growth in the G7 countries. *Renewable and Sustainable Energy Reviews*, 63, pp. 166-171.
8. Garg, B. and Prabheesh, K. P. (2017). Drivers of India's current account deficits, with implications for ameliorating them. *Journal of Asian Economics*, 51, pp. 23-32.

BUSINESS AND APPLIED ECONOMICS

9. Pesaran, M. H. (2004). General diagnostic tests for cross section dependence in panels. Cambridge: Faculty of Economics, University of Cambridge. Cambridge Working Papers in Economics No: 0435.
10. Pesaran, M. H. and Yamagata, T. (2008). Testing slope homogeneity in large panels. *Econometrics*, 142, pp. 50-93.
11. Pesaran, M. H., Ullah, A. and Yamagata, T. (2008). A bias-adjusted LM test of error cross-section independence. *Economet. J.*, 11, pp. 105-127.
12. Puente-Ajovin, M. and Sanso-Navarro, M. (2015). Granger causality between debt and growth: evidence from OECD countries. *International Review of Economics and Finance*, 35, pp. 66-77.
13. Roubini, N. and Wachtel, P. (1998). Current account sustainability in transition economies. Cambridge: National Bureau of Economic Research. Working Paper 6468.
14. Swamy, P. A. V. B. (1970). Efficient inference in a random coefficient regression model. *Econometrica*, 38(2), pp. 311-323.
15. Zhang, X., Chang, T., Su C. W. and Wolde-Rufael, Y. (2016). Revisit causal nexus between military spending and debt: a panel causality test. *Economic Modelling*, 52, pp. 939-944.

2.8. VALUE BASED RISK MANAGEMENT-THE CASE OF AN INSURANCE COMPANY

Blagoje Paunović¹

Faculty of Economics, Belgrade, Serbia

Jelena Kočović²

Faculty of Economics, Belgrade, Serbia

OBJECTIVES

The aim of this paper is measuring the impact of risk on the value of an insurance company. Existing studies that are devoted to analysis of the impact of Enterprise Risk Management (ERM) on the value of an entity did not unequivocally confirm whether ERM contributes to the value creation. This is because traditional risk management approach cannot reliably determine the impact of risk on the value of an entity. In order to eliminate this drawback, we created a deterministic model that enables the measurement of the impact of risk on the value of an insurance company.

METHODOLOGY

A model of the impact of risk on the value of an insurance company is based on Value-Based Enterprise Risk Management (VBERM) concept, which was derived by integrating ERM concept and Value-Based Management (VBM) concept. ERM enables identification and measuring primary risks, while VBM enables identification of value drivers of an entity and by bringing them together into VBERM, it is possible to measure the impact of risk on value drivers and, in that way, on the value of an insurance company. This analysis has three phases: estimating the value of an insurance company, measuring individual risk exposure and measuring overall risk exposure. For identification of key risks, *Failure Mode and Effect Analysis* is used because it enables risks to be ranked according to estimated probability of occurrence and potential impact on insurance company's

¹ PhD, corresponding author: paunovic@ekof.bg.ac.rs

² PhD

performance. For measuring the impact of risk on the value of an insurance company, deterministic models as well as the tools of stochastic scenario analysis (*Monte Carlo* simulation) are used.

RESULTS

Deterministic model is created so that key risks are identified in accordance with regulatory regime Solvency II, and then their impact on relevant elements of income statement, balance sheet and risk capital is estimated since those elements, as value drivers, influence the value of an insurance company. In further analysis, stochastic model based on a large number of simulations is used, so that some of the possible scenarios for each of the selected relevant risks and their mutual impacts are selected randomly. In that way, the distribution of possible impacts of those risks on the value of an insurance company is obtained. Total risk exposure for an insurance company is shown with probability distributions of individual parameters which determine it.

IMPLICATIONS

Running this model using some of the tools for scenario analysis, such as *Monte Carlo* simulation, and using computer programs such as *Crystal Ball*, it is possible to calculate the impact of risk on value drivers and overall value of an insurance company. Since the change in value of an entity is the most robust measure of management performance overall, including risk management, practical implications of this approach are that it enables measuring the impact of all ERM activities on the value, which is of key importance for determining the usefulness of this approach.

ORIGINALITY VALUE

Majority of risk management approaches start with individual risks and their impact on profit. The originality of the VBERM is that, by connecting ERM and VBM, it links risk and return, which enables understanding the impact of risk, adjusted by mutual correlation, on the overall entity. It also encourages measuring risk by using long term value based risk metrics.

KEY WORDS

Enterprise Risk Management, Value-Based Management, Value-Based Enterprise Risk Management, Firm Value, insurance companies

REFERENCES

1. Anju, K. J., & Uma, V. R. (2017). The Determinants of Firm Value from Enterprise Risk Management Perspective: A Conceptual Model, *Journal of Management Research*, 17, pp. 194-203.
2. Hull, J. C. (2007). *Risk Management and Financial Institutions*, Pearson Publishing.
3. Kočović, J., Koprivica, M., & Paunović, B. (2018). New Challenges For Insurance Companies – Solvency II and IFRS 17, in: *Insurance in the Post-Crisis Era*, Kočović, J., Jovanović Gavrilović, B., Boričić, B., Radović Marković, M. (eds), CID Faculty of Economics, Belgrade, pp. 3-27.
4. Kočović, J., Randelović, S., & Paunović, B. (2015). Catastrophe Risk Management Models and Sustainable Development, in: *Catastrophic Risks and Sustainable Development*, Kočović, J. Jovanović Gavrilović, B., Đukić, V., (eds.), CID Faculty of Economics, Belgrade, pp. 3- 25.
5. Kočović, J., Jovović, M., & Paunović, B. (2015). Possibilities of Creating Optimal Investment Portfolio of Insurance Companies in Serbia, *Ekonomika preduzeća*, Vol. 63, No. 7-8, pp. 385-398.
6. Kočović, J., Jovović, M., & Paunović, B. (2014). Determinants of Business Performance of Non-Life Insurance Companies in Serbia, *Ekonomika preduzeća*, Vol. 63, No. 7-8, pp. 367 - 381.
7. Mun, J., (2004). *Applied Risk Analysis*, John Wiley&Sons.
8. Paunović, B., Mitrašević, M., & Janković, D., (2017). Profitability Management of Life Insurance Companies Under Conditions of Low Interest Rates, in: *Challenges and Tendencies in Contemporary Insurance Market*, Kočović, J., Boričić, B., Jovanović Gavrilović, B., Balleer, M., (eds.), CID Faculty of Economics, Belgrade, pp. 297-315.
9. Segal, S. (2005). Value-Based Enterprise Risk Management, *The Actuary*, June/July, 33-36.
10. Segal, S. (2011). Corporate Value of Enterprise Risk Management: The Next Step in Business Management, John Wiley&Sons.
11. Tešić, N., & Paunović, B., (2016). Risk Management Process in Banks, in: *Risk Management in the Financial Services Sector*, Kočović, J., Jovanović Gavrilović, B., Trifunović, D. (eds.), CID Faculty of Economics, Belgrade, pp. 83-103.
12. Vuksanović, I. (2017). The Impact of Risk Management on the Corporate Governance in Financial Sector: Management Remuneration, in: *Challenges and Tendencies in Contemporary Insurance Market*, Kočović, J., Boričić, B., Jovanović Gavrilović, B., Balleer, M., (eds.), CID Faculty of Economics, Belgrade, pp. 367-380.

2.9. DIGITAL SKILLS IN SERBIA - DO WE HAVE PROGRESS?

Aleksandra Bradić-Martinović¹

Institute of Economic Sciences, Belgrade, Serbia

OBJECTIVES

In the preceding ten years, policymakers in Serbia have made some efforts to increase the ability of the population to use digital technology. The analysis of the results of their activities is not sufficiently transparent, and it is difficult to conclude whether the actions carried out have improved and to what extent. This paper aims to examine the level of digital skills in Serbia in the period 2006-2016.

METHODOLOGY

In this paper, we use two level methodology. The first methodology is proposed by Eurostat for the statistics on the Information Society. In the year 2002 European Commission started to implement annual Information Society Survey – “ICT Usage in households and by individuals”. The second level is the calculation of comprehensive indicator. To enable easier monitoring this phenomenon and comparison of data between countries, Eurostat created a Digital Skills Indicator (DSI). The DSI consists of four dimensions, Information skills, Communication skills, Problem-solving skills and Software skills for content manipulation. Dimensions of DSI indicator are covered by several questions in the survey mentioned above and valued by scheme “Methodological introduction”. Finally, the results of individual indicators combine into Digital Skills indicator. Our analysis is based on data for Serbia collected by National Statistical Office in the period 2006-2016.

RESULTS

The analysis shows that the DS indicator had been increasing over the period. In the first half (2006-2010) the increase was moderate, while in the second period (2011-2016) digital skills rapidly improved. The main limitation of the data is lack

¹ PhD, e-mail: abmartinovic@ien.bg.ac.rs

of objectivity (e.g. test results) and reliance only on self-perceived skills of respondents.

IMPLICATIONS

The results show that Serbia is progressing in the digitization process, at least in the field of digital skills development. The primary legal document National Strategy of Information Society Development should be supported by appropriate regulations and policies that would target identified problems in the area of digital literacy. This paper can be used in the process evidence-based policy as an underlying document.

ORIGINALITY VALUE

Scientists in Serbia have begun to deal more with the phenomena of digital literacy in the last decade, but the studies are rare and non-systematic. One of the most valuable empirical Serbian society survey is Digital literacy of employers and students in Serbia, provided by Lakić et al. (2012) which covered 733 employers and 344 students. This research is a step further because it is based on Eurostat methodology, and its results are comparable with other EU countries.

KEY WORDS

Digital skills, Digital Skill Indicator, Eurostat, Serbia, ICT Usage

REFERENCES

1. Adult Education Society (2010). *Start of Second Chance project in Serbia*. Available at <http://www.aes.rs/en/pocetak-second-chance-projekta-u-srbiji/>.
2. Ainley, J., Wchulz, W., Fraillon, J. (2016). A global measure of digital and ICT literacy skills. Background paper prepared for the 2016 Global Education Monitoring Report, Education for people and planet: Creating sustainable futures for all. Australian Council for Educational Research.
3. Boje, C., Dragulanesu, N-G. (2003). "Digital Divide" in Eastern European Countries and its Social Impact. *Proceedings of the 2003 American Society for Engineering Education Annual Conference & Exposition*.
4. Carretero, S., Vuorikari, R., Punie, Y. (2017). *The Digital Competence Framework for Citizens - With eight proficiency levels and examples of use*, Joint Research Centre. European Commission. Luxembourg.
5. Chetty, K., Liu, Q., Wenwei, Li., Josie, J., Gcora, N., Shenglin, B. (2017). Bridging the Digital Divide: Measuring Digital Literacy. G20 Insights – Think 20 Dialogue. Germany.

6. Covelo, S. (2010). *A Review of Digital Literacy Assessment Instruments*. IDE-712: Analysis for Human Performance Technology Decisions, Front-End Analysis Research. Syracuse University, School of Education/IDD & E.
7. European Commission (2015). *Digital Single Market Strategy*. Available at: https://www.eu2017.ee/sites/default/files/2017-09/EC%20for%0TDS_The%20Digital%20Single%20Market%20Strategy.pdf.
8. European Commission (2018a). *Digital Education Action Plan*. Available at: <https://ec.europa.eu/education/sites/education/files/factsheet-digital-education-action-plan.pdf>.
9. Ferrari, A. (2013). *DIGCOMP: A Framework for Developing and Understanding Digital Competence in Europe*, European Commission Joint Research Centre Institute for Prospective Technological Studies. DOI: 10.2788/52966.
10. Gui, M., Arentin, G. (2011). Digital Skills of Internet Natives: Different Forms of Digital Literacy in a Random Sample of Northern Italian High School Students. *New Media and Society*, Vol. 13, No. 6: pp. 963-980.
11. Gunkel, D. (2003). Second thoughts: Toward a critique of the digital divide, *New Media & Society*, 5, pp. 499–522.
12. Khateeb, A. (2017). Measuring Digital Competence and ICT Literacy: An Exploratory Study of In-Service English Language Teachers in the Context of Saudi Arabia, *International Education Study*, 10(12): pp. 38-51.
13. Martin, A. Grudziecki, J. (2006). *DigEuLit: Concepts and Tools for Digital Literacy Development*, University of Glasgow, Scotland. Available at: <https://www.tandfonline.com/doi/full/10.11120/ital.2006.05040249?scroll=top&needAccess=true>.
14. Ministry of Education, Science and Technological Development of the Republic of Serbia (2017). *Digital Competences Framework – Teacher for a Digital Age*.

2.10. IMPACT OF THE FINANCIAL SECTOR ON ECONOMIC GROWTH IN EMERGING COUNTRIES

Hasan Hanić¹

Belgrade Banking Academy, Belgrade, Serbia

Milica Bugarčić²

Belgrade Banking Academy, Belgrade, Serbia

OBJECTIVES

Many previous conducted studies have shown that financial sector has impact on the economic growth and development in individual countries. Aim of our paper is to determine whether this impact exists in a group of 23 emerging countries according to the classification of the International Monetary Fund, and if influence exist, is it positive or negative, and potentially what is the level of the impact.

METHODOLOGY

In research we used a dynamic regression panel model to measure the impact of the financial sector on the economic growth of emerging countries. The Panel includes the values of the variables for the period from 1993 to 2016 for 23 emerging countries according to the classification of the International Monetary Fund. Dependent variable in our model is economic growth measured by GDP per capita growth rate, which is also dependent variable, while for the explanatory variables we used: lag of GDP per capita growth rate, market capitalization (as % of GDP), lag of market capitalization (as % of GDP), domestic credit provided by financial sector (as % of GDP) and interest rate spread, calculated as margin between the cost of mobilizing liabilities and the earnings on assets (%). All variables in the model are logarithmic. We used the GMM (Generalized method of moments) estimator because this system includes sufficient orthogonality conditions that are imposed to ensure consistent estimates of parameters even with endogeneity and not observed individual country effects.

¹ Professor Emeritus,

² MSc, corresponding author: milica.bugarcic@bba.edu.rs

RESULTS

Explanatory variables in our model explain 27% of variability of the dependent variable GDP per capita growth rate, but not all variables are statistically significant. From the obtained results, we can conclude that the increase of market capitalization positively affects GDP per capita growth rate, the increase of domestic loans secured by the financial sector has negative influence on the observed variable, while the interest rates spread has no impact in emerging countries, as the variable is not statistically significant.

IMPLICATIONS

Developed countries have a high degree of market capitalization, transparent markets and good legal regulation. The authors believe that the growth of stock market capitalization with high transparency and well-established legal regulation can significantly contribute to the economic growth and development of the country, and indirectly increase welfare, primarily in countries that are experiencing rapid growth in market capitalization, such as China and India and also in other emerging countries whose markets are slowly developing. Considering importance of the topic, results of this research could be helpful for policy makers.

ORIGINALITY VALUE

The empirical evidence presented in this study shows that the financial sector is relevant and has important effects on economic growth and development. As long as there is statistically significant influence of independent variables in our model on dependent, the scientific contribution of the paper is to point out the importance of the market capitalization and domestic credit provided by financial sector and to show that it can affect sustainable economic growth.

KEY WORDS

Financial sector, economic growth, GDP per capita growth rate, market capitalization, emerging countries

REFERENCES

1. Aali-Bujari, A., Venegas-Martínez, F., & Pérez-Lechuga, G. (2017) Impact of the stock market capitalization and the banking spread in growth and development in Latin

Part II

- American: A panel data estimation with System GMM. *Contaduría y Administración*, 62(5), pp. 1427-1441.
2. Albu, L. L., Lupu, R., & Calin, A. C. (2014). A Nonlinear Model to Estimate the Long Term Correlation between Market Capitalization and GDP per capita in Eastern EU Countries. *Journal of Economic Computation and Economic Cybernetics Studies and Research*, (3).
 3. Alajekwu, U. B., & Achugbu, A. A. (2012). The role of stock market development on economic growth in Nigeria: A time series analysis. *African Research Review*, 6(1), pp. 51-70.
 4. Asongu, S. A. (2012). Government quality determinants of stock market performance in African countries. *Journal of African Business*, 13(3), pp. 183-199.
 5. Ayadi, R., Arbak, E., Naceur, S. B., & De Groen, W. P. (2015). Financial development, bank efficiency, and economic growth across the Mediterranean. In *Economic and Social Development of the Southern and Eastern Mediterranean Countries* (pp. 219-233). Springer, Cham.
 6. Bayar, Y., Kaya, A., & Yildirim, M. (2014). Effects of stock market development on economic growth: Evidence from Turkey. *International Journal of Financial Research*, 5(1), 93.
 7. Marques, L. M., Fuinhas, J. A., & Marques, A. C. (2013). Does the stock market cause economic growth? Portuguese evidence of economic regime change. *Economic Modelling*, 32, pp. 316-324.
 8. Nazir, M. S., Nawaz, M. M., & Gilani, U. J. (2010). Relationship between economic growth and stock market development. *African Journal of Business Management*, 4(16), 3473.
 9. Choong, C. K., Baharumshah, A. Z., Yusop, Z., & Habibullah, M. S. (2010). Private capital flows, stock market and economic growth in developed and developing countries: A comparative analysis. *Japan and the World Economy*, 22(2), pp. 107-117.
 10. Omri, A., Daly, S., Rault, C., & Chaibi, A. (2015). Financial development, environmental quality, trade and economic growth: What causes what in MENA countries. *Energy Economics*, 48, pp. 242-252.
 11. Owusu, E. L., & Odhiambo, N. M. (2014). Stock market development and economic growth in Ghana: an ARDL-bounds testing approach. *Applied Economics Letters*, 21(4), pp. 229-234.
 12. Pradhan, R. P., Arvin, M. B., Hall, J. H., & Bahmani, S. (2014). Causal nexus between economic growth, banking sector development, stock market development, and other macroeconomic variables: The case of ASEAN countries. *Review of Financial Economics*, 23(4), pp. 155-173.
 13. Samargandi, N., Fidrmuc, J., & Ghosh, S. (2015). Is the relationship between financial development and economic growth monotonic? Evidence from a sample of middle-income countries. *World Development*, 68, pp. 66-81.
 14. Valickova, P., Havranek, T., & Horvath, R. (2015). Financial development and economic growth: A meta-analysis. *Journal of Economic Surveys*, 29(3), pp. 506-526.

2.11. EVALUATION OF YOUTH POLICY IN SERBIA OVER THE PERIOD 2015-2017 – RESULTS, CHALLENGES AND PERSPECTIVES

Mihajlo Đukić¹

Institute of Economic Sciences, Belgrade, Republic of Serbia

Duško Bodroža²

Institute of Economic Sciences, Belgrade, Republic of Serbia

OBJECTIVES

The main aim of the paper was to assess the results of the youth policy in the Republic of Serbia led over the period 2015-17 and to define relevant policy inputs for preparation of the future strategic documents. The main focus of the paper was economic part of the youth policy, particularly components such as employment, entrepreneurship, inactivity, etc. that have been proclaimed by the policy makers as the most important policy issues that need to be tackled.

METHODOLOGY

Authors analysed current strategic framework for conducting youth policy and reconsidered policy measures applied by the Ministry of Youth and Sports over the last three years. There have been applied desk research methods in order to assess fulfillment of each of the nine strategic objectives of the Strategy for Youth. Desk research included assessment of the progress in achieving specific objectives and indicators by comparing initial and final values of the selected indicators of success as well as the evaluation of the processes and relationships with the most important stakeholders. Data have been obtained from the official sources, Statistical Office of the Republic of Serbia and databases of the Ministry of Youth and Sports. Authors aimed at assessing fulfillment of the most important evaluation components – Relevance, Effectiveness, Efficiency, Impact and

¹ PhD, corresponding author: mihajlo.djukic@ien.bg.ac.rs

² PhD

Sustainability. Results of the paper could be used by the Ministry of Youth and Sports for the improvement of the national youth policy management.

RESULTS

Assessment of the youth policy led over the period 2015-17 has shown that policy makers had clear vision on the priorities set by the Strategy. Obtained results indicate that the most of the envisaged activities have been completed as defined per Action Plan. Activities performed within Objective 1 – Improvement of employability and employment and Objective 2 – Improvement of acquiring skills and competences have been realized at the level of 52% and 54% respectively. The worst results have been recorded in realisation of the activities within component related to inclusion of the youth from potentially marginalized groups amounting to 34%. It could be noticed that the policy makers are facing problems of monitoring success and coordination of the activities with other stakeholders. It has been achieved solid progress, mainly in Strategic Objectives 1 and 2 - Youth employment and entrepreneurship and Education, pedagogical work with and training of youth.

IMPLICATIONS

Results of the analysis could be useful input for the policy makers in formulating adjustments of the current youth policy and, to the certain extent, reconsidering current policy approach. Further research, particularly field research – focus groups and in-depth interviews are required in order to obtain more detailed findings on specific components of the youth policy in Serbia.

ORIGINALITY VALUE

Evaluation of strategic documents has still not been implemented as a regular practice of the policy makers in Serbia. Originality of the paper resides in the fact that unlike the other youth policy research that have been performed so far, it took into account specific data on the realized projects and actual activities performed by the policy makers. This paper contributes to a better understanding of the policy environment in which youth policy has been performed stressing the importance of maintaining good coordination with different stakeholders, focusing on measurable results and better usage of the resources such as local youth administration human capacities.

KEY WORDS

Youth policy, National Strategy for Youth, evaluation, Republic of Serbia, Ministry of Youth and Sports

REFERENCES

1. EU Strategy for Youth (2015), Retrieved from: <http://eur-lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:52009DC0200&from=EN>
2. European Commission, Directorate-General for Education and Culture Evaluation of the EU Youth Strategy and the Council Recommendation on the mobility of young volunteers across the EU, Retrieved from: https://ec.europa.eu/youth/sites/youth/files/youth-strategy-mobility-evaluation-2016_en.pdf
3. Evaluation of the National Youth Strategy (2008-2014) in the Republic of Serbia and Action Plan (2009 – 2014), Retrieved from: http://www.mos.gov.rs/wp-content/uploads/download-manager-files/Evaluation_of_the_National_Youth_Strategy_eng.pdf
4. International Labour Organization, Statistics and databases (2016). Retrieved from: <http://www.ilo.org/global/statistics-anddatabases/lang--en/index.htm>
5. National Strategy for Youth of the Republic of Serbia 2015 to 2025, Retrieved from: http://www.mos.gov.rs/mladisuzakon/attachments/article/389/nacionalna_strategija_za_mlade0101_cyr.pdf
6. Obradović, V. and Pavlović, D. (2015). Strategic governance in youth employment in Serbia, The Scientific Conference “Innovative Solutions of Operations Management for Serbian Economy Revitalization”, SPIN 2015, pp. 454-460.
7. Pavlović, D., Zubović, J. and Zdravković, A. (2016), Youth Expectations in Job Search in Serbia, Industry, Economic Institute, Belgrade Serbia, Vol. 44(4), pp. 4-17.
8. Pavlović, D., Djukic, M. and Bodroza, D. (2017), Youth unemployment in Serbia: strategic framework, analysis and perspectives, European Project Management Journal, Volume 7, Issue 2, December 2017
9. Tomanovic, S. and Stanojevic, D. Young people in Serbia 2015 - Situation, perceptions, beliefs and aspirations, Retrieved from: <https://pjp-eu.coe.int/documents/1017981/7110686/Young+People+in+Serbia+2015.pdf/1a8d5db9-8dc7-4f3a-bcb9-2af0610d0d94>
10. Youth Policy (2018), Retrieved from: www.youthpolicy.org/

2.12. BUSINESS SECTOR INNOVATION AND ECONOMIC GROWTH: A COMPARATIVE ANALYSIS BETWEEN EU COUNTRIES

Cláudia Caseiro¹

Faculty of Economics, University of Coimbra, Coimbra, Portugal

Marta Simões²

CeBER and Faculty of Economics, University of Coimbra, Coimbra, Portugal

OBJECTIVES

There seems to be a consensus in the literature that innovation drives output growth. This paper examines the relationship between business innovation and per capita output growth in the 28 EU member states considering different aspects of innovation (technological and non-technological) and grouping countries according to their business innovation activity, in particular in terms of inputs and outputs.

METHODOLOGY

We first differentiate the EU28 according to each country's performance in terms of inputs and outputs of business innovation activity relative to the average of the EU28. Next we estimate a growth regression in a panel data context with the average growth rate of real GDP per capita as the dependent variable and considering different innovation indicators as our main explanatory variables. We try to identify different impacts across two sub-samples defined as under or over-achievers in terms of inputs and outputs of business innovation activity relative to the EU28. Group 1 (EU12) is characterized by higher than average business innovation performance and group 2 (EU16) by lower than average business innovation performance. The reference period is either 1990-2015 or 2008-2015 depending on data availability for innovation indicators from the European Innovation Scoreboard.

¹ MSc

² PhD, corresponding author: mcsimoes@fe.uc.pt

RESULTS

The results indicate that the role of business innovation in growth varies according to the sample of countries, the period under analysis and the proxies used to measure business innovation. For group 1, the results reveal that most of the business innovation indicators that are relevant for explaining economic growth have a positive impact. For the period 1990-2015, only the results with brand registrations are significant, and only if Luxembourg is included in the sample; for the period 2008-15, R&D expenditures and employee training have a positive and significant growth impact. Group 2 presents mainly business innovation indicators that have negative impacts on growth. For the period 1990-2015, total R&D personnel and R&D researchers have negative growth impacts; patent applications have a positive effect on growth and also registrations of trademark applications, but when Cyprus and Malta are included this impact becomes negative; for the period 2008-15, R&D expenditures have a positive and relevant growth impact, while trademark application registrations, product/process and marketing/organizational innovations, and SMEs that innovate internally, present a negative and statistically significant estimated coefficient.

IMPLICATIONS

Policies to promote business innovation should be different in each group. Although attention should be given to R&D support policies in both groups, for group 1 incentives to invest in machinery and equipment for innovation activities are key in fostering economic growth. For group 2, policies should ensure an efficient allocation of resources, preventing human capital from fleeing to R&D activities and abandoning other key areas of the economy, and should also invest more in infrastructures to support science and technology.

ORIGINALITY VALUE

This study contributes to the existing literature by identifying different growth effects of innovation activities associated with the use of different proxies for innovation and sub-samples of countries defined according to selected characteristics of the respective business innovation performance. The findings of the study may help policy makers designing more adequate support for innovation activities carried out by the business sector.

KEY WORDS

Business sector innovation, economic growth, EU28, panel data

REFERENCES

1. FREIMANE, R.; BĂLIŢA, S. (2016), "Research and Development Expenditures and Economic Growth in the EU: A Panel Data Analysis", *Economics and Business*. DOI: 10.1515/eb-2016-0016.
2. GOEL, R.K.; RAM, R. (1994), "Research and development expenditures and economic growth: a cross-country study", *Economic Development and Cultural Change*, Vol.42, No.2, pp. 403–411.
3. GRIFFITH, R. (2000), "How important is business R&D for economic growth and should the government subsidise it?", *The Institute for Fiscal Studies*, ISBN 1-903274-13-3.
4. GROSSMAN, G.M.; HELPMAN, E. (1994), "Endogenous Innovation in the Theory of Growth", *Journal of Economic Perspectives*, Vol.8, pp.23-44.
5. HALL, B. H. (2011), "Innovation and Productivity", *NBER Working Paper No. 17178*.
6. HASAN, I.; TUCCI, C. L. (2010), "The innovation-economic growth nexus: global evidence", *Research Policy*, Vol.39, No.10, pp.1264-1276.
7. JONES, C. I. (1995), "R&D-based models of economic growth", *Journal of Political Economy*, Vol.103, No.41.
8. MARADANA et al. (2017), "Does innovation promote economic growth? Evidence from European countries", *Journal of Innovation and Entrepreneurship* 6:1. DOI:10.1186/s13731-016-0061-9.
9. MOHNEN, P. et al. (2006), "Innovativity: A comparison across seven European countries", *Economics of Innovation and New Technology*, Vol.15, 4-5, pp.391-413.
10. MORENO, R.; SURIÑACH, J. (2014), "Innovation Adoption and Productivity Growth: Evidence for Europe", *Research Institute of Applied Economics, Working Paper 2014/13*.
11. MOHNEN, P.; Hall, B. H. (2013), "Innovation and Productivity: An update", *Eurasian Business Review*, Vol.3, 1, pp.47-65.
12. OECD (2007), "Innovation and growth: Rationale for an innovation strategy".
13. PECE, A. M. et al. (2015), "Innovation and economic growth: An empirical analysis for CEE countries", *Procedia Economics and Finance*, Vol.26, pp.461-467.
14. PRADHAN R. P. et al. (2016), "Innovation, financial development and economic growth in Eurozone countries", *Applied Economics Letters*, pp.1141-1144, DOI:10.1080/13504851.2016.1139668.
15. ROMER, P. (1990), "Endogenous Technological Change", *Journal of Political Economy*, Vol. 98, pp. 71-102.
16. SOLOW, R. M. (1956), "A Contribution to the Theory of Economic Growth", *The Quarterly Journal of Economics*, Vol.70, No.1, pp.65-94.

BUSINESS AND APPLIED ECONOMICS

17. ULKU, H. (2004), "R&D, Innovation, and Economic Growth: An Empirical Analysis", International Monetary Fund Working Papers, WP/04/185, pp. 2-35.
18. TAVASSOLI, S.; KARLSSON, C. (2015), "Persistence of various types of innovation analyzed and explained", Research Policy 44, pp.1887-1901.

2.13. THE RELATIONSHIP BETWEEN CO₂ EMISSIONS AND REAL GDP IN SEE COUNTRIES

Petar Mitić¹

Institute of Economic Sciences, Belgrade, Serbia

Slobodan Cvetanović²

University of Niš, Faculty of Economics, Niš, Serbia

OBJECTIVES

In recent years the relationship between increasingly pronounced environmental degradation and economic growth has been in the focus of scientific and professional discussion and analysis, both theoretically and empirically. The main objective of this paper is to examine whether long-run and short-run relationships exist between CO₂ emissions and real gross domestic product (GDP) for SEE countries in the period of 1992-2016.

METHODOLOGY

In this paper authors used Granger's causality analysis based on vector error correction model (VECM) to investigate the interdependence between CO₂ emissions and real gross domestic product for SEE countries. For a short-run analysis a Wald F-test has been used. In order to do this analysis, it is necessary to firstly test the presence of unit roots in the panel data using the LLC test, the IPS test, the Fisher-ADF test and the Fisher-PP test. After this analysis, Johansen-Fisher and Pedroni testing for investigating the presence of cointegration have been used.

RESULTS

The results of the research show that there is a long-run causality running from GDP to CO₂ emissions. In other words, the speed of adjustment is 2,4421% annually, meaning the whole system is going back to long run equilibrium at the

¹ Research Assistant, corresponding author: petar.mitic@ien.bg.ac.rs

² Full Professor

speed of 2,4421% annually. On the other hand, there is no long-run causality running from CO₂ emissions to GDP. Additionally, there is a short run bidirectional causality between GDP and CO₂ emissions.

IMPLICATIONS

SEE countries have to follow and act in accordance with the measures and recommendations of global policies aimed to decrease CO₂ emissions. Continuous work has to be carried out on the introduction of new mechanisms, instruments and actions such as environmental taxes, emission-trading schemes, and carbon capture and storage. Furthermore, it is of the utmost importance to underline that these results do not explain the underlying factors of the observed relationship presented in this paper. Future research should introduce new variables and different methodologies to investigate this phenomenon.

ORIGINALITY VALUE

The originality of this research is based on the selection of countries. To the best of our knowledge, no other similar research used SEE countries to investigate this phenomenon. Furthermore, a complex econometric analysis of panel data was used, which ensures the elimination of problems in previous research. The advantages of this research are: control of individual heterogeneity, less collinearity among indicators, more degrees of freedom, better dynamic data performance, reduction of problems arising from substandard distributions, etc.

KEY WORDS

CO₂ emissions, gross domestic product, VECM, Granger causality

REFERENCES:

1. Azam, M. (2016). Does environmental degradation shackle economic growth? A panel data investigation on 11 Asian countries. *Renewable and Sustainable Energy Reviews*, 65, pp. 175-182.
2. Azomahou, T.; Van Phu, N.; Laisney, F. *Economic Growth and CO₂ Emissions: A Nonparametric Approach*; Universite Catholique de Louvain, 2001; Available online: <http://www.beta-umr7522.fr/productions/publications/2001/2001-01.pdf>
3. Baltagi, B. H. (2005). *Econometric analysis of panel data*. The Atrium, Southern Gate, Chichester, West Sussex PO19 8SQ, England: John Wiley & Sons, Ltd.
4. Burda, M., & Wyplosz, C. (2013). *Macroeconomics: a European text*. Oxford university press.

Part II

5. Choi, I. (2001). Unit root tests for panel data. *Journal of international money and Finance*, 20(2), 249-272. doi: 10.1016/S0261-5606(00)00048-6
6. Costa, D. L., & Lamoreaux, N. R. (Eds.). (2011). *Understanding long-run economic growth: geography, institutions, and the knowledge economy*. University of Chicago Press.
7. Hsiao, C. (2003). *Analysis of Panel Data* (Econometric Society Monographs). Cambridge: Cambridge University Press. doi: 10.1017/CBO9780511754203
8. Im, K. S., Pesaran, M. H., & Shin, Y. (2003). Testing for unit roots in heterogeneous panels. *Journal of econometrics*, 115(1), pp. 53-74.
9. Johansen, S. (1988). Statistical analysis of cointegration vectors. *Journal of economic dynamics and control*, 12(2-3), pp. 231-254. doi: 10.1016/0165-1889(88)90041-3
10. Levin, A., Lin, C. F., & Chu, C. S. J. (2002). Unit root tests in panel data: asymptotic and finite-sample properties. *Journal of econometrics*, 108(1), pp. 1-24. doi: 10.1016/S0304-4076(01)00098-7
11. Maddala, G. S., & Wu, S. (1999). A comparative study of unit root tests with panel data and a new simple test. *Oxford Bulletin of Economics and statistics*, 61(S1), pp. 631-652. doi: 10.1111/1468-0084.0610s1631
12. Mitić, P., Munitlak Ivanović, O., & Zdravković, A. (2017). A cointegration analysis of real GDP and CO2 emissions in transitional countries. *Sustainability*, 9(4), 568. doi:10.3390/su9040568
13. Munitlak Ivanović, O., Zubović, J., & Mitić, P. (2016). Problems of ecosystem services and natural capital evaluation. *Economic Dynamics and Sustainable Development – Resources, Factors, Structures and Policies: Proceedings ESPERA 2015* (pp. 253-266). Publisher: Peter Lang, Frankfurt; New York.
14. Munitlak Ivanović, O., Zubović, J., & Mitić, P. (2017). Relationship between Sustainable Development and Green Economy - Emphasis on Green Finance and Banking. *Ekonomika poljoprivrede*, 64(4), pp. 1467-1482.
15. Odhiambo, N. M. (2012). Economic growth and carbon emissions in South Africa: an empirical investigation. *Journal of Applied Business Research*, 28(1), 37.
16. Ozturk, I., & Acaravci, A. (2013). The long-run and causal analysis of energy, growth, openness and financial development on carbon emissions in Turkey. *Energy Economics*, 36, pp. 262-267.
17. Panayotou, T. (2016). Economic growth and the environment. *The environment in anthropology*, pp. 140-148.
18. Tang, C. F., Tan, B. W., and Ozturk, I. 2016. Energy consumption and economic growth in Vietnam. *Renewable and Sustainable Energy Reviews*, 54, 1506-1514. doi: 10.1016/j.rser.2015.10.083
19. Tietenberg, T. H., & Lewis, L. (2016). *Environmental and natural resource economics*. Routledge.
20. Tiwari, A. K., Apergis, N., and Olayeni, O. R. 2015. Renewable and nonrenewable energy production and economic growth in sub-Saharan Africa: a hidden cointegration analysis. *Applied Economics*, 47(9), pp. 861-882.

2.14. THE ROLE OF SOCIO-PSYCHOLOGICAL VARIABLES IN MIGRANTS' LABOUR MARKET INTEGRATION: A QUANTITATIVE APPROACH*

Grațîela Georgiana Noja¹

West University of Timișoara, Faculty of Economics and Business Administration, East-European Center for Research in Economics and Business, Timisoara, Romania

Nebojša Petrović²

University of Belgrade, Faculty of Philosophy, Department of Psychology, Belgrade, Serbia

OBJECTIVES

The specific aim of the research is to develop a quantitative analysis on migrants' integration into several EU countries that are mostly targeted by immigrants (namely EU-10: Belgium, Denmark, Finland, France, United Kingdom, Germany, Austria, Sweden, Italy and Spain).

METHODOLOGY

We've focused on various macroeconometric models with a distinctive dependent variable (mainly employment and unemployment rate of the foreign population) and a combination of explanatory variables, processed through numerous econometric procedures: *robust regression*, *PCSE*, *spatial lag and error models* (simple and bootstrap based on inverse distance weights matrix row-standardized). *Spatial analysis* was mainly used because our focus was to analyze the performances achieved by neighboring locations (spatial spillovers) in influencing the overall migrant integration outcomes of EU-10.

In this respect, we've compiled a balanced panel (2000-2019 sample and 2016 cross-section) and considered the total immigration flows, as well as the

*This research was conducted within the framework of STSM – Short-Term Scientific Mission, COST Action CA16111 "International Ethnic and Immigrant Minorities' Survey Data Network" (ETHMIGSURVEYDATA)

¹ PhD Associate Professor, corresponding author: gratiela.noja@e-uvt.ro

² PhD

immigrants coming from Serbia and Romania into EU-10, along with a complex set of indicators (47) that we've further used in the empirical analysis. The data was afterwards extrapolated until 2019 to better capture the Brexit impact upon labor mobility within the European Union and we've further applied the standardization procedure, to cover for data benchmarking between countries.

RESULTS

The results obtained reveal that significant positive consequences reflected through a decrease in the unemployment rate of the foreign population are generated by the active labor market policies, along with an improvement in the educational background towards secondary education, along with GDP per capita increases.

IMPLICATIONS

When we've introduced the socio-psychological variables, we've noticed that positive credentials on migrants' integration are reflected through an increased participation in society and community, while life satisfaction and living standards satisfaction also positively reverberate on migrant integration into host economies. However, negative effects are induced by social exclusion (I feel left out of society) and reduced job security/ increased fear, possibility to lose the job in the next 6 months. When we've considered separately the EU-10 immigrants coming from Romania and Serbia, we've noticed that the Romanian migrants are mainly attracted by political stability in terms of the migration policies enforced by the destination countries that are continuously open to receive immigrants and increased job security, while Serbian migrants are rather attracted by the social environment at destination, namely host population's attitude towards religion, volunteering and educational activities, as well as accurate ALMPs oriented towards lifelong learning and job creation. In terms of labor market integration, both Serbian and Romanian migrants contribute to a significant reduction in the unemployment rate of the foreign population, thus reflecting that they tend to positively integrate into the host economies/ labor markets.

ORIGINALITY VALUE

The novelty of the research is given by our extremely complex quantitative approach that captures into a new research framework both the economic and humanitarian dimensions of international migration and thus the analysis is

conducted to identify feasible ways, best practices and effective measures of ensuring a proper integration of these two migrant categories within EU-10, from a double perspective: economics and socio-psychology. We particularly focus on the benefit spillovers for Serbia and Romania in their migration challenges, aiming to extrapolate factors which can foster or complicate similar process in the future in the countries that still have not started to integrate a larger number of migrants, but that are currently confronting with large emigration flows into EU-10.

KEY WORDS

Immigrants, labor market, welfare, strategies, spatial spillovers

REFERENCES

1. Boone, J., van Ours, J. C. (2004). *Effective Active Labor Market Policies*. IZA Discussion Paper Series No. 1335.
2. Borjas, G. J. (2003). The Demand Curve is Downwards Loping: Reexamining the Impact of Immigration on the Labor Market. *Quarterly Journal of Economics*, 118(4), pp. 1335–1374.
3. Brucker, H., Fachin, S., Venturini, A. (2011). Do Foreigners Replace Native Immigrants? A Panel Cointegration Analysis of Internal Migration in Italy. *Economic Modelling*, 28(3), pp. 1078-1089.
4. Card, D., DiNardo, J. E. (2000). Do Immigrants Inflows Lead to Native Outflows?. *The American Economic Review*, 90(2), pp. 360–373.
5. Card, D., Kluve, J., Weber, A. (2010). Active Labour Market Policy Evaluations: A Meta-Analysis. *The Economic Journal*, 120, p. 548.
6. Efron, B., Tibshirani, R. G. (1993). *An Introduction to the Bootstrap*. Boca Raton, FL: Chapman & Hall/CRC. ISBN 0-412-04231-2.
7. Eichhorst, W., Konle-Seidl, R. (2005). *The Interaction of Labor Market Regulation and Labor Market Policies in Welfare State Reform*. IAB Discussion Paper No. 19.
8. European Commission (2016). *Active Labour Market Policies*. European Semester Thematic Factsheet, Eurostat.
9. European Commission (2017). *Eurostat Database*.
10. Fertig, M., Kahanec, M. (2015). Projections of Potential Flows to the Enlarging EU from Ukraine, Croatia and other Eastern Neighbours. *IZA Journal of Migration*, 4(1), pp. 1–27.
11. Hoxhaj, R. (2015). Wage Expectations of Illegal Immigrants: the Role of Networks and Previous Migration Experience. *International Economics*, 142, pp. 136–151.

Part II

12. Kahanec, M., Zimmermann, K. F. (2008). *Migration, the Quality of the Labour Force and Economic Inequality*. Institute for the Study of Labour. IZA Discussion Paper Series No. 3560.
13. Krause, A., Rinne, U., Zimmermann, K. F. (2016). *European Labour Market Integration: What the Experts Think*. International Journal of Manpower. IZA Discussion Paper No. 8383.
14. Longhi, S., Nijkamp, P., Poot, J. (2006). *The impact of immigration on the employment of natives in regional labour markets: a meta-analysis*, ISER Working Papers Series, No. 10.
15. OECD (2015). *Is This Humanitarian Migration Crisis Different?*. Migration Policy Debates, 7. Paris: Organization for Economic Cooperation and Development.
16. OECD (2017). *International Migration Outlook*. Paris: Organization for Economic Cooperation and Development, http://dx.doi.org/10.1787/migr_outlook-2017-en
17. Ruist, J. (2016). How the Macroeconomic Context Impacts on Attitudes to Immigration: Evidence from within – Country Variation. *Social Science Research*, 60, pp. 125–134.
18. Soon, J–J. (2017). Effects of EU Expansion on Migrants’ Employment and Income: A Natural Experiment. *Prague Economic Papers*, pp. 1–16.
19. UNHCR, The UN Refugee Agency (2017). *Figures at a Glance*. Geneva: United Nations High Commissioner for Refugees.
20. UNU WIDER (2017). *World Income Inequality Database*. Helsinki: United Nations University.

2.15. THE COMPETITIVENESS OF INSURANCE MARKET IN SERBIA

Tijana Kaličanin¹

Belgrade Banking Academy, Belgrade, Serbia

Edin Hanić²

National Bank of Serbia, Belgrade, Serbia

OBJECTIVES

The aim of this paper is to determine the level of competitiveness of supply in the Serbian insurance sector in order to examine and analyze the current situation and changes in the competitive conditions in the insurance and whole financial market. This analysis is the basis for taking measures that are necessary for the creation and preservation of healthy competition in this market. First, it is necessary to see which part of the financial sector belongs to insurance sector.

METHODOLOGY

In this paper authors analyzed the changes of the number of the domestic and foreign insurance companies in the period 2007-2017. For the same period, concentration ratios were used for the leading company, first three and first five leading companies. These ratios were calculated by total premiums, non-life premiums, life premiums and by total balance sheets. The Herfindahl Hirschman index, calculated by summing up the squares of the respective market shares, in this case balance sheet totals of all insurance companies was also used.

RESULTS

Market insurance sector in Serbia is characterized by medium supply concentration. Dynamic analysis indicates a significant change in the intensity of competition during the period. Research has shown that the market has currently

¹ MSc, corresponding author: tijana.kalicanin@bba.edu.rs

² MSc

a group of few insurance companies that are leaders in the market and have significant share in total market. Market share of foreign-owned institutions in the analyzed period increased.

IMPLICATIONS

There is a group of insurance companies that are leaders in the market. In this context, it is unreal to expect significant changes in leadership positions in this market in the near future. The degree of concentration in the market is the result of entry and exit of companies and consolidation and merging or transformation of ownership. The question is, how these companies with majority foreign ownership will be able to maintain its market positions.

ORIGINALITY VALUE

The results of the analysis can be used to understand the position of users of insurance companies' services. Indicators of market concentration only reveal the potential of companies to use market power in order to increase prices and quality of provided services, but not the real power of market. Although very important, the concentration measured by these indicators represents only one characteristic of the market of the financial sector.

KEY WORDS

Insurance sector, competitiveness, concentration, financial sector

REFERENCES

1. Athanasoglou, P., Delis, M., & Staikouras, C. (2006). Determinants of bank profitability in the South Eastern European region.
2. Hanić, H., Kočović, M. & Jovović, M., (2012) Comparative analysis of insurance market concentration in Serbia, Croatia and Slovenia. In: Kočović, J., Jovanović Gavrilović, B., & Jakovčević, D. (Eds.), *Achieved Results and Prospects of Insurance Market Development in Modern World* (pp. 155-171), Beograd: Centar za izdavačku delatnost Ekonomskog fakulteta Univerziteta u Beogradu.
3. Hanić, H., Duran, E. & Hanić, A. (2015) Dynamic analysis of the concentration degree of the banking sector in Serbia. *4th International Scientific Conference "Economy of Integration" – "Challenges of Economy in Environment Under Crisis"*, Tuzla, December 3-5, In: Kozarević, E. & Okičić, J. (Eds.), *Proceedings* (pp. 57-71), Tuzla: Ekonomski fakultet.

BUSINESS AND APPLIED ECONOMICS

4. Ikonc, D., Arsic, N., & Milosevic, S. (2011). Growth Potential and Profitability Analysis of Insurance Companies in the Republic of Serbia. *Chinese Business Review*, 10(11).
5. Kaličanin, T., & Hanić, A. (2017). Comparative Analysis of Levels of Banking Sector Markets Concentration in CEE Region. *Economic Analysis*, 49(1-2), pp. 59-72.
6. Lang, L. H., & Stulz, R. M. (1994). Tobin's q, corporate diversification, and firm performance. *Journal of political economy*, 102(6), pp. 1248-1280.
7. Lipczynski, J., Wilson, J., & Goddard, J. (2005). *Industrial organization: competition, strategy, policy*. New York: Prentice Hall.
8. Maksimović, L., & Kostić, M. (2012). Limitations in the application of concentration indicators: Example of insurance market in Serbia, Croatia, Slovenia, Romania and Austria. *Ekonomika preduzeća*, 60(3-4), 199-205.
9. Mamatzakis, E., Staikouras, C., & Koutsomanoli-Fillipaki, N. (2005). Competition and concentration in the banking sector of the South Eastern European region. *Emerging Markets Review*, 6(2), pp. 192-209.
10. Miljković, M., Filipović, S., & Tanasković, S. (2013). Market concentration in the banking sector: Evidence from Serbia. *Industrija*, 41(2), pp. 7-25.
11. Tipurić, D., Pejić, M., & Pavić, T. (2008). Concentration of the insurance industry in selected transition countries of Central and Eastern Europe, 1998–2006. *Post-Communist Economies*, 20(1), pp. 97-118.

2.16. LEGISLATIVE REGULATIONS AND FINANCIAL FACTORS AS SIGNIFICANT FACTOR IN SCIENTIFIC PRODUCTION IN SERBIA

Jelena Ješić¹

Faculty of business economy, Educons University, Sremska Kamenica, Serbia

Andrea Andrejević Panić²

Faculty of business economy, Educons University, Sremska Kamenica, Serbia

OBJECTIVES

The main objective of this research is to show if legislative regulations and financial factors regulated by state institutions are a significant factor in selected indicators of scientific production. A special review will be dedicated to the number of completed research projects, number of published research papers, number of patents examined, number of registered patents, and number of inventions and patents sold.

METHODOLOGY

Research methodology used in this paper for testing the statistical significance for scientific production in the time before and after new legislations applied is the t test for independent samples. The selected indicators of scientific production in Serbia were observed in two time periods: 2006 - 2010 and 2010-2016. These two periods were selected because in 2010 amendments were made to the Law of Innovation Activity (2005, 2010 and 2013), Law of scientific and research development (2005, 2006 and 2010), Law of regional development (2009 and 2010) In this way, we wanted to examine whether the new legislation influenced the R&D community and the R&D production.

¹ PhD, corresponding author: jelena.jessic@educons.edu.rs

² PhD

RESULTS

After the conducted analysis, it can be seen that there is a statistically significant increase in the number of completed research projects, the number of published research papers, as well as the number of inventions and patents sold, respected to two time periods: 2006 - 2010., and 2010-2016. All values of arithmetic meanings have higher values for the period 2010-2016. Results show that legislative regulations by state institutions are a significant factor in the scientific production for two observed periods.

IMPLICATIONS

The relevance of resuming this research is in underlining the effects of adopting the legislations that are directly connected to scientific and research development in Serbia. New legislative by government positively influenced increasing the number of completed research projects, the number of published works, the number of inventions and patents sold. Entering the sphere of investigating governance of R&D policy, we could encourage additional investment in scientific research.

ORIGINALITY VALUE

The paper represents original research with discussion bases for scientific community in order to underline the influence of R&D policy and law adoption on scientific production. Also, it highlights the significant impact of government legislative framework and scientific environment on the scientific activities and outcomes, as well as identifying the inevitable problems that occur during the formation of these interactive relations.

KEY WORDS

Scientific production, R&D policy, high education, R&D indicators, Serbia, innovation, research development.

REFERENCES

1. Andrejević Panić, A. (2016). The impact of financial management on the development of non-profit organizations: case study of higher education institutions in Central-Eastern Europe. *Monographic documentation: textual printed material: doctoral dissertation, authorial reprint*, University Educons. Sremska Kamenica. pp. 1-380.

Part II

2. Andrejević Panić A., Ješić, J. (2016). *Mogućnosti primene principa četvorostrukog heliks modela u visokom obrazovanju*, Pravci strukturnih promena u procesu pristupanja Evropskoj uniji, Beograd: Institut ekonomskih nauka, pp. 280-293.
3. Gibbons, M, Limoges, C, Nowotny, H, Schwartzman, S, Scott, P, Trow, M. (1994). *The new production of knowledge. The dynamics of science and research in contemporary societies*. London: Sage.
4. Đuran, J., Galetin, M. (2010). *Savremeni trendovi razvoja naučnoistraživačke uloge univerziteta u uslovima tranzicije*, Prvi naučni skup sa međunarodnim učešćem – Poslovna ekonomija u tranziciji, Zbornik radova, Sremska Kamenica: Educons Univerzitet. pp. 101-112.
5. Ješić, J. (2016). Quadruple helix model as the basis of the national innovation system. *Monographic documentation: textual printed material: doctoral dissertation, authorial reprint*, Sremska Kamenica: University Educons. pp. 1-312.
6. Penezić, N., Đuran, J. (2010). *Fenomen akademskog preduzetništva*, Poslovna ekonomija, Sremska Kamenica: Univerzitet Educons. pp. 173-195.
7. Republika Srbija. "Sl. glasnik RS". (2005, 2010, 2013). *Zakon o inovacionoj delatnosti*. ("Sl. glasnik RS", br. 110/2005, 18/2010 i 55/2013).
8. Republika Srbija. "Sl. Glasnik RS". (2005, 2006). *Zakon o naučno-istraživačkoj delatnosti* ("Sl. Glasnik RS", br. 110/2005, 50/2006 - ispravka i 18/2010).
9. Republika Srbija. "Sl. Glasnik RS". (2009, 2010). *Zakon o regionalnom razvoju* ("Sl. Glasnik RS", br. 51/2009 i 30/2010).
10. Republika Srbija. "Sl. Glasnik RS". (2005, 2017, 2018). *Zakon o visokom obrazovanju*, ("Sl. glasnik RS", br. 76/2005, 88/2017 i 27/2018).

2.17. DO BUSINESS REGULATIONS PROMOTE GROWTH IN LOW-INCOME COUNTRIES?

Bogdan Dima¹

Faculty of Economics and Business Administration, West University of Timisoara, Timișoara, Romania

Ștefana Maria Dima²

East European Center for Research in Economics and Business (ECEB), Faculty of Economics and Business Administration, West University of Timișoara, Romania

OBJECTIVES

The present article addresses the complex web of interactions between the architecture and quality of the business regulatory setting and economic growth. Thus, we aim to advance a two-fold contribution to the literature: we account for the uncertainty related to possible alternative explanations for growth processes and we assess the impact of business environment on growth.

METHODOLOGY

First, we methodologically account for the uncertainty related to possible alternative explanations for growth processes by involving a ‘Bayesian Model Averaging’. Second, we assess the impact of business environment on economic growth. Even if a large body of literature employs World Bank’s Doing Business index, we see this measure as not immune to various criticisms. Hence, we involve other indicators for the quality of policies, namely the descriptors reflected by Country Policy and Institutional Assessment. These indicators benefit from a pronounced ‘in-field’ nature and reflect a large variety of possible public policies.

RESULTS

The results suggest a statistically significant positive relationship between the overall quality of business regulatory environment and growth. This outcome is found to be robust to various choices of priors’ structures. Moreover, the

¹ Professor PhD

² Senior Researcher PhD, corresponding author: stefana.dima@e-uvt.ro

outcome's estimated amplitude largely declines once the endogeneity is considered.

IMPLICATIONS

We consider the possibility that 'good' policies might compensate (up to a certain degree) for 'bad' institutions. Indeed, when a sub-sample of countries with lower levels of political participation and freedom of expression and association is considered, then the impact exercised by the quality of business regulations appears to be more pronounced.

Our findings provide an empirical support for the thesis that regulatory policies and their outcomes really matter in explaining growth.

ORIGINALITY VALUE

The originality resides in our two-fold contribution to the literature, based on the argument that both 'policies' and 'institutions' influence growth and, so, any model of policies' impact on growth cannot be 'context-free', it should account for the influence of the existing institutional surround. Though, while policies can be adjusted to 'short-run', institutions usually evolve on 'long-run'. During 'institutional adjustment' period, the social landscape can be substantially modified.

KEY WORDS

Economic growth, business regulations, CPIA, low-income countries, Bayesian Model Averaging

REFERENCES

1. Alesina, A., & Dollar, D. (2000). Who Gives Foreign Aid to Whom and Why? *Journal of Economic Growth*, 5(1), pp. 33–63. <http://doi.org/10.1023/a:1009874203400>
2. Alonso, J.A., & Garcimartín, C. (2013). The determinants of institutional quality. More on the debate. *Journal of International Development*, 25(2), pp. 206–226. <http://doi.org/10.1002/jid.1710>
3. Arruñada, B. (2010). How Doing Business jeopardises institutional reform. *European Business Organization Law Review*, 10(04), pp. 555–574. doi:10.1017/S1566752909005552

4. Beugelsdijk, S. (2010). Entrepreneurial culture, regional innovativeness and economic growth. In *Entrepreneurship and Culture* (pp. 129–154). doi:10.1007/978-3-540-87910-7_7
5. Djankov, S., McLiesh, C., & Ramalho, R.M. (2006). Regulation and growth. *Economics Letters*, 92(3), pp. 395–401. doi:10.1016/j.econlet.2006.03.021
6. Eicher, T.S., Papageorgiou, C., & Raftery, A.E. (2011). Default priors and predictive performance in Bayesian model averaging, with application to growth determinants. *Journal of Applied Econometrics*, 26(1), pp. 30–55. <http://doi.org/10.1002/jae.1112>
7. Feldkircher, M., & Zeugner, S. (2015). Bayesian Model Averaging Library. R package BMS, version 0.34. Retrieved from <https://cran.r-project.org/web/packages/BMS/BMS.pdf>
8. Feng, Y. (1997). Democracy, political stability and economic growth. *British Journal of Political Science*, 27(3), 391–418. doi:10.1017/S0007123497000197
9. Fernandez, C., Ley, E., & Steel, M. F. J. (2001). Benchmark priors for Bayesian model averaging. *Journal of Econometrics*, 100(2), pp. 381–427. [http://doi.org/10.1016/S0304-4076\(00\)00076-2](http://doi.org/10.1016/S0304-4076(00)00076-2)
10. Horvath, R. (2013). Does trust promote growth? *Journal of Comparative Economics*, 41(3), 777–788. doi:10.1016/j.jce.2012.10.006
11. Irwin, D. (2014). Doing business: Using ratings to drive reform. *Journal of International Development*, 26(5), 658–667. doi:10.1002/jid.2906
12. Islam, R., & Montenegro, C.E. (2002). What Determines the Quality of Institutions? Background Paper for the World Development Report 2002: Building Institutions for Markets, (January).
13. Jong-A-Pin, R. (2009). On the measurement of political instability and its impact on economic growth. *European Journal of Political Economy*, 25(1), 15–29. doi:10.1016/j.ejpolco.2008.09.010
14. Karl, A., Lenkoski, A., & Neudecker, A. (2015). Bayesian Instrumental Variable Estimation and Model Determination via Conditional Bayes Factors. R package ivbma, version 1.05. Retrieved from <https://cran.r-project.org/web/packages/ivbma/ivbma.pdf>
15. Kaufmann, D., Kraay, A., & Mastruzzi, M. (2015). Worldwide Governance Indicators. Retrieved from <http://info.worldbank.org/governance/wgi/index.aspx#home>
16. Kolko, J., Neumark, D., & Mejia, M.C. (2011). Public Policy, State Business Climates, and Economic Growth. NBER Working Papers. Retrieved from <http://www.nber.org/papers/w16968>
17. Moral-Benito, E. (2015). Model averaging in economics. *Journal of Economic Surveys*, 29(1), pp. 46–75. <http://doi.org/10.1111/joes.12044>
18. Morris, R., & Aziz, A. (2011). Ease of doing business and FDI inflow to Sub-Saharan Africa and Asian countries. *Cross Cultural Management: An International Journal*, 18(4), 400–411. <http://doi.org/10.1108/13527601111179483>

Part II

19. World Bank (2014).CPIA 2014 criteria. Washington, D.C.: World Bank Group. Retrieved from <http://documents.worldbank.org/curated/en/2015/06/24698216/cpia-2014-criteria>
20. World Bank. (2015). World Development Indicators 2015.World Bank.doi:10.1596/978-0-8213-7386-6

2.18. RESEARCH OF THE ECONOMIC EFFECTS OF INVESTMENT IN HYDROELECTRIC POWER PLANTS IN THE REPUBLIC OF SERBIA AND BOSNIA AND HERZEGOVINA

Zdravko Bijelić¹

IROE LOGOS CENTER in founding, Novi Sad, Serbia

Dragan Miletic²

"Center for Young Talents" Foundation, Novi Sad, Serbia

OBJECTIVES

Investment in the production of electricity is a chance for the development of the Republic of Serbia and Bosnia and Herzegovina. The Republic of Serbia and Bosnia and Herzegovina dispose of the unused hydropower potential for the construction of new hydropower plants of optimal capacity. The primary objective of this research is to show that it is economically justified to invest into hydroelectric plants where electricity could be produced for export into the industrialised European countries.

METHODOLOGY

In this research the following scientific research methods are used: observation in order to establish the existing state and assess the development possibilities; comparative method as a function of comparing the state of reference in the early 1970s with the current situation. In the research the mathematical modelling, statistical analysis, and contemporary methods for investment decision making, induction and deduction, and econometric measurement of the obtained results.

RESULTS

Conducted investigations point put that the utilization rate of hydro-energetic potentials is approximately 30 % of the total available potential in both countries.

¹ Full-Time Professor

² PhD, corresponding author: dragan.miletic@cmt.edu.rs

In Republic of Serbia three river flows represent 80% of the total hydro-energetic potential, while in Bosnia and Herzegovina this share is about 90%. Obtained results indicate that the production of significant surpluses of electric energy for export to the regional markets and European Union is possible. This production would be profitable and price competitive.

IMPLICATIONS

Based on the long-term forecast, the paper shows that the investment in the hydropower sector will have a positive impact on stimulating the development of the industry based on new technological knowledge. Also, the development of the industry for technological and control equipment for the hydroelectric plants will result in the development of the SME, development of entrepreneurship, introduction of innovations and employment of highly educated professionals.

ORIGINALITY VALUE

The original scientific and research value of the paper lies in the knowledge that it is necessary to make a discrete developmental leap in the hydropower sector as a generator of the integrated growth and development of the Republic of Serbia and Bosnia and Herzegovina.

KEY WORDS:

Investment, investment efficiency, hydroelectric power, systemic development, industrialization, entrepreneurship, innovation, employment

REFERENCES

1. Baković, M. & Popović, Z. (2012). Matematičko modeliranje i optimizacija. Beograd: Ekonomski fakultet.
2. Bijelić, Z. & Milanović, B. (2011). Proizvodni i uslužni menadžment. Novi Sad: Prometej.
3. Bijelić, Z., Milanović, B. & Bijelić, M. (2017). Integrisana nauka i integrisane poslovne studije u funkciji integrisanog razvoja. Zbornik radova: Međunarodni naučni skup: Nauka & Praksa, (pp.104-117). Banja Luka.
4. Bijelić, Z. & Cvijić, M. (2012). Own production technology as a key out of poverty. Proceedings: The Third Scientific International Conference Capitalism in Transition (pp. 181-190). Belgrade: Higher Educational Institution for Applied studies of Entrepreneurship.

5. Bijelić, Z., Milanović, B. & Novaković, S. (2017). Matematička optimizacija efikasnosti i rizika investicionog projekta. Zbornik radova Međunarodne naučne konferencije Inovacijama do održivog razvoja (pp. 164–172). Novi Sad: Univerzitet privredna akademija, Beograd: Fakultet MEF.
6. Bijelić, Z., Milanović, B. & Novaković, S. (2017). Znanjem do intenzivnog rasta i razvoja proizvodnje električne energije. Zbornik radova Međunarodne naučne konferencije Inovacijama do održivog razvoja (pp. 173–184). Novi Sad: Univerzitet privredna akademija, Beograd: Fakultet MEF.
7. Dakić, P., Dakić, V. & Ratković, Ž. (2011). Hidroenergetski potencijal Republike Srpske. In Jakupović, E. (ed.), *Proceedings of the International Scientific Conference Renewable Energy Sources and Sustainable Development* (pp. 143–147). Banja Luka: Pan-European University Apeiron.
8. Horvat, B. (2007). *Dinamičan ekonomski razvoj*. Beograd: Evropski centar za mir i razvoj (ECDP).
9. Madžar, Lj. & Jovanović A. (1995) *Osnovi teorije razvoja i planiranja*. Beograd: Savremena administracija.
10. Miletić, D. (2014). Cash flow statement: Assessment of situation and application problems in Serbia. *Industrija*, 42(4), 99-114.
11. Miletić, D. (2015). Uticaj sektorske pripadnosti na tokove gotovine preduzeća u Republici Srbiji. *Revizor*, 18(72). 91-102.
12. Miletić, D., Milojević, M. & Jović, Z. (2015). Strategije upravljanja gotovinom kao dobra praksa u globalnom poslovanju. *Proceedings of the Singidunum University International Scientific Conference Contemporary financial management* (pp. 177–181). DOI: <http://dx.doi.org/10.15308/finiz-2015-177-181>
13. Stojaković, D. (1977). *Matematičke metode u ekonomiji*. Beograd: Ekonomski fakultet.
14. Urošević, B. & Božović, M. (2009). *Operaciona istraživanja i kvantitativne metode investicija*. Beograd: Ekonomski fakultet.

2.19. ANALYSIS OF THE EFFICIENCY OF HIGHER EDUCATION SECTOR IN THE CENTRAL EASTERN EUROPE

Andrea Andrejević Panić¹

University Educons, Faculty of Business Economics, Sremska Kamenica, Serbia

Simonida Vukadinović²

University Educons, Faculty of Business Economics, Sremska Kamenica, Serbia

OBJECTIVES

Efficiency of higher education sector has been main generator of innovative activity in knowledge base economies. Countries in the Central Eastern Europe are struggling with national budgetary optimization and allocation of government expenditures. The main objective is the analysis of selected higher education indicators in selected countries. The aim is formulating financial models for prediction of the behavior of the selected performance indicator, depending on selected financial indicators.

METHODOLOGY

The data and results presented here are the part of the broader research given in PhD thesis. Data and sampling are based on higher education indicators presented in the thesis and selected from UNESCO Institute of statistics database according to four different criteria groups: Participation; Completion; Financial Resources; Human Resources. In this paper, it will be presented financial model for one selected dependent variable or performance indicator (number of graduate students or abbrev. Graduates) in relationship with one independent variable or financial indicator (government expenditure on research and development as % GDP or abbrev. GERD). The sample includes the data collected for five selected countries of the region of Central and Eastern Europe: Bulgaria, Hungary, Romania, Slovakia, Serbia. The data is unbalanced and collected for the period of

¹ PhD, corresponding author: andrea.andrejevic@educons.edu.rs

² PhD

2002-2012. Statistical analysis that was used for collected data is cross-correlation time series and regression with time lagging.

RESULTS

The financial indicators according to the financial resources criteria presents government expenditures. Performance indicators from the remaining three criteria groups represent output in higher education sector. The results in this paper presents the cross correlation analysis of one dependent and independent variable for Romania. Financial model evaluates the functional link of number of graduates based on government expenditure on research and development, at time intervals of several years.

IMPLICATIONS

These financial model formulations are focused on the needs for the analysis to make macro-level assessments decisions. Financial models are comprehensive and provides insight into the influence of multiple factors and their impact at the national levels in different countries. These models could be key factor in efficient allocation of funds depending on structure of the higher education sector. This could be of great importance to policy makers, institutional governance and other stakeholders.

ORIGINALITY VALUE

The scientific contribution is possibility of using developed models for obtaining a clearer definition of governmental and national goals in higher education sectors as well as providing a clearer explanation of the measures taken in creating education policy reforms. Further research may include more performance indicators that could tackle capacity building and efficiency in higher education sector.

KEY WORDS

Higher education sector, the efficiency, government expenditures, performance indicators, CEE region

REFERENCES

1. Andrejević Panić, A. (2015). Analysis of compliance of higher education with the labor market with the implementation of the Europe 2020 strategy. *Monograph: Structural changes in Serbia*, Institute of Economic Sciences. Belgrade, pp. 416-430.
2. Andrejević Panić, A. (2016). The impact of financial management on the development of non-profit organizations: case study of higher education institutions in Central-Eastern Europe. *Monographic documentation: textual printed material: doctoral dissertation, authorial reprint*, University Educons. Sremska Kamenica, pp. 1-380.
3. Education, Audiovisual and Culture Executive Agency, EACEA. (2011). *Modernisation of Higher Education in Europe 2011: Funding and the Social Dimension*. Eurydice. European Commission.
4. European Commission. (2012). Rethinking Education: Investing in skills for better socio-economic outcomes. *Communication from the Commission to the European Parliament, the Council, the European economic and social committee and the Committee of the regions*.
5. European Commission, EACEA and Eurydice. (2012). *Funding of Education in Europe 2000–2012: The Impact of the Economic Crisis*. Luxembourg: Publications Office of the European Union. Eurydice Report.
6. Kennedy, P. (2008). *A Guide to Econometrics* (6th ed.). Malden. MA: Blackwell Publishing.
7. Park, H. M. (2011). *Practical Guides To Panel Data Modeling: A Step by Step Analysis Using Stata*. PhD. Public Management & Policy Analysis Program. International University of Japan.
8. StataCorp. (2017). *Stata - Statistical Software: Release 15* (free trial). College Station. TX: StataCorp LLC.
9. UNESCO Institute for Statistics (UIS). (2015). *Thematic Indicators to Monitor the Education 2030 Agenda*. Technical Advisory Group Proposal: Education 2030. UNESCO.
10. Vukadinović, S. (2016). Employment as a factor of economic development of The Republic of Serbia. *Monographic documentation: textual printed material: doctoral dissertation, authorial reprint*, pp. 1-293. University Educons. Sremska Kamenica.

2.20. CAN MIGRATION REDUCE THE POSITIVE EFFECT OF INVESTMENTS IN EDUCATION? EVIDENCE FROM EUROPEAN UNION

Aleksandar Jovičić¹

Fidelity National Information Services, Belgrade, Serbia

Ljubiša Stamatović²

PSP-Farman Holding, Belgrade, Serbia

OBJECTIVES

The normally positive correlation between investment in education and economic growth may be affected by the migration of the educated workforce. An analysis of CEE countries recently admitted into the EU shows that, following the admission, educated people tend to migrate into developed EU member states. We show that the high level of migration may devalue the positive effects of investment in education. We provide recommendations for the public and private sectors of the Republic of Serbia.

METHODOLOGY

The introduction will present the literary review while the paper will be based on the statistical approach. The official annual time series of data related to economic growth, employment, research and development and education sourced from the UNESCO and Eurostat will be analyzed. Data on 36 European countries covering the period from 2000 to 2016 will be examined. Comparisons will be made between two groups: developed countries and less developed countries from Central and Eastern Europe. In the statistical methodology section, we will use bivariate parametric and non-parametric analysis, ANOVA and multiple linear regression analysis. In the econometric methodology section, we will apply panel unit root tests, panel cointegration tests and fully-modified

¹ MBA, corresponding author: jovicicaleksandar@yahoo.com

² MSc

ordinary least squares model. The unknown parameters estimates will be tested at a significance level of 0.05.

RESULTS

Firstly, results have confirmed that investment in R&D and investment in education both enhance economic growth and employment in the context of observed countries in the specified timeframe. Secondly, empirical study supported the complex central hypothesis, that the degree of positive correlation between investments in education and R&D and economic growth and employment significantly decreases following admission to the EU.

IMPLICATIONS

Migrations of educated people have different implications depending on the perspective. Serbian employees will migrate from Serbia searching for a higher salary. The Serbian budget should modify the education policy by investing more in areas where migration is less likely to happen and vice versa. Developed EU countries will profit as they obtain a qualified workforce for free while employees in the developed countries will suffer due to decreased salaries caused by migration.

ORIGINALITY VALUE

While most authors recommend unconditionally continuing with investments in education, this paper suggests the opposite: the state may suffer significant losses as a result of the "brain drain." We challenge the mainstream policies aiming to avoid the unfortunate mistakes of peer CEE countries over the last two decades. The benefit of education is examined in the context of current migration tendencies and the resulting "brain drain."

KEY WORDS

Migration impacts, east-west migration, education, workforce relocation, economic growth, EU enlargement

REFERENCES

1. Van Mol, C., Snel, E., Hemmerechts, K., Timmerman, C., *Migration aspirations and migration cultures: A case study of Ukrainian migration towards the European Union*, Population, Space and Place, 2017.

BUSINESS AND APPLIED ECONOMICS

2. Daniel, E., Di Domenico, M. L., Nunan, D., *Virtual Mobility and the Lonely Cloud: Theorizing the Mobility-Isolation Paradox for Self-Employed Knowledge-Workers in the Online Home-Based Business Context*, Journal of Management Studies, Volume 55, Issue 1, 2017.
3. Ejermo, O., Schubert, T., *Do Higher Wages Reduce Knowledge Worker's Job Mobility? Evidence for Swedish Inventors*, Journal of Management Studies, Volume 55, Issue 1, 2017.
4. Zubović J., Reljić M., Novivić B., Jeločnik M., *Importance of investments in science and technology in Serbia and SEE countries*, 2013.
5. James., Al., *Recentering Regional Learning*, Work-Life Advantage: Sustaining Regional Learning and Innovation, 2017.
6. Pegkas, P., *The Link between Educational Levels and Economic Growth: A Neoclassical Approach for the Case of Greece*, International Journal of Applied Economics, 11(2), 2014, pp. 38-54
7. Sandu, D., Toth, G., Tudor, E., *The nexus of motivation–experience in the migration process of young Romanians*, Population, Space and Place, Volume 24, Issue 1, 2017.
8. Quijada, J. A., Sierra, J. D., *Understanding Undocumented Migration from Honduras*, International Migration, 2018.
9. Wright, M., Tartari, V., Huang, K. G., Di Lorenzo, F., Bercovitz, J., *Knowledge Worker Mobility in Context: Pushing the Boundaries of Theory and Methods*, Journal of Management Studies, Volume 55, Issue 1, 2017.

2.21. BOOTSTRAP PANEL CAUSALITY ANALYSIS OF RELATIONSHIPS BETWEEN FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH IN EMERGING MARKETS

Ayşegül Akça¹

Anadolu University, FEAS, Department of Economics, Eskişehir Turkey

Mustafa Özer²

Anadolu University, FEAS, Department of Economics, Eskişehir Turkey

OBJECTIVES

In this study, we investigate the causal relations between indicators of financial development and economics in Turkey, Russia, China, India and Brazil by using annual panel time series data over the period of 2001-2016.

METHODOLOGY

Cross sectional dependence tests, slope homogeneity tests, and Konya Bootstrap Granger Panel causality test.

RESULTS

The results of the study indicate that depending on the financial development indicators there are evidences of existence of the causal relations between economic growth and financial development indicators. Especially, when we use domestic credit/GDP ratio, we found the evidences of existence of Granger causality from domestic credit/GDP ratio to GDP growth except Turkey. But, the sign of the causal relations differs across the countries in the sample for each indicator.

IMPLICATIONS

Implications of the results will differ across the countries. For example, for China, most of the indicators suggest inverse relationship between economic growth and

¹ Research Assistant,

² PhD, corresponding author: muozer@anadolu.edu.tr

financial development. Thus, the countries should adopt different policies to promote the financial development.

ORIGINALITY VALUE

To the best of our knowledge, this is the first attempt testing the financial development economic growth nexus by using this method for these countries.

KEY WORDS

Cross-sectional dependence, slope homogeneity, financial development, Bootstrap panel causality

REFERENCES

1. Breusch, T. S. and Pagan, A. R. (1980). The lagrange multiplier test and its applications to model specification in econometrics. *The Review of Economic Studies*, 47(1), pp. 239-253.
2. Hermes, N. and Lensink, R. (2010). Foreign direct investment, financial development and economic growth. *The Journal of Development Studies*, 40:1, pp. 142-163, DOI: 10.1080/00220380412331293707
3. Hsueh, S. J., Hu, Y.H. and Tu, C.H. (2013). Economic growth and financial development in Asian countries: A bootstrap panel Granger causality analysis. *Economic Modelling*, 32, 294-301.
4. Kónya, L. (2006). Exports and growth: Granger causality analysis on OECD countries with a panel data approach. *Economic Modelling*, 23(6), pp. 978-992. doi: 10.1016/j.econmod.2006.04.008
5. Liang, Q. and Teng, J.Z. (2006). Financial development and economic growth: Evidence from China. *China Economic Review*, 17, pp. 395-411.
6. Mutascu, M. (2016). A bootstrap panel Granger causality of energy consumption and economic growth in the G7 countries. *Renewable and Sustainable Energy Reviews*, 63, pp. 166-171.
7. Pesaran, M. H. (2004). General diagnostic tests for cross section dependence in panels. Cambridge: Faculty of Economics, University of Cambridge. Cambridge Working Papers in Economics No: 0435.
8. Pesaran, M. H. and Yamagata, T. (2008). Testing slope homogeneity in large panels. *Econometrics*, 142, pp. 50-93.
9. Pesaran, M. H., Ullah, A. and Yamagata, T. (2008). A bias-adjusted LM test of error cross-section independence. *Economet. J.*, 11, pp. 105-127.
10. Samargandi, N., Fidrmuc, J. and Ghosh, S. (2015). Is the relationship between financial development and economic growth monotonic? Evidence from a sample of middle-income countries. *World Development*, 68, pp. 66-81.

Part II

11. Yousif, Y.K. (2002). Financial development and economic growth another look at the evidence from developing countries. *Review of Financial Economics*, 11. pp. 131-150.

2.22. THE INFLUENCE OF EDUCATION LEVEL ON ECONOMIC GROWTH IN CEE REGION

Tijana Kaličanin¹

Belgrade Banking Academy, Belgrade, Serbia

Milica Bugarčić²

Belgrade Banking Academy, Belgrade, Serbia

OBJECTIVES

One of the basic authors' reasons for expecting to find the link between education and economic growth is that people with higher education level will have higher income. Gross domestic product as a measure of economic growth is the monetary value of all the finished goods and services produced within a country's borders in a specific time period. We believe that higher education level of the individual can ensure higher living salary and standards, which will furthermore influence higher gross domestic product.

METHODOLOGY

In this paper authors used linear regression analysis in order to measure the influence of the education level on the economic growth in the CEE region. Panel data includes variable values from 2000 to 2016 for sixteen selected countries in CEE region. We divided the countries of the CEE region according to the IMF classification to developed and emerging countries. The research was carried out on two panels, one panel includes ten developed countries of the CEE region, while other includes six emerging countries. GDP per capita in our model represents economic growth. Accordingly, using regression analysis, the aim is to measure influence of the education level as the independent variable on GDP per capita, as dependent variable. As independent variables our linear regression model includes School enrollment - primary, school enrollment - secondary and school enrollment – tertiary. Besides, two control variables are included in the

¹ MSc

² MSc, corresponding author: milica.bugarcic@bba.edu.rs

model: labor force participation rate, total (% of total population ages 15-64) and research and development expenditure (% of GDP).

RESULTS

The results of our research show that in the developed countries of the CEE region, all explanatory variables that we included in the model are statistically significant. We can say that primary, secondary and higher education have impact on GDP per capita. Also, our control variables (labor force participation rate, total (% of total population ages 15-64) and research and development expenditure (% of GDP)) are significant. On the other hand, in emerging countries of the CEE region, including Serbia, education level has impact on GDP per capita, with one exception, higher education has no impact on economic development in emerging countries, while primary and secondary education have.

IMPLICATIONS

Authors believe that along with physical capital, human capital is one of the leading factors that can influence economic growth. Not only with a higher level of technology and investments in physical capital but also with a higher level of knowledge and education of human capital, countries can improve production results. Thus, better production results will influence the higher level of gross domestic product. The results of the research presented in this paper can be helpful for policy makers and company managers.

ORIGINALITY VALUE

In this paper authors tried to measure the influence of the education level on economic growth. As long as there is statistically significant influence, the scientific contribution of the paper is to point out the importance of the human capital and show that it can affect sustainable development. Education as a key factor in the development and competitiveness of modern economies, plays an essential role in the socio-economic development of economy and society.

KEY WORDS

Education level, GDP, economic growth, knowledge, skills

REFERENCES

1. Acemoglu, D., Johnson, S., Robinson, J. A., & Yared, P. (2005). From education to democracy?. *American Economic Review*, 95(2), pp. 44-49.
2. Asteriou, D., & Agiomirgianakis, G. M. (2001). Human capital and economic growth: time series evidence from Greece. *Journal of Policy Modeling*, 23(5), pp. 481-489.
3. Barro, R. J. (2000). *Education and economic growth*. Mimeo, Harvard University. Boyle, M. H., Racine, Y., Georgiades, K., Snelling, D., Hong, S., Omariba, W. & Rao-Melacini, P. (2006). The influence of economic development level, household wealth and maternal education on child health in the developing world. *Social science & medicine*, 63(8), pp. 2242-2254.
4. Boyle, M. H., Racine, Y., Georgiades, K., Snelling, D., Hong, S., Omariba, W. & Rao-Melacini, P. (2006). The influence of economic development level, household wealth and maternal education on child health in the developing world. *Social science & medicine*, 63(8), pp. 2242-2254.
5. Brown, D. S., & Hunter, W. (2004). Democracy and human capital formation: education spending in Latin America, 1980 to 1997. *Comparative Political Studies*, 37(7), pp. 842-864.
6. Busemeyer, M. R. (2007). Determinants of public education spending in 21 OECD democracies, 1980–2001. *Journal of European Public Policy*, 14(4), pp. 582-610.
7. Halsey, A. H., Heath, A. F., & Ridge, J. M. (1980). *Origins and destinations: Family, class, and education in modern Britain*. Clarendon Pr.
8. Krueger, A. B., & Lindahl, M. (2001). Education for growth: Why and for whom?. *Journal of economic literature*, 39(4), pp. 1101-1136.
9. Michalos, A. C. (2017). Education, happiness and wellbeing. In *Connecting the Quality of Life Theory to Health, Well-being and Education*, Springer, Cham, pp. 277-299..
10. Nurudeen, A., & Usman, A. (2010). Government expenditure and economic growth in Nigeria, 1970-2008: A disaggregated analysis. *Business and economics journal*, 2010(4), pp. 1-11.
11. Rahman, M. M. (2011). Causal relationship among education expenditure, health expenditure and GDP: A case study for Bangladesh. *International Journal of Economics and Finance*, 3(3), 149.
12. Stasavage, D. (2005). Democracy and education spending in Africa. *American journal of political science*, 49(2), 343-358.
13. Stevens, P., & Weale, M. (2004). Education and economic growth. *International handbook on the economics of education*, 27, pp. 205-311.

2.23. FARMERS' PROFIT MAXIMIZATION USING THE PRODUCTION FUNCTION

Boris Kuzman¹

Institute of Agricultural Economics, Belgrade, Republic of Serbia

Radivoj Prodanović²

Faculty of Economics and Engineering Management in Novi Sad, Novi Sad, Republic of Serbia

OBJECTIVES

The objective of the paper is to examine, on the basis of empirical data, the influence of the quantity of nitrogen fertilizer (urea) on the yield of corn, i.e. modelling a production function that will help managers in making quality decisions, such as the use of an optimal level of inputs in agricultural production. By applying the appropriate methodological procedure, it is possible to approximately quantify the amount of input and output, which will provide maximum profit on farms.

METHODOLOGY

The research uses mathematical analysis and modelling, experimental method, observation, regression and correlation, abstraction and generalization, logic and other general scientific methods. For the purposes of modelling the production function, an experiment of 7 identical parcels was set up, i.e. parcels of equal areas, of the same class and type of land, of the same applied agro-technology, protection and quantity of work, to make the obtained result as convincing as possible. The only difference is quantity of applied fertilizer (urea), so it was not used on the first plot, 48.4 kg was used on the second plot, the third one was 96.8 kg, the fourth one was 145.2 kg, the fifth one was 193, 6 kg, on the sixth - 242 kg and on the seventh plot - 290.4 kg. When modelling the production function, only economic factors are taken into account. For more serious analysis and research it

¹ PhD Research Associate, corresponding author: kuzmanboris@yahoo.com

² PhD Assistant Professor

is necessary to include ecological factors because they can have a very large, if not decisive impact on the management of agricultural production.

RESULTS

The correlation dependence of the amount of nitrogen fertilizer used (urea) and corn yield is a simple example of a production function with one input and one output. The resulting production function can be expressed by the equation: $y = -9 \cdot 10^{-5}x^2 + 0,0442x + 3,3149$

Maximum yield of corn (8,742 t/ha) is achieved with the applied amount of nitrogen fertilizer of 245.55 kg. The economically rational field of production is between 191.91 and 254.55 kg/ha of the applied amount of fertilizer. Maximum profit is realized using 235 kg/ha of nitrogen fertilizer.

IMPLICATIONS

The practical application of the production function is obtained by evaluating physical outputs and inputs at market prices. The difference in the market value of physical outputs and inputs is profit. Determining the economically rational area of agricultural production, and determining the point of maximum profit is possible by the application of the production function. Knowing the features of the production function allows the manager to plan production within the limits in which his profit will be largest. All the basic assumptions that have been proven for the production function with one input and one output can be applied to other types of production functions (with multiple inputs and multiple outputs).

ORIGINALITY VALUE

The research that resulted in the creation of a production function in corn production has a scientific connotation, as it gives results whose application can significantly improve the economy of farms. The ecological aspect of production involves the use of as little nitrogen fertilizer as possible. Knowing production function will eliminate the amount of fertilizer that does not result in higher value through the marginal product, than the value of the marginal input used.

KEY WORDS

Production function, farm, nitrogen fertilizer, corn, profit maximization

REFERENCES

1. Battese, G.E. (1992). Frontier production function and technical efficiency: A survey of empirical applications in agricultural economics, *Agricultural Economics*, Elsevier Science, Amsterdam, vol. 7, pp. 185 - 208.
2. Bravo-Uerta, B. E. (1994). Efficiency in agricultural product: The case of peasant farmers in eastern Paraguay, *Agricultural Economics*, 10, pp. 27 - 37.
3. Caves, R.E. & D.R. Barton (1990). *Technical Efficiency in U.S. Manufacturing Industries*. MIT Press, Cambridge, MA.
4. Debertin, D.L. (2012). *Agricultural Production Economics* (second edition 2012.), McMillan Publishing Companu, NJ, USA.
5. Farrell, M.J. (1957). The Measurement of Productivity Efficiency, *Journal of the Royal Statistical Society*, London, UK, vol. 120, no. 3, pp. 253 - 290.
6. Ferguson, C.E. (1969). *The Neoclassical Theory of Production and Distribution*. London: Cambridge University Press.
7. Halter, A.N, Carter H. O. & Hocking J. G. (1957). A Note on the Transcendental Production Function. *Journal of Farm Economics*, vol. 39, pp. 966 - 974.
8. Halter, A.N. & G.L. Bradford. (1959). Changes in Production Functions with Weather Adjustments on Western Kentucky Farms. Progress Report 84. Kentucky Agricultural Experiment Station.
9. Kopp, R.J. & V.K. Smith (1980). Frontier production function estimates for steam electric generation: a comparative analysis. *South. Econ. J.*, vol. 47. pp. 1049-1059.
10. Raynolds, L.R. (2005). *Basic Microeconomics*, Part two, Chepter 12., Boise State University, Idaho, USA, pp. 1 - 9.
11. Stanković, J., Ralević, R. N. & Ljubenović-Ralević, I. (1989). Statistika sa primenom u poljoprivredi, *Savremena administracija*, Beograd, pp. 257 - 328.

2.24. EVALUATING MONETARY POLICY RESPONSE FUNCTION - THE CASE OF SERBIA

Milena Lazić¹

Belgrade Banking Academy, Belgrade, Serbia

OBJECTIVES

Taking into account that the efficiency of traditional monetary policy transmission channel depends on whether the changes in course of monetary policy have been anticipated by market participants as well as on market expectations about the future monetary policy actions, the subject of this paper is the evaluation of monetary policy response function for Serbia in period Jan 2009 – Dec 2017. The main objective is to estimate the course of monetary policy in the reference period as well as to calculate to which parameters within the function was given greater importance over time.

METHODOLOGY

In the last couple of years in the area of monetary theory, it has become usual to compare the actual setting of key interest rates by central banks to what would be estimated by the usage of Taylor rule instead. Furthermore, it is widely accepted that Taylor rule adequately describes the way of conducting monetary policy in the countries that have implemented inflation targeting as a monetary policy regime. With that regard, in this study extended Taylor rule and the standard open economy reaction function were used to test whether National bank of Serbia reacts to inflation, output gap and exchange rate in a consistent and predictable manner. A time-varying parameter VAR (TVP VAR) methodology was applied. All parameters in the VAR specification were assumed to follow the first-order random walk process. Beside the econometric analysis, standard desk research procedure of collecting secondary data and its analysis was conducted.

¹ Teaching Assistant, e-mail: milena.lazic@bba.edu.rs

RESULTS

The results of the conducted research show that the National bank of Serbia has adjusted key interest rate by small steps during the reference period. Since May, 2013 NBS has conducted expansionary monetary policy by lowering key interest rate as the response to the Global economic crisis and the reduction in aggregate demand. Furthermore, the exchange rate still plays dominant role in conducting monetary policy in Serbia especially taking into account the high level of dollarization of the domestic economy.

IMPLICATIONS

The analysis conducted in this research is primarily intended for the policy makers. Furthermore, the evaluation of the monetary policy response function has significant implications on those market participants who are engaged in the prediction of future changes of interest rates, because it dominantly affects their profit margins. It also affects the enterprises and Government's decisions from the point of optimizing their borrowing policy in the forthcoming period.

ORIGINALITY VALUE

The vast majority of contemporary central banks function within the inflation targeting regime with the key interest rate as their operating target. Therefore, the scientific contribution of the paper is to emphasize the importance of the rules vs discretion in conducting the monetary policy as well as to point out the significance of its transparency and predictability to market participants.

KEY WORDS

Response function, key interest rate, transmission mechanism, inflation targeting, Taylor rule, exchange rate, Serbian economy

REFERENCES:

1. Arestis, P., & Sawyer, M. (2008). New Consensus Macroeconomics and Inflation Targeting: Keynesian critique. *Economia e Sociedade*, Campinas, v. 17, Numero Especial, pp. 631-655.
2. Bernanke, B. S., Laubach, T., Mishkin, F. S., & Posen, A. S. (2001). *Inflation Targeting*. New Jersey: Princeton University Press.
3. Bernholz, P. (2003). *Monetary Regimes and Inflation - History, Economic and Political Relationships*. Cheltenham: Edward Elgar Publishing Limited.

4. Domazet, I., Lazić, M., Hanić, H. (2014). Foreign exchange rate as a factor to improve the business environment: the case of Serbia, In: Angelov, B., Jurlina Alibegović, D., Redžepagić, S. Ed. "Contemporary Trends and Prospects of Economic Recovery", Nica, pp. 395 – 410.
5. Fabris, N., & Galić, J. (2016). Ciljanje inflacije u zemljama sa dvovalutnim režimima. *Ekonomska politika Srbije u 2016. godini* (pp. 343-354). Beograd: CID Ekonomskog fakulteta u Beogradu.
6. Ferguson, N. (2014). Central bank rules in historical perspective. *Journal of Economic Dynamics & Control*, pp. 156-159.
7. Fisher, I. (1912). *The Purchasing Power of Money*. New York: The Macmillan Company.
8. Goodfriend, M. (2014). Lessons from a century of Fed policy: why monetary and credit policies need rules and boundaries. *Journal of Economic Dynamic & Control* 49, pp. 112-120.
9. Hale, G., & Philippov, A. (2015). *Is Transition to Inflation Targeting Good for Growth?* San Francisco: Federal Reserve Bank of San Francisco.
10. Hammond, G. (2012). *State of the Art of Inflation Targeting - 2012, Handbook - No.29*. London: Centre for Central Banking Studies, Bank of England.
11. Heenan, G., Peter, M., & Roger, S. (2006). *Implementin Inflation Targeting: Institutional Arrangements, Target Design, and Communications*. Washington: International Monetary Fund, WP/06/278.
12. King, M. (2005, Maj 17). *Monetary Policy: Practice Ahead of Theory*. Preuzeto sa Bank of England: <http://www.bankofengland.co.uk/archive/Documents/historicpubs/speeches/2005/speech245.pdf>
13. Laurens, B. J., Eckhold, K., King, D., Maehle, N., Naseer, A., & Durre, A. (2015). *The Journey to Inflation Targeting: Easier Said than Done, The Case for Transitional Arrangements along the Road*. Washington: International Monetary Fund, WP/15/136.
14. Mohanty, M. S., & Klau, M. (2004). *Monetary policy rules in emerging market economies: issues and evidence*. Basel: Bank fo International Settlement.
15. Nakajima, J. (2011). *Time-Varying Parameter VAR Model with Stochastic Volatility: An Overview of Methodology and Empirical Applications*, IMES Discussion Paper Series, Bank of Japan: Institute for Monetary and Economic Studies.
16. Svensson, L. E. (2002). *Inflation Targeting: Should it be Modeled as an Instrument Rule or a Targeting Rule?* *European Economic Review*, vol. 46(4-5), pp. 771-780.
17. Taylor, J. B. (1993). *Discretion versus policy rules in practice*. Crnegie-Rochester Conference Series on Public Policy 39 (str. 195-214). North-Holland: Elsevier Science Publishers B.V.
18. Totonchi, J. (2011). *Macroeconomic Theories of Inflation*. International Conference on Economics and Finance Research, IPEDR vol. 4, pp. 459 - 461. Singgapoore: IACSIT Press.

Part II

19. Vilaret, S., Pješčić, V., & Đukić, M. (2009). Osnovne karakteristike i dosadašnje iskustvo Srbije u sprovođenju strategije ciljanja inflacije. *Bankarstvo* 5-6, pp. 52-71.
20. Woodford, M. (2008). How Important is Money in the Conduct of Monetary Policy? *Journal of Money, Credit and Banking*, Vol. 40, No. 8, pp. 1561 - 1598.

2.25. POST-TRANSITIONAL DEVELOPMENT IN THE SOUTHEAST EUROPE BANKING INDUSTRIES

Srđan Marinković¹

University of Niš, Faculty of Economics, Niš, Serbia

OBJECTIVES

This is an empirical analysis of the SEE banking sectors' performances. The region has common economic and historical heritage. A modern system of banking intermediation was built on the foundations of the collapsed central-planning or market model of socialism. Opening towards foreign bank capital was the main transformation engine. Therefore, in the similarities and differences we can notice specific constraints in the development and the impact of different choices in economic policy.

METHODOLOGY

We analyzed the dynamics of the development of the Southeast Europe banking industry, on the basis of trends in total assets, profitability, solvency and asset quality. Due to the limited availability of data, a detailed analysis is narrowed down to a sample of five countries: Bosnia and Herzegovina, Bulgaria, Croatia, Romania and Serbia. For other countries in the region, data were not available to the extent that allows the same methodology to be applied. However, we also investigated the banking systems of the FYR of Macedonia, Montenegro and Albania in order to make the geographical coverage as complete as possible. For most of the indicators data are collected for a period of last fifteen years. This way, this primary comparative analysis gives a solid basis for monitoring the dynamics, for periodization of development and identification of characteristic trends. The analysis clearly distinguishes the period of intense growth and the subsequent period of stagnation.

¹ PhD, e-mail: srdjan.marinkovic@eknfak.ni.ac.rs

RESULTS

The countries in which the period of intensive growth was initiated later recorded more intensive growth. It indicates that the capacity of the local market was the main factor of the country's attractiveness to foreign capital. Last years of intensive growth recorded max growth of total assets. It indicates that the local market saturation did not cause the trend change. The stagnation of the total assets and the deterioration of asset quality began after the outbreak of the global economic crisis.

IMPLICATIONS

Although such an analysis cannot undoubtedly confirm the causation of deterioration in the quality of assets by explosive growth of assets, it can be noticed that the expansion of banking intermediation is closely related to the deterioration of asset quality, but also that this process was largely caused by the global economic crisis as an exogenous shock. Such findings demand close monitoring of bank assets growth for the prudential purposes.

ORIGINALITY VALUE

The paper is the latest research on Southeast Europe banking performances. It covers entire post-transitional development and delivers an original fact-based periodization of development.

KEY WORDS

Banking industry, Southeast Europe, business performances, nonperforming loans

REFERENCES

1. Anderson, W. R., Kegels, C. (1998). *Transition banking: Financial development of Central and Eastern Europe*. Oxford: Clarendon Press.
2. Catte, P., Mastropasqua, C. (1993). Financial structure and reforms in Central and Eastern Europe in the 1980s. *Journal of Banking and Finance*, 17(5), pp. 785-817.
3. Cottarelli, C., Dell'Araccia, G., Vladkova-Hollar, I. (2005). Early birds, late risers, and sleeping beauties: Bank credit growth to the private sector in Central and Eastern Europe and in the Balkans. *Journal of Banking and Finance*, 29(1), pp. 83-104.
4. Djankov, S., McLiesh, C., Shleifer, A. (2007). Private credit in 129 countries. *Journal of Financial Economics*, 84(2), pp. 299-329.
5. Gorton, G., Winton, A. (1998). Banking in transition economies: Does efficiency require instability? *Journal of Money, Credit, and Banking*, 30(3), pp. 621-650.

BUSINESS AND APPLIED ECONOMICS

6. Hermes, N., Lensink, R. (2000). Financial system development in transition economies. *Journal of Banking and Finance*, 24(4), pp. 507-524.
7. Marinković, S. (2015). Managing the financial crisis: Credit crunch and response in Serbia. In: Thomas, M. & Bojicic-Dzelilovic, V. (Eds.), *Public policy making in the Western Balkans* (pp. 171-196). Dordrecht: Springer Science+Business Media.
8. Marinković, S., Ljumović, I. (2012). Strane banke u Srbiji: strategija ulaska i poslovne performanse, *Ekonomске teme*, 50(4), pp. 555-570.
9. Marinković, S., Radović, O. (2017). What drives a local currency away from banking markets? Some Southeast Europe insights. In. Goić, S., Karasavoglou, A. & Polychronidou, P. (Eds.), *Finance in Central and Southeastern Europe* (pp. 35-56). Cham: Springer International Publishing.
10. Megginson, W. (2005). Economics of bank privatization. *Journal of Banking and Finance*, 29(8-9), 1931-1980.
11. Scholtens, B. (2000). Financial regulation and financial system architecture in Central Europe. *Journal of Banking and Finance*, 24(4), pp. 525-553.
12. Tang, H., Zoli, E., Klytchnikova, I. (2000). Banking crises in transition countries: Fiscal costs and related issues. World Bank Policy Research Working Paper No. 284. Washington: World Bank.

2.26. EFFICIENCY ENHANCERS AS FDI DETERMINANTS IN EMERGING AND DEVELOPING EUROPEAN COUNTRIES: A PANEL DATA ANALYSIS

Biljana Stankov¹

Novi Sad School of Business, Novi Sad, Republic of Serbia

Jelena Vapa Tankosić²

Faculty of Economics and Engineering Management, Novi Sad, Republic of Serbia

OBJECTIVES

The aim of the research is to prove whether efficiency enhancers, acting as the pillars of competitiveness of the national economy, determine the SDI inflows in emerging and developing European countries and at the same time represent the key factors that influence foreign investors' decisions on the choice of an investment location. The efficiency enhancers are particularly important elements of the economic environment in the analyzed countries, which are especially prominent in the countries' development stage.

METHODOLOGY

During the collection of research data, the authors have used desk method and two secondary sources of data: The Global Competitiveness Report - GCR and The World Investment Report - WIR. For the purposes of research sample the authors have selected 11 emerging and developing European countries, according to the IMF classification: Albania, Bosnia and Herzegovina, Bulgaria, Montenegro, Croatia, Hungary, Macedonia FYR, Poland, Romania, Serbia and Turkey. The correlation analysis has determined the way, coefficient and statistical significance of impact of the efficiency enhancers (Higher Education and Training, Goods Market Efficiency, Labor Market Efficiency, Financial Market Development, Technological Readiness, Market Size) as independent variables, on FDI inflows in US\$, as a dependent variable. The general and special research hypothesis testing

¹ PhD, corresponding author: bilja.l.stankov@gmail.com

² PhD

was performed by the panel regression analysis (Random Effects Model). The analysis of the panel series has been performed in "STATA" statistical software.

RESULTS

Obtained results have confirmed the general research hypothesis and therefore it can be concluded that certain pillars of competitiveness determine the FDI inflows and influence the quality of the investment environment in the emerging and developing European countries. The results of the random effects regression model indicate that Market Size and Technological Readiness have a statistically significant impact on FDI inflows in the research countries in the period from 2007 to 2016.

IMPLICATIONS

The results have significant practical implications for analyzed countries policy makers, with an aim of fostering FDI inflows. Agencies or institutions directly involved in the promotion of foreign investment can also rely on the results of this research study to identify the strengths and weaknesses of the investment environment and present their country as an attractive investment destination. The results can be of great benefit to foreign investors when choosing their investment location.

ORIGINALITY VALUE

The results of scientific research point out to original findings, while confirming some of the conclusions of previous empirical studies. The uniqueness of this empirical study is primarily reflected in the original selection of the research sample (Emerging and Developing Europe), as well as in the selection of independent variables (Pillars of Competitiveness according to the WEF methodology). The empirical testing of the model in the emerging and developing European countries context represent a significant contribution to the literature.

KEY WORDS

Efficiency enhancers, Pillars of Competitiveness, FDI determinants, Panel Data Analysis, Random Effects Regression Model

REFERENCES

1. Agiomirgianakis, G., M., Asteriou, D., & Papathoma, K. (2003). *The determinants of foreign direct investment: a panel data study for the OECD countries* (Report No. 03/06). London, UK: Department of Economics, City University London.
2. Baez-Morales, A. (2014). A panel data analysis of FDI and informal labor markets. *AQR–Working Papers*, 14/02.
3. Bevan, A., & Estrin, S. (2004). The determinants of foreign direct investment into European transition economies. *Journal of Comparative Economics*, 32(4), pp. 775-787.
4. Campos, N., F., & Kinoshita, Y. (2002). Foreign direct investment as technology transferred: Some panel evidence from the transition economies. *The Manchester School*, 70(3), pp. 398-419.
5. Carstensen, K., & Toubal, F. (2004). Foreign direct investment in Central and Eastern European countries: a dynamic panel analysis. *Journal of Comparative Economics*, 32(1), 3-22.
6. Chakrabarti, A. (2001). The determinants of foreign direct investments: Sensitivity analyses of cross-country regressions. *Kyklos*, 54(1), pp. 89-114.
7. Dhakal, D., Mixon Jr, F., & Upadhyaya, K. (2007). Foreign direct investment and transition economies: empirical evidence from a panel data estimator. *Economics Bulletin*, 6(33), pp. 1-9.
8. Dunning, J., H. (2002). Determinants of foreign direct investment: globalization induced changes and the role of policies. In *Annual World Bank Conference on Development Economics Europe “Toward Pro-Poor Policies: Aid, Institutions and Globalization* (279-290). World Bank.
9. Dunning, J., H., & Zhang, F. (2008). Foreign direct investment and the locational competitiveness of countries. *Transnational Corporations*, 17(3), pp. 1-30.
10. Frenkel, M., Funke, K., & Stadtmann, G. (2004). A panel analysis of bilateral FDI flows to emerging economies. *Economic Systems*, 28(3), pp. 281-300.
11. Holland, D., & Pain, N. (1998). The determinants and impact of foreign direct investment in the transition economies: a panel data analysis. In *Convergence or Divergence: Aspirations and Reality in Central and Eastern Europe and Russia* (Proceedings from 4th Annual conference). Centre for Research into East European Business, University of Buckingham.
12. Khachoo, A., Q., & Khan, M., I. (2012). *Determinants of FDI inflows to developing countries: a panel data analysis*. MPRA - Munich Personal RePEc Archive.
13. Popovici, O., C., & Călin, A., C. (2012). Competitiveness as Determinant of Foreign Direct Investments in Central and Eastern European Countries. *Revista Economica*, 1/2012, pp. 658-666.
14. Ranjan, V. & Agrawal, G. (2011). FDI Inflow Determinants in BRIC Countries: A Panel Data Analysis. *International Business Research*, 4(4), 255.

15. Reiljan, J., Reiljan, E., & Andersson K. (2001). Attractiveness of Central and Eastern European Countries for Foreign Direct Investment in the context of European Integration. The case of Estonia. In *Proceeding from 41 st Erse Congress* (3-5). Zagreb.
16. Sakali, C. (2013). Determinants of Foreign Direct Investment (FDI) in Bulgaria: An econometric analysis using panel data. *Journal of Economics and Business*, 16(1), pp. 73-97.
17. Sichei, M., M., & Kinyondo, G. (2012). Determinants of foreign direct investment in Africa: A panel data Analysis. *Global Journal of Management and Business Research*, 12(18).
18. Soumia, Z., & Abderrezzak, B. (2013). The determinants of foreign direct investment and their impact on growth: Panel data analysis for AMU countries. *International Journal of Innovation and Applied Studies*, 2(3), pp. 300-313.
19. Tsen, W., H. (2005). The determinants of foreign direct investment in the manufacturing industry of Malaysia. *Journal of Economic Cooperation among Islamic Countries*, 26(2).
20. Vijayakumar, N., Sridharan, P., & Sekhara Rao, K., C. (2010). Determinants of FDI in BRICS Countries: A panel analysis. *International Journal of Business Science & Applied Management*, 5(3).

2.27. ASSESSING ORGANIZATIONAL MATURITY IN PREDICTIVE ANALYTICS OF TELECOMMUNICATION COMPANIES IN THE REPUBLIC OF MACEDONIA

Kalina Trenevaska Blagoeva¹

Ss.Cyril and Methodius University, Faculty of Economics - Skopje, Skopje, Republic of Macedonia

Marina Mijoska²

Ss.Cyril and Methodius University, Faculty of Economics - Skopje, Skopje, Republic of Macedonia

OBJECTIVES

Data analytics and predictive analytics are among the major trends companies worldwide are facing. In a highly digitalized environment it is not only the question of the usage of data analytics, but how analytically mature organizations are. The goal of this paper is to assess organizational maturity in predictive analytics of telecommunication companies in the country. Predictive analytics provides managers with specific business insights and hence strategic advantage from their data.

METHODOLOGY

Different authors and consulting groups propose different analytics maturity frameworks. In order to assess the level of organizational maturity in predictive analytics we will use Predictive Analytics Maturity Framework Assessment (PAMFA) (Capgemini, 2012), since it best describes maturity levels in telecommunication sector. The method of analysis is based on interviewing managers through a questionnaire that guides respondents through all dimensions and levels proposed by the framework. According to the PAMFA five dimensions are analyzed (Vision and strategy, Enablers, Competence, Deployment and Governance). For each dimension, managers were asked to choose

¹ Full time professor, corresponding author: kalina@eccf.ukim.edu.mk

² Assistant Professor

appropriate level of usage out of four available maturity levels: Level 1: Impromptu, Level 2: Solo, Level 3: Ensemble and Level 4: Symphony. This framework can serve as a roadmap for moving the organization towards achieving its predictive analytics goals.

RESULTS

The results of our survey confirmed that telecommunication companies in the country fully understand the benefits of predictive analytics as a valuable source to gain competitive advantage from data. The results of the interview confirm that organizations fall somewhere around level 2 or 3 for almost all dimensions. Since it is not unusual to find different business units within the same organization operating at different maturity levels, the interview can be conducted with managers of different units.

IMPLICATIONS

The telecommunication sector in the country is one of the most advanced service sectors and hence represents a benchmark concerning the digital transformation. The results of this survey provide useful information needed to design a roadmap for migrating towards the higher levels of maturity. A PAMFA will help the organization understand where it currently stands in terms of analytical maturity by revealing the dimensions and areas where the organization should focus in order to mature further.

ORIGINALITY VALUE

This research is the first attempt to analyze organizational maturity in using predictive analytics in the country. The originality of this research derives from the specific characteristics and development of telecommunications sector and its importance. Knowing where organization is on this journey will help managers/strategists to adopt Ideal analytics maturity level, i.e. the highest level that would enable organizations derive maximum business benefits and achieve its strategic objectives.

KEY WORDS

Organizational maturity, predictive analytics, predictive analytics maturity framework assessment, telecommunication sector, Republic of Macedonia

REFERENCES

1. Capgemini, (2012), Measuring Organizational Maturity in Predictive Analytics: the First Step to Enabling the Vision, www.capgemini.com
2. Grossman, R., (2018), A framework for evaluating the analytic maturity of an organization *International Journal of Information Management*, 38, pp. 45–51.
3. Lismont, J., et al., (2017), Defining analytics maturity indicators: A survey approach, *International Journal of Information Management*, 37 (3), pp. 114-124.
4. Morabito, V., (2015), *Big Data and Analytics: Strategic and Organizational Impacts*, Springer
5. Valdez-de-Leon, O, (2016), A Digital Maturity Model for Telecommunications Service Providers, *Technology Innovation Management Review*, 6 (8), pp. 19-32.
6. www.gartner.com

2.28. FISCAL CONSOLIDATION EFFECTS ON LABOR MARKET TRANSITIONS IN SERBIA

Marko Vladislavljević¹

Institute of Economic Sciences, Belgrade, Serbia

OBJECTIVES

At the end of 2014, the Government of Serbia introduced a set of fiscal consolidation measures, including a 10% cut to public sector wages, for the wages higher than 25,000 RSD. Therefore, public sector jobs became less attractive to workers who received the cut. In this research we estimate the hypothesis that the effects of the wage cut have caused an increased likelihood of transition from public sector either to private sector or to inactivity.

METHODOLOGY

We use Labor Force Survey (LFS) data for Serbia for 2014, year before the fiscal consolidation measures were introduced, and 2015, year after the measures were introduced. LFS is organized as a rotating panel, with respondents present in the same quarters for two years (e.g., in the first quarter of 2014 and in the first quarter of 2015), which enables us to analyze labor market transitions between two consecutive years. We construct the variable wage cut, based on the 2014 wages and the wage cut rules described in the law (Republic of Serbia, 2014). We then estimate whether the wage cut, conditional on other characteristics (gender, age, education, work experience, occupation, etc.) had increased the probability of 1) transition from public sector to private sector (including self-employment and informal employment, due to the small sample size); and 2) transition from public sector to inactivity, compared to remaining in the public sector.

RESULTS

Contrary to our expectations the wage cut has a negative effect on the transition from public to private sector. Further exploration suggests that this effect is due

¹ Research Assistant, e-mail: marko.vladislavljevic@ien.bg.ac.rs

to high correlation of the wage cut with the level of wages, and that low-earning workers have a higher probability of transition from one to another job. Similarly, and again contrary to expectations, we do not find the evidence that the wage cut variable had an effect on the transition from public sector to inactivity.

IMPLICATIONS

Our analysis did not confirm the hypothesis that the wage cut had increased likelihood of transition from public to private sector or inactivity. Previous research indicated that in spite of the wage cut, the public sector wage premium in 2015 still stands at 11%. In addition, public sector is characterized by higher job security and higher motivation for work, which together with the low possibilities of transition between sectors, lowers the assumed effects of the wage cut on transition.

ORIGINALITY VALUE

Current evidence of the effects of recent austerity measures on the transition have been largely based on descriptive statistics or anecdotal evidence, with inconclusive results. This research uses econometric evidence to show the effect of the wage cut in the public sector on the transition from public sector to private sector or inactivity. We find that the wage cut had not increased the likelihood to transition from the public sector.

KEY WORDS

Labor market transitions, fiscal consolidation, public sector, Serbia

REFERENCES

1. Abbaddo T., Bastos, A., Casaca, S. F., Duvvury, N. and Ni Leime, A., (2015). Gender and labour in times of austerity: Ireland, Italy and Portugal in comparative perspective. *International Labour Review*, 154(4), pp. 449-473.
2. Bach, S., & Bordogna, L. (2013). Reframing public service employment relations: The impact of economic crisis and the new EU economic governance. *European Journal of Industrial Relations*, 19(4), pp. 279-294.
3. Campos, M. M., Depalo, D., Papapetrou, E., Pérez, J. J., & Ramos, R. (2017). Understanding the public sector pay gap. *IZA Journal of Labor Policy*, 6(7), pp. 1-29.
4. Cavalcanti T, Rodrigues dos Santos M (2015) (Mis)allocation effects of an overpaid public sector. *2015 Meeting Papers from Society for Economic Dynamics*, No 1094.

5. Depalo D, Giordano R, Papapetrou E (2015) Public-private wage differentials in euro-area countries: evidence from quantile decomposition analysis. *Empir Econ* 49(3), pp. 985–1015.
6. Heyes, J. (2013). Flexicurity in crisis: European labour market policies in a time of austerity. *European Journal of Industrial Relations*, 19(1), pp.71-86.
7. Republic of Serbia (2014): *Закон о привременом уређивању основица за обрачун и исплату плата, односно зарада и других сталних примања код корисника јавних средстава*, Службени гласник РС, бр. 116/2014, Београд.
8. SORS, 2015. *Labour force survey*. Statistical Office of the Republic of Serbia
9. Vladislavljević M., Narazani E., and Golubović V. (2018): *Public-private wage differences in the Western Balkans countries*. MPRA Paper No. 80739, Munich Personal RePEc Archive
https://mpra.ub.unimuenchen.de/80739/1/MPRA_paper_80739.pdf
10. Vladislavljević, M. (2017). The public sector wage premium and fiscal consolidation in Serbia. *Ekonomski anali*, 62(215), pp. 111-133.
11. Vladislavljević, M., (2017). Public private job satisfaction differential in Serbia: Evidence from SILC data. Cukanović-Karavidić, M. et al. (ur.), *Education for entrepreneurial business and employment*. Newton Abbot: Compass Publishing, pp. 186-206.

2.29. IN SEARCH FOR RESEARCH AND INNOVATION STRATEGY FOR SMART SPECIALIZATION OF THE REPUBLIC OF SERBIA: CHALLENGES BETWEEN THEORY AND REALITY

Đuro Kutlača¹

University of Belgrade, "Mihajlo Pupin" Institute, Belgrade, Serbia

OBJECTIVES

Objectives of this paper are exploration of the challenges of use of methodology for creation of smart specialization strategy (S3) in Serbia. S3 is focused on the use of knowledge for economic development. Serbia as candidate country for membership in EU is in permanent transition of economy and society since 1991. Major challenges of implementation of S3 in Serbia are weak links between R&D sector and economy, and undeveloped culture of dialogue for adoption and realization of S3 priorities.

METHODOLOGY

Paper will be organized in four main parts. First part will be (critical) description of the main concepts of methodology for creation of smart specialization strategy (S3). The concept of S3 is a tool for realization of the strategy of the European development through "integrated industrial policy for the globalization era" and "Innovation Union". Second part will present implication of implementation of S3 in Serbia, i.e. conditions for use of one theoretical concept in reality of economy and society in Serbia. Third part will discuss results of implementation of S3 in Serbia achieved so far (process is not finished yet), analyzing challenges between proposed methodology and real situation in country. Fourth part will be addressed further steps in implementation of S3 in Serbia, with particular attention to the aspects of dialogue which should be organized between involved stakeholders in order to achieve consensus for adoption and realization of S3 priorities in Serbia.

¹ PhD, e-mail: djuuro.kutlaca@pupin.rs

RESULTS

Major results of research presented in this paper are: analysis of implications of (uncritical) use of one theoretical concept – methodology for development of smart specialization strategy (S3) in real economy; proposals for adaptation of S3 methodology for use in Serbia; findings revealed during the process of implementation of S3 in Serbia such as: selection of the priority sectors of economy, ICT case study with report on the innovation potential of the software industry in Serbia, etc.

IMPLICATIONS

Implications of research presented in this paper are twofold: firstly, for academics, theoretical approach is expanded with integration of operation research (Multiple Criteria Decision Making) methods for ranking of sectors of economy; secondly for policy makers, implementation of S3 in Serbia will enrich the base of experimental results, with special attention to process of selection of priority sectors and establishment of dialogue within EDP (Entrepreneurial Discovery Process) in Serbia.

ORIGINALITY VALUE

Originality in this paper is the critical analysis of theoretical concept of smart specialization strategy (S3), which resulted in proposal for integration of operation research (MCDM, Multiple Criteria Decision Making) methods for ranking of sectors of economy with methodology for development of S3.

KEY WORDS

Smart specialization, S3 Strategy, MCDM methods, priority sectors of economy, entrepreneurial discovery process, dialogue, Serbia

REFERENCES:

1. Edquist, C., and Johnson, B., (1997). "Institutions and Organizations in Systems of Innovation", in Edquist, C. (ed.), "Systems of Innovation", London, Pinter.
2. European Commission (2010). Regional Policy Contributing to Smart Growth in Europe 2020, COM (2010) 553 final.
3. Foray, D., David, P.A. & Hall, B. (2009). Smart Specialization – The Concept. Knowledge Economists Policy Brief no. 9, Knowledge for Growth Expert Group.

Part II

4. Foray D., Ortega-Argilés R. (2011). Smart Specialization. From Academic Idea to Political Instrument, the Surprising Career of a Concept and the Difficulties in its Implementation, MTEI WP 2011-001.
5. JRC and IWB (2017). Smart Specialization & Organizational Development: Roadmap 2017-2018 for the pilot project with Serbia. Internal working document.
6. Kroll, H., Schnabl, E., & Horvat, D. (2017). Mapping of economic, innovative and scientific potential in Serbia. Karlsruhe: Fraunhofer ISI.
7. Kutlača, Đ., Semenčenko, D., Nedović, V., (2016). Smart specialization in Serbia – Challenges for governance of research and innovation, 23th scientific conference Technology, culture and development, proceedings, Tivat, Montenegro, Association “Technology and culture”, pp. 7-21.
8. Kutlača, Đ., Živković, L., Štrbac, D., Semenčenko, D., Popović-Pantić, S., (2018). “ICT case study in Serbia: Report on the innovation potential of the ICT sector in Serbia”. “Mihajlo Pupin” Institute. Report commissioned by the JRC, European Commission, January 2018.
9. Kutlaca, Dj., Semencenko, D. (2015). National Innovation System in Serbia: Past, Present, Future. Publisher: University of Belgrade, Institute "Mihajlo Pupin" - Science and technology Policy Research Centre. ISBN 979-86-82183-14-3, UDK 005.591.6(497.11), 001.896:62(497,11), p. 151. Belgrade [book is in Serbian language].
<http://www.pupin.rs/cirnt/wp-content/uploads/2012/12/NIS2-P1-color.pdf>
10. Kutlaca, Dj. (2015). Southeast Europe: Albania, Bosnia and Herzegovina, Croatia, Former Yugoslav Republic of Macedonia, Montenegro, Serbia, Slovenia. Chapter 10 in: UNESCO Science Report: Towards 2030. Paris, UNESCO, pp. 273-295.
http://en.unesco.org/unesco_science_report
11. Foray, D., (2009). Measuring smart specialization: entrepreneurial discovery, new activities and inclusiveness, Smart Specialization – The Concept. Knowledge Economists Policy Brief 9, June 2009.
12. Radosevic, S., (2004). A Two-Tier or Multi-Tier Europe? Assessing the Innovation Capacities of Central and East European Countries in the Enlarged EU, JCMS 2004 Vol. 42. No. 3. pp. 641-666.
13. Radosevic, S., (1999). Restructuring and Reintegration of Science and Technology Systems in Economies in Transition, project funded by DGXII of the EC under the Targeted Socio-Economic Research (TSER) Programme, 1996-98, SPRU-Science and Technology Policy Research, University of Sussex, UK, Summary of the project, April 1999.
14. S3 Platform (2012). Guide to Research and Innovation Strategies for Smart Specialization (RIS3), May 2012.
http://ec.europa.eu/regional_policy/sources/docgener/presenta/smart_specialisation/smart_ris3_2012.pdf
15. Semencenko, D., Kutlaca, Dj., (2018). Shaping National Innovation System in Small, Transitional Economy – Case of Serbia. Publisher: University of Belgrade, Institute

BUSINESS AND APPLIED ECONOMICS

"Mihajlo Pupin" - Science and technology Policy Research Centre. ISBN 978-86-82183-16-7, p. 186. Belgrade.

16. Zeleny, M., (1976). The Theory of the Displaced Ideal. In Zeleny, M., (ed), Multiple Criteria Decision Making, Berlin-Kyoto, Springer-Verlag, 1976, pp.153-206.

2.30. AGRICULTURAL CREDIT MARKET DEVELOPMENT IN SERBIA: ASSUMPTION FOR INVESTMENTS IN AGRICULTURAL SECTOR

Vesna Paraušić¹

Institute of Agricultural Economics, Belgrade, Serbia

Jonel Subić²

Institute of Agricultural Economics, Belgrade, Serbia

OBJECTIVES

Effective access to agricultural credit market with a government support is a crucial factor for future farmers' investments and improvement of their competitiveness. The aim of the paper is to analyze the agricultural credit market and government support in Serbia in order to give recommendations for improving access to agricultural loans and higher investment in the agricultural sector.

METHODOLOGY

Desk research is basically involved in collecting and analyzing secondary data from existing resources hence. Also, authors conducted an empirical research for collection of primary data in form of survey (interviews) among domestic institutions in agricultural credit market, banks, agricultural producers and other market participants. The survey was conducted during 2018 in the period February-May 2018 by phone, lasting 30-45 minutes, or through personal contacts.

RESULTS

Agricultural lending market in Serbia has been significantly improved over the years. Today, there is no impediment to the development of the agricultural

¹ PhD, corresponding author: vesna_pa@iep.bg.ac.rs

² PhD

sector, and the portfolio of agricultural loans is steadily growing. In the forthcoming period, further growth of agricultural loan portfolios can be expected, with the decrease in the share of bad loans in the total loan portfolio in agriculture. Also, the following can be expected: (a) retaining the existing level of interest, with their possible additional reduction for subsidized loans; (b) stopping the downward trend and a slight increase in the number of clients, (c) and increasing the size of the loan.

IMPLICATIONS

The results of the research are intended for economic policy makers and institutions and banks in Serbia which are main providers of credit to agricultural holdings.

ORIGINALITY VALUE

The results of the research contribute to the further institutional improvement of the agricultural credit market in Serbia, with the aim of increasing investments in the physical assets of agricultural holdings and strengthening competitiveness of the agricultural sector in Serbia.

KEY WORDS

Agricultural credit market, creditors, Lending volume, government support, loan-to-value ratio

REFERENCES

1. Bogdanov N. (2007). *Mala ruralna domaćinstva u Srbiji i ruralna nepoljoprivredna ekonomija*, UNDP, Beograd, Srbija.
2. Cvijanović D, Subić J, Paraušić V. (2014). *Poljoprivredna gazdinstva prema ekonomskoj veličini i tipu proizvodnje u Republici Srbiji*. Republički zavod za statistiku, 2014.
3. Cvijanović D, Paraušić V, Vuković P. (2014). „The role of government in building the competitiveness of rural areas in serbia“in thematic proceedings: „*The new EU agricultural policy – continuation or revolution?*“ No 99.(1):155-164., Published by Institute of Agricultural and Food Economics National Research Institute, Warsaw, 2014, Poland.
4. Jansson Kristina Hedman at al. (2013). *Agricultural Credit Market Institutions*, Working paper, No. 33, January 2013.

Part II

5. Paraušić V, Simeunović I, Vuković D. (2015). *Serbian agricultural competitiveness. Geography, environment, sustainability*, Faculty of Geography, Lomonosov Moscow State University and Institute of Geography of the Russian Academy of Sciences. No. 01 Vol. 08, 2015. pp. 16-26.
6. Paraušić V, Cvijanović J. (2014). Monografija "*Konkurentnost agroprivrede Srbije – klasteri u funkciji održive regionalne konkurentnosti*". Institut za ekonomiku poljoprivrede, Beograd. pp. 1-222.
7. Strategija poljoprivrede I ruralnog razvoja Republike Srbije za period 2014-2024, Službeni glasnik RS, broj 85/14.
8. SEEDDEV (2017). Konkurentnost poljoprivrede Srbije, SEEDDEV, Beograd, Srbija. (available at: www.seeddev.org/publikacije/Konkurentnost_poljoprivrede_Srbije/Konkurentnost_Srbije_Analiza.pdf)
9. Survey of the Agricultural Credit Market in Serbia. Questionnaire for the: (a) National Bank of Serbia, (b) Development Fund of the Autonomous Province of Vojvodina, (c) Provincial Fund for Agricultural Development of Vojvodina Province and (d) Ministry of Agriculture, Forestry and Water Management; (e) Agricultural producers. Internal document. Institute of Agricultural Economics, 2018.
10. Zubović J. et al. (2017): Procena ekonomskih efekata liberalizacije tržišta poljoprivrednog zemljišta, U: Ekonomske, socijalne i razvojne posledice prodaje poljoprivrednog zemljišta u Srbiji, Ur: Božo Drašković, Institut ekonomskih nauka, Beograd. pp. 233-291.

2.31. FDI AS A FACTOR FOR ECONOMIC DEVELOPMENT IN SOME EUROPEAN COUNTRIES

Srdjan Redžepagić¹

Belgrade Banking Academy – Faculty for Banking, Finance and Insurance, Belgrade, Serbia

OBJECTIVES

Foreign direct investment (FDI) in most countries represents one of the key factors in economic development. For this reason, they attract the necessary attention to increase production and exports, which to a certain extent contributes to stable economic growth. It is important to create an environment conducive to investment to encourage investors to invest their capital in a given country. In order to determine assumptions about the positive impact of FDI inflows on the overall economic development of recipient countries' investments, it was necessary to carry out an analysis of the case where a number of Southern European countries should not verify these claims empirically. The main objective of this study is to obtain an answer to the question of whether, and to what extent, foreign direct investment affects the economic development of the selected countries in South-East Europe.

METHODOLOGY

The methodology adopted in this study has focused on the use of linear regression techniques and correlation analysis, using secondary databases available at the World Bank. The results showed that there are different levels of macroeconomic indicators of observed relationship (foreign direct investment, gross domestic product, exports and imports) with the development of the analyzed countries of Southeast Europe. Structural transformations are present today. How do these transformations affect the economy in Europe? What are the prospects, results and factors for economic development in Europe and how can other countries use this European experience?

¹ PhD, e-mail: sredzepagic@gmail.com

RESULTS

We are going to see that all these countries have significant trade deficits with the rest of the world, and more specifically, vis-à-vis the EU, which is the main partner of all these Balkan countries. In 2016, the EU-28, but also as it was the case of the United States and China, they have all recorded by far the world's highest trade values. Mentioned countries accounted for around 45 % of both global exports and imports of goods. In EU countries, trade has almost doubled since 2002. Growth as interrupted twice in that period between 2000 and 2004 and again in 2009 (following the 2008 financial and economic crisis). In both cases, however, the economic downturns only delayed, without stopping, the expansion of global trade. These persistent deficits aggravate the economic situation of the countries while increasing their indebtedness. Trade deficits, apart from excessive and unsustainable public spending, are one of the main reasons for indebtedness. The outlook for the Balkans is pessimistic, and all countries will face a higher cost of debt. The situation could be improved to a certain extent, thanks to FDI flows, but that depends on two phenomena: the development of trade within the EU (which are paralyzed because of the crisis that hit the EU), and the structural reforms of the Balkans.

IMPLICATIONS

Small open economies, which do not have adequate resources for domestic savings, need FDI. This becomes one of the main preconditions for future economic growth. This is particularly important for the countries in transition in south-eastern Europe that aspire to become members of the EU. The accession process itself entails additional costs, and as the countries analyzed have begun their transition relatively late, they face greater difficulties than the economies that have already been integrated into the EU. The technology transfer that could come from foreign investment seems to be almost as important as the mobilization of capital.

ORIGINALITY VALUE

Structural transformations are present today. Some main questions will be treated:

How do these transformations affect the economy in Europe?

What are the prospects, results and factors for economic development in Europe and how can other countries use this European experience?

KEY WORDS

Europe, Balkans, structural transformations, foreign direct investment, economic development

REFERENCES

1. European Central Bank (2011) The European Stability Mechanism, Monthly Bulletin, (July) pp. 71-84.
2. Broner, F., Erce, A., Martin, A., Ventura, J. (2014) Sovereign debt markets in turbulent times: Creditor discrimination and crowding-out effects, *Journal of Monetary Economics*, vol. 61, pp. 143-147.
3. European Central Bank (2012) A Fiscal Compact for a Stronger Economic and Monetary Union, Monthly Bulletin, (May) pp. 79-94.
4. Fitzgerald, C. (2013), The debt crisis in Ireland, *The Quarterly Review of Economics and Finance*, Elsevier, vol. 53, issue 4, pp. 353-363.
5. Hristov, N., Hülsewig, O., Wollmershäuser, T. (2012) Loan supply shocks during the financial crisis: Evidence for the Euro area, *Journal of International Money and Finance*, vol. 31, pp. 569-592.
6. Matousek, R., Rughoo, A., Sarantis, N., Assaf, A.G. (2015) Bank performance and convergence during the financial crisis: Evidence from the 'old' European Union and Eurozone, *Journal of Banking & Finance*, vol. 52, pp. 208-216.
7. Milesi-Ferretti, G.M, Tille, C. (2011) The great retrenchment: International capital flows during the global financial crisis, *Economic Policy*, vol. 26, issue 66, pp. 285-342.
8. Mody, A., Sandri, D. (2014) The Eurozone crisis: how banks and sovereigns came to be joined at the hip, *Economic Policy*, vol. 27, issue 70, pp. 199–230.
9. Molyneux, P. (2013) Chapter 10 in 50 years of Money and Finance: Lessons and Challenges, *The European Money and Finance Forum*, pp. 355-376.
10. Samuelson, P., & Nordhaus, W. (2009) *Economics*. Nineteenth edition: International edition, McGraw – Hill Companies, Inc.
11. Featherstone, K. (2011) The Greek Sovereign Debt Crisis and EMU: A Failing State in a Skewed Regime, *Journal of Common Market Studies*, vol. 49, issue 2, pp. 193-217.
12. Bajnai, G., Fischer, T., Hare, S., Hoffmann, S., Nicolaidis, K., Rossi, V., Viehoff, J., Watt, A. (2012) *Solidarity: For Sale? The Social Dimension of the New European Economic Governance Europe in Dialogue 2012/ 0*, Bertelsmann Stiftung, Gütersloh.
13. Fernandes, S., Rubio, E. (2012) Solidarity within the Eurozone: how much, what for, for how long?, *Notre Europe*.
14. Jabko, N. (2011). Which Economic Governance for the European Union? Facing up to the Problem of Divided Sovereignty, Report No. 2, Swedish Institute for European Policy Studies.

2.32. INTERNAL MIGRATION DETERMINANTS: EVIDENCE AT NUTS-3 LEVEL IN ROMANIA

Marian Zaharia¹

Petroleum-Gas University of Ploiești, Ploiesti, Romania

Aniela Bălăcescu²

Constantin Brâncuși University, Târgu Jiu, Romania

OBJECTIVES

In last two decade Romania is facing, with intensified migration to big cities (Bucharest, Timisoara, Cluj, etc.) which leads to an increase in the gap between the developed and the least developed regions, as well as the over-crowding of the economic poles. Migration is influenced by a variety of economic, political, environmental, social, etc. factors that can be considered, on the one hand, as impulse factors (for the place of origin) and, on the other hand, as factors of attraction for destination). The objective of this article is to analyses internal migration in Romania and points out the main factors that influence it. With this principal objective we specify and estimate an econometric model for the 41 Romanian counties plus Bucharest for the period 2007-2016.

METHODOLOGY

In analysis of internal migration in Romania our research involves using panel data analysis tools. Thus, dependent variable is Migration Rate (MR) and independent variables are economic (real GDP per capita, wage rates, employment rates, unemployment rate, private dwelling rate, exports per capita,) and noneconomic (inhabitants of each county, university graduates per 1,000 inhabitants, number of small and medium enterprises per 1,000 inhabitant, the share of RDI employees in the employed population, population density, criminality rate, degree of urbanization, amenities index, density of public roads per 100 km², infant deaths per 1,000 live-birth).

¹ Professor, PhD

² Associate Professor, PhD, corresponding author: anielabalacescu@gmail.com

RESULTS

The study shows an increasing polarisation of regional development, not only in volume but also in the structural changes in internal migration. The econometric results show that alongside Bucharest, counties from the West, North-West and Center regions were more attractive to emigrants and the main determinants were GDP per capita, wage, unemployment, the number of small and medium enterprises per 1,000 inhabitants. The study can be further explored by introducing other important indicators in the analysis of internal migration, alongside those concerned.

IMPLICATIONS

Romanian counties have been facing significant and persistent economic and social regional disparities which determine the intensification of internal migration with negative effects on economic and social cohesion. This paper can be a working tool for decision-makers in elaborating economic development strategies.

ORIGINALITY VALUE

This paper will further contribute to the research regarding the determinants for internal migration by investigating the flows at NUTS-3 (Nomenclature of Territorial Units for Statistics - small regions for specific diagnoses) level in Romania. Furthermore, Bunea (2012) are constrained by the limited time (2004-2008 period) before the economic crisis shows its effects on the Romanian economy. The period for which we have it under review is last decade that allows us to examine the internal migration flows from Romania after economic crisis.

KEY WORDS

Internal migration, NUTS-3, GDP, Romania, panel analysis

REFERENCES

1. Antonescu D., (2017), The analysis of regional disparities in Romania with Gini/Struck coefficients of concentration, HAL Id: hal-01613053, URI: <https://hal.archives-ouvertes.fr/hal-01613053/document>
2. Babucea, A.G., Răboțu C.I., Bălăcescu A., (2017), Analysis of variance of infrastructure for the main categories of public utilities at territorial level in Romania,

Part II

- Economic Computation and Economic Cybernetics Studies and Research, 2, Vol. 51, pp. 85-102
3. Bunea, D., (2012). Modern Gravity Models of Internal Migration. The Case of Romania. Theoretical and Applied Economics, Volume XIX, No. 4(569), pp. 127-144
 4. Chirtoc I., (2009), The factors that influence Romania's economical growth, Annals of the Constantin Brâncuși University of Targu Jiu, Economy Series, 3, pp. 391-398
 5. Goschin Z., Constantin D., Roman M., Ileanu B., (2009), Regional Specialisation and geographic Concentration of industries in Romania, South-Eastern Journal of Economics, 1, pp. 99-113
 6. Horváth I., Kiss T., (2015), Depopulating semi-periphery? Longer term dynamics of migration and socioeconomic development in Romania, Demografia, 58, pp. 91-132
 7. Zaman, G., Georgescu G., Goschin Z., Antonescu D., Popa F., (2015): Endogenous economic development at regional level. The case of Romania. Munich University Library, pp. 1-270, URI: <https://mpra.ub.uni-muenchen.de/id/eprint/70646>

2.33. SERVICE QUALITY MANAGEMENT IN BANKING SECTOR IN CRISIS AREA: CASE STUDY OF NORTHERN KOSOVO

Isidora Ljumović¹

Institute of Economic Sciences, Belgrade, Serbia

Krsto Jakšić²

Faculty for economics, University in Priština, temporarily seated in Kosovska Mitrovica

OBJECTIVES

Northern Kosovo in the last fifteen years is barely surviving the socio-political crisis and structural constraints. Kosovo's financial and banking systems are extremely specific. Access to finance is limited for companies and the population. The aim of this paper is to analyze banking sector outreach, as an indicator of access to finance, as well as satisfaction of the services provided by banks that operate in Northern Kosovo.

METHODOLOGY

Service quality is an abstract and "elusive" concept, as services have four unique features: Intangibility, Inseparability, Perishability, and Variability and it is extremely difficult to capture the quality of services. Survey methods as used, determining only the perception of the respondent about the quality of service. In this paper we applied the method of interviewing and the survey method using a SERVQUAL model that is commonly used to analyze the degree of satisfaction of service users. We chose this method since it is used equally by the service providers and the academic community. We widened standard SERVQUAL model (containing 22 claims in five dimensions of quality: Tangibles, Reliability, Responsiveness, Assurance, and Empathy) and added a sixth dimension in order to capture the price effect of services provided. After an extensive desk research, analysis of secondary data and interviews with bank employees, we conducted a survey in the period November 2017-March 2018.

¹ Senior Research Associate, corresponding author: isidora.ljumovic@ien.bg.ac.rs

² Assistant Professor

RESULTS

The results of this research are mixed and show different trends in bank customer satisfaction. Customers are mostly satisfied with tangibles, referring to the physical facilities, equipment, look of the personnel and reliability to a certain extent. All other dimension are rated below the average. Sixth dimension, satisfaction with the accessibility and the price of bank products, had the lowest scores, particularly, transparency of contract terms, obstacles for getting the financial services and cost of credit have been perceived adversely.

IMPLICATIONS

The results of the research presented in this paper are primarily intended in the purpose of scientific research, but also could be used to guide the banking industry to reshape its quality management and increase customers satisfaction in different segments.

ORIGINALITY VALUE

This research extends the scope of current customer research about satisfaction of banking services. It also gives insight to an market that is operation under constraints and could be qualified as an crisis area market.

KEY WORDS

Banking sector, Northern Kosovo, SERVQUAL model, customer satisfaction, banking sector outreach

REFERENCES

1. Barac, N. i G. Milovanović (2000). Menadžment kanala distribucije, Ekonomski fakultet, Niš.
2. Beck, T., A. Demirgüç-Kunt and M. Soledad (2007). Reaching out: Access to and use of banking services across countries, *Journal of Financial Economics*, 85: pp. 234-266.
3. Đorđević, B. (2009). Merenje kvaliteta bankarskih usluga, *Finansije*, 64(1-6): pp. 256-271.
4. Ennew, T. C. and N. Waite (2007). *Financial Service Marketing*, Butterworth-Heinemann, Elsevier, Oxford (UK).
5. Krstić, B. i S. Marinković (2009). Specifičnosti konkurencije u bankarstvu, Razvijanje konkurentne prednosti preduzeća u Srbiji u uslovima evropskih integracija (III) Ekonomski fakultet, Niš; pp. 211-227.

6. Ljumović, I. Lazić, J., Vesić, A. (2015). Specifičnosti finansiranja u preduzetništvu. Beograd: Ekonomski institut.
7. Ljumović, I., Jakšić, K. (2015). Dostupnost finansijskih resursa preduzećima na severu Kosova, Zbornik Matice srpske za društvene nauke Vol. 152(3), pp. 557-568.
8. Ljumović, I., Lečovski, I., Analysis of Financial Resources Accessibility in Banat District, u celosti u zborniku radova International Scientific Conference, „Strenghtening the Competitiveness and Economoy Bonding of Historical Banat - SCEBB“, Megatrend univerzitet, Vršac, 28-29.09.2011., pp. 147-152.
9. Ljumović, I., Marinković, S. (2013). What Makes Bank Go Global in National and European Identity in the Process of European Integration (eds.Pero Petrović, Milovan Radaković), International Thematic Proceedings, pp. 473-488.
10. Ljumović, I., Viduka, B., Cvijanović, J. (2015). Access to finance for organic producers in Serbia: demand side. *Ekonomika poljoprivrede*, Vol LXII (4), pp. 989-1002.
11. Marinković, S. (2008). Finansijsko tržište i finansijske institucije u Republici Srbiji, Ekonomski fakultet, Niš.
12. Marinković, S. Ljumović, I. (2010). Socijalna dimenzija pristupačnosti i kvaliteta bankarskih usluga u Republici Srbiji, *Ekonomika preduzeća*, Vol. 3-4, pp. 149-159.
13. Myers, L. B., L. A. Kappelman and V. R. Prybutok (2007). A comprehensive model for assessing the quality and productivity of the information systems function: Toward a theory for information systems assessment, *Information Resources Management Journal*, 10(1): pp. 6-25.
14. Parasuraman, A., L. Berry and A. Zeithaml (1991). Refinement and reassessment of the SERVQUAL Scale, *Journal of Retailing*, 67(4): pp. 420-450.
15. Parasuraman, A., V. Zeithaml, and L. Berry (1988). SERVQUAL: A multipleitem scale for measuring customer perceptions of service quality, *Journal of Retailing* 64(1): pp. 12-37.
16. Ravichandran, K., S. Prabhakaran and S. A. Kumar (2010). Application of Servqual model on measuring service quality: A Bayesian approach, *Enterprise Risk Management*, 1(1): pp. 145-169.
17. Şafakli, O. V. (2007). Testing Servqual dimensions on the commercial bank sector of Northern Cyprus, *Financial Theory and Practice*, 31(2): pp. 185-201.

2.34. IMPACT OF CHANGES IN EXCISE POLICY ON DISTRIBUTION OF HOUSEHOLD INCOME IN SERBIA

Jovan Zubović¹

Institute of Economic Sciences Belgrade, Serbia

OBJECTIVES

The aim of this paper is to estimate what is the impact of changes in excise policy on distribution of disposable household incomes in Serbia over the period of 5 years. Persistent growing excise rates on all excise goods have a significant impact on the purchasing habits and distribution of income among different categories of goods. The objective is to determine which (groups of) goods households mostly abandon as a result of growing excises.

METHODOLOGY

Author has used data from HBS surveys in Serbia for the period 2012-2016. The trends of expenditure have been analysed for excise goods over the observed period with the aim of evaluating the impact of excise rates change on share in the expenditure of excise goods.

RESULTS

Results show that despite significant increase both in excise rates and producers' prices, the share of excise goods has increased in household consumption both for tobacco and alcohol goods. Price elasticity is significantly higher for tobacco goods. Over 5 years there has been a decrease from 53.6 to 51.8% of households consuming alcohol products, as long as tobacco products consumption has been reduced from 1,088 to 865 cigarettes per capita. However, the share in total household consumption has not changed the direction. Alcohol products constitute 1.2% of household consumption in the whole period, hence having income elasticity 1, while tobacco products share has increased from 2.9% to 3.4%, being highly income inelastic.

¹ Senior Research Associate, e-mail: jovan.zubovic@ien.bg.ac.rs

IMPLICATIONS

Implications of this research are related to the excise policy setting for different types of goods. It is essential to provide evidence of impact over time and allow for policy setting to achieve most out of excise as a type of tax that should be aiming at reducing the externalities, mostly adverse health effects of these two types of goods.

ORIGINALITY VALUE

This kind of research has not been previously conducted on Serbian data. There have been several policy papers published worldwide over the last 30 years, but very few of them have covered countries with low and middle income.

KEY WORDS

Disposable household income, excises, tobacco and alcohol products

REFERENCES

1. Anderson, P., Chisholm, D., & Fuhr, D. C. (2009). Effectiveness and cost-effectiveness of policies and programmes to reduce the harm caused by alcohol. *The lancet*, 373(9682), pp. 2234-2246.
2. Chaloupka, F. J., Grossman, M., & Saffer, H. (2002). The effects of price on alcohol consumption and alcohol-related problems. *Alcohol research and health*, 26(1), pp. 22-34.
3. Coate, D., & Grossman, M. (1988). Effects of alcoholic beverage prices and legal drinking ages on youth alcohol use. *The Journal of Law and Economics*, 31(1), pp. 145-171.
4. Wagenaar, A. C., Salois, M. J., & Komro, K. A. (2009). Effects of beverage alcohol price and tax levels on drinking: a meta-analysis of 1003 estimates from 112 studies. *Addiction*, 104(2), pp. 179-190.
5. Toomey, T. L., & Wagenaar, A. C. (1999). Policy options for prevention: the case of alcohol. *Journal of public health policy*, 20(2), pp. 192-213.
6. Grossman, M., Sindelar, J. L., Mullahy, J., & Anderson, R. (1993). Policy watch: alcohol and cigarette taxes. *Journal of Economic Perspectives*, 7(4), pp. 211-222.
7. Skafida, V., Silver, K. E., Rechel, B. P., & Gilmore, A. B. (2014). Change in tobacco excise policy in Bulgaria: the role of tobacco industry lobbying and smuggling. *Tobacco control*, 23(e1), pp. 75- 84.
8. Gilmore, A. B., Tavakoly, B., Taylor, G., & Reed, H. (2013). Understanding tobacco industry pricing strategy and whether it undermines tobacco tax policy: the example of the UK cigarette market. *Addiction*, 108(7), pp. 1317-1326.

Part II

9. Ahmad, S., & Billimek, J. (2007). Limiting youth access to tobacco: Comparing the long-term health impacts of increasing cigarette excise taxes and raising the legal smoking age to 21 in the United States. *Health Policy, 80*(3), pp. 378-391.
10. Decoster, A., Loughrey, J., O'Donoghue, C., & Verwerft, D. (2010). How regressive are indirect taxes? A microsimulation analysis for five European countries. *Journal of Policy analysis and Management, 29*(2), pp. 326-350.
11. Schick, A. (2008). *The federal budget: Politics, policy, process*. Brookings Institution Press.
12. Howard, C. (1999). *The hidden welfare state: Tax expenditures and social policy in the United States*. Princeton University Press.
13. Zubovic, J., Subic, J., & Jelocnik, M. (2009). Foreign direct investments in transition economies—the case of Serbian financial industry. *Economic Sciences Series, 61*(4), pp. 10-18.
14. Zubović, J., & Bradić-Martinović, A. (2013). Jačanje konkurentnosti kao faktor izlaska iz krize država Zapadnog Balkana. *Ekonomika: časopis za ekonomsku teoriju i praksu*, pp. 403-418.

programs
microeconomics
analyze GDP
macroeconomics
economy
market research
values



explain nations
income union
government
understand
centrally market
systems



9 788689 465426

CIP - Каталогизација у публикацији -
Народна библиотека Србије, Београд

330(048)

INTERNATIONAL Scientific Conference Theoretical and Empirical Aspects of
Economic Science - 60 Years of Challenges and Opportunities (2018 ; Beograd)
Business and Applied Economics : book of abstracts / International
Scientific Conference Theoretical and Empirical Aspects of Economic Science
- 60 Years of Challenges and Opportunities Belgrade, Serbia, 1 November
2018 ; editors Ivana Domazet, Jovan Zubović. - Beograd : Institute of
Economic Sciences, 2018 (Beograd : DonatGraf). - 260 str. ; 24 cm

"This Book of Abstracts is a part of research projects numbers III 47009
(European integrations and social and economic changes in Serbian economy
on the way to the EU) and OI179015 (Challenges and prospects of structural
changes in Serbia: Strategic directions for economic development and
harmonization with EU requirements)..." --> kolofon. - Tiraž 200. - Str.
15: Preface / editors. - Bibliografija uz svaki rad.

ISBN 978-86-89465-42-6

a) Економија - Апстракти b) Економски развој - Апстракти
COBISS.SR-ID 269457420