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# Contents

|  |           |
|--|-----------|
| <b>Business and Economics Data Analysis .....</b>  | <b>11</b> |
| <b>Signe Balina, Rita Freimane, Kristine Rozite</b>  |           |
| PRODUCTIVITY OF ICT SECTOR AS A DRIVING FACTOR OF COUNTRY'S ECONOMIC COMPETITIVENESS .....                             | 13        |
| <b>Martins Danusevics</b>  |           |
| RETAIL SATURATION IN THE BALTIC STATES .....   | 14        |
| <b>Ludmila Fadejeva</b>  |           |
| GLOBAL VECTOR AUTOREGRESSION MODELS: A SECTORAL DIMENSION .....  | 15        |
| <b>Rita Freimane, Signe Balina, Krstine Rozite</b>   |           |
| EFFECTS OF R&D ON PRODUCTIVITY: A COMPARISON BETWEEN NEW AND OLD EU MEMBERS .....                                      | 16        |
| <b>Vija Micune</b>   |           |
| ANALYSIS OF DSGE MODEL WITH BANKING SECTOR – THE CASE OF LATVIA .....  | 17        |
| <b>Jekaterina Razina, Daina Skiltere</b>   |           |
| SCENARIOS FOR LATVIAN DAIRY PRODUCTS EXPORT DEVELOPMENT .....  | 18        |
| <b>Nicolai Sinik</b>   |           |
| BUSINESS PRODUCTIVITY AND DATA ANALYSIS IN THE AUSTRIAN SUPERMARKET SECTOR .....                                       | 19        |
| <b>Business Competitiveness Enhancement .....</b>  | <b>21</b> |
| <b>Annija Apsite, Ilona Baumane Vitolina</b>   |           |
| THE ENVIRONMENT OF INNOVATION ECOSYSTEMS IN THE BALTIC STATES .....  | 23        |
| <b>Daina Belicka</b>   |           |
| LATVIA TRANSPORT OPERATIONAL PROGRAMME EX-POST EVALUATION .....  | 24        |
| <b>Thomas Corinth</b>  |           |
| PRODUCT AND PRICING POLICIES IN THE GERMAN HOSPITALITY INDUSTRY .....  | 25        |
| <b>Alina Dibrova</b>   |           |
| LEGAL FRAMEWORK DEVELOPMENT: NON-BANK BUSINESS FINANCING OPPORTUNITIES.....  | 26        |
| <b>Ekes Szeverin Kristof</b>   |           |
| PETRI NETS FOR MODELING PRODUCTION SYSTEM .....  | 27        |
| <b>Anna H. Jankowiak</b>   |           |
| EXPLORING THE ROLE OF CLUSTERS IN INCREASING THE COMPETITIVE ADVANTAGE OF AN ENTERPRISE<br>IN THE GLOBAL ECONOMY ..... | 28        |
| <b>Rene Lauck</b>  |           |
| GAINING COMPETITIVE ADVANTAGE WITH RISK MANAGEMENT – A THEORETICAL APPROACH .....                                      | 29        |
| <b>Sarmite Mickevica</b>   |           |
| ADOPTION OF CUSTOMER RELATIONSHIP MANAGEMENT CONCEPT FOR SMALL AND MEDIUM SIZE ENTER-<br>PRISES .....                  | 30        |
| <b>Sergejs Paramonovs</b>  |           |
| PASSENGERS' DECISION-MAKING AT CHOOSING RIGA AIRPORT FOR DEPARTURE .....   | 31        |
| <b>Wojciech Popczyk</b>  |           |
| THE STRUCTURE AND CREATING OF FAMILY SOCIAL CAPITAL IN BUSINESS .....  | 32        |
| <b>Ieva Puke</b>   |           |
| ENTREPRENEURIAL DECISION MAKING PROCESS IN SME'S DURING EARLY INTERNATIONALIZATION<br>STAGE .....                      | 33        |
| <b>Atis Verdenhofs, Tatjana Tambovceva</b>   |           |
| EVOLUTION OF CUSTOMER SEGMENTATION IN THE ERA OF BIG DATA .....  | 34        |
| <b>Circular Economy for Smart Growth .....</b>   | <b>35</b> |
| <b>Juris Benders</b>   |           |
| CIRCULAR ECONOMY NATIONAL STRATEGY DEVELOPMENT IN EU COUNTRIES .....   | 37        |
| <b>Valdone Darskuviene, Izolda Skruibyte</b>   |           |
| EXPLORING THE LINKS BETWEEN CSR AND COUNTRIES' COMPETITIVENESS .....   | 38        |
| <b>Dzineta Dimante, Tatjana Tambovceva, Dzintra Atstaja</b>  |           |
| DEVELOPMENT OF SHARING ECONOMY: ANALYSIS OF DIFFERENT COUNTRIES EXPERIENCE.....  | 39        |

|  |           |
|--|-----------|
| <b>Agita Livina</b>  |           |
| CIRCULAR ECONOMY APPLICATION IN SHRINKING REGIONS .....  | 40        |
| <b>Daria Nikonova, Lada Podolyanets</b>  |           |
| ECONOMICAL ASSESSMENT OF COMPREHENSIVE MINERAL PROCESSING OF PHOSPHOGYPSUM WITH RARE EARTH ELEMENTS' EXTRACTION BASED ON COST-BENEFIT ANALYSIS ..... | 41        |
| <b>Inese Pelsa</b>   |           |
| PROPORTION OF GREEN PUBLIC PROCUREMENT OF PUBLIC PROCUREMENT IN LATVIA DURING PERIOD OF 2015-2017: FACTORS THAT INFLUENCE GPP DEVELOPMENT .....      | 42        |
| <b>Inga Sirante</b>  |           |
| INDICATORS AND CORALTION MATRIC FOR NATIONAL INNOVATION SYSTEM .....   | 43        |
| <b>Aija van der Steina</b>   |           |
| SHARING ECONOMY IN TOURISM IN LATVIA: ATTITUDES OF THE INDUSTRY AND SOLUTIONS.....   | 44        |
| <b>Contemporary Management and Business Innovations .....</b>  | <b>45</b> |
| <b>Ilgvars Abols, Agita Livina</b>   |           |
| SHARING ECONOMY IN HOSPITALITY: COMPARISON OF APARTMENT OFFER IN RIGA ON AIRBNB.COM AND BOOKING.COM PLATFORMS IN 2016 AND 2017 .....                 | 47        |
| <b>Dace Amsone, Andris Denins</b>  |           |
| NATIONAL TOURISM DESTINATION MANAGEMENT SYSTEMS: PARTNERSHIP TOOLS .....   | 48        |
| <b>Kintija Barloti, Andris Denins</b>  |           |
| THE ROLE OF PERSONALITY GROWTH IN THE DEVELOPMENT OF A COMPANY IN TODAY'S GLOBAL ECONOMY .....   | 49        |
| <b>Norbert G. Brink</b>  |           |
| SUCCESS FACTORS OF VIRTUAL SYSTEM SUPPLIERS - A CASE STUDY .....   | 50        |
| <b>Andrejs Cekuls</b>  |           |
| THE IMPACT OF DECISION MAKING ON ORGANIZATIONAL PERFORMANCE WITHIN COMPLEX ORGANIZATIONS .....   | 51        |
| <b>Andris Denins</b>   |           |
| THE IMPROVEMENT OF THE COMPANIES INSOLVENCY MANAGEMENT PROCESS .....   | 52        |
| <b>Justs Dimants, Aija van der Steina, Biruta Sloka</b>  |           |
| CHALLENGES FOR MACROMARKETING SUCCESSFUL APPLICATION FOR LATVIA'S COMPANIES EXPORT INCREASE .....  | 53        |
| <b>Igor Dukeov, Madara Apsalone, Ilona Baumane-Vitolina, Jukka-Pekka Bergman, Erika Sumilo</b>   |           |
| A FIRM'S ORGANIZATIONAL INNOVATION AND ORGANIZATIONAL KNOWLEDGE MANAGEMENT ABILITIES ...   | 54        |
| <b>Daiga Ergle</b>   |           |
| APPLICATION OF GAMIFICATION IN HUMAN RESOURCE MANAGEMENT PROCESSES AT ENTERPRISES AND ORGANIZATIONS IN LATVIA .....                                  | 55        |
| <b>Eduards Gausis</b>  |           |
| DEMOCRACY IN THE 21ST CENTURY. ONLINE COMMUNICATION WITH CITIZENS .....  | 56        |
| <b>Steffen Hossfeld</b>  |           |
| THE INLUENCE OF DIGITALIZATION ON DECISION MAKING IN ORGANIZATIONS – A PROFESSIONALS INTERVIEW ANALYSIS .....  | 57        |
| <b>Kaspars Iesalnieks</b>  |           |
| BUSINESS CYCLE MANAGEMENT AND COMPANIES PERFORMANCE: INVENTORY MANAGEMENT .....  | 58        |
| <b>Sarmite Jegere</b>  |           |
| CULTURAL ENTERPRISE MANAGEMENT EVALUATION .....  | 59        |
| <b>Alexander Kanaev, Olga Kanaeva, Konstantin Belousov</b>   |           |
| TRANSITION TO THE SUSTAINABLE DEVELOPMENT MODEL: THE PRACTICE OF RUSSIAN COMPANIES.....  | 60        |
| <b>Sabine Koklacova, Tatjana Volkova</b>   |           |
| VALUE SYSTEMS IN THE CONTEXT OF DESIGN MANAGEMENT FOR PROMOTING SOCIALLY RESPONSIBLE SOLUTIONS .....   | 61        |
| <b>Jelena Luca</b>   |           |
| MULTIDIMENSIONAL ANALYSIS OF INNOVATIVE COMPANY FIELDS .....   | 62        |

**Lada Podolyanets, Margarita Izotova**

CREATION AND PROMOTION OF A COMPLEX MUSEUM PRODUCT WITH BRANCH AND UNIVERSITY MUSEUMS FOR TREATMENT AND ADAPTATION ..... 63

**Bjarne Erik Roscher**

ORGANIZATIONAL IDENTITY MEASURED BY CONTENT ANALYSIS OF PUBLIC AVAILABLE INFORMATION TO SUPPORT RESEARCH ON INNOVATION ADOPTION IN HOSPITALS BY ACADEMIC STAFF ..... 64

**Evija Rusite, Biruta Sloka**

EVALUATION OF THE SIGNIFICANCE OF THE RANKINGS OF HIGHER EDUCATION INSTITUTIONS ..... 65

**Ralf Schechowiz**

INTERIM MANAGERS IN THE CFO ROLE IN MEDIUM-SIZED COMPANIES: COOPERATION BETWEEN CEO AND CFO, ROLES AND SUCCESS FACTORS ..... 66

**Diana Sitenko**

INTEGRATION OF NATIONAL INNOVATION SYSTEMS OF EAEU COUNTRIES: PROBLEMS AND PERSPECTIVES ..... 67

**Inna Steinbuka, Martins Zemitis, Gundars Berzins**

HOW TO FACE LATVIA'S COMPETITIVENESS CHALLENGE? BOOSTING INVESTMENT IN RESEARCH AND INNOVATION ..... 68

**Yulia Stukalina**

INTERNATIONAL ACCREDITATION OF STUDY PROGRAMMES IN THE CONTEXT OF QUALITY ASSURANCE IN HIGHER EDUCATION ..... 69

**Evgeniya Tonkova**

MARKETING ON THE PART OF THE CONSUMER AND C2B PARTNERSHIPS ..... 70

**Andzela Veselova**

EVALUATION OF OPERATION OF LATVIAN LARGE AND SMALL & MEDIUM ENTERPRISES ACCORDING TO THE EUROPEAN BUSINESS EXCELLENCE MODEL CRITERIA ..... 71

**Inesa Voroncuka, Paula Podolska**

LATVIA CASE – LOOPHOLES AND SPACE FOR IMPROVEMENT IN THE GAMBLING MARKET..... 72

**Financial Services, Accounting and Finance ..... 73**

**Ieva Aizsila, Kristine Cabanova**

AUDIT PROCESS: APPLICATION OF PROFESSIONAL SCEPTICISM AND PROFESSIONAL JUDGEMENT – CASE STUDY IN LATVIA ..... 75

**Atanas Atanasov**

GOODWILL DISCLOSURE IN THE FINANCIAL STATEMENTS OF BULGARIAN PUBLIC ENTERPRISES..... 76

**Ilon Beizitere**

IS AVAILABILITY OF FINANCIAL INSTRUMENTS A CHALLENGE FOR MICRO-ENTERPRISES? ..... 77

**Leszek Bohdanowicz**

HOW FIRM PERFORMANCE AFFECTS SUPERVISORY BOARD ACTIVITY: EVIDENCE FROM THE POLISH TWO-TIER BOARD MODEL ..... 78

**Kristina Bojare**

SUSTAINABILITY AND COMPETITIVENESS IN THE CONTEXT OF LATVIAN BANKS ..... 79

**Larisa Bule, Liga Leitane, Kristine Rozite**

ASSESSMENT OF FUNDED PENSION CAPITAL INHERITANCE OPPORTUNITY IN LATVIA ..... 80

**Alessandro Danovi, Patrizia Riva**

CRISIS STAGES AND EARLY WARNINGS IN THE ITALIAN BANKRUPTCY CODE REFORM..... 81

**Vadims Danovics, Ludmila Yadchenko**

CROWDFUNDING SERVICE PROVIDERS - NEW FINANCIAL MARKET PLAYERS? ..... 82

**Tomasz Dorozynski, Janusz Swierkocki, Wojciech Urbaniak**

FDI INFLOW TO THE LODZ REGION. WHERE ARE WE 5 YEARS LATER? ..... 83

**Jörn von Elsenau, Colin Glinkowski**

BANKING SYSTEMS IN THE BALTIC STATES ..... 84

**Simon Grima, Inna Romanova, Jonathan Spiteri, Frank Bezzina**

A PROPOSED CONCEPTUAL CONTROL FRAMEWORK FOR TECHNOLOGICAL INNOVATION WITHIN THE FINANCIAL SERVICES INDUSTRY ..... 85

**Irina Japparova, Ramona Rupeika-Apoga**

ASSESSMENT OF COMPETITION IN THE BANKING SECTOR OF THE BALTIC STATES ..... 86

|   |     |
|---|-----|
| <b>Justine Sophia Jaunzeme</b>  |     |
| ANALYSIS OF MEASUREMENT POLICIES FOR REAL NON-CURRENT ASSETS AT PUBLIC BALTIC COMPANIES                                 | 87  |
| <b>Damian Kazmierczak</b>   |     |
| CHEAP DEBT OR DELAYED EQUITY? THE MOTIVES FOR THE USE OF CONVERTIBLE BONDS BY COMPANIES IN POLAND                       | 88  |
| <b>Twahir M. Khalfan, Stefan Wendt</b>  |     |
| THE IMPACT OF CONCENTRATED OWNERSHIP ON PAYOUT ACROSS NORDIC FIRMS  | 89  |
| <b>Beata Kotowska</b>   |     |
| FINANCIAL REPORTING IN THE MICRO ENTERPRISES IN SELECTED EUROPEAN COUNTRIES   | 90  |
| <b>Grzegorz Krzykowski, Ewa Spigarska, Agnieszka Poblocka</b>   |     |
| BAYESIAN MODELS OF PROVISION FOR EMPLOYEE RETIREMENT BENEFITS   | 91  |
| <b>Marina Kudinska, Inna Romanova, Aina Joppe</b>   |     |
| CAPITAL ADEQUACY AND LIQUIDITY IN THE CONTEXT OF BANK STABILITY: CASE OF LATVIA   | 92  |
| <b>Kazys Kupcinskas</b>   |     |
| CREDIT MARKET STABILITY: NON-PERFORMING LOANS INTERACTION WITH BUSINESS CYCLES IN EU COUNTRIES                          | 93  |
| <b>Irina Kuzmina-Merlino, Svetlana Saksonova</b>  |     |
| THE KNOWLEDGE AND COMPETENCIES REQUIRED FOR FINTECH SECTOR  | 94  |
| <b>Tsvetomir Manolov</b>  |     |
| ENVIRONMENTAL DISCLOSURES – THE CASE OF BULGARIAN ANNUAL REPORTS  | 95  |
| <b>Rumyana Marinova</b>   |     |
| IMPAIRMENT OF THE RIGHTS TO FOOTBALL PLAYERS IN BULGARIAN PROFESSIONAL FOOTBALL CLUBS                                   | 96  |
| <b>Jakub Marszalek</b>  |     |
| PERSONAL DETERMINANTS OF THE FAMILY BUSINESS CAPITAL STRUCTURE - CENTRAL AND EASTERN EUROPEAN PERSPECTIVE               | 97  |
| <b>Olga Martyniuk, Kateryna Romanchuk, Anastasiya Piekarskaya, Aneta Ejsmont, Rita Briedyte</b>                         |     |
| FINANCIAL REPORTING REQUIREMENTS FOR MICRO ENTERPRISES IN POLAND, BELARUS, UKRAINE AND LITHUANIA - COMPARATIVE ANALYSIS | 98  |
| <b>Inta Millere, Ivita Faitusa, Simon Grima, Peter J. Baldacchino</b>   |     |
| A COMPARATIVE ANALYSIS OF THE LATVIAN AND MALTESE REGULATORY AND PROFESSIONAL REQUIREMENTS FOR ACCOUNTANTS              | 99  |
| <b>Harry Mueller</b>  |     |
| ACCESS TO PAYMENT DATA AND ITS STRATEGIC IMPACTS ON MANAGEMENT ACCOUNTING   | 100 |
| <b>Dancho Petrov</b>  |     |
| BLOCKCHAIN TECHNOLOGY – A BANK LENDING (R)EVOLUTION: THE CASE OF SYNDICATED LOANS                                       | 101 |
| <b>Kristine Petrovska</b>   |     |
| AN ALTERNATIVE FOR DETECTING SYSTEMIC RISK IN BANKING SECTOR. PRINCIPAL COMPONENTS APPROACH                             | 102 |
| <b>Olga Rajevska</b>  |     |
| DO PENSION FUNDS' PARTICIPANTS IN LATVIA TRACK THE PROFITABILITY OF THEIR PENSION SAVINGS?                              | 103 |
| <b>Inese Rozenbaha</b>  |     |
| BANKRUPTCY PREDICTION MODELS WITH STATISTICAL AND ARTIFICIAL INTELLIGENCE TECHNIQUES – A LITERATURE REVIEW              | 104 |
| <b>Ramona Rupeika-Apoga, Syeda Hina Zaidi</b>   |     |
| THE DETERMINANTS OF BANK'S STABILITY: EVIDENCE FROM LATVIA'S BANKING INDUSTRY   | 105 |
| <b>Svetlana Saksonova, Irina Solovjova</b>  |     |
| SOME ASPECTS OF ENSURING THE STABILITY OF THE COMMERCIAL BANKING SYSTEM – THE CASE OF LATVIA                            | 106 |
| <b>Maria Tissen, Ruta Sneidere</b>  |     |
| THE THEORETICAL AND PRACTICAL ANALYSIS OF TURNOVER RATIOS MODIFICATION FOR THE COMPANY'S BUSINESS ACTIVITY              | 107 |
| <b>Alicja Winnicka-Popczyk</b>  |     |
| CAPITAL SOURCES OF INNOVATION FINANCING IN POLISH FAMILY BUSINESSES (THE REPORT OF OWN RESEARCH)                        | 108 |



|   |            |
|---|------------|
| <b>Human Development and Efficiency .....</b>   | <b>109</b> |
| <b>Diana Araja, Janis Priede</b>  |            |
| IMPACT OF NUTRITION-RELATED DISEASES ON PUBLIC EXPENDITURES .....   | 111        |
| <b>Diana Araja, Janis Priede</b>  |            |
| OPPORTUNITIES FOR ASSESSMENT OF HEALTH CARE SYSTEM'S EFFICIENCY: THREE-LEVELS EVALUATION MODEL .....                              | 112        |
| <b>Ilze Buligina, Leena Kaikkonen</b>   |            |
| IMPLICATIONS FOR TRAINING THE TRAINERS IN WORK-BASED LEARNING - THE BALTIC CONTEXT .....  | 113        |
| <b>Michael Hager, Tatjana Seibt</b>   |            |
| CONSIDERING WORK-RELATED PREFERENCES AND ORGANIZATIONAL COMMITMENT IN EMPLOYER BRANDING .....                                     | 114        |
| <b>Kostas Karamanis, Nicolaos Arnis, Efstratios Kypriotelis</b>   |            |
| JOB SATISFACTION OF PUBLIC ADMINISTRATIVE PERSONNEL IN GREECE: AN EMPIRICAL ANALYSIS .....  | 115        |
| <b>Signe Koritko</b>  |            |
| IMPROVED INTERNAL CONTROL SYSTEM AS SUPPORT OF THE HEAD OF THE PUBLIC ADMINISTRATION INSTITUTION .....                            | 116        |
| <b>Ineta Lakstigala, Signe Balina</b>   |            |
| MANAGER'S COMPETENCES AND SKILLS AT THE STATE MANAGEMENT .....  | 117        |
| <b>Kristine Lece</b>  |            |
| ROLE OF EDUCATIONAL LEVEL IN EMIGRATION PROCESSES IN LATVIA .....   | 118        |
| <b>Irena Matuze-Karabesko, Inesa Voroncuka</b>  |            |
| POSSIBILITIES TO USE COACHING METHODS FOR PRIVATE COMPANY AND PUBLIC ADMINISTRATION'S PERSONNEL PRODUCTIVITY .....                | 119        |
| <b>Denize Ponomarjova, Romans Putans</b>  |            |
| ETHNIC DIFFERENTIATION OF REPRODUCTIVE HEALTH OF POPULATION IN LATVIA .....   | 120        |
| <b>Industries and Productivity .....</b>  | <b>121</b> |
| <b>Daira Baranova</b>   |            |
| PRODUCTION CHALLENGES IN CURRENT ECONOMIC FRAMEWORK .....   | 123        |
| <b>Aleksandrs Dahs, Vladimirs Rojenko</b>   |            |
| REGIONAL DEMOGRAPHICS AND ENTERPRISE PRODUCTIVITY IN LATVIA .....   | 124        |
| <b>Margarita Dunska, Aija Marcinkevica</b>  |            |
| LEAN EFFECTIVENESS METHOD APPLICATION IN CREATIVE INDUSTRIES OF LATVIA.....   | 125        |
| <b>Laimdota Komare</b>  |            |
| DETERMINANTS OF TOTAL FACTOR PRODUCTIVITY IN 8 EUROPEAN COUNTRIES .....   | 126        |
| <b>Janis Priede, Roberts Skapars</b>  |            |
| PRODUCTIVITY OF LATVIA'S WOOD PROCESSING INDUSTRY .....   | 127        |
| <b>Astrida Rijkure</b>  |            |
| CARGO DIVERSIFICATION OPPORTUNITIES AND METHODS IN PORTS UNDER THE INFLUENCE OF ECONOMIC CHANGE .....                             | 128        |
| <b>Irina Skribane, Sandra Jekabsone</b>   |            |
| LABOR PRODUCTIVITY AND ITS IMPROVEMENT OPPORTUNITIES IN LATVIA .....  | 129        |
| <b>Emil Velinov, Pawel Dobrzanski, Sebastia Bobowski, Anna Jankowiak</b>  |            |
| COMPETITIVENESS OF EUROPEAN UNION'S AUTOMOTIVE INDUSTRY .....   | 130        |
| <b>International Economics and Globalization .....</b>  | <b>131</b> |
| <b>Johannes Bramboeck</b>   |            |
| THE INFLUENCE OF GLOBALIZATION IN PHARMACEUTICAL INDUSTRY.....  | 133        |
| <b>Tomasz Dorozynski, Anetta Kuna-Marszałek</b>   |            |
| INSTITUTIONAL EFFICIENCY OF THE CEE COUNTRIES AND FDI INFLOW: COMPARATIVE STUDY BASED ON INVESTMENT ATTRACTIVENESS RANKINGS ..... | 134        |
| <b>Bogusława Drelich-Skulska</b>  |            |
| THE ROLE OF ASEAN IN ASIAN REGIONALISM IN XXI CENTURY .....   | 135        |
| <b>Egils Fortins, Gunars Vaskis</b>   |            |
| INTERACTION OF INTERNATIONAL TRADE AND PRODUCTIVITY: LATVIA CASE STUDY.....   | 136        |

**Inese Kalnina**

LEGAL ASPECTS OF DIGITAL CURRENCIES ..... 137

**Polina Lyalina, Lada Podolyanets, Albert Feldman, Valeriia Diakonova**

EFFICIENCY IMPROVEMENT INSTRUMENTS OF THE RUSSIAN OIL EXPORT IN VOLATILE CONDITIONS ..... 138

**Tatiana Solovey, Nadezhda Kanygin**

CORPORATE SOCIAL RESPONSIBILITY OF SMALL AND MEDIUM ENTERPRISES IN DEVELOPED AND EMERGING ECONOMIES: CASES OF GERMANY AND RUSSIA ..... 139

**Andrejs Zlobins**

THE INTERNATIONAL EFFECTS OF THE ECB'S ASSET PURCHASE PROGRAMME ..... 140

**Krystyna Zoladkiewicz**

THE TRANS-PACIFIC PARTNERSHIP AGREEMENT (TPP) IN THE CONTEXT OF CONTEMPORARY REGIONALISM 141

**Labour Markets and Mobility of Labour ..... 143****Mihails Hazans**

WHAT DRIVES EARNINGS OF RETURN MIGRANTS IN LATVIA? ..... 145

**Ilze Koroleva, Inta Mierina**

REPEAT MIGRANTS: WHO ARE THEY AND WHY DO THEY MOVE ON? ..... 146

**Inta Mierina, Ilze Koroleva**

FINDING A JOB AFTER RETURNING: THE CASE OF LATVIAN MIGRANTS ..... 147

**Romans Putans, Denize Ponomarjova**

THE DEMAND AND SUPPLY OF DIGITAL SKILLS IN THE AGE-GROUP 50+ ..... 148

**Tatjana Sudova, Nataliia Spiridonova**

EU LABOUR MARKET GAP ANALYSES OF MIGRATION OF HUMAN CAPITAL AS A FACTOR OF SUSTAINABLE DEVELOPMENT ..... 149

**Life Quality and Income Inequality ..... 151****Pawel Dobrzanski**

INCOME INEQUALITY IN EU COUNTRIES ..... 153

**Liga Feldmane**

IMPORTANCE OF RESIDENTIAL RELOCATION IN ASSESMENT OF LIFE SATISFACTION..... 154

**Juris Krumins, Anna Klusa**

MALE AND FEMALE LIFE EXPECTANCY AND SELF PERCEIVED HEALTH IN WORKING AND RETIREMENT AGES: CASE OF LATVIA ..... 155

**Krzysztof Malaga**

LES DILEMMES DE LA THÉORIE DE LA CROISSANCE ÉCONOMIQUE VERSUS LA THÉORIE UNIFIÉE DE LA CROISSANCE D'ODED GALOR..... 156

**Daniel Schettler**

TOWARDS MODELLING THE INFLUENCES OF WAGE DISPERSION ON TEAM PERFORMANCE WORK IN PROGRESS ..... 157

**Santa Sproge-Rimsa, Baiba Savrina**

THE ROLE OF HIGHER EDUCATION IN RAISING THE QUALITY OF LIFE: ANALYSIS OF THE BALTIC STATES ... 158

**Janis Supe, Baiba Savrina**

ANALYSIS OF ECONOMIC SECURITY IN THE BALTIC STATES IN CONTEXT OF LIFE QUALITY..... 159

**Marketing and Brand Management ..... 161****Anda Batraga, Daina Skiltere, Jelena Salkovska, Santa Bormane, Ilgvars Rukers, Aija Legzdina**

PRODUCT PROMOTION AS BODY OF INTEGRATED MARKETING COMMUNICATION TOOLS FOR SUSTAINABLE DEVELOPMENT OF BUSINESSES..... 163

**Kristine Berzina, Ilze Medne**

TOURISM ENTERPRISE COOPERATION: CAN BENEFITS BE FINANCIALLY PROVED? ..... 164

**Svilen Ivanov**

APPLIED SEMIOTIC ANALYSIS OF CREATIVE ADS ..... 165

**Vanya Kraveva, Ivayla Dimitrova**

PROTECTING THE E-CUSTOMER: LEGAL AWARENESS AND CONSUMER BEHAVIOUR OF BULGARIAN YOUNGSTERS ..... 166

**Vanya Krалеva, Svilen Ivanov**

TOWARDS A GENERAL MODEL OF SUSTAINABLE INVOLVEMENT ..... 167

**Agnesa Lahiza**

THE IMPACT OF DIGITAL MARKETING ON THE INSURANCE INDUSTRY STRATEGIES ..... 168

**Ilze Medne, Kristine Berzina**

DISTINCTIVE PERCEPTIONS OF LATVIA AS A DESTINATION IN GERMAN, AUSTRIAN AND SWISS TOURISM  
MARKETS ..... 169

**Ieva Puke**

EXPORT MARKETING PROCESS IN SMES DURING EARLY INTERNATIONALIZING STAGE ..... 170

**Elina Radionova-Girsa, Valerijs Praude**

DOING BUSINESS ON THE INTERNET: DEALING WITH ONLINE CUSTOMERS IN LATVIA..... 171

**Ronalds Skulme**

SOCIAL MEDIA INFLUENCE ON CROWDFUNDING PROCESS EVALUATION MODEL ..... 172

**Biruta Sloka, Justs Dimants, Zane Svilane, Renate Vidruska**

HOME PAGES FOR HIGHER EDUCATION EXPORT ..... 173

**Umer Qadir Sofi**

SENSORY MARKETING THROUGH IMPACT OF DISCOUNTS ON IMPULSE BUYING BEHAVIOR..... 174

**Laila Stabulniece**

CONSUMER BEHAVIOUR IN ONLINE TRADE: THE PROFILE OF VARIOUS GENERATIONS..... 175

**Emanuel Stocker, Margarita Dunska**

THE INFLUENCE OF THE INHABITANT ON THE SELLING PROCESS ..... 176

**Nitin Veer**

PERCEIVED VALUES, SATISFACTION, TRUST AND STORE LOYALTY IN RETAILING ..... 177

**Regional Development and Public Governance: Europe's Economic Future 179**

**Silvija Bruna, Silvija Kristapsone**

METHODS OF PROJECT MANAGEMENT IN PUBLIC PROJECTS IN LATVIA ..... 181

**Ilze Buligina, Biruta Sloka**

ENHANCING THE FLEXIBILITY OF VOCATIONAL EDUCATION AND TRAINING INSTITUTIONS FOR MODERN  
LABOUR MARKETS ..... 182

**Lauma Muizniece, Aleksandrs Cepilovs**

DISREGARDING HISTORY AND CONTEXT: INNOVATION POLICY IN LATVIA POST 1990..... 183

**Elena Murashova, Valeria Loginova**

ASSESSMENT OF STATE INFLUENCE ON THE DEVELOPMENT OF THE INNOVATION SYSTEM ..... 184

**Lada Podolyanets, Yuliya Veselova**

THE CURRENT STATE AND PROSPECTS OF INTERACTION BETWEEN RUSSIA AND THE BALTIC SEA REGION  
IN THE LNG MARKET ..... 185

**Maris Pukis, Lilita Seimuskane**

THREE FORMS OF GOVERNMENT FAILURE: OVER REGULATION, WORSE PROHIBITION, OVER CONTROL .... 186

**Evgeniya Tonkova, Dancho Petrov, Sevdalina Hristova**

THE NEED TO BALANCE THE INVESTMENTS IN THE TERRITORY ..... 187

**Visvaldis Valtenbergs, Inese Grumolte-Lerhe, Zanita Avotniece, Ilona Beizitere**

AGRICULTURAL LAND TRADE RESTRICTIONS IN EUROPE AND THE LAND MARKET SITUATION IN LATVIA 188

**Zane Zeibote**

THE IMPACT OF GLOBALIZATION ON REGIONAL DEVELOPMENT AND COMPETITIVENESS IN THE EU AND  
LATVIA ..... 189

**Janis Zvirgzdins, Maija Senfelde, Kaspars Plotka**

INTELLECTUAL URBAN ENVIRONMENT ..... 190

**Janis Zvirgzdins, Maija Senfelde, Kaspars Plotka**

NUCLEAR ENERGY AND RENEWABLE ENERGY IN URBAN ENVIRONMENT ..... 191



**NEW CHALLENGES OF  
ECONOMIC AND BUSINESS  
DEVELOPMENT 2018**

10 - 12/05/2018/Riga  
University of Latvia

# Business and Economics Data Analysis



## PRODUCTIVITY OF ICT SECTOR AS A DRIVING FACTOR OF COUNTRY'S ECONOMIC COMPETITIVENESS

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**Key words:** *ICT sector, productivity, European Union, panel data analysis, competitiveness*

**JEL code:** D24, R11, C23

Already since mid-1990 empirical literature points that the growth in productivity in the EU is relatively slow. The modest level of productivity in Europe means that this can lead to lose of competitiveness. Development of ICT sector is one of ways how to achieve better performance of economy. The digital economy now permeates countless aspects of the world economy, impacting sectors as varied as banking, retail, energy, transportation, education, publishing, media or health (OECD Digital Economy Outlook 2015). The enormous growth of digital economy along with the rapid development of information and technology (IT) is having a profound impact on the world economy (Sung, 2009)

It must be admitted that the core of the digital economy is the ICT sector. Ismail Seki asserts that “the power of economic competitiveness of a country depends on the productivity of its ICT sector” (Seki, 2008). The World Economic Forum, which has been measuring competitiveness among countries since 1979, defines economic competitiveness as “the set of institutions, policies and factors that determine the level of productivity of a country” (The Global Competitiveness Report 2017–2018). The interconnection between ICT sector productivity level and economic competitiveness could be based on assumptions that economic competitiveness depends on its productivity level. Nowadays when we speak about digitalized world and the knowledge economy, it could be also predicted that importance of ICT sector has direct impact on the productivity level of country.

Purpose of the paper is to analyse and verify how productivity level in ICT sector impacts the economic competitiveness of different European countries. As measurement for competitiveness Global Competitiveness Index (rank and value) data from World Bank databank is used and is attributed to the following data from Eurostat for Information and communication sector: wage adjusted labour in % and apparent labour productivity in 1 000 EUR. Research results indicate statistically significant correlation between Information and Communication (J) sector apparent labour productivity and Global Competitiveness Index (rank and value) data for year 2015.

Additionally in the empirical part we undertook a panel data investigation of long-run and short-run Granger causality between ICT sector indicators, productivity and competitiveness for a panel of EU countries. We have found unidirectional long-run Granger causality from ICT sector indicators to productivity growth and competitiveness level.

Thereby could be stated that higher will be ICT sector productivity that higher will be the country's economic competitiveness. To create productivity growth and competitiveness of EU it is necessary to invest in ICT and related skills. Furthermore research results depict the future growth possibilities of ICT sector in Latvia and its impact to the national economy.

## RETAIL SATURATION IN THE BALTIC STATES

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**Key words:** *retail, saturation, Baltic States, concentration, market growth*

**JEL code:** *C32, C43, L81*

The retail market has been a constant field of competition fights in the Baltics. The largest chain stores have been aggressively pushing for additional market shares in a demographically declining marketplace. This must lead to increased saturation of the marketplace. But the perceived high saturation was not a deterrent for new international chains announcing their entry in the Baltic Retail market. That leads to an assumption, that investors since see potential for market growth. Thus a research of the saturation of the market should be of advantage for companies, state institutions and other subjects. Investors would benefit from insight into the potential of investing in the Baltic States. Institutions can use saturation data to access the competition, especially since it has become a topicality in the Baltic in recent years.

The research aim is to analyse dynamics of the retail market by several indicators, amongst them market share, market size, growth rates, saturation indicators, concentration ratios and other. Additionally author will look into the assumption that several largest retail chains are in a dominant position.

The preliminary results indicate a market concentration level that is not significantly different from the situation in previous research before 2014, indicating a relatively easy entry for new competitors. The saturation of the market is still at a medium level. Albeit the decline of the population, especially in rural areas, the urban population can still uphold a certain retail demand. The slowly increasing income of the Baltic populace can help maintain additional trade area, which can be created both by existing chains, as well by newcomers. A further potential can be seen in the Baltic states, explaining the interest of new players for entering the relatively small region.

## GLOBAL VECTOR AUTOREGRESSION MODELS: A SECTORAL DIMENSION

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**Key words:** *global vector autoregression, input-output table, spillovers*

**JEL code:** *C32, F44, E32*

In today's world, country development is determined by global processes as well as by country's ability to integrate and position itself well in international production chains. In global world any event, such as productivity shock in the specific country's sector, will affect other countries and sectors. That's why, while analysing the effect of different shock (global/regional/sector) on any region or country, it is necessary to take into account cross-country integration.

Nowadays, detailed sector level information for the analysis of economy is mostly used in the framework of Computable General Equilibrium models, which is based on Supply and Use tables. On the other hand, economic shocks in the multi-country setup can be modelled in global vector regression model framework (GVAR). The existing GVAR models are based mostly on country level aggregated data and omit the sectoral aspect.

In this paper we are extending the global vector autoregression framework by including sector level dimension accounting for input-output production structures and value added weights. This way we develop a unique tool to evaluate potential effect of productivity shock in country-sector setup. To disentangle productivity shock we use sign restrictions implemented into structural GVAR through rotation matrix matrix approach.

The results show heterogeneous spillovers of global or euro area specific technological shocks on various regions. For example, to a large extent Central and Easter European countries are effected by technology improvements in euro area directly. On the other hand, the effect on Baltic countries is mostly indirect and realises through spillovers from the improvements in the regions as a whole.



## EFFECTS OF R&D ON PRODUCTIVITY: A COMPARISON BETWEEN NEW AND OLD EU MEMBERS

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**Key words:** *R&D, productivity, panel data analysis*  
**JEL code:** *O30, O47, C23*

Productivity has become an important issue for the European Union because of a slowdown in the European productivity growth and ageing of population in this region. As research and development expenditure are acknowledged as the key factor to productivity growth and development, that has been considered by policymakers setting the Lisbon target for R&D expenditures to the 3% level of GDP. Such target value has been raised discussions whether the same target level should be set for countries at different levels of development and different industrial structures. That motivates to study of comparisons of the efficiency of the R&D expenditures in different countries.

The goal of the paper is to evaluate the influences of different R&D types on productivity growth in the EU countries, and compare the contribution of R&D to a production efficiency between two groups – new EU member states (joined the union in 2004 and later) and old EU members.

Empirical analysis was conducted estimating unbalanced panel data regression models.

Consistent with previous literature, evidence of a positive and significant impact of the R&D stock on productivity was found in both groups – new and old EU members. However, the R&D stock elasticity coefficients within the group of the old EU members turn out to be larger than the corresponding coefficients for the group of new EU members. Additionally, we find that mostly in the group of new EU members there is a problem not only with quantity of R&D expenditure to GDP ratio, but also to lower ability to transform R&D expenditures into productivity growth. That means R&D supporting policies must pay attention to factors that could stimulate firms' capabilities to increase R&D efficiency.

## ANALYSIS OF DSGE MODEL WITH BANKING SECTOR – THE CASE OF LATVIA

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**Key words:** *DSGE model, financial frictions, banking sector, lending, interest rates*

**JEL code:** *C51, E44, G21*

After the global financial and European sovereign debt crises in the last decade, the global financial community acknowledged that ties between the real and financial sectors were much closer than previously believed. The financial turbulence revealed that the banking sector could be sufficiently significant to determine overall development of the real economy. At the same time, both credit standards and credit demand have been affected by the real conditions of the economy, perspectives of different industries, monetary policy as well as risk of borrowers.

In response to the need for the analytical framework considering the interlinkages between real and banking sectors, methodology that was initially developed to model solely fluctuations of real output or solely fluctuations of lending variables were amended with new aspects. Dynamic Stochastic General Equilibrium (DSGE) models with financial frictions has emerged as the most remarkable econometric advance that could be applied to evaluate the performance of the real economy and banking sector simultaneously. Nevertheless, the analytical completeness of DSGE models comes at cost of complexity. The usefulness of the more complex DSGE models should be judged by evaluating their performance against simpler versions of DSGE models.

In Latvia, the results of the evaluated DSGE models have been never compared against each other. Therefore, the aim of this paper is to estimate DSGE model with financial intermediation and simpler versions of DSGE models for the Latvian economy and compare the obtained results. Some parameters of the estimated DSGE models would be calibrated and the remaining estimated using Bayesian techniques. The selected framework allows to study also the effects of different type of shocks on the macroeconomic variables.

After the evaluation of the models for the Latvian economy, the conclusions could be made mainly in favour for DSGE model with financial frictions. However, simpler versions of DSGE model provide some insight into transmission mechanism and relevance of the most common shocks. Inclusion of the financial aspects provides basis for explanation of the fall in real output in Latvia during the economic crisis in 2008- 2010.

## SCENARIOS FOR LATVIAN DAIRY PRODUCTS EXPORT DEVELOPMENT

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**Key words:** *milk and milk product production industry, export development scenarios, forecast, economic freedom*  
**JEL codes:** *C53, F17, Q17*

Dairy industry in Latvia shows rapid growth since milk production facilities are being modernised and milk product assortment is being expanded in the last years. Latvian dairy products export value reached 165.5 million EUR in 2016, decreasing by 23.2% in comparison with export value in 2014. It is impossible to determine the probable industry's of dairy products development and certain products export possibilities because Latvian dairy industry researches are included in the whole researches of food and beverage industry. The research made by authors is actual in modern market since it analyses production of Latvian milk and dairy products and contains evaluation of external markets potential.

The research aim is to analyse the potential of external markets for Latvian milk and dairy products industry. The research uses statistical data processing methods, system analysis, comparison methods, forecasting methods.

The results of the research reveal scenarios for Latvian dairy products export development, which theoretically reflects the dynamics of Latvian milk processing industry development. The authors emphasize that the revealed tendencies are the basis for further research. The credibility of the results will increase after inviting experts and members of industry. According to the authors, the major factors preventing the export of Latvian dairy products are great competition in foreign markets, high logistics costs and low economic freedom. The main export conducive factors are large and open markets and stable demand for dairy products. As a result, the authors believe that the main conclusions are applicable for the planning of Latvian economic growth strategies and in the analysis of the economic freedom of external markets. Thus, the results of the study are both theoretically and practically applicable. Raw milk purchasing prices in Latvia are the lowest in the European Union, hence in order to promote the development of Latvian farms and therefore the quality of milk, the Ministry of Finance should include the dairy industry in the priority sectors by allocating additional financing to the industry, consequently promoting the prosperity of the industry and also economic freedom in the internal market in order to stimulate export. In addition, all official representatives of Latvia abroad should participate in the lobbying of Latvian agricultural and dairy sectors in order to make Latvian farmers and dairy producers recognisable in the external markets. According to the authors, scenario forecasting is also useful for decision making at both business and national government levels, since the use of scenarios under market conditions allows to understand the situation and its evolution better and more fully, find out the benefits, assess the potential threats, define possible directions for action, increase adaptation speed and response rate to changes in the external environment.

## **BUSINESS PRODUCTIVITY AND DATA ANALYSIS IN THE AUSTRIAN SUPERMARKET SECTOR**

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**Key words:** *Austria, benchmarking, data analysis, productivity, retail*

**JEL code:** *C14, C67*

Productivity is widely said to be the main key factor to increased prosperity by ensuring efficient use of resources. Efficiency in organizations is attracting considerable interest due to globalization and increased competition. Austria has the highest retail density within European retail, with 1,67m<sup>2</sup> Floor Size per capita. Whilst, omnichannel retailing is an opportunity, threat and the future on the one hand, stationary efficiency is the mission, purpose and the presence on the other hand.

With reference to the future in Austria's retail, one of the main challenges is the creation of new competitive advantages that are associated with investments in the latest technologies, innovation, research, human capital. With reference to the presence, knowledge on performance and productivity growth is needed to improve competitiveness.

Many hypotheses regarding efficiency in outlets in general and supermarket outlets in detail appear not well grounded with respect to the involvement of middle management. Still, middle management in many companies, are the experts with important tasks and topics such as; adopting best practices, strategic resource-allocation decisions and evaluation of personnel and shop performance.

This paper will discuss on economic and management challenges. The area of research is the Austrian supermarket sector. The methodology is based on the estimation of a newly developed non-parametric model. The empirical analyses applied to panel data on a sample of supermarket outlets. The variables are elaborated with the contribution of the middle management of the firm. The input variables used cover: Floor Size (m<sup>2</sup>), Customers, Working Hours, Labor Costs, Transactions Size, Productivity and Inventory Loss. Two Turnover variables are used for output in the model.

The aim of the research is to assess the potential for productivity growth to improve competitiveness of Austrian supermarkets by identifying the primary areas of improvement in outlets of large, multi-store multi-market chain operation.

Research methods used in this research: Literature review on productivity and efficiency, empirical analysis of data.

The results of this paper contribute to theoretical and practical research in management science as the performance of several retailers is sub-optimal, suggesting the potential for significant improvements.





**NEW CHALLENGES OF  
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# Business Competitiveness Enhancement



## THE ENVIRONMENT OF INNOVATION ECOSYSTEMS IN THE BALTIC STATES

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**Key words:** *start-up, innovations, innovation ecosystem, open innovations*

**JEL code:** *O32, O31*

The ever-changing world pushes both individuals and enterprises to reach new levels of development. One of the prerequisites for development is innovation. However, due to scattered and network-based social, knowledge and technological resources the development of innovations, especially those highly connected with technologies, are not that simple to be made. In the past decade it is possible to notice a shift in terms of strategies of value creation – enterprises are slowly changing their approach from internal to external innovation systems. However, right now Latvia, in comparison with other European Union countries, convincingly stands among those countries, where innovations have been evaluated as problematic and which are hindering the overall competitiveness (21<sup>st</sup> position among 28 countries, Global Competitiveness Index, 2016-2017). Lithuania holds 19<sup>th</sup> position, while Estonia holds 14<sup>th</sup> position.

Right now there is a lack of studies examining innovation ecosystems and thorough analysis of hampering and motivating factors for the most efficient ecosystem development in Latvia, Lithuania and Estonia. This paper aims at providing insights into state and non-state actors governing innovation ecosystems in the Baltic countries. Also, in this paper authors aim to describe and analyse particular case studies, explaining the current innovation ecosystem environment on a particular example of self-driving automotive technologies. As a result, it is possible to make conclusions about the weaknesses and strengths of the particular innovation ecosystem and to come up with suggestions to enhance synergy among the involved actors.

The theoretical basis of the research is based on the concept of open innovations, which is a derivation from the organization theory. There are three key theoretical perspectives of organizations: rational, natural and open systems, thus it can be said that open innovations is the new era of governing change and innovations in and among enterprises. Both rational and natural systems concepts tend to focus on factors within the organization and hold the environment constant, which means they take a closed systems approach. However, nowadays in particular organizations do not operate in an alienated bubble; they are affected by their external environment too. Although open systems perspectives emerged more than 50 years ago (in the 1960s), the shift from traditional to open business strategies has only recently taken its turn. Thus, companies and even industries are facing challenges in finding their position among state and non-state actors, which undeniably influence their ability to carry out their business plans on a full potential.



**LATVIA TRANSPORT OPERATIONAL PROGRAMME EX-POST EVALUATION**

*Daina Belicka, CSE COE*

**Key words:** *EU funds, transport, evaluation*

**JEL code:** *I20, I21, I28, O21, O22, O52*

Transport infrastructure development requires large long-term investments and provides significant contribution to the economic growth if the funding provided is invested in effective and efficient way. During the EU funds programming period 2007-2013 more than 1.5 billion EUR has been allocated to the transport infrastructure development based on the government priorities defined in the Operation Programme (OP) “Infrastructure and Services”. This research aims to perform an ex-post evaluation of the transport sector projects financed by European Regional Development Fund (ERDF) and Cohesion Fund (CF) during the period 2007-2013. The ex-post methodological approach was based on EU Better Regulation Guidelines for evaluation activities and included design of evaluation questions for main evaluation objectives – efficiency and effectiveness. The research method included a review of planning documents at EU and national level, Operational Programme implementation reports and different related studies. Quantitative data research comprised a review of the statistical data provided by Central Statistical Bureau; data available at different agencies and used for transport sector performance monitoring, for instance, road safety indicators; economic data at national and regional level. The qualitative data research consisted of semi-structured interviews with institutions responsible for OP planning and implementation, final beneficiaries and other stakeholders, for instance, Planning Regions. The research results demonstrated that planned objectives of the European Transport Core Network and Comprehensive Network have been achieved and in some cases exceeded, however the usage of different other financial instruments in addition to ERDF and CF could have been higher. The projects in the efficient and effective way contributed to the infrastructure further development; infrastructure compliance with technical requirements set by EU; economic development of regions and overall economic development of country. The evaluation results include recommendations for future planning of transport sector priorities in Latvia, to provide better mobility; linkage with EU transport sector priorities; contribution to growth corridor and regional development by using different financial instruments available in the most effective way.

## PRODUCT AND PRICING POLICIES IN THE GERMAN HOSPITALITY INDUSTRY

*Thomas Corinth, University of Latvia*

**Key words:** *behavioural pricing, hospitality industry, pricing strategy, Grand Départ*

**JEL code:** *M31, L80, L83*

A lot is known about the flexible approach of aviation industry and hospitality industry, to proactively predict fluctuations in demand and to respond with various price differentiations. Achieving an optimal utilization with optimum absorption of the willingness to pay with a unit price is hardly possible in liberal economic environment. Therefore, different prices must be offered by means of price differentiation for diverse market segments, corresponding to the respective willingness to pay. Target is to define the right customers, to provide the right service at the right price at the right time at the right place. The services for the professional application of price differentiations (in hospitality industry called: revenue management) must be subject to greater fluctuations in demand and the requested goods must be price-elastic. The price differentiation itself can refer e. g. to the dimensions of time, place, space, quantity and purchaser. Typical examples of periods of high demand are holiday periods, trade fairs, the arrival days in a work week or even sporting and cultural events. The reactions of the product and pricing policy as reaction on volatility in demand leads to the question of this work.

The research is based on relevant literature. First, examples of studies concerning other major sports events will be introduced, to gain information on the importance of sporting events in general. Then, the function of food and beverage supply will be explained. In addition, typical instruments and strategies are explained, that affect the hospitality product and pricing policy. With respect to the Grand Départ, the influences on the product and the price policy had been surveyed upon local catering businesses. Also examined whether and to what extent behavioral pricing effects were used consciously.

Three months before the Grand Départ 160 catering establishments by e-mail were invited to participate in an online survey. 32 of these businesses gave a fully usable response, for which data were the basis of further evaluations. To interpret the investigation results better, criteria were defined that the restaurants were divided into different business types. The research showed, that some potentials are certainly not fully exploited because of lack of experience and the partial lack of knowledge about existing possibilities of price differentiation and effects of behavioral pricing.

## LEGAL FRAMEWORK DEVELOPMENT: NON-BANK BUSINESS FINANCING OPPORTUNITIES

*Alina Dibrova, University of Latvia*

**Key words:** *alternative finance, legal framework development*

**JEL code:** *G28, G23, K20*

The aim of the conducted work is to present a complete analysis of the regulation of alternative finance, often referred to as the shadow banking sector, as well as highlight the existing gaps and potential further development of the regulation of this sector. A wide range of alternative finance possibilities exist, starting from alternative investment funds and up to crowdfunding, peer-to-peer lending and Business angel activities. While regulators have taken their first attempt to regulate some of them (for instance alternative investment funds), others remain broadly unsupervised, despite growing awareness of non-bank financing possibilities among businesses. This not only limits the use of the opportunities alternative financing possibilities might bring to the market, but also creates unwanted tension for those already using them. By performing a deep analysis of the regulatory base and acknowledging the further steps announced by supervisors, this study will contribute to a European-wide overview of shadow banking regulation. To develop an overall assessment of existing and expected changes in regulation, the author will perform an analysis of national regulatory frameworks, using also the method of graphical visualisation and of statistical data analysis. It is foreseen that the performed work will have broad theoretical and practical implications. Namely, this would become the most recent legal framework analysis on alternative finance possibilities at EU level. Moreover, while modelling the possible development of the regulatory base the work would significantly contribute to the theoretical implications. By providing a concise analysis and summary of the current legal framework, the study could be directly used by various market participants.

The conclusions of the work performed suggest that at EU level the initial regulation has been applied to alternative finance and the hypothesis that the alternative finance sector remains fully unregulated can no longer be supported.

## PETRI NETS FOR MODELING PRODUCTION SYSTEM

*Ekes Szeverin Kristof, University of Sopron*

**Key words:** *Petri Nets, production system, timed event graph, simulation*

**JEL code:** *C60, D24, E23, L23*

For a productive enterprise, the processes can be described using economic objective functions, which factor of the uncertainty (prices, volumes, availability) is high in some of its functions. Though most of the simulation solutions with a large database help to reduce uncertainty, they are not enough to optimize planning and management tasks successfully. A solution to the problem could be the use of Petri nets, which were primarily designed to solve the structure and regulation of competing parallel systems (Vaisman, 2012).

In the paper, shortly after the introduction of the Petri nets theory, we will present an application that can be used for modeling and analyzing workplace and flexible manufacturing systems (FMS). These nets can be used to study the functioning of manufacturing systems and provide important information such as productivity, minimized material handling, machine utilization and so on (Aalst,1995). However, the most known disability of timed Petri nets suitable for modeling flexible workplace production the deterministic firing time. To overcome this, the stochastic Petri nets were developed, in which the firing times, like the queuing theory, have the same exponential distribution as the service times. However, the applicability of stochastic Petri nets seems to be limited in practice for several reasons (Aalst-Hee,2002).

The Petri nets are closely linked with Work Flow, which is intended to describe the general business process for individual cases. Such cases may include an insurance claim, a mortgage claim, a tax return, an order or even a patient in the hospital. In similar cases, the same workflow is applicable, but in all cases there is an identifier for each case (Grigorova, 2013). It is also important to highlight the role of routing, as we can allow optional tasks in the processes. Using routing, the following constructs can be described: CPN (Jensen, 1997), sequential routing, parallel routing, selective routing, iterative routing (Russel-Aalst et al, 2002). Additionally, the Petri-net allows you to create a process availability graph describing how and in what order the different states are available (Vaisman, 2012).

I believe that these nets can help to optimize a production process using productivity indicators, material handling systems, machine requirements, and leverage.

## EXPLORING THE ROLE OF CLUSTERS IN INCREASING THE COMPETITIVE ADVANTAGE OF AN ENTERPRISE IN THE GLOBAL ECONOMY

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**Key words:** *clusters, competitiveness, economies of scale, industrial clusters*

**JEL code:** *L14, L26.*

Globalization of contemporary international relations has caused that both countries and enterprises take a number of actions aimed at raising the broadly understood competitiveness. Enterprises are forced to exist in conditions of intense local and international competitiveness, which make companies look for partners by creating different cooperation networks. Clusters are one of the types of such cooperation. Clusters, i.e. related companies, universities and national institutions, contribute to increasing competitiveness, innovation, to creating new products, new companies and new jobs. Clusters, through the specificity of their character, combine the activities of entrepreneurs, local government institutions, and scientific units, thus contributing to the dynamic growth of their business. Existing, strong and specialized clusters are an opportunity for many small and medium-sized companies operating locally and not having the chance to independently go beyond the borders of their region. Clusters bring many tangible economic effects for affiliated companies, and enterprises combine into clusters to take advantage of economies of scale and synergy. Creating an effective cluster contributes to the reduction of operating costs, supply, logistics and production.

The aim of the article is to show the impact of functioning in clusters on associated enterprises and their competitive level in the global economy. There are following research questions in the paper: (1) what benefits can the company achieve in the clusters? (2) in what aspects of the functioning of enterprises clusters can bring benefits? (3) can functioning in a cluster contribute to the increase of the company's competitiveness? In order to verify the research questions raised in the article, the following research methods were used: method of critical analysis of available literature (data from both primary and secondary sources were used), cause-and-effect analysis (it was used to examine the impact of association of enterprises in clusters on the increase of competitiveness of this enterprise) and own empirical research carried out among senior managers of transnational corporations located in the industrial cluster under study. The article adopts a deductive-analytical approach.

## **GAINING COMPETITIVE ADVANTAGE WITH RISK MANAGEMENT – A THEORETICAL APPROACH**

*Rene Lauck, University of Latvia*

**Key words:** *risk management, company performance, competitive advantage, strategy*

**JEL code:** *D81, H12*

Managing risks is a vital process which often has substantial impacts on the performance of organisations. In risky situations, managers have to make several decisions, ranging from easy to very complex issues. Therefore it is essential to establish a risk management system in order to identify, analyze, assess and to control risks properly. Many companies suffer on ill-structured decision-making processes and insufficient risk management systems. This can be traced back to fact that risk management is often underestimated in organisations. Due to the fierce competition and rapid changes on the markets, the topic of risk management has become vital in both academia and in practice over the last several years. The aim of this paper is to give a guideline for a successful risk management system which additionally improves the competitiveness of companies. The research of this paper is based on an extensive literature review from different scientific areas such as Management and Risk Management and should raise awareness for further scientific research.

## ADOPTION OF CUSTOMER RELATIONSHIP MANAGEMENT CONCEPT FOR SMALL AND MEDIUM SIZE ENTERPRISES

*Sarmite Mickevica, University of Latvia*

**Key words:** CRM, customer relationship management, SME

**JEL code:** M10

Lack of definition for customer relationship management (CRM) concept in the enterprise may hinder successful CRM project implementation. When for management it is challenging to understand objective of all CRM concept components – strategic, operational and analytical, it becomes also difficult to define the objective of whole CRM system in the enterprise, implement it successfully and measure its results. Many enterprises implement CRM by taking as the baseline CRM technology capabilities, but not their business and customer strategy, what hinders success of those projects.

Currently available theoretical model of CRM is developed for large enterprises and it is not fully applicable for small and medium enterprises (SMEs). When conducting CRM research in Latvia market, what is dominated by SMEs, it is important to define which areas of CRM conceptual model should be adjusted for SMEs needs and which areas are important for practical adoption of CRM in SME's.

During research CRM experts gave their evaluation of CRM theoretical model components – strategic, operational and analytical use in SMEs. Research was conducted as semi structured interview and survey of CRM experts. Main finding of research is that for SMEs the most important is the operational component of CRM and CRM strategy component should be simplified.

This research will contribute to the adjustment of CRM theoretical concept for SMEs needs and will contribute to the decision-making process of SMEs willing to evaluate their current CRM implementations or for those who consider adopting CRM in the future.

## PASSENGERS' DECISION-MAKING AT CHOOSING RIGA AIRPORT FOR DEPARTURE

*Sergejs Paramonovs, University of Latvia*

**Key words:** *air passenger, decision making, airport, gravitation modelling*  
**JEL code:** *M16, M38, R40*

In the region of the Baltics, competition among airports has been becoming tougher for the recent years. Undisputed leader, Riga International Airport, start losing positions against its competitors in Estonia and Lithuania. The latter show higher pace of development. One may speculate that specific factors affect passengers' decision on traveling from a particular airdrome. This study reveals a specific segment of such the decision-making process – analysis of several variables named in the following paragraph.

This article is prepared on the ground of ongoing research the author conducts on efficiency of airports, as reflected in passengers' satisfaction with aviation and non-aviation services. The study aims at finding key factors in the best way reflecting on optimal balance between distance to the airport, time spent for travel, actual cost and income of a traveller. A combination of the factors may result in a higher chance for the decision of a passenger to prefer one airport to another. The article does not discuss a possibly related factor of airport's offered destinations and passenger's satisfaction with it. The consecutive article on Total Time of Travel summarizes the cumulative interplay of factors.

The study compares passenger's subjective comprehension of the variables measured with a survey against Gravity Model commonly used for transportation modelling. The latter has four steps – dividing geographical region into zones; computing number of trips starting and ending points for each zone; computing the number of trips between them for all pairs of zones; and assigning all trips to the various routes and transit routes. Combinations of Alternatives along with four factors were given to selected pool of passengers for ranking in the survey.

Results of the study indicate that passengers' decision-making process over picking a specific airport is biased. Many respondents would chose routes from home to Riga airport with no or minimum number of transfer-stops. As well, time and cost of traveling given higher priority over distance of travel. This time, there was Riga airport researched only. Applying Gravity model created understanding that the longer the distance from the airdrome, the less chance the passenger choses this route. Implications of the study are widespread. Knowing passengers make decisions by time and cost of travel, it may help better target and marketing.



## THE STRUCTURE AND CREATING OF FAMILY SOCIAL CAPITAL IN BUSINESS

*Wojciech Popczyk, University of Lodz*

**Key words:** *family businesses, family social capital, competitive advantage*

**JEL code:** *F23, F20, F00, F61, L26, M16, M21, O19, O32, O30*

The operational assessment of family businesses in Poland and in the world is conducted through the prism of existing and unfavourable stereotypes which refer to such companies and hinder the recognition of the indubitable role these entities play in the market economy from the economic and social perspective. One such unjust stereotype is the belief in their impeded management professionalization that stems from nepotistic practices and a lack of will to employ specialists and professional managers from outside the family circles, which may lead to the limitation of developmental abilities, or even to marginalisation in the conditions of the knowledge-based economy. Yet family businesses do operate, develop and, as evidenced by empirical research, carried out in many countries featuring different levels of economic development and belonging to various cultural areas, the financial results they achieve are not worse and in most cases even better than their non-family counterparts. In the case of joint stock companies the differences are considerable, showing higher efficiency of the family businesses.

In the conditions of the economy of the XXI c. intangible resources play a major role in creating business competitive advantage. Human capital is the vehicle of them. To benefit from the human capital, businesses have to work on developing social capital - relational one, which enables the staff to exchange experience, share knowledge and create a new knowledge. Family businesses appear to have a particular form of social capital from the very inception. Family social capital comes from the family, its culture, traditions and results from the frequent, deep and long-lasting personal interactions among family members. Emotional trust and strong moral infrastructure seem to be the most invaluable components of it. In turn, they result in creating such strategic resources like: strong internal and external social architectures of the business, reputation and mechanism of protecting tacit knowledge, which all are the sources of family business competitive advantage over their non-family counterparts. The paper aims at presenting the model of emotional and moral processes in family businesses. The Author refers to the results of own research (phone in-depth interviews carried out with 12 entrepreneurs) to illustrate the processes and verify the model.

## ENTREPRENEURIAL DECISION MAKING PROCESS IN SME'S DURING EARLY INTERNATIONALIZATION STAGE

*Ieva Puke, University of Latvia*

**Key words:** *entrepreneurial decision making, internationalization, SME*  
**JEL code:** *L26*

SMEs face high levels of uncertainty when enter international markets due to physical, psychological and cultural market distance, limited experience and knowledge of entrepreneur. Evidence of entrepreneurial decision making processes under conditions of uncertainty shows use of heuristic approach. Liabilities of smallness, newness and foreignness are often used among studies on the internationalization of SME's. These liabilities influence decision making process, but how entrepreneurs act to overcome these barriers?

The research objective is to explore entrepreneurial decision making process in SMEs during early internationalization stage. The research questions are:

- what factors influence entrepreneurial decision making process during early internationalization stage?
- how entrepreneurial decision making process help enter international markets?
- how SMEs cope with liabilities of newness, smallness and foreignness?

Research method: author has adopted qualitative research approach based on inductive analysis, and grounded theory building. Using purposeful sampling, 22 SMEs involved in international business were selected and 15 agreed to participate. They had to respond to criteria of turnover, number of employees and growth, have at least 25% of turnover from international sales, all of them exported to at least 10 countries, including outside of their home continent. Interviews took place in Latvia, 2017, August-October. 15 semi-structured face-to-face interviews conducted with entrepreneurs – business owners or in few cases export managers; interviews were transcribed.

Research results and conclusions: The key success factor for SMEs first entering international markets is speed of growth. During early internationalization phase companies are still searching for and validating their value proposition. The sooner they validate it the faster growth it can achieve. Study results show that companies use exploratory market learning, process based creativity and agile marketing principles while searching for value proposition. Study shows that companies facing liability of newness use various tools to build trust and legitimacy in international markets: exploiting reputation and networks of partners, involving industry opinion leaders and endorsers, using marketing tools to build thought leadership programs, recruiting early adopters as first customers.

Conclusions: this study gives a deeper understanding of entrepreneurial decision making processes during early internationalization stage and can be useful for business owners and export managers when planning going international as well as policy makers.

The study limitations: the purpose of this research is to develop variables and propositions for the theory, not to test the theory. As research was conducted in Latvia which belongs to group of small and open economy countries (SMOPEC), SMEs here might be more driven to internationalization comparing to companies from larger markets.

## EVOLUTION OF CUSTOMER SEGMENTATION IN THE ERA OF BIG DATA

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*Tatjana Tambovceva, Riga Technical University*

**Key words:** *segmentation, big data, predictive modelling, decision tree, RapidMiner*

**JEL code:** *M31, C45*

Huge amounts of data can be created and stored by organizations because of Information Technology (IT) development. Borders of different disciplines are becoming more vague and interconnection of disciplines can be observed more often. Marketing and IT is blending due to digitalization, statistics is becoming more important due to rise of big data and data mining.

Purpose of the study is to create customer segments based on predictive modelling by using big data available in organization. Process of data mining is described and performed in the study on data provided by organization. CRISP-DM data mining process is selected and used in the study. RapidMiner Studio software is used for development of customer segments.

Common characteristics of segmentation and predictive modelling are identified. Results of empirical study show that it is possible to create customer segments by using sophisticated predictive model. This can be achieved without having to write statistical software codes. Results also show that organization can benefit by implementing segmentation based on data mining and predictive modelling in key business areas.



**NEW CHALLENGES OF  
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# Circular Economy for Smart Growth



## **CIRCULAR ECONOMY NATIONAL STRATEGY DEVELOPMENT IN EU COUNTRIES**

*Juris Benders, University of Latvia*

**Key words:** *circular economy, national strategy, policy tools, stakeholders*  
**JEL code:** *E61, O44, O57*

Since European Commission adopted a Circular economy package that is assumed to be a new and more ambitious step for EU Environmental policy development. The successful implementation of eco-design concept into various economy sectors should be based on comprehensive national strategy appropriate for certain country. Therefore the elaboration of Circular economy oriented national policy documents is on Agenda nowadays.

Implementing policies towards building a Circular economy models requires the participation of different types of stakeholders including national/local governments, business, NGOs, consumers, academic and research centres. Circular economy development depends from application of various policy instruments, such as regulatory instruments, research and innovation measures, information and education support issues.

Paper aims to analyse and formulate the principal aspects of Circular economy national strategy development, putting attention to Circular economy current implementation processes in EU countries. The research is based on document analysis; the comprehensive investigation of different Circular economy national level policy documents in EU countries have been performed.

Circular economy national strategies have been analysed applying the following criteria: strategy frame and scopes covered, principal implementation steps and policy tools to be used. Well grounded Circular economy strategy framework, as well as, network partnerships have been recognized as crucial components in advanced Circular economy strategies.

Obtained research results could serve for successful elaboration of Circular economy strategy in Latvia right now. The comprehensive Circular economy national strategy ensure preconditions for well timely stakeholder group involvement, identification of the most priority sectors for Circular economy development and implementation of exact policy tool package.

## EXPLORING THE LINKS BETWEEN CSR AND COUNTRIES' COMPETITIVENESS

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**Key words:** *corporate social responsibility, competitiveness, environment, dimensions*  
**JEL code:** *M14, L21, D21*

The relevance and dynamics of economic, social, political and other processes lead to the increasing researchers' attention on the Corporate Social Responsibility (hereinafter – CSR) as a result of its potential impact on maintaining growth and competitiveness of a country. The European Commission, the United Nations and other international institutions are actively discussing the contribution of the CSR to building a sustainable economy in order to achieve the increasing long-term competitiveness. Whereas the CSR develops, occurs and is defined at micro-level, it is often analysed and assessed on micro-level. However, it is expedient to define and assess the CSR, as well as its potential impact, at the national level, when formulating government policy, which stimulates the development of the CSR at the national level.

In the course of dynamic processes of globalization the conditions of competition are changing and the need to find new methods to ensure the national competitiveness is growing. Although the studies on competitiveness at corporate and sector levels concentrate on company added-value creation, the practice and research, however, recognize the fact that the competitiveness of a company and sector in an open economy is becoming more dependent on the ability of a country to form favourable conditions for the companies to operate and compete in global markets. On the other hand, as a result of a high state integration, the changes in countries are interdependent, with direct or indirect impact, thus requiring reasonable solutions on the national level. Researchers focus on the factors, which build the competitive advantages of countries, promoting the increase in employment rate, the generation of relatively high income, the improvement of living standards, as well as continuous and high paces of economic growth. Therefore, the policy-making for increasing competitiveness, taking into account the differences of cultural environment, may become the essential presumption in consolidating the impact of CSR on country competitiveness.

The paper investigates relationship between the phenomena of CSR and country competitiveness. On the basis of identified theoretical approaches relationship between the phenomena of CSR and country competitiveness is investigated and a model to assess the impact of CSR level on country competitiveness is developed.

## **DEVELOPMENT OF SHARING ECONOMY: ANALYSIS OF DIFFERENT COUNTRIES EXPERIENCE**

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Tatjana Tambovceva, Riga Technical University  
Dzintra Atstaja, BA School of Business and Finance*

**Key words:** *sharing economy, collaborative consumption, consumer attitude, building trust*

**JEL code:** *A13, E61, O44*

Sharing economy as one of the Circular economy business models have great potential in reducing need for physical assets in the same time increasing availability of different services. The idea of zero waste and completely closed materials cycles contradict the fundamental laws of thermodynamics, therefore considerable reduction in demand for material assets is very crucial to implement circular economy and reduce ecological footprint. To ensure real decoupling of resource use from economic growth, reduction in production outputs can create considerable effect. In the same time, Sharing economy does not require giving up benefits and conveniences of using the material assets, because of bigger efficiency. The Sharing economy requires considerable societal change, which arises many new issues to be resolved. The paper discusses benefits of the Sharing economy and how its induced problems can be resolved.

Research aim is to discover drivers and obstacles in a development of the Sharing economy and suggest solutions. We use literature study, observations and consumer survey as the research methods.

The findings of this research suggest that main drivers for people to engage in the Sharing economy activities are possibility to save or earn money, but less important motivation is helping environment or gaining unique experience, or establishing new relationships. Main obstacles are worries about personal safety and that professions or homes will be well-treated by platform members. Building trust between sharing platform members, providing system of trustful reviews about service providers and users, availability of more comprehensive information about sharing platforms are the main enablers for further development of the Sharing economy. From the economic policy perspective, we suggest to set clear rules for collaborative economy participants to separate sharing activities from illegal entrepreneurship and set fair tax system. Results of the study can help to develop better sharing platforms as well as for policy makers to work out suitable regulation of the Sharing economy.



## CIRCULAR ECONOMY APPLICATION IN SHRINKING REGIONS

*Agita Livina, Vidzeme University of Applied Science*

**Key words:** *circular economy, shrinking region, planning, balanced development*

**JEL code:** *R11*

In Eastern and Western European countries is going shrinking of several regions. Shrinking phenomena includes Latvia, Lithuania, Estonia and other countries and regions. The shrinking region is considered as untoward and gone territory for economic growth particularly from policy makers' perspective. The aim of this study is to analyse theoretical options for circular economy development in shrinking regions. The growth economy which requires to plan more and more profit, units of goods, jobs etc. is not adequate strategy for shrinking regions. The research conducted by desktop approach by analysing research articles with key words: shrinking and circular economy and by reviewing policy planning documents on circular economy and regional development at European Union level and at national level in Latvia.

Initial study findings show that at first, national policy and EU policy didn't accept shrinking of regions; at second, principles of circular economy are applicable to shrinking regions. There are challenges as cooperation, philosophy of consumption and values, willingness and availability to pay of services. The study will open discussion about shrinking regions and circular economy from other perspective because till now mainly circular economy is related with zero waste concept.

## **ECONOMICAL ASSESSMENT OF COMPREHENSIVE MINERAL PROCESSING OF PHOSPHOGYPSUM WITH RARE EARTH ELEMENTS' EXTRACTION BASED ON COST-BENEFIT ANALYSIS**

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Lada Podolyanets, Saint-Petersburg Mining University*

**Key words:** *critical materials; sustainable development; recycling; investment; cost-benefit analysis.*

**JEL code:** *Q32, Q51, O32*

In the modern world sustained growth in demand and supply of rare earth metals is preserved according to directives of progress in science and technology. Rare earth elements are becoming increasingly integrated in new technologies, especially within the clean energy, military and consumer electronics sectors. At the same time, the world market of rare earth raw materials is monopolized by China, and this fact causes the volatility of international prices. One of the most significant component of modern innovative rare earth mineral resource potential of Russia is techogenic raw materials sources, which is associated with the processing of phosphogypsum, the waste of production of apatite concentrate. The processing of phosphogypsum with the extraction of rare earth oxides is not carried out in commercial size due to undervaluation of economical efficiency of capital investment project.

The traditional positions of valuation of economical assets, which involve the calculation of measures of efficiency, are described in the article. The project implementation of recycling, in addition to economic benefits, also has a significant impact on social and ecological well-being. This increases the value of projects and should be taken into account when making investment decisions. The main directions of using of phosphogypsum are analyzed by authors. Multiple benefits, which arise during the waste recycling, are identified and classified. For comprehensive assessment of these projects authors propose to use Cost-Benefit Analysis, which involves the calculation of two components of the net present value of the project - financial and economical. In such a way, the economical net present value reflects the monetization of the environmental effect from reducing the harmful environmental impact of waste, thereby enabling the project to be more efficient. As one of the possible ways of monetary evaluation of external positive benefits, which associated with reducing the harmful environmental impact, it has been proposed to use the estimate of prevented environmental damage. The methodological basis for carrying out this assessment is the «Provisional guidelines of determination of prevented environmental damage». The methodological approach of assessment of efficiency of comprehensive mineral processing of phosphogypsum with rare earth elements' extraction is proposed by authors. Also the estimate of economic strength of waste recycling is adduced.

## **PROPORTION OF GREEN PUBLIC PROCUREMENT OF PUBLIC PROCUREMENT IN LATVIA DURING PERIOD OF 2015-2017: FACTORS THAT INFLUENCE GPP DEVELOPMENT**

*Inese Pelsa*

**Key words:** *green public procurement, public procurement, proportion of green public procurement*  
**JEL code:** *Q56, Q58*

Public procurement is considered as the most effective policy to promote innovations into specific fields. In Latvia, public procurement is 17% of gross domestic product. Green public procurement is a mean of saving up finances for public institutions, especially, taking into consideration total expenses of the contract life cycle not just procurement price.

On February 17th, 2015, the Cabinet of Ministers approved “Green Public Procurement Support Plan 2015-2017” which determined the aim that since 2015 procurement planned from the state budget and to which green procurement is applied must be at least 15% of the financial means of the total state and municipal institution procurement volume, in 2016 it must be 20%, and in 2017 – 30%; as well as green procurement and green public procurement requirements are applied and integrated into the process of introducing EU structural and investment funds and Cohesion fund.

On June 20<sup>th</sup>, 2017, the Cabinet of Ministers approved Regulations No 353 “Requirements and Application of the Green Public Procurement”. The Regulations by the Cabinet determine the process of application of green public procurement, its implementation, supervision, evaluation, as well as control and mandatory groups of goods and services which the green public procurement is applied to.

At the moment, green public procurement must be applied systematically, forming a deliberate procurement policy for public institutions according to the principles of the green public procurement. This policy should be aimed to achieve continuous improvements.

The aim of the paper is to explore the proportion of applied green public procurement of total procurement in Latvia in the period of time since 2015 until 2017; to analyze how the aims of the proportion of the green public procurements are achieved. By analyzing data from the Procurement Supervision Agency and State Regional Development Agency to explore the main groups of goods and services which environmental requirements are applied to. The paper includes data collected in a survey of municipalities of Republic of Latvia aiming to identify the main factors that promote GPP development and the ones that are obstacles of implementing GPP. It is concluded that one of the main factors that influences development of GPP are state resolutions and development of legal acts, as well as provided EU financing that include GPP requirements. The main obstacles of GPP implementation are limited municipality budgets, resulting that those procurement are chosen that do not include an environmental requirements.

In order to develop GPP successfully it is necessary to form a technical support group, or “a helpdesk”, that would provide information about implementation of GPP to municipal procurement providers on a daily basis.

Analytical, graphic, economically mathematical, statistical research methods as well as other qualitative and quantitative research methods have been used in this research.

## INDICATORS AND CORALTION MATRIC FOR NATIONAL INNOVATION SYSTEM

*Inga Sirante, University of Latvia*

**Key words:** *National Innovation system, Indicator, Correlations matric*  
**JEL code:** *O380*

Performance indicators such as national wealth (GDP per capita), R&D intensity (GERD/GDP), global competitiveness index (GCI) and scientific impact (citations/paper) are used to compare national innovation systems. These indicators are derived from the ratio of primary measures such as population, GDP, GERD, GCI and papers. Frequently they are used to rank members of a national innovation system and to inform decision makers. This is illustrated by the European Research Area S&T indicators scoreboard used to compare the performance of member states.

Katz [Katz, J.S., 2000. Scale independent indicators and research assessment. *Science and Public Policy* 27, 23–36] showed that scientific impact (citations/paper) scales with the size of the group (papers). In this paper it will be shown that two other common measures, R&D intensity and national wealth, scale with the sizes of European countries and Latvia.

The aim of the study is to develop recommendations for improving the national innovation system, to determine system indicators and to develop an indicator correlation matrix.

The information was obtained using qualitative research methods, analyzing planning documents and statistical data obtained from various public and restricted sources of access.

A study of national systems has from common observations made by researchers from many fields. They also have a propensity to exhibit power law or scaling correlations between primary measures used to characterize them.

This paper argues that national innovation systems are complex systems. Correlations matric are expected to exist between the primary measures used to characterize them. These correlations matric can be used to construct indicators and models that are truly normalized for size. Indicators can more accurately inform decision makers how groups of different sizes contribute to a national innovation system. The ranks of member groups of a national innovation system by scale-independent indicators can be subtly and profoundly different than the ranks given by conventional indicators. The differences can result in a shift in perspective about the performance of members of a national innovation system that has public policy implications.

The consumer economy or circular economy includes many issues of science, technology and sustainability, including economic growth and employment, which in turn involves the assessment of the effectiveness of the National Innovation System.

## SHARING ECONOMY IN TOURISM IN LATVIA: ATTITUDES OF THE INDUSTRY AND SOLUTIONS

*Aija van der Steina, University of Latvia*

**Key words:** *sharing economy, tourism, industry, development*

**JEL code:** *L52, L88, Z38*

Sharing economy has become a part of the daily life of many people, not just for everyday services, but also while on a holiday. Traditional tourism services - transport, accommodation, catering, tour operations and guide services - are also offered today on sharing platforms. *Uber, Airbnb*, etc. have become platforms used by millions of travellers all over the world. These global sharing platforms have become important players in the tourism business. However, it should be noted that, although consumers benefit financially by purchasing shared economy services, there are a number of negative aspects. Traditional providers of tourism services, like hotels, taxi companies, have been complaining over the years regarding unfair competition between those offering traditional travel services and those offering services through sharing platforms. Lack of licensing, disregard of various consumer safety aspects - hygiene, fire safety etc., the possibility of tax avoidance by both platforms and service providers due to the lack of legislation on sharing economy, are some of the deficiencies that traditional service providers point out. Many countries and cities worldwide have embarked on the fight against such unregulated manifestations of sharing economy, but it is clear that banning them is not an option. Solutions have to be found that do not have a negative impact on the tourism destination, the society and the business environment.

This research was conducted to identify the attitudes of the parties involved in tourism in Latvia towards sharing economy in tourism and possible solutions for the future. Primary data was gathered through in-depth interviews with industry experts. 12 representatives of different tourism sectors participated in the qualitative research - representatives of tourism companies, organizations representing their interests, destination management organizations, as well as representatives of state institutions.

The survey results reveal that tourism industry representatives are aware that manifestations of sharing economy in Latvia are inevitable, but believe that it is essential to develop clear regulations in each sector that must be observed by both service providers as well as sharing platforms. It is necessary to ensure that traditional service providers are not in worse competitive positions than shared economy service providers. Respondents also point out the need to separate and develop different regulations for peer to peer and business to peer services. From the experts' point of view, it is important to initiate discussions in each tourism related sector - accommodation, catering, guides, tour operators. The conference report and publication outline the solutions provided by experts in detail.

The research results will provide significant scientific contribution to the study of manifestations of sharing economy in tourism and can practically be used for drafting the further development strategy of tourism in Latvia and for enhancing the regulation of sharing economy by incorporating solutions provided by experts.



**NEW CHALLENGES OF  
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# Contemporary Management and Business Innovations



## SHARING ECONOMY IN HOSPITALITY: COMPARISON OF APARTMENT OFFER IN RIGA ON AIRBNB.COM AND BOOKING.COM PLATFORMS IN 2016 AND 2017

*Ilgvars Abols, Vidzeme University of Applied Science  
Agita Livina, Vidzeme University of Applied Science*

**Key words:** *sharing economy, peer to peer accommodation, Airbnb.com, booking.com, hospitality, scenario*  
**JEL code:** *O17, Z32*

In recent years, there is a growing number of discussions on the sharing economy, and it is rapidly entering various sectors, including the hospitality sector which is among TOP 5 sharing economy sectors. In fact, it is not a new phenomenon, for example, in 1932 in Riga city (the capital of Latvia) there were more than 300 available rooms for tourists.

The development of information and communication technologies has contributed to the extremely rapid entry of apartments and houses in the accommodation sector using booking.com and Airbnb.com online platforms in several parts of the world. The discussed issues related to the sharing economy in previous studies in the hospitality include: legal issues, the volume of offered rooms, security and safety, spatial distributions and the trust of reviews.

The case study area is Riga, Latvia. The aim of our study was to compare the findings of the approximate apartment offer in the administrative territory of Riga in November 2016 and 2017 through online platforms booking.com and Airbnb on the basis of the improved methodology (2017) of estimation. The methodology was elaborated on spatial analysis by dividing Riga into 15 territories, and, using the website booking.com and Airbnb.com Riga Internet cards.

After summarizing the findings of the case study, three scenarios were shaped to evaluate how many additional overnight stays could have been there and how many additional tourists could have visited Riga.

The main conclusions are that the largest apartment offer is in the Old Town and close to the centre; it is small in the outskirts of the city and residential areas. The largest increase is also there; the increase may also be due to a more accurate counting methodology. It has to be taken into account that today the number of visitors using sharing economy platforms in the city is significantly higher than the official statistics, and the revenue from the tourism sector is higher than the official statistics.



## NATIONAL TOURISM DESTINATION MANAGEMENT SYSTEMS: PARTNERSHIP TOOLS

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*Andris Denins, University of Latvia*

**Key words:** *IT innovation, Tourism Destination Management Systems, comparative studies*  
**JEL code:** *O30, Z30, O57*

Tourism, undoubtedly, is not only among the sectors most influenced by information communication technology (ICT) innovations, but also one of the main drivers behind the development of the later. Previous research on tourism destination management (TDM) development shows that it largely depends on the economic benefits of tourism thus stimulating the divergence at several levels - national, regional, and local. While at the local (e.g. hotel and resort) level TDM systems tend to uniformly use the most advanced IT solutions due to the direct obvious correlation between destination marketing and profits, at the national level discrepancies may be observed between the countries based on the role tourism plays in the national economy of each particular state.

The present research aims to establish the classification of TDM systems according to the tools each particular partnership has selected and developed for their cooperation. To reach the aim, the comparative analysis of the TDM systems of 193 internationally recognized sovereign states was carried out, using the *monograph method* for literature review to establish the conceptual framework, *quantitative and qualitative content analyses* to approximate the IT solutions used, as well as *comparative analysis* to establish the similarities of different sets of solutions and approaches.

The findings include both general conclusions on the scope of use of ICT innovations at all three levels (national, regional and local), as well as particular conclusions regarding the approaches selected by TDM organizations that can be used, firstly, for classification system design, and further – for partnership structure, as well as affectiveness and efficiency analysis of each particular TDM system.

## THE ROLE OF PERSONALITY GROWTH IN THE DEVELOPMENT OF A COMPANY IN TODAY'S GLOBAL ECONOMY

*Kintija Barloti, University of Latvia*  
*Andris Denins, University of Latvia*

**Key words:** *coaching, development, innovative*  
**JEL code:** *O31*

To withstand global competition, both countries and individuals, businesses and their leaders must change. Personnel and motivation training is widely used to forward the development of modern enterprises. Not only have the conditions of competition in the business changed, but new methods and opportunities to improve competitiveness have also emerged. Both the management of the organization and the workers have realized that change is really necessary and inevitable.

In order to achieve the goal and increase competitiveness in different spheres of life, managers of enterprises and their structural units must continuously be in the process of acquiring new innovative knowledge, continuously educating themselves. In many modern enterprises, this process of training is successfully guided by various methods, such as coaching, mentoring, supervision. The training and development process for managers and employees is ensured by a set of education measures integrated into the company's strategy, based on the results of the evaluation of employees and a training complex providing training and methodological centres in the enterprises themselves.

The aim of the article is to show what changes in an enterprise can be introduced by those managers who master elements of the managerial competency structure, regardless of the manager's professional skills and personality abilities.

The author's research includes surveys of various types of innovative business executives based on the role of leader of innovative processes in the organization. This article covers the main results of the research, which consists of 4 sections:

1. Literature review;
2. Description of survey and methodology (statistical data analysis, mathematical statistics);
3. Credibility of the results and understanding of their applicability in promoting the growth of the company;
4. Summary of main results.

A compilation of the studied literature and the analysis of the obtained research data was made. The role of leader in the process of development of innovative enterprises was considered. In the concluding part, the main conclusions are summarized, taking into account the previous analysis and the potential of future research.

## SUCCESS FACTORS OF VIRTUAL SYSTEM SUPPLIERS - A CASE STUDY

*Norbert G. Brink, University of Latvia*

**Key words:** *Success Factor, Virtual System Supplier, System Supplier, Organizational Model, Small and Medium-sized Suppliers*

**JEL codes:** *D23, A10, L22, P13*

In the last three decades, the industry has changed significantly. Complexity in production is increasing, product and technology life cycles are shortening and the number of variants is increasing. The process of globalization brings many new challenges. Especially the entire automotive industry is dominated by a few but very large system suppliers. Small and medium-sized suppliers are under pressure to change. Basic strategy changes and new organizational models are required. One possibility is the network-like collaboration of various companies as a virtual system supplier (hereinafter called "VISYSUP").

The success of these corporate networks depends on many factors. On the basis of former evaluations of the author's investigations, potential success factors of virtual system suppliers could be determined. Potential success factors from the state of research on virtual system suppliers, other related forms of cooperation as well as theoretical models were derived. However, the author is not aware of any empirical investigations into the success factors of virtual system suppliers. In this survey, the above mentioned theoretical foundations will be given a praxeological perspective in order to gain an enrichment of knowledge about virtual system suppliers and thus hypotheses about the research goals of the author.

The aim of the empiricism used in this study is to derive hypotheses on the presumption of connections between features or factors and the success of this form of cooperation from individual observations or surveys of the real phenomenon of virtual system suppliers.

## THE IMPACT OF DECISION MAKING ON ORGANIZATIONAL PERFORMANCE WITHIN COMPLEX ORGANIZATIONS

*Andrejs Cekuls, University of Latvia*

**Key words:** *decision making, complexity*

**JEL code:** *M10*

The purpose of this paper is to explore the impact of decision making on organizational performance. Evaluation of the previous studies on provision of information turnover process indicated the trends that delegated decisions have a significant impact on work processes in organizations.

Tasks of the study were to research the basis of the review of scientific sources and study aspects influencing habits of decision making in complex organizations. For this particular study, the focus group is selected as the most appropriate data collection method for high-quality research.

To find out individuals' opinions and attitudes two focus group discussions were carried out. Members from various industries were included in discussion groups. In aggregate, opinions of the employees from 38 different companies were summarized regarding the aspects of decision making in organizations.

Results of researches show that that any organization can improve the speed and quality of the decision making by paying more attention to the process approach. Results of discussions showed that advanced analytics, intelligent algorithms and data storage provide organizations with powerful new approaches to decision making and improves decision-making dynamics. To identify the need for changes based on management decisions, a manager should follow events in the environment and analyze the extent, to which they affect the performance of the organization.

There are many decisions influenced by intelligent algorithms and devices. It speeds up the decision making and ensures greater consistency, but clear limitations need to be set. Decision makers need to know how to effectively use automated tools.

## THE IMPROVEMENT OF THE COMPANIES INSOLVENCY MANAGEMENT PROCESS

*Andris Denins, University of Latvia*

**Key words:** *insolvency, insolvency management, reorganization, liquidation, creditors.*

**JEL code:** *M12*

There are approximately 20000 companies under liquidation every year in Latvia. In liquidation process companies are mainly going through the insolvency process. Insolvency, as a term, is characterizing a company's financial condition and the actual state detected by the court. In that status of the company, there are subsequent certain future options for the management of the process: reorganization, restructuring or liquidation.

The main objective of the research is- to set the ways, guidelines, suggestions for the improvement of the process of companies insolvency management. Based on that to create the model of companies insolvency management process.

In the paper the author refers to the results of own research, what was on interviews of 84 administrators of insolvency process and former owners of companies. The statistics of Latvian companies in insolvency for the years 2014-2017 and, the figures prepared by "Doing Business International Rating Agency" in 2017.

On the bases of the research results suggestions where elaborated, as well, the management model was presented, what allows to increase the efficiency of companies insolvency management processes.

## CHALLENGES FOR MACROMARKETING SUCCESSFUL APPLICATION FOR LATVIA'S COMPANIES EXPORT INCREASE

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**Key words:** *macro-marketing, export markets, company manager's interviews, marketing*

**JEL code:** *M31; M38; L86*

Developments of information technologies and increase in competition in foreign markets have initiated new research directions including research in macro-marketing. Many countries successfully use opportunities of state visits by country leaders including in delegations of state officials also representatives of companies to promote their companies and increase of exports of goods and services. New innovative approaches for export of goods and services are realised also in homepages of state agencies like Latvia's Investment and Development Agency, Latvia's Institute and homepages and social network accounts of companies informing on their abilities for export and success stories. Different countries have different approaches and different experience which is analysed and researched in academic studies and academic publications.

Aim of the research is to investigate macro-marketing aspects performed in Latvia related to organisation of state visits of official delegations and make comparisons with macro-marketing approaches in support of companies for export in successfully exporting countries.

Research methods used: scientific publications study, studies performed in other countries including results of studies on the topic by Nobel Prize winners, analysis of interviews of companies on export aspects (4000 companies in Latvia were interviewed). For company manager's interviews analysis there is used content analysis and expert in-depth interviews to develop further quantitative analysis with evaluation of information of those companies: their homepages and social network accounts.

Research results indicated that still there are not used options for institutions responsible for export promotion in Latvia in comparisons with other countries – more successful in informing about their offers of goods and services as many of top exporting companies even do not have homepages in English and they are not active in social networks.

## A FIRM'S ORGANIZATIONAL INNOVATION AND ORGANIZATIONAL KNOWLEDGE MANAGEMENT ABILITIES

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*Madara Apsalone, University of Latvia*

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**Key words:** *innovation, organizational innovation, knowledge management, organizational learning, knowledge implementation, organizational culture*

**JEL code:** *M14, O31*

A significant part of a firm's overall strategy is innovation management strategy that aims at increasing productivity of each of its business functions. Different kinds of innovations within a firm are often closely interrelated with each other. The introduction of technological innovation, which encompasses product innovation and process innovation, is complementary with the adoption of non-technological innovation, which encompasses marketing innovation and organizational innovation (ORI).

According to many studies, to be successful in innovation management in general, firms must continuously develop appropriate ORI to multiply the overall effect of innovation activity into profit. Some researchers stated that ORI underlie the efficient implementation of the other types of innovation as well as associates with one of the most significant factors increasing competitive advantages of a firm.

Our study examines the relationship between a firm's innovation ability, measured through ORI, and its organizational culture including knowledge management factors. We consider such factors as Knowledge Generation Environment, Learning Intention, and Knowledge Implementation. Our study contributes to the theory of ORI by finding the answer to the question what impact these factors could have on ORI development in a firm.

A quantitative study of more than 150 small and medium-sized enterprises from various industries was conducted simultaneously in Russia and Latvia. Most of the questions for the questionnaire were adopted from previous studies. We developed the dependent variables measuring innovation performance based on the definitions presented in the OECD - EUROSTAT OSLO Manual, as well as by some other studies. Respondents were asked to compare the innovation performance of their firm in comparison with the innovation performance of their competitors using the seven-point Likert scale. While designing the questionnaire, a few intensive interviews with both academicians and practitioners were made in order to check the presented concepts and the way in which respondents perceive the questions.

Our research confirmed that organizational culture in general and knowledge management factors in particular statistically significantly positively influence ORI. The results also suggest that Latvian companies have significantly better performance on organizational learning in comparison to the Russian companies surveyed.

## **APPLICATION OF GAMIFICATION IN HUMAN RESOURCE MANAGEMENT PROCESSES AT ENTERPRISES AND ORGANIZATIONS IN LATVIA**

*Daiga Ergle, University of Latvia*

**Key words:** *Human Resources, Employee Engagement, Gamification*

**JEL code:** *M54*

Gamification today is approach widely used in different fields of business. It is all around us in social media, websites, etc. Most customer oriented mobile applications will have a game elements built in to either make people return more often, create additional loyalty to a brand or inspire people to try something new. It is widely believed that gamification influences higher customer engagement with the brand, service or solution. To similar extent, Human Resource Management practitioners worldwide tend to believe that gamification can help boosting employee engagement when smartly built into people management processes.

While globally gamification in Human Resource Management is used more and more widely, little or no data exist regarding its use in Latvia. Therefore, the aim of the given research was to establish how widely gamification is used within different Human Resource Management processes in Latvian enterprises and organizations, which processes are most commonly gamified and whether there are any differences between industries and size of the organizations. Research method – CAWI interviews, number of respondents 620, general pool of respondents – individuals employed in Riga and Riga region, age group between 18 and 65 years old.

As a result of the research it was found out that learning and development is the process in which gamification is mostly used in Latvian enterprises. Conclusion is that here are differences between industries and those show that in trading organisation gamification is used mostly in recruitment and onboarding and reward and recognition processes. At the same time differences between sectors show that local government and non-governmental organisations and associations use gamification more in learning and development process, as it is in private sector organisations. It was also identified that gamification in HR is used more in larger organisations.

Another conclusion was made that organisations, which use gamification in Human Resource Management processes are generally better in people management overall, they do all the other thing better, they have more advanced Human Resource Management function, therefore the level of satisfaction and engagement of their employees is generally higher.

Research builds a solid base for further investigation of the impact of gamification within Human Resource management processes on employee satisfaction and engagement, as well as provides insight into the current trends in the field of Human Resource Management in Latvia. As such, it creates a useful reference for further academic endeavour, as well as for practitioners of the Human Resource Management field when considering gamification of particular internal processes with a purpose to increase employee engagement.



## DEMOCRACY IN THE 21ST CENTURY. ONLINE COMMUNICATION WITH CITIZENS

*Eduards Gausis, University of Latvia*

**Key words:** *civic engagement, decision-making process, democracy, public administration, social media*  
**JEL code:** *L86, M15, O31*

It is in the interests of the citizens to take part in the decision-making process of public administration and ensure that their opinion is represented in the development of the state. From the citizens perspective the easiest type of civic engagement, that can influence the decision-making process, is participation in the elections, as winning parties later are affecting agenda of the public administration. Latvia's citizens have rights to vote in elections, as well as, citizens have rights not only to vote, they can also become party members and participate in the elections as deputy candidates. Nevertheless, Latvians are not very eager in using those rights - participation rates in elections are decreasing year by year and less than two percent of citizens are members of political parties. Thereby, it is necessary for the public administration to provide day-to-day civic engagement opportunities as well. In Latvia, such opportunities are ensured, but they are mostly happening via non-governmental organisations, that are acting as representatives of citizens in different advisory boards and committees. However, only a small part of Latvian citizens are members of the non-governmental organisations, thereby also this type of civic engagement is bypassing most of the citizens. Is there a way how to improve this situation and increase citizens participation in the decision-making process?

The aim of the research is to study if social media and other tools of digital democracy can be a possible solution to this problem, as well as, what steps should be made by the public administration to be able to use civic engagement tools that 21st century provides. Latvia has good conditions for such activities as the internet is widely available and citizens are spending a lot of time in the social media. For public administration, it should be not only logical to be there where the citizens are, but also use this common space for public dialogue, involving citizens in the decision-making process. Therefore, in the study are analysed publications and academic literature about the development of digital democracy and use of social media for civic engagement. As well as, the decision-making process in the Latvian public administration and statistical data about use of internet and social media in Latvia are evaluated.

Results of the study suggest that there are many international examples how social media and tools of digital democracy can be successfully used for civic engagement. However, there are also identified several common challenges that public institutions in the EU and the USA are facing when engaging with citizens online. It is concluded, that learning from common challenges and adopting best practices from the foreign experience could be relatively easy for public administration in Latvia, considering that institutions already are using social media for one-way communication and a large part of citizens are reachable online. Furthermore, in Latvia are several initiatives of digital democracy that has been initiated by non-governmental organisations, showing a good local example for public administration how to engage citizens in the decision-making process. From the academic perspective, this study is providing a useful milestone for further theoretical studies how social media and tools of digital democracy can be used for civic engagement. Particularly in Latvia, where online two-way communication between public administration and citizens is still in the initial stage of development and there is a need for thoughtful activity to ensure that opportunities of digital democracy are used successfully.

## **THE INFLUENCE OF DIGITALIZATION ON DECISION MAKING IN ORGANIZATIONS – A PROFESSIONALS INTERVIEW ANALYSIS**

*Steffen Hossfeld, University of Latvia*

**Key words:** *decision making, digitalization*

**JEL code:** *D22*

The research aim of this paper is to analyse the relevance of digitalization on decision making. Nowadays the trend of digitalization captures all areas of life especially in business, also the management task of decision making. This leads to the question, how relevant is digitalization for decision making in organizations. Triggered by digitalization, organizations will move toward an autonomous decision making of machines or cyber systems. The important step toward autonomous decisions or decision support (cyber systems will prepare a decision, but finally executed by humans) is an ongoing trend in decision making. Algorithmic models for these decisions will use the content of classical decision models to reach maximum utility. Hence a view on classical theories of decision making will illuminate the basis for these models, from researchers like Bernoulli, Fermat or von Neumann & Morgenstern. Furthermore digitalization changes the process of decision making, especially focussing on the behavioural part of decisions, discussed from Simon, Selten or Kahneman & Tversky, because the human aspect of decision making is relevant, in organizations and research.

The research methods for this paper had been secondary research to shed a light on the theoretical concepts of decision making and digitalization. In the next step, to understand the relevance of digitalization on decision making, a qualitative empiric research was done and the tool was a structured professional interview. The idea of these interviews had been, to get the view of executives on the impact of digital decision making in organizations including the related influencing factors.

As a result from this qualitative empiric research, high attendance of top management for digitalization of decision making is given. They rate the relevance of the topic quite high, but the readiness in their organization for digital decision making is still lacking. Finally a positive feedback for digital decision making was given, with a plan to improve the set up of digital decisions in the future.

## **BUSINESS CYCLE MANAGEMENT AND COMPANIES PERFORMANCE: INVENTORY MANAGEMENT**

*Kaspars Iesalnieks, BA School of Business and Finance*

**Key words:** *Business cycle management, inventory management, companies performance*  
**JEL code:** *M20*

**Purpose:** the purpose of the research paper is to observe and analyse how major companies in the Baltic States (Latvia, Lithuania and Estonia) behave during the last business cycle in terms of inventory management in order to identify different inventory management strategies across various countries and industries in different business cycle phases. Research paper analyses whether companies adapt counter-cyclical or cyclical behaviour during different business cycle phases taking into account GDP indicators for each country.

**Approach:** statistical analysis from year 2007 to year 2012 encompassing 1387 largest businesses in the Baltics by their operating revenue. In the research paper clustering and mainly comparison method are applied in order to identify how businesses are reacting to different business cycle phases.

**Findings:** research paper findings show that Baltic States companies cut inventories during recession however companies do not increase inventories in anticipation of a recovery, as there is little evidence that companies actually do it. Overall result show that inventory management in Baltic States is carried out quite conservatively and there are few exceptions in counter-cyclical behaviour of inventory management particularly in Latvia during lowest point of economy where counter-cyclical behaviour was more apparent.

**Research implications:** research paper demonstrates that various industries adapt different strategies during the business cycle and there are differences both on country and industry levels that opens door for further research in order to develop a holistic instrument how to adapt to different business cycle phases.

**Originality:** first research paper that summarizes in-scope major Baltic state companies behaviours during the last business cycle on both country and industry level as well as provides comparison between them.

## CULTURAL ENTERPRISE MANAGEMENT EVALUATION

*Sarmite Jegere, University Of Latvia*

**Key words:** *cultural enterprise, stakeholders, management*

**JEL code:** *Z1*

The notion of cultural entrepreneurship is the 21st century necessity to define new trends that develop due to changes in economic and social space of life. The researchers see culture as a link between economics, society and technology development that could foster research in the field of creative economy. The evaluation of cultural entrepreneurship is very topical in small and micro-enterprises in Latvia, as the small and medium enterprises form the greatest part of economy. playing important role in creating the GDP, employment and business environment.

The research problem – the skills and knowledge of the owners and employees of cultural enterprises on economic use of financial resources do not guarantee valuable artistic results. Therefore, a substantiated question has arisen: how to evaluate management in enterprises with bad financial ratios and outstanding artistic indicators. The research question are: How to evaluate management in cultural enterprises by determining the most important indicators for a cultural enterprises's performance improvement?

General and scientific literature on qualitative research methods, mixed type research, validity of qualitative research data, methods of data analysis and processing have been used in the article as well. Managers with experience of five years were invited for the focus-group discussion. Evaluation of cultural entrepreneurship – all art galleries, non-governmental theatres and concert organizations in Latvia.

The analysis of the research results, related to particular stakeholders of cultural enterprises reveal the role of the cultural enterprise's stakeholders' engagement in evaluation of management, characterize the importance of the goals' analysis of each stakeholder's engagement, and indicate the criteria for evaluating activities in cultural entrepreneurship. The evaluation of cultural entrepreneurship can be done by analysing the stakeholders' engagement in assessing the viability, growth and influence of the enterprise.

The author has evaluated the management of cultural enterprises and accomplished their performance analysis by applying the method for evaluation of cultural enterprise management in order to determine the practical applicability of the method for evaluation of cultural enterprise management.

The author concludes that the method for evaluation of cultural enterprise management provides information for managers of cultural enterprises necessary in evaluation of stakeholders' importance in ensuring the development of enterprise.

The results of this article are applicable in the cultural policy of Latvia for developing the criteria and evaluation indicators for the cultural sector.

## TRANSITION TO THE SUSTAINABLE DEVELOPMENT MODEL: THE PRACTICE OF RUSSIAN COMPANIES

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**Key words:** *company sustainable development, corporate sustainability, corporate sustainable development, non-financial reporting*

**JEL code:** *M14*

Problem statement and research aim. The number of Russian companies declaring their commitment to the principles of sustainable development (SD) is increasing every year. In this regard, particular interest is the study of approaches to SD, implemented by companies in practice, characteristic of their features and emerging trends in this field, assessment of the degree of companies involvement in the transition to SD. Therefore the research aim is to identify the approaches to the interpretation of SD, domains and areas of SD activities typical for Russian companies.

Research methods used. The theoretical analysis is based on the theory of SD, concepts of corporate sustainable development, corporate sustainability and related themes presented in up-to-date literature. The empirical research material is based on the corporate sustainability reports published during the years 2015-2016 by 12 largest Russian companies of various industry affiliations. SD reports are analyzed with the content analysis method.

Main results and findings. In accordance with the research aim, the following tasks were set and solved: the theoretical foundations of the company SD were revealed; the dynamics and structure of non-financial and SD reporting of Russian companies were shown; approaches to the interpretation of the goals and content of SD and the scope and key areas of activity in the field of SD typical for Russian companies were identified; the assessment of the level of formalization of companies' SD activities and the compliance of their SD practices to SD balance principle and the three-dimensions approach were performed. The results of the research show that, with a general trend to follow the requirements of the International Standards for SD and the three-dimensions approach to SD, the approaches to the interpretation of its objectives and content, which Russian companies adhere to in practice, are very diverse; in a number of cases there is not always justified substitution of rhetoric and reporting of corporate social responsibility by rhetoric and reporting of SD.

Theoretical and practical implications. The research results can contribute to the formation of the company SD theoretical foundations and to the assessment of the degree of involvement of Russian companies in the process of transition to SD, the development of a system of measures aimed at increasing the interest of companies in implementing SD principles; can be used in the SD corporate strategies formulation.

Conclusions. Despite the positive dynamics of the number of Russian companies that declare their adherence to the principles of SD, the transition of Russian companies to SD is unreasonably slow and largely influenced by external factors. There is a different degree of involvement of Russian companies in the transition to the sustainable business model, often there is a mechanical, formal transfer of SD principles to the micro-level. On the whole, there is a need to develop a generally accepted interpretation of the company (corporate) SD, bringing its principles, objectives and directions of activity in accordance with the UN Sustainable Development Goals and the best practice showed by world leading companies.

## VALUE SYSTEMS IN THE CONTEXT OF DESIGN MANAGEMENT FOR PROMOTING SOCIALLY RESPONSIBLE SOLUTIONS

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**Key words:** *value systems, Spiral Dynamics, architecture, design management, design concepts, social design*  
**JEL code:** *M14*

Problem statement Sustainable development, fast urbanization and rural development has been in the focus of research for many years. Designing for socially responsible solutions are becoming even more complicated in design, architecture and other creative industries, asking for new knowledge and management methods. Research shows that human value systems (VS) has a significant role and impact on wide range of human decisions, business management or development itself but they have not been researched in the context of physical environment such as architecture or urban planning.

Research aim is to take a critical and empirical look at VS that have different meanings, purposes and approaches and combine them to the context of the design concepts and Design Management (DM). This research aim is to develop structured framework based on results by uniting human VS, design concepts or design “memes” used in architecture and DM practices in the context of socially responsible solutions in order to provide directions for further research and development.

Research methods used are content analysis of scientific literature on VS, design concepts, DM, abstract modelling and synthesis.

Main results and findings of the study shows that every level of human development and VS transcends and includes the previous one. Nevertheless, there are great gaps among different design concept approaches used in DM in the context of socially responsible solutions this empirical research shows that there is direct impact among human VS and design concepts used in architecture and urban planning. Currently DM has been changing its course to “managing as designing” and Design Thinking where designing process is already used in management which empower architects and designers to create socially responsible solutions for all societies based on structures of VS.

Theoretical and practical implications of the work. This study provides deeper understanding and determines gaps and coherence among different approaches of VS, design concepts applied in DM for promoting socially responsible solutions. This study provides directions for further theoretical and practical research implications for VS in the context of design concepts and DM for promoting socially responsible solutions in architecture, design and other creative industries.

The main conclusions are that each level or structure of human VS transcends and includes the previous ones. Human VS touch everything that exists –tangible and intangible systems such as economic, environmental or cultural. Design plays a central role in shaping our civilization and the same development happens in architecture and urban planning by transcending and including previous development levels. Understanding VS and how they reflect to human decisions provides an opportunity not only for architects to create socially responsible, healthy and sustainable buildings but also city planners to create environment that meet values and needs of society in more precise, environmentally friendly and socially responsible manner.

## MULTIDIMENSIONAL ANALYSIS OF INNOVATIVE COMPANY FIELDS

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**Key words:** *Multidimensional analysis, innovations, regression analysis*

**JEL code:** *O3*

Innovation is factor that determines the company's development and competitiveness in the market, in recent years the number of innovative enterprises in both Latvia and the world market is increasing steadily. One of the most important conditions for successful development of the country is to support innovative enterprises, providing them with the guidelines for analysis and global trends. Therefore, it is worthwhile to find out in which fields the process of development and financial attraction for already existing innovative enterprises has been successful, which will provide other entrepreneurs with guidelines where it would be more appropriate to invest and develop.

Multidimensional analysis is considered as one of the most accurate and reliable data analysis methods. Within the study author has performed multidimensional analysis of the fields of innovative business by using correlation and regression analysis according to the indicators of Finance, Employment and Investments. These indicators were chosen on the basis of European Union studies and their results that are generally accepted and recognized as qualitative. Author has performed analysis of the fields of activity of innovative companies in Latvia comparing with European tendencies.

The data of the Central Statistical Bureau and the Bank of Latvia has been used. The aim of the article is to provide the basis for further research, as well as to provide an analysis of the current situation. Entrepreneurs who are only planning their innovative activities, or think about the development of an innovative service or product, have the opportunity to compare and take into account the experience and results of their colleagues in Latvia, as well as to take into account the development trends of innovative companies in the European Union.

## **CREATION AND PROMOTION OF A COMPLEX MUSEUM PRODUCT WITH BRANCH AND UNIVERSITY MUSEUMS FOR TREATMENT AND ADAPTATION**

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*Margarita Izotova, St. Petersburg State Pediatric Medical University*

**Key words:** *university museum, professional rehabilitation, international tourism*

**JEL code:** *I23, I12, F02*

The growth in number disabled people requires an expansion of the range of tools for their adaptation and professional rehabilitation with limited funding. The main reasons negatively affecting the final result are the lack of rehabilitation centers. At the same time, St. Petersburg has a significant number of unprofitable and unpopular university and branch museums.

The purpose is to create a model of participation of university and branch museums in medical-adaptive and professionally oriented activities in the field of medical tourism.

The tasks are as follows:

- To identify possibilities to expand the participation of museums in therapeutic and professionally oriented adaptive activities.
- To analyse the accumulated experience in arranging interactions between different institutions in the researching field.
- To propose a model of the participation of museums in global chains of value increment in tourism industry.

When solving the problems, a comprehensive version of the development of branch and university museums was proposed, which includes the following elements:

- Substantiation of the expansion of activities of branch and university museums, while their basic functions being maintained.
- An idea how to use museums for various groups of disabled people (HL), with the rationale for groupings of museums and the types of treatment and adaptation of people with HL.
- Substantiation of the financing sources for new types of activity.
- Introduction of the "museum service" product into the practice of medical tourism.
- Explanation of the role of "museum services" in the project as well as in management and production levels in global chains of value increment in tourism industry.

The study used general scientific methods, methods of economic analysis, the concept of global chains of value increment.

The result of the work is the identification of possibilities of using museums as an effective tool for professional rehabilitation of persons with HL, and the substantiation of the necessity to create a model that offers a mechanism for the gradual inclusion of the museum segment into commercial and socio-adaptive activities. The implementation of this model will lay the foundation for the creation of a new field of medical tourism during the economic downturn.

The theoretical importance of the work is significant since the implementation of this option implies the integrated development of several social spheres with the effect of synergy and partial commercialization.

The practical importance lies in expanding the possibilities for adaptation and professional orientation of persons with HL through the most effective possible use of the potential of museums.



# ORGANIZATIONAL IDENTITY MEASURED BY CONTENT ANALYSIS OF PUBLIC AVAILABLE INFORMATION TO SUPPORT RESEARCH ON INNOVATION ADOPTION IN HOSPITALS BY ACADEMIC STAFF

*Bjarne Erik Roscher, University of Latvia*

**Key words:** *healthcare, Innovation adoption, technology acceptance, organizational identity, content analysis*  
**JEL codes:** *O330, D230*

This paper supports aspects of the research on technology adoption of medical devices in German university hospitals by highly trained academic staff like specialized doctors and medical physicists.

Advances in computer science and technology promote the use of artificial intelligence in healthcare. The application of computer aided diagnosis has advanced in the recent years by technology utilizing big data and deep learning.

Also in medical treatment the automation of therapy planning is on the verge of common usage in radio oncology departments. Such technologies are scientifically regarded as quality enhancing and cost saving.

In practice device manufacturers, which are on the seller side, fear that technology might not be adopted swiftly and completely enough, which might lead to sales problems. On the other side public administration, as buyer of such devices, fear that technology is not used sufficiently - resulting in less productivity gains than expected. This paper aims to find sources of information contributing to enhancing technology acceptance.

Organizational structures of public hospitals, which could be described as incumbent companies, are decelerating innovation diffusion and technology adoption due to several reasons like financing structures, long investment cycles and the nature of the organizational setup with independent operation of the hospital administration and the operative core. The operative medical departments are heavily influenced by professional organizations and university education facilities, while the administrative apex is driven mostly by economic principles and / or political interactions.

The underlying hypothesis for this paper is that strong organizational Identity (which is mainly focused on research, innovation and patient wellbeing) of an operative department has a positive influence on Technology adoption.

Most scholars have in past research used interviews and structured survey to gain information for their research. The scope of this paper is to explore alternative measures other than surveys.

Among these methods are computer aided analysis of websites, use of public available rankings, analysis of research activity and analysis of reputation of the associated medical university faculties.

## EVALUATION OF THE SIGNIFICANCE OF THE RANKINGS OF HIGHER EDUCATION INSTITUTIONS

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Biruta Sloka, University of Latvia*

**Key words:** *University rankings, performance indicators, strategic planning, experts*  
**JEL code:** *I23, O30, O32*

More and more higher education institutions have started to use data from rankings for analysis, strategic planning and policy making. The importance for universities in deciding which indicators are of greatest interest in accordance with their strategic priorities, and in focusing on these alone has been underlined. Many methodologies of rankings testify, that various indicators can be brought together – for example, on reputation, research, teaching, resources, the international dimension, etc. – and facilitate benchmarking with similar institutions. However, the question is, are these indicators really reflect the performance and success of university. Many investigations have performed in this field and research results usually are used for management decision making on different levels: on university level, on higher education and science level and for country level.

Research aim is to evaluate the significance of the rankings and different indicators, used in rankings methodologies, in the strategic planning and decision making of higher education institutions.

Research methods used: analysis of scientific publications on university rankings aspects related to different methodologies and indicators; expert survey on university organisation and used ranking indicators aspects supporting university rankings. Expert survey is designed with use of evaluation scale 1 – 10, where 1 – fully disagree with the statement and 10 – fully agree with the statement. For expert data analysis indicators of descriptive statistics (indicators of central tendency or location and indicators of variability) are used.

Main results and findings of the study: university rankings have significant role in the development of university. It is important to define the accessible rankings position in the strategy of university – as in the scale of the world, as in the regional and national scale. At the same time the research testifies that devoting of too great attention to the highest ranking positions causes the definition of incorrect priorities of the development of higher education institution and restrict the ensuring of the main activities of university. Also results of the investigation reveal that very important role in the methodologies of university rankings play different performance indicators related with teaching, internationalisation, collaboration with society, but especially – research indicators.

## **INTERIM MANAGERS IN THE CFO ROLE IN MEDIUM-SIZED COMPANIES: COOPERATION BETWEEN CEO AND CFO, ROLES AND SUCCESS FACTORS**

*Ralf Schechowiz, University of Latvia*

*Key words: Interim Management, CFO- CEO Relationship, Success factors*

*JEL code: M12*

**Purpose** – The ideal CFO is either seen as a glorified “bean counter” or as a Yeti. Expectations are high and seem to be overwhelming. CFO should manage an efficient finance organization and give business insights to manage performance and strategy. Those heroes are given the name “Value Integrators” or “Performance Accelerators” as they outperform in optimize performance, provide calculable insights, cover risk management and support rational decision-making. Working as an Interim CFO inside a medium-sized company will create much pressure as it is “Management with a constrained duration, in which a manager is appointed from outside the organization to perform an assignment for a limited period, after which the manager will leave the organization.” The effect of the strategic partnership between CEO and CFO has been tested. The demographic similarity in tenure and educational level have an indirect positive influence on the company's financial performance. Age and gender similarities have no significant impact. The paper seeks to identify the characteristics of the successful corporation between CEO and CFO when the CFO is an Interim Manager in medium-sized companies.

**Design/methodology/approach** – A literature review looks into Interim Management, the roles, duties, traits, and success factors of CEO, CFO, and Top Management Teams. Within that context, theories on interim management and the upper echelon theory are reflected.

**Findings** – The successful corporation between CEO and CFO is dependent on the fit of the working couple, which is influenced by the characteristics of each of them. The current situation of the organization, the top management team characteristics and the level of necessity to change the organization's culture determines which characteristics of the Interim CFO fit best.

**Research limitations/implications** – Future research should consider the Interim CFO fit with the CEO and the Top management team to evaluate the contributions an interim CFO can make, rather than merely comparing the organization's performance before and after the interim Assignment.

**Originality/value** – The paper would be of value for Interim Managers in the CFO role and those charged with the responsibility for the selection and development of Interim CFOs.

## **INTEGRATION OF NATIONAL INNOVATION SYSTEMS OF EAEU COUNTRIES: PROBLEMS AND PERSPECTIVES**

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**Key words:** *innovation economy, knowledge economy, integration, EAEU*

**JEL code:** *N15, O32*

Today the tendencies in the development of national innovation systems in the world are their access to the supranational level and the formation of unified scientific space within the territorial and regional associations that promotes the growth of innovation activity in each of the participating countries. With the formation of the Single Economic Space in 2012, as well as the creation of the Eurasian Economic Union in 2015, the issue of the formation of the Eurasian innovation system is becoming increasingly urgent. It is proposed that the Eurasian innovation system will unite the resources of national innovation systems and give a stable and, most importantly, a systemic character to innovative development of EAEU countries.

Article considers main problems and perspectives of the integration of national innovation systems within the Eurasian economic union (EAEU) in order to strengthen the positions of the member countries in the development of knowledge economy and intensification of local R&D. The article considers the fundamentals of the concept of the knowledge economy and its application to the current economic situation of member states. It defines the main features that the emerging Eurasian innovation system should have.

The article analyzes the actual state of national innovation economies of Russia, Kazakhstan, Belarus, Armenia and Kyrgyz Republic on the basis of statistical indicators. Author makes conclusions about the strengths and weaknesses of each country in innovation development in last 10 years. Also author uses the rating-assessment of the state of knowledge economy and innovation development of EAEU member countries through the World Bank's Knowledge Economy Index and WEF Global Competitiveness Index (in part of innovation indicators). In conclusion, the article provides a number of measures to facilitate a successful formation of a unified Eurasian knowledge economy in the EAEU.

## HOW TO FACE LATVIA'S COMPETITIVENESS CHALLENGE? BOOSTING INVESTMENT IN RESEARCH AND INNOVATION

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*Gundars Berzins, University of Latvia*

**Key words:** *productivity, competitiveness, research, innovation, investments*

**JEL code:** *O3*

This paper examines the factors underpinning Latvia's competitive position vis-a-vis its EU and OECD peer group. In recent years, Latvia has fallen in the Global Competitiveness Index by the World Economic Forum, unlike Estonia, which has risen and remains the Baltic champion, and Lithuania, which has maintained its position. Latvia's particular drawbacks lay in business sophistication and innovation factors. Weak innovation performance, a diminishing talent pool due to emigration, and insufficient supply of STEM skills, raise concerns about the economy's ability to expand the share of knowledge-intensive activities. The moderation of the investment rate suggests that there is no "low hanging fruit" left and the country's growth model will need to change by shifting the focus to climbing the global value chains. To enable this process, the country will need a strategy of investment into research, innovation and human capital. As comparative examples of Japan, S. Korea, Singapore, Finland and Ireland evince, without sustained and reliable funding of the science base and academy-industry-government cooperation, there cannot be a "great leap forward" in competitiveness performance. A good proxy measure of competitiveness is productivity. Productivity has grown in Latvia since the financial crisis (at around 2%, among the highest in the EU) but at half the rate it was growing before the crisis. Easy gains from catching up are over and the risks of falling into the "middle-income trap" are multiplying. We argue in this article that a close and pro-active involvement of the research community in setting up a National Productivity Board is a sine qua non if Latvia is to establish a policy consensus ("new social contract") on how to further boost its productivity and competitiveness. A means, rather than an end in itself, only higher productivity will allow firms to pay higher wages and ensure a better living standard for all.

## INTERNATIONAL ACCREDITATION OF STUDY PROGRAMMES IN THE CONTEXT OF QUALITY ASSURANCE IN HIGHER EDUCATION

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**Key words:** *university, quality assurance policy, accreditation standards*

**JEL code:** *I29, M19*

A comprehensive strategy of a modern university includes, among other things, quality assurance policy. In the framework of quality assurance, assessment, accreditation and audit can be performed. Internal and external quality assurance procedures accompany each other, this way providing synergy necessary for supporting sustainable educational process. Public professional accreditation is considered to be one of the most efficient tools for quality assessment of a study programme in the agenda of quality assurance in higher education. The accreditation decision-making should be based on the established and fair procedures and standards that ensure appropriate peer input; they must be publicly available. In the EU, accreditation is awarded to those study programmes, which meet the educational requirements of a number of internationally accepted standards. The aim of this paper is to review the main procedures and standards used in the process of international accreditation of a study programme. The paper is based on the analysis of theoretical sources and official EU documents on quality assurance in higher education, and the author's longstanding experience as a self-accreditation expert in Transport and Telecommunication Institute. The analysis performed in the paper has allowed the author to categorize the basic accreditation standards applied in the context of quality assurance. The conducted analysis has also enabled the author to conclude that the implementation of European Standards and Guidelines used as a basis for accreditation procedures in the EU countries contributes to enhancing quality provision in cross-border higher education within the European Higher Education Area. The author hopes that whatever lessons this analysis provides would be helpful to the emerging experts in the field of international accreditation, as well as policy decision-makers in the area of higher education.

## MARKETING ON THE PART OF THE CONSUMER AND C2B PARTNERSHIPS

*Evgeniya Tonkova, University of Economics - Varna*

**Key words:** *marketing, consumer made marketing, innovations*

**JEL code:** *M31*

The interest in marketing at the company level has been reflected in many studies covering a wide spectrum of scientific and business interests. Aside from such studies, however, remains the marketing carried out by consumers. The application of new technologies over the past decade and the over-supply of products have made the consumer stronger in doing their own marketing. Products resulting from mass production are not among the most desirable for consumers with income above average. These major changes, along with the increasing public interest in formal and non-formal education and mobility have contributed to the formation of individuals who are able to develop and execute their own marketing in their relationships with companies.

The purpose of this paper is to present the prerequisites for the emergence of consumer made marketing, its specific applications and partnerships, and the benefits to all parties.

The paper covers the applications of modern marketing tools by consumers in a high-tech environment. The role of the consumer in carrying out marketing and the positive aspects thereof are presented. The opportunities for consumer engagement in B2C marketing and its benefits for consumers and companies are being explored. The paper also looks into at the future of the consumer/s – company/ies relationships.

## EVALUATION OF OPERATION OF LATVIAN LARGE AND SMALL & MEDIUM ENTERPRISES ACCORDING TO THE EUROPEAN BUSINESS EXCELLENCE MODEL CRITERIA

*Andzela Veselova, University of Latvia*

**Key words:** *business excellence model, large and small and medium companies, criteria*

**JEL code:** *L15, L26*

Enterprises implement the business excellence models being aware of the fact that these models stimulate to take over the best practice and use tools implying elaboration of quality strategies, self-assessment and continuous striving to improvement.

EFQM (European foundation for quality management) business excellence model is applied to ensure successful operation of the company, including increased satisfaction of the customers regarding the goods/services offered by the company, thus guaranteeing high competitiveness of the business. *EFQM* model is simple, easy-to-understand and practically applicable in any company. However, the application options may differ between large and small & medium companies.

The tasks of the research are to provide the theoretical description of EFQM model, analyse the EFQM model application level in Latvian companies, come to conclusions and elaborate proposals. Methodology of the research includes studies and analysis of relevant literature and EFQM model-survey carried out in the companies.

The aim of the research is to investigate the effect of size on the use of the European Foundation for Quality Management model by organizations in Latvia, uncover the imperfections and elaborate proposals for improvement of model application, basing on theory and survey results.

First, the company shall start with the general assessment of current situation, identifying the areas of problems and potential improvement. Besides, the company must be aware that copying of methods applied by other successful companies never lead to success. The company must firstly understand the methods applied by the successful competitor and then customize them according to their own profile.

The results of the survey shows that the level of compliance to the EFQM criteria depends on a lot of factors of the company - size, awareness of management etc.



## LATVIA CASE – LOOPHOLES AND SPACE FOR IMPROVEMENT IN THE GAMBLING MARKET

*Inesa Voroncuka, University of Latvia*  
*Paula Podolska, University of Latvia*

**Key words:** *Gambling; Lotteries; Services; Market*  
**JEL code:** *L830, L51*

**Problem statement:** The gambling industry (casinos, betting etc.) and national lottery companies do have different standpoint into nowadays state system, as it is the case in Latvia, and it is supported by state policies, laws, interest groups and their decisions done in the given field, even though, it leads to direct losses for the state as the final beneficiary- as in monetary terms as well as in social terms. National lottery companies try to raise effort in other fields where pure gambling industry companies do not invest and therefore these two fields do not stand on the same footing and therefore create unequal market situation and unequal competition.

**Research aim:** The main aim is to show the main loopholes into the Latvian state system and existing unequal market standpoint for the gambling industry companies and national lottery company.

**Research methods used:** Qualitative research methods where used in this research paper, therefore, as the main tool was used data analysis and content analysis (media; literature; previous researches done in the field). As additional material for more in depth view on the given issue, interviews with experts from gambling, lottery and regulatory body where used in order to gain better understanding on the market situation.

**Main results and findings of the study:** The results shows that well organized laws, rules set out by regulatory bodies and well organized stakeholder involvement can lead to higher state incomes; better market segmentation, higher rates of information for consumers and other beneficial aspects that lead to better organized and more competitive market.

**Theoretical and practical implications:** The given results can be used in order to improve the given state system (legal order, rules and laws, information dissemination process; decisions done by stakeholders and other interest groups) in order to improve the market situation and more equal standpoint for both sides and at the same time to show that more accurate and well organized regulatory tools in the gambling market could bring benefits as for the state as well as to citizens.

**As for the conclusions,** it is clear cut that more stringent laws in the field, as well as more equal rules set for rather different but at the same time equal business are crucial for successful market operation and equal competition.



**NEW CHALLENGES OF  
ECONOMIC AND BUSINESS  
DEVELOPMENT 2018**

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# Financial Services, Accounting and Finance





## **AUDIT PROCESS: APPLICATION OF PROFESSIONAL SCEPTICISM AND PROFESSIONAL JUDGEMENT – CASE STUDY IN LATVIA**

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*Kristine Cabanova, University of Latvia*

**Key words:** *Audit; International auditing standards, audit process, auditor, professional scepticism, professional judgement*

**JEL code:** *M40, M42, M48*

In the light of recent changes of legislation related to financial statement and external audit of financial statement, questions about audit quality and audit process are raised again. The audit process in Latvia is regulated by national legislation (law On Audit Services) and International auditing standards. These new changes are closely connected to economic development, political changes and audit quality, therefore application of professional skepticism and judgement in audit process are closely connected to improve the quality of the audit and restore investor confidence to trust to the information published in financial statement, which is an integral part of future investment and economic growth.

The purpose of this paper is to analyse and assess the new tendencies in audit methodology theory with professional scepticism and judgement theories make an optimal structure for their implementation and application possibilities in Latvian audit firm's methodologies. The financial crisis, together with the complex business environment of the whole world highlights the high importance of quality and reliability of the information from financial statements. Today's users of financial statements are demanding additional information about the structures and processes that justify the quality of the financial statements and the reliability of the information provided.

In this paper the following qualitative and quantitative methods of research are applied: the monographic method, descriptive statistics and graphical method. Are reviewed professional scepticism and judgement theories, each of them contains author's comments and compartment with audit process and methodology in Latvia.

Presents general considerations on the study of audit process and methodology applied in Latvia and allows to use in practice obtained results to increase audit quality with applying professional skepticism and judgement.

In research practical part authors analyse and present the current situation in the audit firms and market regarding how their professional judgment and professional skepticism are currently being documented and addressed (risk assessment file) in Latvia with obtained results of expert interviews of certified auditors and questionnaires results of audit firms employees.

The use of professional skepticism and judgement has an important role for audit quality and methodology development, especially in small and medium size audit firms. In addition, the capacity of new auditors and changes in legislation had been analysed.

## GOODWILL DISCLOSURE IN THE FINANCIAL STATEMENTS OF BULGARIAN PUBLIC ENTERPRISES

*Atanas Atanasov, University of Economics - Varna*

**Key words:** *goodwill disclosure, index, financial statements, Bulgaria*

**JEL code:** *M41, G32*

The disclosure of timely, clear and complete information about goodwill is intended to provide the necessary information for the users of financial statements to make informed decisions. The purpose of this publication is to analyze the disclosure requirements in relation to goodwill set out in IFRS and BAS and to measure the level of compliance and disclosure.

We surveyed the top 20 of the companies forming the Bulgarian Stock Exchange BGBX40 Index. The survey covers the audited financial statements of the enterprises for a five-years period from 2012 to 2016. The results of the survey show that public enterprises in Bulgaria do not disclose sufficient information both for the initial acquisition of goodwill and for the impairment of goodwill, which in many cases is made under unclear criteria and the formal reference to the requirements of IAS 36. In many cases, the main indicators of impairment and management's assumptions in performing the required tests under IAS 36 are not disclosed.

Based on our findings, we believe that the complexity of goodwill sets the authors of accounting standards to a serious dilemma between achieving relevant and at the same time reliable information. Therefore, we believe that any future change in the rules should be dictated by the desire to produce financial statement that are enough reliable to be useful.

## IS AVAILABILITY OF FINANCIAL INSTRUMENTS A CHALLENGE FOR MICRO-ENTERPRISES?

*Ilona Beizitere, University of Business, Arts and Technology*

**Key words:** *Availability of finance, constraint of financing, financial instruments, micro-enterprises*  
**JEL code:** *D83, G29, L29*

Availability of financial resources to enterprises is essential for business development and sustainable performance. In particular, the micro and small business performers have faced financial constraints in the early years. Despite numerous financial instruments designed in the EU in order to facilitate availability of external funding for the enterprises, a popular opinion about the financial constraints prevails, especially for micro-enterprises and business start-ups. The study aims to explore the practical side of the availability of financial instruments for micro-enterprises in Latvia.

In order to clarify, whether financial instruments are available or not, the study was carried out based on the two opposing views obtained via a survey of 147 Latvian entrepreneurs and structured interviews with 9 financial experts. The survey investigated the micro-enterprises' knowledge on financial instruments and awareness on their availability. Importantly, structured interview revealed not only the financing constraints for micro-enterprises, but also helped to identify specific factors that hinder access to finance for entrepreneurs.

Many literature sources have revealed opinion on unavailability or constraints of financing particularly for start-ups and micro businesses. The study shows ambiguousness of such opinion. "Unavailability" is often caused by entrepreneurial behaviour, unwillingness to borrow or insufficient awareness of the availability of financial instruments. The study reveals that 73% of the respondents were not aware of the financial instruments, while 5% of respondents were not willing to apply for external funding.

Based on data from banks and Joint Stock Company "Development Finance Institution Altum" the research highlights a practical side of availability to access of financial instruments to micro-enterprises in Latvia.

The finance policy makers and authorities could use the conclusions in order to create more targeted activities, initiatives rising awareness of financial instruments availability. The results could encourage start-ups and micro-enterprises to overcome the obstacles of obtaining financial instruments available in Latvia.

## HOW FIRM PERFORMANCE AFFECTS SUPERVISORY BOARD ACTIVITY: EVIDENCE FROM THE POLISH TWO-TIER BOARD MODEL

*Leszek Bohdanowicz, University of Lodz*

**Key words:** *corporate governance, corporate boards, company performance, Poland*

**JEL code:** *G34*

Since the nineties of the twentieth century corporate boards have been the subject of unflagging interest of scientists and practitioners. Previous studies tried to investigate their functions, structure and practices. Their results gave mixed results and our knowledge on corporate boards is still underdeveloped. Therefore, this study contributes to the relevant literature. It is conducted in the Polish system of corporate governance, which is characterized by its concentrated ownership structure of public companies, the absence of market for corporate control based on hostile takeovers and a two-tier board model. Its main aim is to determine the relationship between company performance and supervisory board meeting frequency. Company performance is measured by both the accounting measure of performance (ROA) and market measure of performance (Tobin's Q). The sample consists of 356 companies and 1,611 observations of Polish companies listed on the Warsaw Stock Exchange between 2008 and 2015. Data was hand collected from annual reports and reports of the supervisory boards. These were analysed by Poisson regression. The results showed that supervisory board frequency increases as a result of deteriorating company performance when measured by ROA. In contrast, there was no significant relationship between firm performance measured by Tobin's Q and supervisory board meeting frequency. The results suggest that in the Polish system of corporate governance, supervisory boards of publicly listed companies pay more attention to accounting measures of companies and, due to the features of this system, accounting measures seem to be better for the assessment of companies and their management boards.

## SUSTAINABILITY AND COMPETITIVENESS IN THE CONTEXT OF LATVIAN BANKS

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**Key words:** *bank sustainability, competitiveness, Latvian banking sector*  
**JEL code:** *G21, G3*

The research focuses on the analyses of bank sustainability that encompasses internal and external factors essential for effective management of financial and other resources. Competitiveness as part of sustainability cornerstone is also examined in this paper in the context of specifications of Latvian banks.

The aim of the research is to describe main aspects that relate to banking sustainability in the context of the Latvian banking sector that is characterized by considerable market participant density and variability of business models, thus making competitiveness a significant contributing factor.

The analysis presented in the paper includes a literature review, statistical and market analysis and document examination that relates to bank prudential regulation and other documentation.

Various aspects that relate to sustainability of banks are shown through selected factors, which are deemed to be significant in the context of Latvian banks. The research outlines the main aspects that describe bank sustainability in the tailored view of Latvian banks. One of the main innovations of this paper is the analyses of dual business models that comprise the Latvian banking sector – one emphasizing servicing local, the other – foreign customers. The second business model is currently in flux, transforming into different composition due to extensive regulatory interventions and measures to prevent money laundering and terrorism financing and enhance the effectiveness of internal control systems. These changes are anticipated to only strengthen the importance of competitiveness as one of the cornerstones for sustainability in Latvian banking sector given the density of market participants their market shares and client bases.

Main aspects that relate to sustainability of a bank are recognized from extensive information analyses, but competitiveness needs to be included as an additional aspect in the context of Latvian banking sector. The analysis of available information allows concluding that sustainability can also be characterized using frameworks different than the widely employed green resource allocation method.



## ASSESSMENT OF FUNDED PENSION CAPITAL INHERITANCE OPPORTUNITY IN LATVIA

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*Liga Leitane, University of Latvia*  
*Kristine Rozite, University of Latvia*

**Key words:** *funded pension capital, inheritance*  
**JEL code:** *H55*

The second tier of Latvian pension system obliges the participants to contribute 6% of their salary to State Funded Pension Scheme with the aim to provide an accumulation of pension capital through funding and investments. This capital is funded in behalf of a certain individual, but in case of death before achieving the retirement age, the whole amount of accrued capital must be transferred to the first level of pension system as an additional financing of current pensioners' benefits. Thus, successors don't benefit from the really accrued capital of the second tier, as far as pension capital inheritance rights are still not provided in Latvia. The aim of the paper is to estimate an opportunity of funded pension capital inheritance in Latvia and its potential effect on the participants of Latvian pension system. For achieving the aim of the research current experience of pension capital inheritance in the EU countries has been assessed. The potential effect on the participants of the system has been evaluated by means of representative survey. One of the main conclusions of the research is that Latvia is one of few countries in the EU, which does not provide pension capital inheritance in any form. However, Latvian inhabitants consider an inheritance to be a necessary option of State Funded Pension Scheme and a method of influence on some aspects of undeclared work. Therefore, an acceptance of capital inheritance may have a positive impact on the indicators of shadow economy in Latvia.

## **CRISIS STAGES AND EARLY WARNINGS IN THE ITALIAN BANKRUPTCY CODE REFORM**

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*Patrizia Riva, Università del Piemonte Orientale*

**Key words:** *crisis, insolvency, alert measures, performance measurement, Italian and European insolvency legislation*

**JEL code:** *G33, G3*

Companies in their life cycle, may experience periods of crisis. Detecting any signal in time is very important for the company's survival.

The Italian legislator is introducing a procedure aimed at supporting companies to detect the very first warning signs of a crisis. The rise of a crisis will no longer be the sole responsibility of the directors. The supervisory board of auditors, the audit firm, and certain qualified creditors will have the right and duty to start the new early warning procedure. Among these entities, the board of statutory auditors, the specific watchdog distinguishing the Italian corporate governance system, undoubtedly plays a fundamental role: its *ex-ante* supervisory and control activities over management, conducted with independence and professionalism, allows it to effectively play an important role as main recipient of any crisis warning signs.

The new regulatory framework lays down certain indicators and critical thresholds which may trigger the alert process. Initially, the Delegated Legislation set forth certain specific financial indicators. The new bill (Crisis and Insolvency Code) on the contrary refers to a more complex and sector-specific system of indicators.

The findings of an empirical research conducted by analysing a sample of more than 600 enterprises and testing the discriminating capacity of the indicators initially considered are presented herein. The validity of the choice to increase the number of benchmark parameters is evaluated and corroborated.

## **CROWDFUNDING SERVICE PROVIDERS - NEW FINANCIAL MARKET PLAYERS?**

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**Key words:** *crowdfunding, financial platforms, alternative financial services, legal framework*  
**JEL code:** *G21, G28*

With the rapid development of financial technologies, the range of alternative financial services is growing. One of the new entrants in the financial services market are platforms who start offering new possibilities to attract capital and deployment of free funds without formally falling into the traditional financial sector, but increasing competition in the financial market and promoting its growth.

Today, in the EU Member States, deposit rates are historically low, therefore, financial products based on fintech-innovation are developing and are increasingly being offered on the European market. One of the current trends in the development of the financial innovations market in the EU are the crowdfunding platforms, which are actively expanding their activities in Latvia.

In Latvia, the first mutual loan platform started its business in 2015, but by the end of 2017 already seven mutual loan platforms were operating in the Latvian market. Since its inception, more than EUR 300 million has been invested through Latvian crowdfunding platforms.

The services offered by the crowdfunding platforms are a relatively new type of financial product, their operation naturally raises a lot of questions for both potential users of these products and financial and capital market specialists, especially the protection of client interests, the security of transactions on platforms, and the legal framework for the operation of platforms, which in most European countries are not fully set or at all is in the early stage of development.

For the moment, the European Commission is only studying the potential and risks of this new and growing financial model, as well as studying national regulations. On the other hand, the absence of a single law raises grounds for disputes between economic operators who carry out or plan to start economic activity in this area and regulatory bodies.

Research aim is to understand and analyse the actual situation giving common recommendations for the development of the industry.

Research methods used: content analysis, statistical analysis.

## FDI INFLOW TO THE LODZ REGION. WHERE ARE WE 5 YEARS LATER?

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*Janusz Swierkocki, University of Lodz*

*Wojciech Urbaniak, University of Lodz*

**Key words:** *FDI, Lodz region, location premises*

**JEL code:** *F21, R11*

The role which FDI play in the process of economic modernization is still a hotly debated issue, especially in emerging countries trying to catch-up with the developed world. FDI can bring both advantages (e.g. technical upgrading) and disadvantages (e.g. crowding out of local businesses) to a domestic economy. Their net balance for growth and development is not always positive (e.g. Moran, Graham, Blomström eds. 2005; Tytel, Yudaeva, 2006; Herzer, 2012; Temiz, Gökman, 2014). Regions of the transforming Central Europe owe the most to foreign capital in terms of increased production and improved standard of living of their people (Tondl, Vuksic, 2008). At the same time, the arrival of a foreign investor may easily destabilize the local economy by, e.g., threatening the natural environment, crowding out local businesses, contributing to higher unemployment (Gorynia ed. 2005), or increasing demand for specific categories of workers and skyrocketing their wages (Mullen, Williams 2007).

For many years economists, international business academics and representatives of other disciplines have been interested in criteria for choosing location for FDI. Numerous theoretical and empirical studies (for overview see Faeth, 2009; Kim, Aguilera, 2016; Nielssen, Rasmussen, Weatherall, 2017) have not proposed any clear-cut answer to this question (Lautier, Moreau, 2012). One of the reasons is the fact that the choice of location is dictated not only by its specific features (geographic location, resources, demand, institutions) but also by motivation driving investors (Dunning, 2000).

In our paper we compared the role of various factors in attracting foreign capital to the Province of Lodz in two periods: till 2010 and between 2011 and 2015. We used two direct questionnaire studies:

1) The first study from 2010 included 188 companies with foreign capital (CFCs). They accounted for 9% of the total number of CFCs in the Province of Lodz.

2) In 2015 we interviewed 135 CFCs which invested in the Province between 2011 and 2015 based on a similar questionnaire. They accounted for 20% of total number of CFCs in this period.

24 factors included in the questionnaire were divided into three groups, reflecting supply, demand and institutional conditions. We used statistical methods (e. g. Mann-Whitney test) in order to identify the significant changes between motivations behind FDI location in the Lodz Province till 2010 and between 2011 and 2015.

In both periods foreign investors were looking first of all for relatively cheap and skilful labour to enjoy the advantages stemming from low production costs but importance of these factors relatively decreased five years later. In 2015 there were no factors discouraging investment in the region as in the study conducted in 2010. That could be the evidence that the Lodz Province became more attractive for foreign investors.

## BANKING SYSTEMS IN THE BALTIC STATES

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**Key words:** *credit union, bank subsidiaries, banking business model*

**JEL code:** *G21, N20, P34*

In order to understand the future, it is necessary to comprehend the past. History has shaped banking systems and determined banks' behaviour. The Baltic banking systems of today are a result of economic and political turmoil which has been occurring since the beginning of the Baltic banking systems in the 19th century. The research on historical and current developments are all part of a project, funded by the Deutsche Bundesbank. The project consists mainly of two studies which are to be presented. The first research topic compares the development of the credit unions in Estonia, Latvia and Lithuania, analysing certain critical points in time, like the first independence, the occupation by Soviet Russia or the second independence, which may be defined as turning points for the credit unions. The questions are to what extent developments in the three countries differ, whether they can be understood based on historical political turning points, and whether developments follow their own dynamics. The methodological basis for a comparative analysis of credit cooperative developments is provided by the approaches of the New Institutional Economy, such as the transaction cost approach. The second research topic explores the evolution of banking business models since the 1990s, as the entry of big foreign banks reshaped the young Baltic banking systems. It is to be seen, whether the integration and transfer of foreign banking business models have been affecting the profitability of foreign subsidiaries. In order to explore the transformation of business models of the two Swedish banks Swedbank and SEB, which dominate the Baltic banking systems, theory on internationalization strategies is exerted. Future research on evolving banking systems may resort to the influencing factors on the business model transformation and on their profitability. As the final research results and conclusions of the two research topics are still pending, the ongoing research process and preliminary results will be presented.

## **A PROPOSED CONCEPTUAL CONTROL FRAMEWORK FOR TECHNOLOGICAL INNOVATION WITHIN THE FINANCIAL SERVICES INDUSTRY**

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*Inna Romanova, University of Latvia*  
*Jonathan Spiteri, University of Malta*  
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**Key words:** *financial services market, innovation, cryptocurrency, blockchain technology, business development*  
**JEL code:** *F49, F69, G30, G38, G40, O16*

Currently, hype surrounding the proliferation of technology in Financial Services, has been significant. Blockchain-based technology, the creation of bitcoin and other cryptocurrencies and robo-advice to mention a few have complicated and disrupted the landscape of yesterday's financial services providers and their ancillary service providers – auditors, underwriters, advisors, actuaries, lawyers and regulators to mention a few. These new technologies offer tremendous opportunities for innovation and development, but are also uniquely suited to facilitate illicit behaviour and are disrupting the role, structure, and competitive environment for financial institutions and the markets and societies in which they operate.

The objective of this paper is to integrate the basic utility model of behaviour, the underlying control principles as a benchmark as well as emerging developments in behavioural finance, to make suggestions intended to support or at least not impair the technological innovative potential in the Financial Services Industry. The ultimate goal is to propose a control framework that imposes controls on the characteristics that make them especially useful for unintended behaviour (for example, but not limited to anonymity) but does not impose costs on characteristics that, at their core, have generative potential (for example, but not limited to the decentralization of value-transfer-processes and lower costs).

In doing this, we briefly describe the processes of these technologies, attempt to define and disambiguate terminology, foster a general understanding of how they work, and discuss how and why software quality professionals might want to invest time and energy in learning about, implementing, or using them in their own organizations - or alternatively, improving the quality of technology itself. We finish, by discussing the proposed control framework and the critiques of the suggested approaches.

This paper can be seen as a primer for software professionals, regulators and controllers, in that it demystifies and identifies issues that might be intrinsic to these innovations and gives suggestions for addressing them with new leaner value creating control models, while moving away from cumbersome controls that stifle financial services activity and transactions.

## ASSESSMENT OF COMPETITION IN THE BANKING SECTOR OF THE BALTIC STATES

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**Key words:** *competition, Lerner index, Boone indicator*

**JEL code:** *G21, O16*

Looking at the composition of the financial sector across the Baltic countries, banks represent the largest share of the total assets. The current external macro-financial environment is complicated by the slowdown in the growth of the global economy. Also, this period of uncertainty is further shortened by the global geopolitical situation. That is why the financial sector should be able to adapt to these changes and maintain effective competitiveness.

The relevance of the chosen topic can be explained by the fact that the main goal of any business is winning the competition. Triumph over an opponent is the result of continuous and competent work of the banks. The external policy of the bank and the services offered directly affect the competitiveness.

This paper examines several competitiveness indicators. The first is the profit margin. The purpose of any business is to maximize the profit. With their profits banks develop and improve the quality of banking services, by increasing the level of competitiveness. The second indicator is the growth of own capital, which ensures the stability of the bank's financial position and the liquidity of the balance sheet. The own capital amount determines the bank's ability to remain stable during a crisis. The third indicator is the bank's assets, which show the use of bank resources. The bank's assets consist of their own and attracted resources, which are used to make a profit, to maintain liquidity and ensure the bank's efficiency. The bank's prosperity depends on reliable investors and borrowers. Banks are struggling for such clients to maintain a level of competitiveness. That is why the amount of deposits and credits is examined in this paper.

Several methods are used to conduct the competitiveness analysis in the Baltic State's banking sector. The publicly available sources used to analyze Lerner, Boone and H-statistic indexes in the period 2005-2015.

In general, the analysis of competitiveness indexes shows that banks in the Baltic States have a high level of competitiveness and its ability is increasing every year. This paper gives valuable political consequences for the banks of the Baltic States and the stakeholders in general.

## **ANALYSIS OF MEASUREMENT POLICIES FOR REAL NON-CURRENT ASSETS AT PUBLIC BALTIC COMPANIES**

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**Key words:** *non-current assets, measurement, cost, fair value, International Financial Reporting Standards*

**JEL code:** *M40, M41*

Companies, which list their securities on the public Baltic market, must prepare their consolidated financial statements according to the International Financial Reporting Standards (IFRS – in abbreviation). Management of companies, which report under the IFRS, face a choice concerning the balance sheet measurement of non-current assets. Management must choose between the application of revaluation model and cost model for intangible assets and property, plant and equipment and between fair value model and cost model for investment property. Furthermore, several methods for estimation of assets' fair value are at the disposal of companies' management.

The purpose of this paper is to study and to compare the valuation methods, which public Latvian, Lithuanian, and Estonian companies apply for measurement of real non-current assets on the balance sheet. Real non-current assets include intangible assets, property, plant and equipment, investment property, biological assets, and non-current assets held for sale. As part of the research, the relationships between the valuation methods chosen, category of real assets, countries of companies' domicile, and the industries of companies are established. The research methods applied are those of economic analysis and statistical methods. The results of research demonstrate that fair value measurement is most commonly applied for investment property; and measurement of intangible assets and property, plant and equipment at fair value is rare.



## CHEAP DEBT OR DELAYED EQUITY? THE MOTIVES FOR THE USE OF CONVERTIBLE BONDS BY COMPANIES IN POLAND

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**Key words:** *corporate finance, convertible debt financing, Polish capital market*  
**JEL code:** *G10, G30, G32.*

The motives for using convertible bonds as a substitute for common stock or as an alternative for straight debt were first confirmed in the mid-1950s. However, most previous studies concentrated primarily on the American and the Western European markets and they utterly ignored the issuances of convertible debt done in Central and Eastern Europe (CEE). As a consequence, the motives for using convertible bonds by Eastern European companies are still very ambiguous.

The intent of this paper is to fill an outlined research gap in the existing literature and to identify the motives for selling convertible bonds by companies in the Polish capital market, which is supposed to be the biggest debt securities market among all CEE countries. To our best knowledge this study is the first that tries to answer a crucial question, namely why Polish firms decide to use convertible debt financing and whether these motives are similar to those for companies from more mature convertible bond markets.

The paper examines all 75 issues of convertible bonds carried out between 2009 and 2017 by public companies listed on the Warsaw Stock Exchange. A few selected issuance parameters and proxies for financial performance of the issuers (describing their size, market value, leverage, liquidity, profitability and growth opportunities) have been analyzed by means of descriptive statistics, statistical significance tests and logistic regression models.

The results of the research indicate that profitable and less leveraged companies which use convertibles for investment purposes consider hybrid debt as a source of cheap debt, since the majority of issued bonds are redeemed by the issuers before or at maturity and they are not converted into equity capital by bondholders. On the contrary, according to the research findings, nonprofitable and more indebted firms that use convertible bonds in restructuring process perceive hybrid debt as delayed equity which is transformed into ordinary shares soon after convertibles issuance. This strategy is probably aimed at speeding up raising funds by avoiding an elaborate process of private or public offerings of common stock.

The theoretical and practical implications of this study are two-fold. First, the paper starts a discussion about convertible debt financing used by firms from Central and Eastern Europe. Secondly, it helps to understand the motivation that drives the Polish companies to issue convertible bonds which seems to be similar to the motives for the American and Western European corporations.

## THE IMPACT OF CONCENTRATED OWNERSHIP ON PAYOUT ACROSS NORDIC FIRMS

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*Stefan Wendt, Reykjavik University*

**Key words:** *dividends, repurchases, concentrated ownership, institutional large shareholders, Nordic listed firms*  
**JEL code:** *G35, G32,*

**Purpose** – The aim of this paper is to investigate the influence of concentrated ownership, large foreign shareholders and government ownership on payout. **Design/methodology/approach** – Using a sample of 809 listed firms across Denmark, Finland, Norway, and Sweden during the years 2006 to 2014, the authors employ a dynamic panel model to analyze the effects of highly concentrated ownership on payout. In addition, the authors use a panel vector autoregressive (VAR) model as a robustness check to address potential endogeneity between highly concentrated ownership and payout. **Findings** – The results show that the impact of highly concentrated ownership on payout largely differs among the Nordic countries. Highly concentrated ownership increases the propensity to dividend payment for firms in Denmark and Norway. However, high ownership concentration results in a lower propensity to pay dividends in Finland and to repurchase stocks in Norway and Sweden. More results find that highly concentrated ownership has a significant negative impact on the amount of dividends in Sweden. Also, high ownership concentration reduces the amount of money used for repurchases in Denmark, Finland, and Sweden, while large foreign institutional owners appear to increase the amount repurchases in Denmark. **Research Limitations/implications** – The findings provide empirical support that the impact of large foreign ownership on reducing surplus cash in the hands of corporate insiders is largely influenced by the context behind concentrated ownership. **Originality/value** – This is the first study to examine the influence of different types of large shareholders on payout for firms under highly concentrated ownership across Nordic countries.

## FINANCIAL REPORTING IN THE MICRO ENTERPRISES IN SELECTED EUROPEAN COUNTRIES

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**Key words:** *accounting, financial reporting, micro enterprise, financial statement, stakeholders*

**JEL code:** *L25, M13, M41*

Micro enterprises are an important element of European economies. The number of micro companies constitutes average 93% of all registered entities. They employ nearly 30% of all workers in the European Union countries. It can be observed that highly developed countries as well as those still developing, having a different political, social and cultural structure have been devoting much attention to these enterprises. Their further development depend largely on their financial situation and adequate, reliable data from information system, which is based on accounting.

The main aim of this research paper is to carry out a comparative analysis of the reporting obligations of micro enterprises which keep account books in selected European countries (Great Britain, Latvia, Poland).

At the beginning of this paper, criteria for classification of enterprises as micro, small and medium, resultant from legal regulations in selected countries, will be presented and compared. The analysis of macroeconomic data will indicate significance of micro sector. Next part will be concerning the literature studies and analysis of the legal regulations allowed identification and comparison of the registration requirements arising from the accounting law regarding micro enterprises in the researched countries.

The first main conclusion of the analysis indicates different ranges of the mandatory elements of the financial statements and of the additional information which the micro entities must prepare in individual countries. The second important observation from the research is that the balance sheet and the profit and loss account do not have one unique template. It means that in each country the scope of disclosures of information in financial statement, which is a basis for decision-making and for evaluation of the enterprises, is not homogenous. Nowadays, when the European market is a global market even for micro company, all groups of stakeholders can be interested in getting the same relevant and comparable information from accounting system no matter in which country the enterprise is registered.

This paper is a basis for seeking the best solutions and practices collecting and presenting information, not only for the reporting purposes, but also for constructing effective information system which will be adequate to ensure the needs all groups of the stakeholders.

## **BAYESIAN MODELS OF PROVISION FOR EMPLOYEE RETIREMENT BENEFITS**

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**Key words:** reserves, accountancy, valuation

**JEL code:** C11, M40

According to the balance sheet law, business entities are required to present their material and financial situation and financial result clearly and reliably, i. e. show your complete liabilities. Liabilities include also provisions, even though their maturity date and amount are not certain. This justifies the inclusion in the accounting books of provisions for future employee benefits (short provisions for employee). Provisions for employee are created if the employer's obligation to provide such benefits for employees results from labor law, collective labor agreements or employment contracts, and when the amounts of these benefits are so significant that their failure to include them in the financial statements will negatively affect the image the material and financial situation and the entity's financial result. These benefits include retirement and pension benefits and jubilee bonuses, which are long-term. This means that there is uncertainty as to whether and when the event conditioning the payment of the benefit occurs. As a result, when estimating provisions, appropriate indicators are adopted (discount rate, expected inflation rate, employee turnover rate and others). The article presents an innovative Bayesian approach to the valuation of a provision for employee benefits. The main goal of the article is to create a model of provision for employee. To achieve the goal actuarial methods as well as Bayesian models based on linear dynamic models were used to estimate the provision for employee in accordance with current legal standards in Poland (ie the Accounting Act, labor law, international accounting standards and the national accounting standard no. 6). The adoption of actuarial assumptions about the random structure of model parameters has a significant impact on their value, and thus on the financial result of the business entity, as well as on the faithful and reliable picture of the business unit.

## CAPITAL ADEQUACY AND LIQUIDITY IN THE CONTEXT OF BANK STABILITY: CASE OF LATVIA

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*Inna Romanova, University of Latvia*  
*Aina Joppe, University of Latvia*

**Key words:** *bank, capital adequacy, liquidity, stability*

**JEL code:** *G21*

The importance of bank capital management and liquidity is widely discussed in scientific literature and professional industry publications. Besides, capital adequacy and liquidity indicators are the most important tools used for regulatory purposes to maintain stable banking system in a country. Capital and liquidity are essential for ensuring bank stability as well as form the basis for successful bank performance. Consequently, bank stability is vital for the economic growth of any country.

The objective of this paper is to analyze the capital adequacy and liquidity of Latvian commercial banks in the context of on stability.

The paper provides analysis z-score as a measure of stability as well as of capital adequacy, liquidity of Latvian banks in the period from 2008 until 2016. The analysis is done using quantitative and qualitative analysis methods based on the financial statement data of Latvian commercial banks over nine years. The analysis is based on classification of banks into groups depending on the size of bank total assets. The paper reveals the differences in formation of liquid reserves and reserves of capital in different groups of banks. The analysis has shown the dependence between bank size in terms of assets and bank liquidity: small banks maintain higher liquidity standards to preserve its stability. Besides, decrease in bank liquidity is associated with an increase in risk-weighted assets and a decrease in bank stability. This dependence was revealed in all bank groups independently from its size. Moreover, in small banks growth of capital is accompanied by a decrease in liquidity.

## **CREDIT MARKET STABILITY: NON-PERFORMING LOANS INTERACTION WITH BUSINESS CYCLES IN EU COUNTRIES**

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***Key words:** non-performing loans, credit risk*

***JEL code:** G21, G28, G32*

Non-performing loans (NPL) is still an issue for the European Union hindering credit market growth and putting concerns over credit market stability. In the research, we assess NPL as one of the key indicators for credit market stability and analyze panel data of 15 selected EU countries during period of 1998-2014 years. Selected variables representing business cycle (GDP, Industrial production index; stock market index, consumer confidence index) were regressed against the NPL compared to gross Loans portfolio using different regression techniques. Results of the regression analyses tell us that NPL are very much dependent over the GDP changes, however the lags and impact is different across the countries and some region specific highlights were found. The research is contributing to better understanding of the macro economy interaction with the credit market stability in the business cycles context.

## THE KNOWLEDGE AND COMPETENCIES REQUIRED FOR FINTECH SECTOR

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**Key words:** *Fintech, knowledge, skills, competence, finance, technology*  
**JEL code:** *G21, G23.*

Since fintech is developing dramatically as a sector, the number of startup companies and job vacancies is increasing as well. While this is a good opportunity to get employed in the sector for job seekers, the entry requirements for fintech firms are relatively tough. The reason is that the candidates are required to have knowledge and skills regarding both finance and technology. Of course, those that have experience in these industries find themselves relatively easily employed.

The aim of the research is to identify, what knowledge and competencies are necessary for a specialist in order to successfully work in the fintech industry by conducting a survey of fintech employers and experts on the industry.

In order to achieve this aim, the authors analyse the history of digital transformation and the development of the fintech market in context of the development of modern financial services and information technologies, and evaluate the demand for fintech specialists in the labor market.

The results of the research allow making conclusions about what are the competencies required from fintech specialists, that allow them to successfully manage the business. The authors also provide recommendations on the requirements of fintech startups for job candidates and show where the knowledge of fintech can be acquired.

## ENVIRONMENTAL DISCLOSURES – THE CASE OF BULGARIAN ANNUAL REPORTS

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**Key words:** *annual reports, disclosure, environmental information*

**JEL code:** *M41, Q56*

The purpose of this paper is to analyse environmental disclosure practices in the annual financial statements published by the six condensing thermal power plants operating in Bulgaria in order to determine the main qualitative characteristics of published environmental information and its changes over years. The article also takes into account the absence of a compulsory accounting standard and examines how this affects disclosures. Information on companies' web sites and information disclosed in their annual activity reports has also been analysed and a critical analysis of existing practices has been carried out.

The survey was conducted on 17 criteria for the 2012-2016 period and shows a high percentage of environmental disclosures, although the level of disclosure are very heterogeneous in both quantity and quality. Approaches were suggested to overcome the identified shortcomings.



## IMPAIRMENT OF THE RIGHTS TO FOOTBALL PLAYERS IN BULGARIAN PROFESSIONAL FOOTBALL CLUBS

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*Key words: football players, impairment, IAS 36, accounting, Bulgaria*

*JEL code: M41*

Acquired rights to football players are a specific intangible asset and therefore have different features in their initial and subsequent valuation. The purpose of this paper is to make a critical analysis of the factors that determine the downgrading of players' value, which is a prerequisite for recognizing accounting impairment of acquired rights to players. According to the International Financial Reporting Standards (IFRS) and Bulgarian Accounting Standards (BAS) at the end of each reporting period a football club is required to assess whether there is any indication that a footballer may be impaired. And this is a specific procedure because the rights to the players are different from the other intangible assets, as their value depends very much on the results achieved by the individual footballer.

The aim of this paper is to show that the information provided by football clubs in their financial statements regarding the tests for the impairment of the rights to players is insufficient and incomplete. We have found that there are flaws in the FEF Regulations issued by UEFA which allow football clubs not to disclose enough complete information. In addition, we believe that the texts of IAS 36 are very difficult to apply in football industry. A literature review of previous research has been carried out and the practices described in the notes to the financial statements of the first 6 professional football clubs in Bulgaria have been examined. These clubs work and play in the same championship but accept different accounting standards. The results of the survey show that the level of disclosure of information about the impairment of rights to players is very low. Our findings suggest that UEFA, FIFA and local football associations should promote new rules aimed at improving the accuracy of financial disclosure of football clubs.

## **PERSONAL DETERMINANTS OF THE FAMILY BUSINESS CAPITAL STRUCTURE - CENTRAL AND EASTERN EUROPEAN PERSPECTIVE**

*Jakub Marszalek, University of Lodz*

**Key words:** *family business, financing policy, Central and Eastern Europe, comparison, ownership*  
**JEL code:** *G32, G34*

The aim of the article is to find statistically significant differences in financing policy between family owned companies and others. Particular attention was paid to the role of representatives in the management of the company. The essence of a family business means that it has a strongly focused shareholding. If the owners do not hold the board directly, this may exacerbate the conflict typical of the agency's problems. 845 listed family owned companies in selected Central and Eastern European countries were analyzed in period of 2006-2016. Within this group, family businesses were separated by directly managed by family members. Data was obtained from Amadeus database. The analysis was mainly focused on the problem of capital structure. To take into account the economic context of the researched entities, their profitability and liquidity were also analyzed. Beside the descriptive statistics the significance difference test were used. The research was conducted in a general, sectoral and national context. The results show that family businesses managed by family members compared to others apply conservative financing policies. They are less indebted and generally keep higher financial liquidity. It must be stressed, however, that the results obtained are not entirely clear. This may be caused both by the sectoral conditions of financing strategy and the differences in the family business development stage in particular country. The research results do not allow concluding about the role of profitability in the financial policy.

The obtained results contribute to the research on the capital structure determinants. They also provide new insights about the family businesses behaviour. In addition, some information about the role of personal management in centralized ownership of business management was provided as well. The results are mostly consistent with previous achievements, but they point some significant differences in the level of financial liquidity and profitability in particular country. Therefore the paper may also provide some information for adjusting the state economic policy in family business promoting.

## FINANCIAL REPORTING REQUIREMENTS FOR MICRO ENTERPRISES IN POLAND, BELARUS, UKRAINE AND LITHUANIA - COMPARATIVE ANALYSIS

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**Key words:** *financial reporting, Eastern Europe, micro enterprises, SME*

**JEL code:** *M48, M41, O52, P20*

In Europe, the debate over the simplification or outright abolishment of reporting requirements for micro and small companies is receiving considerable attention with the implementation of the Directive 2013/34/EU. The government's rationale for simplification of financial reporting requirements is mainly based on reducing the administrative burden. The purpose of this paper is to carry out a comparative analysis of the reporting obligations of micro enterprises in selected Eastern-European countries (Poland, Belarus, Lithuania, Ukraine). These are countries with different levels of economic development, but with a common political-economic ground. As a research method, the authors have chosen desk research of national accounting regulations (laws and national standards) in terms of requirements to micro-entities. Literature studies and analysis of the national legal regulations show that the elements of financial statements of micro-entities are similar in four selected countries. The differences, however, concern the definitions of a micro-entity, the range of financial data presented in financial statements and the requirements of keeping accounting books. As a result, the scope of the financial information for decision-making and evaluation of the enterprises is not homogenous in the researched Eastern-European countries. Poland and Lithuania are the state members of European Union what affects on their accounting law and financial reporting requirements of micro enterprises. In the case of Ukraine, the financial reporting requirements are similar to the ones of European Union. Although, the definition of micro entity differs from the European one. Belarus is a country where the transformation has been limited. It has influenced not only by the structure of Belarus' enterprises but also on the national accounting law. In Belarus micro enterprises are not obligated to prepare any financial statements.

## **A COMPARATIVE ANALYSIS OF THE LATVIAN AND MALTESE REGULATORY AND PROFESSIONAL REQUIREMENTS FOR ACCOUNTANTS**

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*Ivita Faitusa, University of Latvia*

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**Key words:** *accountant profession, accountant regulation, accountant certification, accountant education*

**JEL code:** *M48, A29*

The accountant is one of the main pillars of a successful business activity. Countries within the EU offer different routes to becoming a qualified professional accountant and the regulations and standards sometimes differ. Contrary to the situation in Malta, where accountants are required to follow a standard content (syllabus) of formal education with approved education bodies and need to have a standard amount of years' experience with approved Accountancy Firms; in Latvia an accountant is able to practice without a mandatory accountancy qualification and it is enough to have an economic related academic or professional education at certificate, diploma or degree level or have experience or an accountant certificate of competency.

The aim of this study is to compare requirements and routes to becoming an Accountant in Latvia and Malta. Then, through this comparison and using the historical institutionalism approach as the theoretical framework to understand the development of the accountancy profession in Malta, the authors will try to determine whether there is need for improvements and reform to the requirements for practicing as an Accountant in Latvia. The case of Malta was chosen for comparison purposively since like Latvia (although much larger) Malta is a small state in the EU.

To address this objective the authors used the comparative approach which involved a comparative study of the models, qualifications, regulations, standards and approaches in each country. The theoretical and methodological grounds of the paper are the normative acts, works produced by scientists and Internet sources.

The study shows that the accountancy profession in Malta is mature and very well developed and established within the EU and therefore, Latvia should build its accountancy profession by referring to the Malta Model.

The article looks at both theory and practice and tries to determine and understand problematic issues pertaining to the regulatory and professional requirements, in a drive to provide recommendations for improvement.

## ACCESS TO PAYMENT DATA AND ITS STRATEGIC IMPACTS ON MANAGEMENT ACCOUNTING

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**Key words:** *management accounting, European payment service directive, strategic management*

**JEL code:** *M41, G28, L14*

In January 2018, the revised Payment Service Directive (PSDII) is put into application and reforms the handling of payment data within the Single European Payment Area (SEPA). It is aimed to ensure an integrated European market for payment providers and stipulate competition between different banks and institutions. Despite its title, the directive regulates also so-called Account Information Services (AIS), which do not provide payment options or proceed funds but solely retrieve information from bank accounts and make them accessible to third parties (access-to-accounts principle). Some of these AIS do already exist (despite the lack of proper regulation) and provide the full range of account data (account holder, balances, transactions, counterparties, historical data etc.) to authorised third parties.

This paper analyses the EU regulatory framework from the perspective of accounting. Whereas public focus is currently on business-to-consumer services like payment handling or mobile payment applications, the new regulation may offer a wide scope of possibilities also for business specific services especially in cash management, financial accounting and risk management. Since the EU directive focusses on consumer accounts with natural persons as account holders, the technical features for bank data handling may also be applied on Small and Medium Sized Enterprises (SMEs), at least for non-incorporated business partnerships. It is pointed out, that the upcoming juridical and technical environment of bank data processing may enable new types of technical solutions for the financial and management accounting of SMEs, which allow for quicker information, less manual work in data handling and increased verifiability.

Based on this analysis, the paper draws conclusions from the perspective of business strategy. The described innovations do not only enhance existing processes in accounting but may also affect make-or-buy decisions regarding payment handling and cash accounting services. By applying the theoretical framework of informational economics, it is shown that the broader access to payment data reduces the information costs for outside parties such as providers of business process outsourcing services. This arises questions about the optimal size of the firm and the economics of outsourcing.

## **BLOCKCHAIN TECHNOLOGY – A BANK LENDING (R)EVOLUTION: THE CASE OF SYNDICATED LOANS**

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**Key words:** *blockchain, distributed ledger, banking, syndicated loans, smart contract*

**JEL code:** *G21, G15, D80*

Blockchain is one of the most widely discussed innovative technologies that is expected to lead to revolutionary changes in the financial sector. At the heart of most discussions is the question of whether blockchain is a threat to the existence of traditional banking or whether it will transform the latter, causing a strong impetus in its evolution? Syndicated loans are one of the areas of traditional banking in which the upcoming application of blockchain based on Distributed Ledger Technology (DLT) is undoubted. This argument is supported by the steadily growing number of leading banks in syndicated lending which are actively experimenting pilot DLT platforms for a syndicated lending community.

The analysis in this paper focuses on the specificities of DLT and the possibilities for its application in the area of syndicated lending. The main research objectives and tasks are tied to the development of an adequate conceptual model that tests connections and relationships between the blockchain technology and its impact on some of the core components of syndicated loans: negotiation of the loan contract, formation of the bank syndicate, pricing, bookrunning and bookkeeping, trading and servicing. The results of the comparative analysis of the currently used technologies and the smart contracts that are the product of the blockchain technology show that their implementation will lead to significant positive changes in database security, transaction and settlement speed, service automation, acceleration of the credit process and ultimately to a significant reduction in operating costs. Some objective DLT restrictions are also correctly analyzed. In conclusion, we can summarize that, at this stage, the expectations that blockchain technology shall destroy the traditional bank lending seem to be exaggerated. It is argued that blockchain should be viewed not as a threat, but as a real prerequisite for banking in general, and syndicated lending in particular, to accelerate to a new evolutionary stage of their development.

## AN ALTERNATIVE FOR DETECTING SYSTEMIC RISK IN BANKING SECTOR. PRINCIPAL COMPONENTS APPROACH

*Kristine Petrovska, University of Latvia*

**Key words:** *banks, principal component analysis, systemic risk*

**JEL code:** *C38, G21, G28*

Since last global financial crisis academics and regulators alike have drawn increased attention to evaluating and limiting the systemic risk within financial industry. While regulators have full access to confidential information on all supervised entities and market data are available to all interested parties, determining systemic risk where bank shares or debt securities are not publicly listed is problematic to say the least. Therefore, this paper shows principal components analysis as an alternative method for identifying level of systemic risk among banks in small economies with undeveloped share market for banks.

The study presented in this paper uses publicly available bank yearly performance data (return on assets, leverage, non-performing loans ratio, liquidity and capital adequacy) in Latvia to compute principal components. The increased cross-correlation of bank performance ratios materialized as increased percentage of variance that first three principal components explain during global financial crisis and ensued European debt crisis shows that principal components analysis is an alternative method for tracking level of systemic risk in small economies with undeveloped share market for banks. The variance that first, second and even third principal component explained increased during financial crisis meaning that bank performance results were higher cross-correlated and interdependent. This leads to increased systemic risk and potential system instability to marginal threads.

The results of the research show that principal components analysis is a suitable method in banking sector even with divergent business strategies and regulatory framework. However, only the banks that are practising banking activities should be included in the research.

## DO PENSION FUNDS' PARTICIPANTS IN LATVIA TRACK THE PROFITABILITY OF THEIR PENSION SAVINGS?

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**Key words:** *public pensions, pension funds, financial literacy*

**JEL code:** *H55, H75*

A knowledge-based welfare state presupposes participation of enlightened individuals in social security schemes, including public and private pensions. Pension system in Latvia imposes responsibility for the future pension on individuals, both in 1<sup>st</sup> and 2<sup>nd</sup> pension pillars. The aim of the current paper was to identify the mode of behaviour of Latvians in respect of their mandatory pension savings in mandatory state funded pension pillar. The paper provides the analysis of the responses given by the participants of the survey “Mastery of Life and Information Literacy” implemented in spring 2016 by SIA “Aptauju Centrs”; specifically, to the question whether they control the profitability of their pillar II pension savings (under the “financial literacy” sub-group of questions). The research methods include analysis of scientific publications and analysis of primary and secondary statistical data. The statistical analysis has been performed using descriptive statistics, Kruskal-Wallis test, Mann-Whitney test, and Spearman’s rank correlation coefficients. The obtained results are also juxtaposed with the secondary statistical data from other sources.

The survey revealed, that 76.8% of those respondents who claim to have participated in pillar II pension funds do not control the profitability of their pension plans, and only 32.2% of those who control do it annually. The very breakdown of the answers demonstrates lack of financial literacy: 31.8% of the respondents aged 65+ have chosen the answers “I do not control” or “I control annually”, although the only valid answer for this age group would be “I do not have a 2<sup>nd</sup> pillar pension account” (because they were not even allowed to join pillar II). On the other hand, there are respondents of younger age groups (below 44 years), who are working and who have chosen the answer “I do not have a 2<sup>nd</sup> pillar pension account”, while they are enrolled in pillar II pension schemes automatically. Weak concernment of Latvians in their mandatory pension savings is also backed by Financial and Capital Market Commission data: although Latvian legislation allows changing pension plan and fund manager, more than 90% do not use this opportunity, and almost half of those who use it have done so under the influence of advertising, rather than rational thinking.

The analysis shows no difference in answers of Latvians and non-Latvians, men and women, having and not-having minor children. There are statistically significant differences between the answers of respondents from different regions ( $p < 0.001$ ), of different educational level ( $p < 0.001$ ), age ( $p < 0.01$ ), working in public or private sector ( $p < 0.01$ ), etc. The respondents’ answers also correlate with their self-reported locus of control and ability to critically assess the information found and to compare information sources.

Low interest demonstrated by the population to the performance of state funded pension plans demotivates fund managers from competition and undermines the future adequacy of 2<sup>nd</sup> pillar pensions. Improving financial literacy in the field of pensions is needed to enable people make informed choice of financial services for their future wellbeing.



## **BANKRUPTCY PREDICTION MODELS WITH STATISTICAL AND ARTIFICIAL INTELLIGENCE TECHNIQUES – A LITERATURE REVIEW**

*Inese Rozenbaha, University of Latvia*

*Key words: artificial intelligence, bankruptcy prediction models, statistical techniques*

*JEL code: G33*

Bankruptcy prediction has been an active research domain since 1960s. The possible bankruptcy of the company has consequences not only for the owners and creditors of the company, but also for investors and employees, therefore, in order to receive timely and the most accurate signals for possible bankruptcy, is the priority for all interested parties.

The effectiveness of a bankruptcy prediction model is determined by the accuracy of its outcome. Models are mainly divided into two categories: statistical and artificial intelligence models. Mostly used statistical model methods are *Multivariate discriminant analysis, logit, probit* and others. However, in this century the use of artificial intelligence techniques in predicting bankruptcy is undergoing rapid development. As its main techniques can be mentioned – *Decision Trees, Classification and regression tree, Artificial neural network, Genetic algorithms, Support Vector Machines* and others. The main conclusion is that artificial intelligence technologies yield the result with much higher accuracy than the statistical methods, that is essential for bankruptcy prediction considering potential financial consequences.

Based on the analysis of the scientific literature of the bankruptcy prediction models, that are using statistical and artificial intelligence techniques, the aim of this paper is to determine those techniques, followed by further studies, the author will create the model of bankruptcy prediction for the agricultural companies in Latvia.

The methods used in the study are monographic analysis, graphical presentation, grouping and comparison.

## THE DETERMINANTS OF BANK'S STABILITY: EVIDENCE FROM LATVIA'S BANKING INDUSTRY

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**Key words:** *Z-score, banks stability, credit risk, liquidity risk*

**JEL code:** *G01, G21*

Banking industry is facing huge challenges last 5 years: technology-enabled innovation, changes in customer preferences, bank de-risking and new regulatory initiatives are resulting in unprecedented changes of banks' business models. To go through all these changes, banks need to be stable, moreover, the stability of banks is crucial for the economic growth and prosperity of countries, as businesses rely on the banking system to meet all of their financial needs. Thus, any disruption in banks' stability affects the economy as a whole. The present study contributes to the empirical literature by identifying the determinants of banks' stability in the Latvian Banking Industry. This study covers both banks specific (endogenous) factors and macroeconomic (exogenous) factors that impact the banks' stability. The data used in this study is the annual financial statements of Latvian banks operated in the period 2008-2016. Using panel data analysis technique, we found evidence that credit risk and liquidity risk have a significant negative impact on banks' stability. These findings are consistent with the expected results, by confirming examined Z- score model: the higher the liquidity and credit risk, the lower the stability of the banking system. The size of the bank and the inflation rate have significant positive impact on banks' stability, as a result, large banks are more stable compared to smaller banks. Similarly, when interest rates are adjusted according to the expected inflation, the inflation effect on the stability of the banks is positive. We found insignificant results regarding the impact of GDP Growth, Efficiency of Banks Operations and Profitability on banks' stability. The current study will provide valuable policy implications to the Latvian banking industry and stakeholders in general.

## SOME ASPECTS OF ENSURING THE STABILITY OF THE COMMERCIAL BANKING SYSTEM – THE CASE OF LATVIA

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*Irina Solovjova, University of Latvia*

**Key words:** *commercial bank stability, profitability, liquidity, strategy*  
**JEL code:** *G21*

Latvian economic history counts several severe crisis episodes in the banking system over the past 25 years. Reaching and sustaining the stability of commercial banks and the banking system required a large amount of work in enhancing liquidity, profitability and asset management. How to do this is a highly relevant topic not only in Latvia, but also in the euro area overall, where many banks continue to struggle with the legacies of the crisis.

The first aim of this paper is to characterize the contours of the optimal stability strategy for banks with an emphasis on banks operating in Latvia. Because the development of an effective asset management strategy is an essential part of the stability strategy of any commercial bank, the second aim of this paper is to provide a way of summarising information about the quality and profitability of bank assets as well as to propose some strategies for effective asset management.

The authors used both quantitative and qualitative economic methods of including comparative analysis and synthesis, graphical illustration methods, as well as quantitative methods to analyse commercial bank profitability, liquidity, and asset quality.

As a result of the empirical analysis, the authors conclude that active liquidity and profitability management allows banks to increase their overall stability and lower the influence of external factors on their performance. A successful asset management strategy should control both for the structure and profitability of assets as well as liabilities (sources of financing).

This implies that when designing and implementing such strategies commercial banks have to constantly analyse and forecast the external environment (e.g. macroeconomic and financial market developments) because it affects not only asset profitability, but also the stability of the banking system overall. The results of such analysis must affect asset, liquidity and profitability management strategies.

## THE THEORETICAL AND PRACTICAL ANALYSIS OF TURNOVER RATIOS MODIFICATION FOR THE COMPANY'S BUSINESS ACTIVITY

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*Ruta Sneidere, University of Latvia*

**Key words:** *accounting, modification, turnover, analysis*  
**JEL code:** *M41, M49*

The financial aspect of the business activity of an enterprise firstly appears in the speed of turnover ratios. The analysis of the business activity is to study the levels and dynamics of various turnover ratios. This article's perspective - indicators of turnover are based on the data of the financial reports of the companies from the 19th century. Eventually the annual statements of the companies were enhanced with new components such as: *Accrued income, Accrued liabilities, Non-current assets held for sale and discontinued operations, Investment property* which in the 19th century were not shown on debtors and liabilities reports. Studying international scientific literature and articles – the authors analyzed methods of turnover ratio calculations of different financial analysis schools. In the financial statement analyses not all the components of turnover ratios should be used for an accurate and reliable result of turnover ratio calculations.

The aim of this research is to study methods of turnover ratio calculations and to modify the constituents of turnover ratios based on the empirical research.

The authors of this paper are using international scientific literature and articles to understand the different schools of financial analysis. For the empirical research, in order to compare the traditional and modified calculation of turnover ratios, the authors have used the data from annual statements of Latvian's most profitable companies of different industries over a five-year period. In the research the authors have applied quantitative and qualitative methods of economical analyses such as the mathematical and the statistical method, the ratio analysis, the graphical method and logically – constructive methods. At the end of the research the authors have summarized the general conclusions and findings.

## CAPITAL SOURCES OF INNOVATION FINANCING IN POLISH FAMILY BUSINESSES (THE REPORT OF OWN RESEARCH)

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**Key words:** *family business, innovations in family firms, innovation financing, family business in Poland*  
**JEL code:** *G30, G32, M10*

Family business plays a significant socio-economic role in Poland, accounting for about 70% of the number of companies, offering more and more jobs, systematically increasing its share in GDP. Introducing a variety of ideas and solutions significantly contributes to the improvement of innovation of the economy. The optimisation of the financing structure is one of the key factors in the development of family businesses, where others include: the succession of power and ownership, the professionalization of management, and conflict mitigation in the family circles to avoid a negative influence upon the company's operations. There are numerous ways to describe and classify the financing sources in an enterprise, but any presentation must include the following: a) the source of funds, b) the entity in possession of the funds, c) the application of the funds, and d) the time allocated to the disposal of the capital. In the case of family businesses, which are – by nature – loaded with a higher financial risk, the criterion regarding the ownership of amassed capitals seems to be of utmost importance.

This article is empirical in its nature, presenting the results of research on innovation financing in Polish family businesses conducted in 115 entities from the list of "Forbes Diamonds 2016" (Polish version). The author formulates issues and research hypotheses in the context of the possibility of functioning and development of family businesses in the economy that aspires to be referred to as knowledge-based. The research is a questionnaire with the use of CATI and CAWI techniques. The empirical material obtained was analyzed using logistic regression and linear regression. The results of the study conclude that family businesses are able and willing to invest in innovation to meet the ambitions of a knowledge-based economy. The study adds to theoretical and practical knowledge in this field and is aimed at family entrepreneurs, central and local governments and business environment institutions. This article is particularly targeted at the potential successors of family ventures.



**NEW CHALLENGES OF  
ECONOMIC AND BUSINESS  
DEVELOPMENT 2018**

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University of Latvia

# Human Development and Efficiency



## IMPACT OF NUTRITION-RELATED DISEASES ON PUBLIC EXPENDITURES

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*Janis Priede, University of Latvia*

**Key words:** *nutrition-related diseases, public expenditures, efficiency*

**JEL code:** *H51, I15, I18*

Availability, accessibility and affordability of the health care services and medication have a substantial role in human development. At the same time, the primary health care is defined as a priority in order to avoid the expansion of diseases and to decrease the necessity of public and private expenditures for medication in future. In this context the medicines reimbursement system for outpatient treatment is one of the essential indicators of availability and affordability of the primary health care. The largest number of reimbursed diagnoses, such as cardiovascular diseases, endocrine, nutritional and metabolic diseases, neoplasms, osteoporosis, are identified as nutrient-related diagnoses. Taking into account the limited public resources for the medicine reimbursement system and patient resources, the aim of this research was to analyse additional possibilities to optimise resource allocation to the health care, based on nutrition-related diagnoses in the medicine reimbursement system and potential efficiency of complementary programmes. To meet the aim defined, theoretical research methods were used alongside empirical research methods, as well as for data processing and analysis, statistical analysis methods and methods of economic analysis were used.

The largest part of the health care public resources for the reimbursement system is allocated for endocrine, nutritional and metabolic diseases. Diagnosis of the type two diabetes mellitus, as an example, and the more common type of diabetes (representing the largest part of diabetic cases and expenditures spent for treatment of diabetes mellitus worldwide) usually develops in adulthood and is related to obesity, lack of physical activity, and unhealthy diets. At the same time diabetes mellitus causes a lot of complications (increases the risk of heart disease and stroke, kidney failure, diabetic retinopathy as an important cause of blindness and damage to the nerves, neuropathy in the feet increases the chance of foot ulcers and eventual limb amputation), which should be appropriately treated, taking into account, that the overall risk of dying among people with diabetes mellitus is at least double the risk of their peers without diabetes mellitus. The essential role of the alternatives is justified by several randomised controlled trials, which show that lifestyle interventions based on diet and exercises, reduce the proportion of people with glucose tolerance that would otherwise develop the type two diabetes mellitus.

The economic analysis shows, that in circumstances of a limited budget, the current reimbursement result insures allocative efficiency, but not technical and overall efficiency, and therefore the patient does not receive complete treatment. There is a tendency to achieve technical efficiency by increasing the budget assignation for medicine reimbursement, but the treatment alternatives (nutrition programme, physician's time by consultation, patients' training etc.) are not evaluated sufficiently. The overall economic efficiency would be achieved by the evaluation and wider use of the alternatives and complementary methods, which would reduce the suffering of patients and optimise the public expenditures for nutrition-related diseases.



## **OPPORTUNITIES FOR ASSESSMENT OF HEALTH CARE SYSTEM'S EFFICIENCY: THREE-LEVELS EVALUATION MODEL**

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*Janis Priede, University of Latvia*

**Key words:** *health care system, efficiency, assessment*

**JEL code:** *H51, I11, I18*

Efficiency of the health care systems becomes crucial in circumstances of the risen costs of health technologies and strictly limited recourses allocated from the public budget. Within the framework of this research, authors evaluate the opportunities to assess the efficiency of health care systems. To achieve the goal of the research, the methods of the theoretical research (literature analysis, content analysis, and electronic resources analysis) are used alongside the methods of the empirical research (data collection methods: document analysis and database statistical analysis). For data processing and analysis, methods of economic analysis and statistical analysis are used. To perform this research authors have created a three-level performance evaluation model based on macro-level evaluation (policy impact assessment), meso-level evaluation (system analysis, functional and economic efficiency measuring) and micro-level evaluation (production function, allocative and technical efficiency measures).

The appropriate measures of the macro impact results, policy outcomes and performance outputs are defined to evaluate the efficiency of health care system. Taking into account that the health care is only one of the mechanisms to achieve the public health goals, authors assume that the macro impact results are specified for public health, the policy outcomes are determined to the health care, as well as the pharmacy, while the performance's outputs are representative for detail analysis of all levels. The general conclusion concerning to the health care services and reimbursement system of medicines and medical devices shows the tendency to move towards technical efficiency, rather than total economic efficiency (technical and allocative efficiency), as the treatment alternatives (nutrition programs, physician's time by consultation, complementary therapy etc.) are not sufficiently taken into account. The allocative efficiency in health economics is also associated with the market efficiency and effectiveness of the treatment process. There are no perfect competition market conditions for health care products and services, so it is necessary to use the additional methods of economic analysis, such as the cost-benefit analysis, which is one of the most appropriate methods in consideration to the health care. The policy outcomes might be measured by the functional effectiveness and economic efficiency indicators.

The suggested methodology for efficiency assessment of health care system has substantial theoretical and practical implication for decision-making process on health care financing.

## IMPLICATIONS FOR TRAINING THE TRAINERS IN WORK-BASED LEARNING - THE BALTIC CONTEXT

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**Key words:** *work-based learning, training of trainers, competitive labour force*  
**JEL code:** *I25; I28; O15; L38*

Work-based learning (WBL) is increasingly becoming part of the vocational education and training (VET) systems across Europe (EC 2013). There is also a growing number of research dedicated to these developments since WBL is being recognised as a precondition for developing competitive labour force via national VET systems and thus promoting access to employability of young people (Cedefop 2017). WBL is often seen as a powerful vehicle for developing skills of the workers and for promoting productivity of the labour force. However, there still remains some contradictory research viewpoints e.g. on productivity of the WBL (OECD 2016). One crucial element considered for the development of WBL is the existence of competent trainers in work-based learning. As it still is a challenge, the problem requires also a focused research to support policy developments. The aim of the paper is to study the main challenges for training of trainers for work-based learning in the Baltic context. Against the back-ground of wider socio-economic and educational-employment aspects, the paper analyses the case of the ongoing European Union Erasmus+ programme project “TTT4WBL” which addresses the possibility of developing and piloting the innovative ‘tandem training’ approach across the Baltic countries.

The case study represents the methodology for testing and potentially implementing common approaches regarding the training of trainers for WBL in the three Baltic countries based on a respective research component in liaison with a Finnish research institution. The innovation of the approach studied in the present paper constitutes the proposed ‘tandem’ scheme implying a joint training of trainers from companies and VET institutions leading to sharing and co-creation of knowledge, thus contributing to increased competitiveness of the developed labour force.

The research within the TTT4WBL project still being in progress, the initial results yielded allow to draw certain conclusions about the feasibility of the proposed ‘tandem training’ method for the Baltic countries with individually specific situations regarding WBL but a critical mass of similarities that allow for a common core approach. The main research methods used in the study will be desk research and qualitative analysis of the empirical data of the survey from the three Baltic countries’ stakeholders.

The conclusions from the research has a theoretical value regarding the development of joint methodological approaches against varied national VET policy contexts. The practical value of the study refers to the recommendations for education policy makers to improve the quality of training of trainers for work-based learning.

## **CONSIDERING WORK-RELATED PREFERENCES AND ORGANIZATIONAL COMMITMENT IN EMPLOYER BRANDING**

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**Key words:** *employer branding, job characteristics, organizational commitment, work-related preferences*  
**JEL code:** *M54*

Employer branding, a human resource management tool, has been developed as a method to implement an efficient and sustainable approach to employee recruitment and retention. It is applied through the identification, establishment and communication of unique and attractive job characteristics to a company's internal and external target personnel. Associated benefits are an increased recruitment rate, a higher level of organizational commitment and an increase of productivity.

However, companies face the challenge to effectively align the job characteristics they offer (e.g. a high salary, innovative products, a high degree of job security, a high socioeconomic importance etc.) with the work-related preferences of their target personnel to create a high level of organizational commitment. Often the exact preferences of the workforce and their impact on individual organizational commitment is not known. Consequently, a company's resources are used inefficiently and costly withdrawal behaviour might occur.

To address this problem and to add to the understanding of this topic, this paper examines the relationship between employees' work-related preferences and their organizational commitment. The underlying research question is whether different preferences for job characteristics lead to a different level of organizational commitment. In addition, the impact of individual characteristics like age or gender on this process shall be analysed.

An empirical study with 200 participants has been conducted. Standard questionnaires that test the importance of job characteristics and organizational commitment of employees were completed by the sample group. A factor analysis for the importance of job characteristics revealed four dimensions of work-related preferences. Statistical tests were performed to measure the relationship between these work-related preferences and the degree of organizational commitment.

The findings support the assumption that different work-related preferences indicate a different level of organizational commitment. Derived from these results, a practical recommendation for a company could be to regularly examine their offered job characteristics and to match them to the work-related preferences of their employees in order to maintain a high level of organizational commitment.

## **JOB SATISFACTION OF PUBLIC ADMINISTRATIVE PERSONNEL IN GREECE: AN EMPIRICAL ANALYSIS**

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*Nicolaos Arnis, Technological Educational Institute of Epirus*  
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**Key words:** *Job satisfaction, Public sector, Greece, Minnesota Satisfaction Questionnaire*

**JEL code:** *J45, J81, J88*

The aim of this paper is to study the satisfaction of employees from their working environment in Greek public sector. As a case study the Region of Western Greece who will be analyzed, who, on a daily basis, serve the needs of a large geographical region and come into contact with the public as well as with other services at local, regional and national level. In order to achieve this, in 2017 we conducted an empirical research using the structured questionnaire method in accordance with the Minnesota Satisfaction Questionnaire (MSQ) model. Data from 100 district employees were collected and processed descriptively through SPSS. From the findings of this research and in accordance with those of other international surveys, we find that workers are generally satisfied, in a level that can be classified as medium to high. In addition, we note that satisfaction from endogenous factors is higher than exogenous. The Greek public sector needs to become more operational, efficient, decentralized and able to work in a flexible and efficient way, responding to internal and external changes. Ensuring the benefits of public administration will make it more effective and more efficient for citizens, contributing decisively to ending the economic and social crisis that has been rampaging Greece for about 8 years now.

## IMPROVED INTERNAL CONTROL SYSTEM AS SUPPORT OF THE HEAD OF THE PUBLIC ADMINISTRATION INSTITUTION

*Signe Koritko, University of Latvia*

**Key words:** *internal control, control, motivation, public administration*

**JEL code:** *H83, H11*

Recent studies suggest that internal control can find wasteful functions in public administration institutions and also reduce waste of financial resources. That's why the national trend set itself the aim to create an efficient, cost-effective and professional public administration and to provide the transparency of procedure control, has allowed to examine an internal working of public administration institutions. But relationship between heads of the public administration institutions and internal control system improvements has been in the focus of research in order to ensure better compliance of managerial experience and experience with the demand for public needs. In Latvia there are 156 heads of the public administration institution's and they have responsibility to create, to improve and to consummate internal control system of the public administration institution. But there are no system as link between the levels of internal control system development stages and closer co-operation between heads of the public administration institutions about internal control system as one of the important element of the national public administration. Also there are no system which can motive the head of the public administration institution to provide a better results of internal control system functioning.

The aim of the study was to identify the opinions of the heads of the public administrator institutions on the one hand, and the public sector needs on the other hand – in relation to the question studied. The paper is based on the results of a study by the author in 2017 among heads of the public administrator institutions and internal control system literature review and policy document analysis as its main methods. The focus in the present paper thus is on the need to implement such innovative approaches in the internal control system in public administration institutions and to provide advice to public administration policy makers.

Methods applied in the current paper: analysis of scientific publications, survey of heads of the public administration institutions. In the survey questionnaire for most of the questions the evaluation the scale 1 – 10 was applied to evaluate the attitude of the respondents, where 1 – not significant, 10 –very significant.

The results describe what are the advantages and disadvantage, in addition of key performance indicators compared to existing internal control system. The main finding of the paper is proposals for government and Ministry of Finance, to impact efficiency of internal control system in the public administration institutions of Latvia. The result of the paper is also practical implications for inter-institutional cooperation geared to the opportunities better use information and communication technologies to consummate internal control system. Sharing information, knowledge, and best practices, as input for internal control system, but opportunities as output factor for head of public administration institutions.

## MANAGER'S COMPETENCES AND SKILLS AT THE STATE MANAGEMENT

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*Signe Balina, University of Latvia*

**Key words:** *competence, skills, manager, knowledge*

**JEL code:** *M59, D73, M12, D89.*

Nowadays, it is significant that a manager possesses skills to successfully organize, plan and control working processes and the staff at an enterprise. In order to hold a leading position and to perform certain functions and achieve desirable and planned results, it is necessary to possess different skills and competences. The theory of management science differs from practical managerial responsibilities by various situations and events of daily life. As the manager must work and cooperate with people of different characters and temperaments. Therefore, the manager's competence and its improvement are of a great importance just as the manager's desire to commit to self-improvement. Nowadays, a critical thinking, working with data, social media skills, cooperation and creativity, modern work relations with people of different age, skills to motivate oneself and others and, of course, a regular work on improvement of competences are of great very importance. The manager must be open to innovations, including application of new and state-of-art management methods.

Professional managerial standards lay down what competences are necessary: communication and interaction skills, staff management skill, planning and control skills, focusing on the development as well as professional skills. But nowadays, the totality of these skills needs improvement on regular basis by attending different courses, workshops or studying in order to improve one's qualification and expand the knowledge.

The aim of the study is to clarify, which skills and competences the manager must possess, and whether these skills and competences are being improved regularly, acquiring new knowledge and managerial skills.

Methods used in the study are theoretical analysis and documentary analysis.

Results of the study can be used in practice, improving the work process and managerial skills, professional knowledge and development. On the basis of the data, thus obtained, it will be possible to specify, which basic knowledge must be improved in order to upgrade the managerial competences, what possibility is there to clarify attendance of courses and, which courses are most in demand with a view to improve knowledge, the necessary and advanced work competences.

## ROLE OF EDUCATIONAL LEVEL IN EMIGRATION PROCESSES IN LATVIA

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**Key words:** *children, emigration, education, marital status*

**JEL code:** *O15*

Background: Contrary to the situation in the Nordic countries and Western Europe affected by the immigration crisis, a major problem in Eastern Europe and the Baltic States is emigration, which leads to the loss of a significant part of the population. The main reason for emigration today is economic factors. As numerous studies show, economic difficulties are often linked to a lack of education. Therefore, it is important to study in more detail the impact of educational level on emigration processes to be able to predict the possibility of emigration and to develop proposals for preventive measures to reduce emigration.

The aim of the research is to study the relevance between the educational level and the possibility of emigration in the context of the age, family status, number of children and place of residence of a person.

Data and methodology: The data have been analysed on individual level using information from the Population Register of the Office of Citizenship and Migration Affairs, 2011 Population Census, Ministry of Education and Science, etc. The study population includes persons who were 20 to 59 years old in the Population Census 2011. The point of reference is the legal status of a person on January 1st, 2017.

Results: A comparison with the distribution of educational levels in the population shows that lower educational level increases the chance of emigration. The group with greatest probability of emigration is 20-29 years old persons with basic education. Divorce also increases the chance of emigration. The relevance between the possibility of emigration, educational level, type of residence and the number of children is more complicated. Studies show that people who live in medium-sized cities (22-85 thousand people) are more likely to emigrate than residents of Riga, small towns or rural areas. The impact of the number of children is different in groups of people with various educational levels. The greatest impact is observed for women with basic education, for which, as the number of children increases, the chance of emigration decreases sharply but still remains higher than for women with a secondary or higher educational level.

## **POSSIBILITIES TO USE COACHING METHODS FOR PRIVATE COMPANY AND PUBLIC ADMINISTRATION'S PERSONNEL PRODUCTIVITY**

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**Key words:** *personnel productivity, coaching, personnel development*

**JEL code:** *H89, M12, M14, M19, M53*

Nowadays we may observe the tendency of giving employees less adaptation time for new tasks, as well as cutting new employees induction time in organizations where they start working.

Aim of the given article is to explore conditions, under which the coaching method may be used to raise personnel's productivity.

The article considers literature connected with coaching methods' application. Coaching is a specific service, which is suitable for the personnel with both theoretical knowledge and experience in performing specific assignments. Likewise, one of the most important coaching application aspects is the leadership's trust to the personnel, clearly set aim and tasks, as well as comprehension of available resources. For example, a preparation experiment in a small company selling professional devices implemented by one of the article's authors has been described. There has also been introduced a preparation experiment in a group of public administration personnel. Likewise, the article summarizes survey results regarding comprehension of conditions of coaching methods' application in the Bank's environment.

Coaching method is a modern way of teaching adults to be productive while working (according to Parslow); however, it is not a universal solution of all tasks connected with personnel development. It is important to know the conditions of this method's application; then, the productivity rates of the company's personnel performance may be considerably improved.

On the ground of the performed preparation experiments we have identified hypothetic conditions for the coaching method application in terms of tendency of giving employees less adaptation time for new tasks.



## ETHNIC DIFFERENTIATION OF REPRODUCTIVE HEALTH OF POPULATION IN LATVIA

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**Key words:** *ethnicity, differentiation, reproductive health, Latvia*  
**JEL code:** *I10, I14, J13*

A reproductive health, as part of general health and a central feature of human development, plays an important role in the population change and well-being. It reflects a health status of the economically active population, both for females and males, and affects the health of the next generation.

In Latvia, reproductive health can be analysed from the different demographic perspectives. Most of the statistics, studies and reports provides an information on the health status (specifically focusing on females' and child health) by such socio-economic indicators as age, marital status, education, incomes and others. However, another perspective to examine the reproductive health by ethnic background of individuals has not been widely used until now, while ethnic minorities make up 38% of the total population in Latvia (CSB, 2017).

The aim of the paper is to analyse the ethnic differences in reproductive health of the Latvian population by focusing on the several aspects: self-assessment of health, assessment of sexual and reproductive health, health care habits, etc. Research questions: to determine whether ethnical inequalities in reproductive health are existing.

Data: sample survey "Reproductive Health of the Population" data from the year 2011 of population in reproductive age (15–49 years) by gender and place of residence (region) (n= 2617) are used to examine ethnic differences. The main indicators describing the demographic situation and reproductive health of population (natural increase, life expectancy etc.) are provided for the same time period and ahead based on the databases from the Central Statistical Bureau. Additionally, authors performed the analysis of the policy instruments in Latvia dealing with a support and improvement of reproductive health of the population.

The preliminary results show that Latvian ethnic group is experiencing now a higher birth rate and positive natural increase than ethnic minorities (non-Latvians), which faces a negative natural increase since the beginning of 1990s. This tendency will probably remain also in the future.



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# Industries and Productivity



## PRODUCTIVITY CHANGES IN CURRENT ECONOMIC FRAMEWORK

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**Key words:** *global value chains, labour productivity, productivity, productivity measures*

**JEL code:** *D24, E24*

Designing policies to rise in productivity and understanding global challenges affecting the growth is an important current issue. OECD, IMF, World Bank, the European Commission deal with different aspects of productivity. The research aims are to analyze the theoretical foundations of productivity measurement and causes of actual trends, labour market policies fostering productivity growth and promoting sustained economic growth.

The research consists of three parts. In the first part, problem of productivity growth in Latvia and in the EU is analyzed based on empirical data and calculations. Second part of the research deals with indicators and causes of the current situation. This section presents as well as the literature review. OECD methodology of productivity measurement has been used in the paper. Third part of the research is dedicated economic policy for faster productivity. Flexible labour market policy appears to be important to faster productivity growth in the short run and long run.

There are different productivity measures. Value-added based labour productivity is one of them. Labour productivity is a useful measure due to the fact that it reflects how efficiently labour is combined with other factors of production. Measurement of labour productivity is closely connected with the development of living standards. The choice among productivity measures depends on the purpose of productivity measurement.

## REGIONAL DEMOGRAPHICS AND ENTERPRISE PRODUCTIVITY IN LATVIA

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*Vladimirs Rojenko, University of Latvia*

**Key words:** *productivity, human capital, demographics, panel data, fixed effects model*

**JEL code:** *C23, R10, J10*

In this paper authors explore the relations between workforce demographics and various aspects of the enterprise productivity in the six statistical regions of Latvia. Despite the significant amount of research on the topic of industrial productivity conducted and published over the last decade, the effects of regional demographic change have been relatively ignored in both academic and political debate. Such omission is puzzling since a sustainable demographic situation is undoubtedly one of the key preconditions of an economic growth, as the deteriorating population dynamics and associated loss of human capital potential unavoidably lead to grave economic implications.

Using the fixed-effects model based on panel data for the six statistical regions of Latvia in 2008-2014 period, authors will show that variations in labour demographics have a significant correlation with changes in some important factors of enterprise productivity. Due the high inter-regional disparity of demographic parameters, as well as the strong effects of the 2008-2010 economic crisis period on the economic indicators, authors select both year and region as the fixed effects parameters for the model. Such approach also helps to gauge the scale of said spatial and temporal variations.

Results of this study, in conjunction with the review of theoretical literature on this topic, allow authors to conclude that specific aspects of the workforce demographics, particularly education attainment and age structure, may help in explaining both regional and sectoral enterprise productivity differences in Latvia. Understanding this link is crucial because of the relative predictability of demographic processes, as well as the projected risks of further demographic decline throughout the entire country and its economically most vulnerable regions.

## LEAN EFFECTIVENESS METHOD APPLICATION IN CREATIVE INDUSTRIES OF LATVIA

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*Aija Marcinkevica, University of Latvia*

**Key words:** *effectiveness, Lean, Lean Service, creative industries, process optimization*  
**JEL code:** *L26, L89*

Creative industries occupy an increasingly important place in the Latvian and global national economy. These are the industries that grow fast, are associated with intellectual capital and able to create new jobs. Increasing effectiveness, in turn, is important for every organisation in order to preserve competitiveness in the rapidly changing external environment. It is an integral part of the companies' competitiveness in every industry and the basis of successful operation in the long-term.

The purpose of the research is to determine the possibilities of use of the Lean effectiveness method in creative industries of Latvia. The Lean Services approach that derived from the Lean effectiveness improvement method is a general way of thinking approach able to ensure balance between creativity and standardised work practices. This Lean approach is mainly focused on the optimisation of processes and services through the professionalisation of job functions. Within the framework of this research, the authors have proved that the use of the Lean Services in creative industries may have a positive impact on the turnover of such companies. In general it was concluded that entrepreneurs of Latvia's creative industries are aware of the Lean objectives, work at the reduction of costs and losses but in practice the majority of them do not find time to meet said objectives, do not develop standards for continuous improvement and do not conduct audits.

The research, at first, summarises the theoretical substantiation of peculiarities of implementation of the effectiveness methods in creative industries including the theoretical analysis of the Lean approach and the Lean Services approach. The following section specifies the research methodology as well as analyses practical use of the Lean methods and their connection with the growth and amount of turnover. At the end of the research, conclusions and recommendations are given to increase the effectiveness of companies in creative industries.

Theoretical and practical implications of the research entail the possibility to develop an analysis-based effectiveness improvement programme for Latvia's creative industries as a result of which the performance of said companies will be facilitated.

To meet the purpose of the research, the research methods were used as follows: document analysis, text analysis, content analysis, deconstruction, statistical analysis methods (grouping, comparison, statistical indicator analysis – calculation of the mean, mode, median and relative values, correlation analysis) and survey (questionnaire).

## DETERMINANTS OF TOTAL FACTOR PRODUCTIVITY IN 8 EUROPEAN COUNTRIES

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**Key words:** *total factor productivity, growth model*

**JEL code:** *E230*

The paper analyses the total factor productivity (TFP) growth rate in 8 European countries: Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic and Slovenia during 1997-2016 and discusses factors that determine TFP growth.

Since the study of Solow (1957) that recognised that growth in developed economies was not due to accumulation of production factors but a residual - total factor productivity (TFP), TFP and its determinants became important topic to research. TFP captures additional methods, such as technology improvements, education, management, political and social enhancement, employed to produce goods or services more efficiently. TFP growth has become the most important factor of growth in developed and developing countries, and finding determinants of TFP growth is the main aim of modern researches. The aim of this research is to find TFP determinants in 8 European countries through implementation of empirical analysis and to recognize the more effective ones.

The theory and studies of Barro (2001), Becker et al (2010, 2012), Borensztein et al (1998), De Hoyos and Iacovone (2011), Grossman and Helpman (1991) indicate such determinants of TFP growth as trade openness, R&D, foreign direct investment, education, institutional framework. In the literature, these determinants are positively related to TFP growth. The study takes these determinants into account and bases the analysis on the panel data and regression. The results show a positive, significant influence of openness of trade on TFP growth. The share of labour force with tertiary education also is positively associated with TFP growth. Unfortunately, such variables as FDI share and R&D expenses that were expected to have positive influence do not appear as significant determinants of TFP growth. Some of empirical results of the study do not follow the theoretical framework, therefore, the determinants need to be addressed for each country separately. Understanding the TFP growth determinants is important to build individual growth model.

## PRODUCTIVITY OF LATVIA'S WOOD PROCESSING INDUSTRY

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**Key words:** *productivity, wood, completeness, Latvia*

**JEL code:** *D24, D40*

Measures of productivity growth constitute core indicators for the analysis of economic growth. However, there are many different approaches to productivity measurement and their calculation and interpretation requires careful consideration, in particular when undertaking international comparisons. Productivity is commonly defined as a ratio of a volume measure of output to a volume measure of input use. While there is no disagreement on this general notion, a look at the productivity literature and its various applications reveals very quickly that there is neither a unique purpose for, nor a single measure of, productivity.

Improvements in firm level productivity translate directly into national economic growth, but productivity growth in the economy can exceed that of the individual firms. This is because competition favours firms that are more productive, and so these firms' market share expands, while that of less productive firms contracts. In the process, the average level of productivity is increased. This process of competitive dynamics is important for keeping the economy close to its production possibility frontier. Policies and market behaviour that undermine competition may cause the economy to slip below its potential.

Measured productivity is the ratio of a measure of total outputs to a measure of inputs used in the production of goods and services. Productivity growth is estimated by subtracting the growth in inputs from the growth in output — it is the residual.

There are a number of ways to measure productivity. The most common productivity measures used are:

- multifactor productivity (MFP), which measures the growth in value added output (real gross output less intermediate inputs) per unit of labour and capital input used; and
- labour productivity (LP), which measures the growth in value added output per unit of labour used.

This paper is evaluating the productivity of Latvia's wood industry.

Results reflect on main indicators of the Latvia's wood industry to evaluate productivity and competitiveness.



## CARGO DIVERSIFICATION OPPORTUNITIES AND METHODS IN PORTS UNDER THE INFLUENCE OF ECONOMIC CHANGE

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**Key words:** *ports cargo, transport economic, diversification*

**JEL code:** *R40, R11, F160*

Port is one of the most important links in the transport chain and one of the main promoters and providers of national economic development. Each port is unique with its geographic location, infrastructure and range of services designed to serve as many ships and cargo as possible and to be competitive in the global logistics market. In order to assess the overall port's activity, it is necessary to develop systems of port efficiency indicators, because knowing how efficiently the port operates can enable more efficient use of available resources and increase its competitiveness. Under the influence of modern economic processes and also political circumstances, trends in cargo transit flows are often changing rapidly, and ports should be able to diversify their cargo structure with minimal financial losses. Current study provides evaluation of the processes for assessing the efficiency in the transport cargo structure process based on real-time research using the same technologies and methods as well as offering new methods for assessing cargo diversification. The aim of this study was to confirm the importance of timely estimation of possibilities to diversify the cargo structure in order to take respective measures before the specified risks occur in the multimodal transport system by developing a methodological proposal for monitoring and assessment of the efficiency of the cargo structure as well as for measures and comparative assessments.

## LABOR PRODUCTIVITY AND ITS IMPROVEMENT OPPORTUNITIES IN LATVIA

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**Key words:** *added value, labour cost, productivity, economic growth structural changes*  
**JEL code:** *E61, O11, O47*

Along with a more rapid economic growth tension can be observed in the Latvian labour market. Number of economically active population is decreasing because of negative natural increase of the population and emigration, while number of job vacancies is rising and labour shortages become more acute. As a result wages are rising rapidly, and it, in turn causes increase in production costs and negatively affects the competitiveness of domestic firms. Fall in the number of economically active population as well as fastest growth of the national economy and comparatively low level of productivity cause a risk for sustainable development of the economy of Latvia.

Changes in productivity and labour costs from 2011 to 2016 show that the increase in labour costs exceeded productivity growth more than two times in the manufacturing as well in the total economy of Latvia. Convergence of labour costs is inevitable in the conditions of free labour movement (open labour market), thus further economic growth of Latvia will largely depend on its ability to reduce the productivity gap with the advanced economies. Two mutually interconnected processes determine increase of productivity level. First, they are the entrepreneurs' choices about competitive advantages on which their business strategies are based, which define the business management and technological decisions (to modernize production or to move resources across sectors, to other region or even other country). Second, it is the ability of the country to ensure the reallocation of the its resources to the most productive firms and sectors, i.e. to promote structural reforms or "technological upgrading". The aim of the research is to evaluate the dynamics of labour productivity in Latvia and the factors that influence it, as well as the current policy measures to increase labour productivity in Latvia. Different quantitative and qualitative research methods are used in the analysis, for example analysis of scientific literature and economic policy planning documents, statistical data analysis methods, shift share analysis etc.

The results of the research show that productivity growth rate in Latvia was one of the fastest in the EU during the last five years that enhanced productivity convergence with the advanced economies. Raise of the productivity level was mostly influenced by the improved business conjuncture and optimization of the number of employees at the sectoral/firms' level. Nevertheless, the contribution of structural transformation was insignificant on productivity growth.

## COMPETITIVENESS OF EUROPEAN UNION'S AUTOMOTIVE INDUSTRY

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*Pawel Dobrzanski, Wroclaw University of Economics*  
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**Key words:** *automotive industry, competitiveness, productivity, innovation*

**JEL code:** *F40, L91, O14*

Automotive sector plays a key role in the EU, that provides around 12,6 million jobs and creates 4% of the EU's GDP. The EU accounts 20% of global vehicles production, the EU's automotive sector is the largest private investor in R&D. EU policy aim to strengthen the competitiveness of the EU automotive industry. In 2014, European Automobile Manufacturers' Association (ACEA) presented policy manifesto, which pointed out three main pillars necessary to improve competitiveness of automotive industry. Those pillars are: driving innovation, fostering growth through international trade and building a supportive regulatory framework.

The main goal of the article is to analyse competitiveness of the EU automotive sector. The paper provides a literature and industry reports review regarding automotive industry. The economic performance of the EU automotive sector is evaluated. In the first part of the paper main indicators for automotive sector will be presented, for instance production, employment, trade. Authors will focus on innovation, as a key factor for economic growth. In second part of the article major challenges for automotive sector will be presented. The article is based on critical review of the literature of the subject and international instructions reports and analysis. The statistical data is sourced from the main international statistics. Main research method employed are comparative studies.

In conclusion authors emphasized that the main challenge for EU automotive industry is raising world share of Chinese automotive sector. In addition huge challenge will be adaptation new technologies – electric, hybrid and e-gas (CNG and NGV) cars, as this will require huge R&D investments. However this may gain the leadership position for EU in the global chain in automotive industry. This research can be used by policy makers in developing countries for the purposes of advancing conditions for automotive sector and stimulating economic growth.



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10 - 12/05/2018/Riga  
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# International Economics and Globalization



## THE INFLUENCE OF GLOBALIZATION IN PHARMACEUTICAL INDUSTRY

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**Key words:** *globalization, quality, compliance, pharmaceutical, industry*

**JEL code:** *F60, L65, L15*

The quality management systems are becoming increasingly important for corporate success of pharmaceutical companies in the current business environment. The health authorities worldwide have been set more and more focus on product quality and services in recent years. Global stakeholders such as patients, clients and government agencies require the highest good manufacturing practices, quality and documentation standards. A functioning quality management systems concept is indispensable to prove the safety, effectiveness and quality of the products. Quality is next to costs and availability of products and services one of the main success factors. To ensure this, companies transform their organizations evermore globally. The number of mergers and acquisitions in the pharmaceutical industry are a sign of progressive globalization. This mergers and acquisitions have shown that the pursuit of size is no longer the key motive of acquisitions. The aim is often the focus on their core competencies. Core issues are site and transnational systems, productivity, production strategies, availability and costs. The quality assurance departments should have adequate knowledge and system access across the whole pharmaceutical production chain to ensure on-going compliance in the company worldwide. The local company organizations should fulfill all these requirements, hence to increase competitive advantages on the international market. The central research question is if a reliable quality management system has significant impact on the economic success of pharmaceutical companies. The current requirements on quality management systems are huge needs for the daily pharmaceutical production business. The reputation of a company is one of the most important assets of a globally successful business organization and often a huge effort is needed to restore the trust after incidents in quality and compliance. The thesis approach is to conduct research through semi-structured expert interviews and field study. The case study shows many and deep information and creates a holistic view. The mix of interviews and case study provides a broad spectrum and representative data sets. The expected outcome is to support pharmaceutical companies in their decision-making processes.

## INSTITUTIONAL EFFICIENCY OF THE CEE COUNTRIES AND FDI INFLOW: COMPARATIVE STUDY BASED ON INVESTMENT ATTRACTIVENESS RANKINGS

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*Anetta Kuna-Marszalek, University of Lodz*

**Key words:** *FDI, Institutions, CEE, investment attractiveness*

**JEL code:** *F21, F23*

There is a long list of location-specific attributes which impact FDI inflow. Independent variables used by researchers in various combinations include inter alia: economic and social stability in the host country (Asiedu 2001, Bartels, Napolitano, Tissi 2014); its foreign exchange rate, taxes, institutions, barriers to trade, and trade with FDI home country (Blonigen 2005); size of the host market and the ease of entry into neighbouring markets; cost of labour, employees' skills, availability and quality of infrastructure, agglomerations benefits (Cheng, Kwan 2000); political risk (Jimenez, de la Fuente, Duran 2011) and many others. In our paper we want to focus on the institutional aspects and the role in attracting FDI. Hence the objective of the paper is to assess the relationship between institutional efficiency (both public and private) in Central and Eastern European Countries (CEEC) and foreign direct investment (FDI) inflows in quantitative and qualitative terms.

In order to assess the relationship between institutional efficiency and FDI inflow we employed variables used in leading global investment attractiveness rankings (e.g. Global Competitiveness Index by World Economic Forum). As the measures of institutional efficiency, we used 21 indicators from rankings, e.g. intellectual property protection, diversion of public funds, favouritism in decisions of government officials, transparency of government policymaking, strength of investor protection. To examine the relationship we used analysed indices and correlated them with FDI inflows into the CEECs, in quantitative and qualitative terms, using statistical methods, such as, e.g., Spearman's rank correlation and Pearson correlation.

This study is structured as follows. First, it explores the existing literature on factors of investment attractiveness focusing predominantly on the importance of institutional efficiency as one of them. Further, we examine inward FDI flows in the CEE countries against the global performance in the area over the period 2000-2016. Next, we discuss institutional efficiency in the CEECs in selected international rankings. The final part examines the correlation between individual institutional efficiency indices and the inflow of foreign investment. Detailed results of our analyses are presented in the final part of the study. At the end we present conclusions and recommendations addressed to authorities responsible for the creation of policy towards foreign investors.

Our preliminary results suggest the institutional environment is important for the investment attractiveness of CEE countries. Over the period covered by the study, most countries witnessed improvements in institutional efficiency and gradually evolved towards free market rules reaching the quality close to that of the countries of Western Europe. When analysing components of the index we realised that regulations, including the protection of property rights, are one among the weaknesses of the institutional environment.

## THE ROLE OF ASEAN IN ASIAN REGIONALISM IN XXI CENTURY

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**Key words:** *regional integration, regional institutions, Asian regionalism, ASEAN*

**JEL code:** *F02, F53, F55*

Regionalism in the global economy is a historical category, whose dimensions and direction of evolution have always depended on a set of economic, political, cultural, and civilization factors that affected a particular region. For many years, the prime stimulus for continued research of Asian regionalism was the relative scarcity of regional institutions in the East Asia region, compared to that in Europe or in North America. In XXI century, a decidedly reverse trend can be observed. The main thesis of this article is, that the Association of South East Asian Nations (ASEAN) is dominant regional institution in East Asia with large potential to generate the prospective East Asia Community in XXI century. The foundation of all considerations has been the critical analysis of the topic of regional institutions in East Asia on the basis of research papers and legal documents of the ASEAN. Personal visits of the Authors in head office of ADB, in Manilla were also very important sources of knowledge about Asian regionalism. The ASEAN is an example of a regional institution characterized by consistent and persistent strife for improved economic cooperation of its members. The development of regionalism under ASEAN auspices has increased incrementally since the early 1990s, mainly through multilateral initiatives and formal inter-regional cooperation structures, such as the ASEAN Free Trade Area (AFTA, 1992), the formalized structure of the services market set up in the ASEAN Framework Agreement Services (AFAS, 1995), the adoption of „ASEAN Vision 2020” document (1997), the concept of a regional ASEAN Investment Area (AIA, 1998), and the framework for industrial cooperation within the grouping in the form of the ASEAN Industrial Cooperation (AICO) Scheme. In 2007, members of the ASEAN agreed on adopting a new approach to the process of regional cooperation through the so-called ASEAN Charter, intended to form a basis for setting up a formal ASEAN Community. The ASEAN Charter came into force on January 1, 2009, offering a legal framework for transforming the association into a cohesive and formalized regional organization. The ratification of the Charter has opened up a path to a regional grouping based on three pillars: military security, economic union, and socio-cultural community. The observed progress of regional integration of the ASEAN member countries attests to the fact that the nations involved in the process are well-aware of not only the potential benefits offered by close integration, but also of the potential risks associated with increased globalization and international competition on world markets. However, they seem to favour the cultivation of a traditional approach to integration, formulated by means of non-binding political instruments, such as those adopted for the purpose of setting up the methodological framework of the ASEAN economic community. It must be noted that the achievements of the ASEAN over the last decades have already stimulated and inspired a number of similar initiatives and forms of cooperation in East Asia, likes: ASEAN+3, East Asia Summit (EAS), ASEAN Regional Forum (ARF) and APEC. Nowadays the ASEAN is the dominant regional institution. Further development and progress of Asian regionalism processes can only be achieved if the leaders of the region’s nations manage to overcome the lack of mutual trust and historically established animosity.



## INTERACTION OF INTERNATIONAL TRADE AND PRODUCTIVITY: LATVIA CASE STUDY

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**Key words:** *international trade, productivity, comparative advantages*

**JEL code:** *F13, F10*

The aim is to analyse theoretical and empirical aspects of interactions between international trade and productivity on the example of the Republic of Latvia.

One of the most pressing problems faced by national governments is to ensure economic growth. In the case of a small country that is fully attributable to the Republic of Latvia, economic growth depends to a large extent on two factors: international trade and productivity.

International trade is based on international division of labour. One of the most widely used theoretical concepts that explain the division of labour in the international trade is the concept of comparative advantages. In the relative advantage concept, the "productivity" category is already implicitly used, but no more detailed theoretical analysis is performed. This leads to the need to pay more attention to the theoretical analysis of productivity

As a result of scientific and technological progress, international forms of division of labour are changing. While formerly characterized by the specialization of countries in the production of certain goods, technological specialization is currently dominant. This means that trade in intermediate products and services begins to dominate in international trade. Consequently, a new problem arises as to the interactions between international trade and productivity. How international trade in today's conditions affects productivity and vice versa

## LEGAL ASPECTS OF DIGITAL CURRENCIES

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**Key words:** *electronic money, virtual currency, cryptocurrency, Bitcoin*

**JEL code:** *K02, O03*

The aim of the article is to analyse the stages in the evolution of electronic money. Cryptocurrency is seen as the next stage in the process of money evolution. The evolution of electronic money has led to a cryptocurrency having significant advantages over other forms of money. With digitalisation, banknotes are becoming a technically outdated payment instrument. New cryptocurrencies are emerging almost daily, and many interested parties are wondering whether central banks should issue their own versions. Legal status of cryptocurrency, despite the widespread dissemination and use of the Internet, is not legally secured and requires detailed consideration not only by lawyers and economists, but first and foremost by software engineers. Some central banks have explored the possibility of central bank-issued electronic money applicable to retail payments. Main result: central bank digital currency could transform all aspects of the monetary system and facilitate the systematic and transparent conduct of monetary policy. In this regard, the system is required to provide protection mechanisms, including the regulatory, legal and organizational support of the development of economic processes that meet modern international realities and minimize the risks of illegal activities.

## EFFICIENCY IMPROVEMENT INSTRUMENTS OF THE RUSSIAN OIL EXPORT IN VOLATILE CONDITIONS

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**Key words:** *export, trade, oil, construction of pipeline, strategic oil reserve*

**JEL code:** *L95, L91, F13*

In the last decade the Russian Federation has become a major player in international trade. It provides world market with a large range of products: from mineral raw materials to products of manufacturing by the its industrial complex. Establishing ties and even bigger integration in international trade is an important aspect for the development of the country's economy. Russia's major trading partners are China, CIS countries and Europe, but the strengthening of relations with the countries of the Asian region (the Republic of India, the countries which are locates next to the Persian Gulf) is also important. A prospective partner in the field of trade relations in this region can become the Republic of India because the relationship between countries has a history that can characterize them as fairly friendly and based on the principles of equality and respect for each side's points of view. Many industries are spheres of cooperation, including oil and gas.

The purpose of this study was to identify perspective ways of interaction between Russia and the Republic of India in the field of hydrocarbon logistics. To achieve the research goal the following tasks were formulated:

- Identification of potential and/or already implemented opportunities to strengthen cooperation between the Russian Federation and the Republic of India in the field of hydrocarbon logistics;
- Analysis of the world experience in organizing the interaction of various states in the field of research;
- Formulation of an innovative proposal to strengthen cooperation between the Russian Federation and the Republic of India in the field of hydrocarbon logistics.

While solving the following tasks a comprehensive version of the relationship development between the Russian Federation and the Republic of India in the field of hydrocarbon logistics was proposed, which includes the following elements:

- Regular supply of crude oil by sea;
- Creation of a strategic reserve of oil for the Republic of India in the territory of the Russian Federation;
- Alternative option in case of force majeure circumstances – the arbitration transaction;
- Construction of the pipeline as option of strategic long-term interaction.

Carrying out this study the following methods were used: general scientific methods, method of economic analysis, content analysis. The theoretical significance of the work is essential since all the elements of this option are proposed to be implemented as a whole with the aim of strengthening the relations between the countries under consideration and establishing long-term partnerships in the oil and gas sector. Practical significance lies in the possibility of levelling down the risks associated with the disruption of hydrocarbon supplies to the Republic of India.

## **CORPORATE SOCIAL RESPONSIBILITY OF SMALL AND MEDIUM ENTERPRISES IN DEVELOPED AND EMERGING ECONOMIES: CASES OF GERMANY AND RUSSIA**

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*Key words: small and medium enterprises; development; CSR; communication on progress*  
*JEL code: L25, M14*

Nowadays a new global system of business relationships that is based on the principles of corporate social responsibility (CSR) is being formed. In some countries the CSR is already mandatory for large companies and gradually CSR is spreading over the other business levels like small and medium enterprises (SMEs). Taking into account that SMEs are often considered as the backbone of economies (in many countries they account for more than 50% of GVA and employ the most part of workforce), SMEs could act as a powerful lever for development and expansion of CSR. However it happens at a slow pace so far. The aim of the work is to investigate the current process of CSR implementation among SMEs and to compare the way process runs in developed and emerging economies on the examples of Germany and Russia.

According to database of the UN Global Compact the quantity of nonfinancial reports submitted by SMEs of developed countries is much greater than those of emerging countries: for instance, by now there are 203 reports of German companies versus only 11 reports of Russian firms. In order to explain the difference an initial comparative analysis of SMEs in Germany and Russia was held. It was found that even though Russian statistics presents quite impressive growth rates for the number of newly registered SMEs, there are a lot of problems and obstacles for efficient operation of SMEs (like lack of financing, poor system of interaction with big companies etc.). So the segment of SMEs in Russia is objectively simply much less prepared for introducing CSR.

At the next stage the quality of the UN Global Compact reports was examined. The reports of German and Russian companies for years 2014 and 2016 were studied. To assess the quality of the reports special criteria were formulated: materiality of information, comparability of information for several reporting periods, structure of reports, description of positive and negative aspects of firm activity, disclosure of 10 Global Compact principles etc. The in-depth analysis has shown that almost a third of all reports were quite superficial: information didn't correspond to reality and was not supported by calculations or numerical data.

Although in comparison with emerging economies the business environment in developed countries should favor the development of CRS, the quality of CRS statements submitted by representatives of both types of economy is not satisfactory. The nonfinancial reports in both cases found out to be often just formal and made only in order to keep the status of UN Global Compact member. In conclusion the suggestions for increase of SMEs involvement in CSR are made.

## THE INTERNATIONAL EFFECTS OF THE ECB'S ASSET PURCHASE PROGRAMME

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**Key words:** *Asset Purchase Programme, quantitative easing, euro area, spillovers, Bayesian GVAR*  
**JEL code:** *C54, E47, E58, F42.*

Following the Great Recession, central banks in advanced economies introduced a number of unconventional monetary policy measures such as quantitative easing because policy rates became constrained by their lower bounds and were no longer able to influence long-term interest rates and ultimately to stimulate output and increase inflation towards the target (Stone, Fujita, Ishi (2011) and Bridges, Thomas (2012)). As a last of the major central banks, the European Central Bank (ECB) announced the Asset Purchase Programme (APP) on January 22, 2015 to prevent the euro area economy from entering a deflationary spiral. Empirical findings suggest that the APP was successful in stimulating domestic economic activity (see e.g. Wieladek and Garcia Pascual (2016) and Zlobins (2017)). However, the literature shows that central bank asset purchases can also have significant spillover effects on other countries (see Chen et al. (2015)) and because countries might not be in the same phase of the business cycle, such accommodative monetary policy in one region can contribute to the economic and financial instability in another region. Chen et al. (2017) finds that the unconventional monetary policy measures used by the ECB before the introduction of the APP generated sizable cross-border effects, although they were smaller than in the case of the US quantitative easing measures.

This paper expands the literature by focusing on the international effects of the APP on 29 advanced and emerging economies. Similarly to the Chen et al. (2015, 2017), our analysis is based on the global vector autoregression (GVAR) model, but given the large number of parameters to be estimated (5-8 variables for each of 29 economies) and relatively short time series (from January 2009 to August 2018), we choose to resolve the overparameterization problem by means of Bayesian shrinkage, thus creating a Bayesian GVAR in the spirit of Feldkircher and Huber (2016) and Crespo Cuaresma et al. (2016). The model is then used to obtain impulse response functions to the asset purchase shock in the euro area which is identified from the quantity variable by using a similar set of sign restrictions as in Zlobins (2017). Our results confirm that the APP not only was effective domestically but also caused significant, heterogenous international responses.

## THE TRANS-PACIFIC PARTNERSHIP AGREEMENT (TPP) IN THE CONTEXT OF CONTEMPORARY REGIONALISM

*Krystyna Zoladkiewicz, University of Gdansk*

**Key words:** *TPP, RTA, Asia-Pacific, regionalism, cross-regional*

**JEL code:** *F15, F02, F13*

Regional trade agreements (RTAs) have proliferated rapidly in recent years and have become an important feature of the world economy. Contemporary integration processes refer to the third wave of regionalism, and could be seen in the context of a trend towards increasing number of cross-regional agreements. This dimension of integration may raise a question about reasons of this apparent shift from the traditional concept of regional integration (among “natural trading partners”). Another significant aspect of this trend is the complexity of RTA negotiations due to their changing structure as modern agreements include more and more sophisticated commitments and provisions. They also address issues related to multilateralization of regionalism in moving away from a spaghetti bowl of criss-crossing arrangements. This trend is especially growing in the Asia-Pacific region. The work contributes to this phenomena, and discussion is focused on an example of the modern RTA, the Trans-Pacific Partnership Agreement (TPP).

The goal of this paper is to provide an overview of TPP agreement. It anticipated liberalisation of trade and investment between 12 Asia-Pacific countries. In light of the US withdrawal, negotiations were continued between the remaining 11 members that affirmed economic and strategic importance of the agreement. On 23 January 2018, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) was concluded (entry into force date likely late 2018 or January 1, 2019). It is assumed to become one of the most comprehensive regional agreement, an instrument for strategic market access, including services, investment, customs procedures, tariff cuts, and more. Due to interlinked nature of its commitments the CPTPP is considered to be important for companies as this deal should bring opportunity for their competitive advantage.

Literature overview, TPP text and data analysis are among research methods used in the paper.

Concluding, the study should offer new insights into issues of contemporary regionalism enhancing our theoretical knowledge in this area. Many of the specific provisions of the TPP are likely to set the benchmarks for future trade agreements. From practical perspective TPP is likely to change trading structures across the region, its implications can be important even for non-members.





**NEW CHALLENGES OF  
ECONOMIC AND BUSINESS  
DEVELOPMENT 2018**

10 - 12/05/2018/Riga  
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# Labour Markets and Mobility of Labour





## WHAT DRIVES EARNINGS OF RETURN MIGRANTS IN LATVIA?

*Mihails Hazans, University of Latvia*

*Key words: return migrants, wage premium*

*JEL codes: F22, J24, J31*

Since the beginning of the 21st century, Latvia has lost to emigration 12% of its population. Facilitating return migration is one of the ways to minimize negative economic and social consequences of emigration in Latvia and other sending countries. According to survey of return migrants, detailed information on employment possibilities and earnings in Latvia targeted on emigrants has a potential to increase return migration. This paper analyzes determinants of earnings of return migrants using very rich information on jobs and earnings in Latvia, as well as foreign experience of more than 1000 returnees surveyed in 2016.

After controlling for personal characteristics and hours worked, we find significant and sizable positive effects on returnees' earnings at the main job for various components of specific human capital accumulated abroad: duration of work abroad in particular sector or occupation; any knowledge acquired abroad which is used at the job in Latvia; foreign experience in occupation related to one's education or qualification; specific skills which make the respondent a difficult-to-replace employee at his workplace. These results hold true also after controlling for a rich set of job characteristics, as well as when men and women are considered separately. By contrast, general experience accumulated abroad (proxied by duration of stay abroad) positively affects earnings in Latvia only for those return migrants who have completed abroad some tertiary education.

**REPEAT MIGRANTS: WHO ARE THEY AND WHY DO THEY MOVE ON?***Ilze Koroleva, Institute of Philosophy and Sociology, University of Latvia**Inta Mierina, Institute of Philosophy and Sociology, University of Latvia****Key words:*** return migrants, re-integration, repeat migration***JEL code:*** E24, F66, J61

While several countries in Europe have introduced legislation aimed at facilitating return migration, the data from a recent large-scale survey of Latvian migrants “The emigrant communities of Latvia: national identity, transnational relations and diaspora policy” shows that many of those who returned later emigrated again. Some of the movement can be explained as circular migration linked to, for example, seasonal employment, yet in most cases, as the research suggests, inability to adapt to the home country either in practical terms (finding employment, integrating into the school system, etc.) or socially (mentality of the society, disappointment with the work environment) serve as grounds for repeated emigration. This situation can be interpreted as resulting from *unsuccessful return migration*. The aim of this paper is to explore the profile of repeat migrants and to shed new light on the reasons behind repeat migration. The analysis is based on two quantitative sources of data: i) the survey of Latvian emigrants (N=14068; 2014) and ii) the survey of return migrants (N=3088; 2016) and concludes with recommendation to policy-makers as to how to ensure a more lasting return migration, i.e., how to prevent repeated emigration by providing the necessary support.

## FINDING A JOB AFTER RETURNING: THE CASE OF LATVIAN MIGRANTS

*Inta Mierina, Institute of Philosophy and Sociology, University of Latvia*  
*Ilze Koroleva, Institute of Philosophy and Sociology, University of Latvia*

*Key words: labour market integration, return migrants*

*JEL code: E24, F66, J61*

Whether a sending country will benefit from emigration will depend, as emphasized in a recent IMF report, on a sizeable portion of emigrants returning and putting their acquired skills to work in their home country. Latvia, like many other East European countries, is increasingly facing labor shortages, yet the young and skilled are not rushing to return. Previous studies have shown that the main factor preventing return migration is migrants holding a bleak view of the opportunities in their home country's labor market, them being unable to find information about job offers and a satisfactory job. In this paper we explore how the expats seek and find information about job opportunities in Latvia, what makes it difficult or could help them in job search, as well as to identify the most effective solutions for bringing together representatives of diaspora with employers in Latvia searching for workers. The study is based on a recent quantitative survey of 387 Latvian return migrants, as well as interviews with employers, an expert group discussion, and analysis of secondary data.

The results show that for many migrants the decision to return has been spontaneous, not well thought-through, and in most cases, the job-search only begins after returning. Among the difficulties preventing a successful job search from abroad are inability to participate in a face-to-face job interview and to start working right away, lack of clarity about the wage level, the contents and conditions of work, as well as the fact that employers do not always want to employ return migrants. The results also show that the wage level is not the only factor important for potential return migrants, and various other surrounding factors such as work conditions and opportunities for growth, assistance in finding a home and a place for a child in a kindergarten, as well as a complex, clear information on various issues related to return migration, including taxes and benefits, matter. In various countries in Europe different solutions exist that help those abroad to find a job in their home country, and most representatives of the target group, employers and experts believe that there is a need for a separate platform that would help members of the diaspora to find employment in Latvia.

## THE DEMAND AND SUPPLY OF DIGITAL SKILLS IN THE AGE-GROUP 50+

*Romans Putans, University of Latvia*  
*Denize Ponomarjova, University of Latvia*

**Key words:** labour market, socio-demographics, age 50+, ALMP, digital skills, digital social inclusion, gap analyses

**JEL code:** J0, J1, J480

The article presents results of a research from 2017 of the EU state of play of adult career management and their digital social inclusion based on data from 8 EU countries and combines the research results with the newest theoretical trends and policy initiatives in life-long learning focusing on digital social inclusion of the adult population (50+) by various socio-demographic indicators. Primary statistical overview based on empirical data presents adults' perception of the necessity, self-assessed proficiency and frequency of applying various general and specific digital skills for inclusion and employability through social media. These results are then compared to the needs and habits of the companies in labour market. Supplemented by qualitative data from experts' interviews, focus groups and case-studies, the cross-sectoral analyses allows the coming to grounded conclusions and recommendations to address digital social inclusion of the age-group 50+ in a structured three-folded way interconnected through digital skills and social media. Authors conceptualize the main results and recommendations for the development of marketable, user-friendly, flexible and broadly available ALMP activities. Results of the research fosters the awareness of the importance of digital skills in a socially balanced way and offers specific advices to facilitate socially and economically balanced usage of digital skills and experience between adult learners 50+ and companies. Although mostly many similarities among presented EU countries are evident in relation to adult career management and their digital social inclusion showing binding European values and trends, still several differences are also easy to notice, e.g. in Northern Ireland and Cyprus more than in other countries the traditional – non-digital – ways and perceptions of adult career management are present. This may signal of slower digital social media development in comparison to e.g. Italy, where usage and one can say also a culture of virtual social environment seems to be more advanced, but at the same time Northern Ireland and Cyprus have more people-centered socio-economic programmes, while Italy may already be concerned of overuse of the digital instruments. France, Slovenia, Latvia, Spain, and Czech Republic shows more common, gradual and medium balanced development of adult career management in the context of their digital inclusion.

The study was partly conducted in the framework of the EU Erasmus+ program's project AGE FACTOR: Boosting adult career management and key competences for inclusion and employability through social media, No. 2016-1-FR01-KA204-024066.

## **EU LABOUR MARKET GAP ANALYSES OF MIGRATION OF HUMAN CAPITAL AS A FACTOR OF SUSTAINABLE DEVELOPMENT**

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*Nataliia Spiridonova, St-Petersburg State University*

**Key words:** *migration, sustainable development, human capital*

**JEL code:** *F22, J24, Q01*

In our time, many developed countries receive significant migration flows, but there is no political and public consensus about their positive impact on the economy of host countries. The particular disagreements concern the social policy, the problems of budgetary funds for the integration programs, benefits for immigrants, and the impact of immigration on the future of the economies of developed countries.

The aim of the study is to identify the impact of migration of human capital on the sustainability of the socio-economic system. Research tasks are: to reveal the relevance of labor mobility for the sustainability of the developed economies; to define the quantitative and qualitative parameters of human capital of migrants; to identify the consequences of migration for receiving countries and donor countries; to analyze the impact of migration on social protection systems of the state; to propose methods of optimizing the identified problems by means of the state social policy. The regions of the EU and the Russian Federation were selected as objects of analysis. Open data from the Ministry of Finance of the EU, OECD, Eurostat, Rosstat, and the Russian Office for Migration (MIA of Russia) are used in the work.

We use a combination of methods of modern economic theory used in the study of socio - economic relations. The main methods of this research are functional and comparative analysis. It is shown that on the one hand, the influx of migrants creates a burden on social protection systems, on the other hand, developed countries taking the main migration, need of labor force and must compete for human capital of high quality. Migration of human capital leads to the formation of a variety of labor resources as a factor of sustainability of the socio-economic system.

The findings and results of the study can be used for theoretical research and forecasting of social and economic change. Governmental organizations can use the results to improve the efficiency of social and migration programs





**NEW CHALLENGES OF  
ECONOMIC AND BUSINESS  
DEVELOPMENT 2018**

10 - 12/05/2018/Riga  
University of Latvia

# Life Quality and Income Inequality





## INCOME INEQUALITY IN EU COUNTRIES

*Pawel Dobrzanski, Wroclaw University of Economics*

**Key words:** *inequality, competitiveness, income redistribution, comparative studies*

**JEL code:** *D31, D63, O15, O57*

After 2004, many post transitions economies joined EU, which significantly differed in the level of development from the “old” EU countries. In literature, the concept of a two-speed Europe has become popular. Simultaneously in the global economy the gap between rich and poor countries keeps widening. Many scientific studies indicate that in the long-run increase in income inequality cause social, political and economic problems. One of the EU's priorities is to reduce disparities, for this purpose, cohesion policy is conducted.

The purpose of the research is to answer the question whether income differences between old and new members are increasing or diminishing over the last years. In the first part of the article Author will focus on income inequity problem described in literature. In the second part EU policy that aim to reduce inequality will be presented. Then paper highlights the key statistics about income inequality, for instance from Eurostat, OECD. The research period is from 2004 to 2016. In the last part of the article Author will analyse inequality gap between EU countries using various statistical methods. To show differences in income inequalities between countries the quintile analysis will be present. Author will focus also on Lorenz Curve and GINI Index. Both disproportion between EU countries and intra countries will be examined.

Research confirmed that inequity was changing with different speed and directions over all EU counties. Inequality was rising the most in Cyprus. The Gini index also increased in Germany, Denmark, Sweden and Spain. On the other hand, in Poland, UK and Portugal. The highest growth in disposable income was noticed in Bulgaria and Romania, but those countries are still behind EU average. Moreover difference between the country with the highest and the lowest income per capita is raising during research period. This research can be used by policy makers in to ensure proper policy is implemented to reduce income inequality and sustainable growth.

## IMPORTANCE OF RESIDENTIAL RELOCATION IN ASSESMENT OF LIFE SATISFACTION

*Līga Feldmane, University of Latvia*

**Key words:** *life satisfaction, residential relocation, residential migration*

**JEL code:** *R23; I31*

Life satisfaction has become very popular research object in many interdisciplinary fields of science in recent years. According to theoretical literature there is correlation between migration and migrants' life satisfaction after migration event and residential relocation increases housing satisfaction considerably. As it was observed in previous studies migration increases migrants' happiness compared to feelings before moving, but they are happier just after the move; after some years the degree of happiness returns in initial level.

In order to evaluate how the migration and time lived in the residence influence people life satisfaction the data of survey "Quality of Life in the cities of Latvia" was analysed which was conducted by Central Statistical Bureau of Latvia in year 2017, when respondent from the biggest cities (Daugavpils, Rezekne, Jelgava, Jurmala, Jekabpils, Ventspils, Liepaja, Valmiera) was questioned about their satisfaction with life and living conditions in their residence. All respondents were divided in 4 groups considering the time period how long they have lived in the city and their satisfaction level with living in the residence was compared with statistical methods. The main finding is that persons who have moved to the residential city recently evaluate life in the city and its facilities (public transport, sport facilities, health facilities etc.) more positive, while persons who live in the city from the birth are the least satisfied.

## **MALE AND FEMALE LIFE EXPECTANCY AND SELF PERCEIVED HEALT IN WORKING AND RETIREMENT AGES: CASE OF LATVIA**

*Juris Krumins, University of Latvia*  
*Anna Klusa, University of Latvia*

**Key words:** *health, gap between sexes, Latvia*  
**JEL code:** *I14*

Introduction. Changes and differentiation of life expectancy gives an important insight in socio-economic and human development of any country and region. Life expectancy without long term activity limitation since 2004 is one of the structural indicators for assessing the EU strategic goals (Lisbon strategy) under the name of “Healthy Life Years” (HLY). Among other human development and life quality dimensions the gender gap in health and life expectancy is a topical issue, especially in countries lagging behind the general path of socio-economic development. Life expectancy in 2015 for men at age 15 and 65 in Latvia was lowest, but for women 4<sup>th</sup> lowest among the 28 EU countries. Difference in male-female life expectancy in Latvia still forms 9.6 years.

Aim of this study is to determine the main socio-economic drawbacks in forming gap in male-female life expectancy, healthy life years and self-perceived health in Latvia since the year 2004, when the country was integrated into the European Union.

Data and methods. Data on male and female activity limitation and self-perceived health from Statistics on Income and Living Conditions (SILC), Survey of Health, Ageing and Retirement in Europe (SHARE), The European Social Survey (ESS) and Migration and Population Policy Survey are used in analysis. Methods of the Life table calculations used by Ehemu, Eurostat and Central Statistical Bureau of Latvia are discussed. Indicators from the European Health and Life Expectancy Information System (EHLEIS) are used in analysis.

Findings of the study. Gender differences in income, employment/unemployment and life style still play the main role in male-female gap in life expectancy and health status, particularly in working ages. Income inequality prevents an increase of the share of healthy life years in the life expectancy.

Practical implications of the study. The use of self-perceived health, the Global Activity Limitation Indicator (GALI) and Healthy Life Years helps to explain and to understand main drawbacks in forming gap of male-female health status and to reinforce public policies - health, employment, retirement, equality/solidarity, sustainable development and other.

## LES DILEMMES DE LA THÉORIE DE LA CROISSANCE ÉCONOMIQUE VERSUS LA THÉORIE UNIFIÉE DE LA CROISSANCE D'ODED GALOR

*Krzysztof Malaga, Poznan University of Economics and Business*

**Mots-clés:** *croissance économique, développement économique, dilemmes de la théorie de la croissance économique, théorie de la croissance économique unifiée*

**Classification JEL:** *O40, O49*

Dans l'introduction à l'ouvrage d'Oded Galor, *Unified Growth Theory*, il y a citation de Stephen W. Hawking: "*A complete, consistent, unified theory (...) would be the ultimate triumph of human reason*", qui est archétype de la recherche de la vérité sur la réalité.

Dans ce papier on essaie répondre à la question: si une telle exigence est réalisable en sciences économiques. Pour ça on confronte dix les plus importants dilemmes de la théorie de la croissance économique (TCE) contemporaine avec la théorie de croissance unifiée d'Oded Galor (TCU), qui incontestablement est la plus avancée TCE qui reste en relation réciproque avec la théorie du développement économique.

Tout d'abord on présente les plus importants dilemmes de la TCE contemporaine - qu'est-ce que c'est la croissance économique et comment la mesurer? Qu'est-ce que c'est le développement économique en tant que tel et par rapport à la croissance économique? Quelle doit être le rôle des *faits stylisés* dans la construction des modèles de la croissance économique? Est-ce que les processus qui sont à la source de la croissance économique sont pris en compte de même manière par les statisticiens et par les auteurs des modèles de croissance économique? Quel est le rôle du temps dans analyse de la croissance économique. Est-ce que la TCE est *a-spatiale*? Quel est le rôle de l'espace dans la TCE? Pourquoi on accepte la dichotomie persistante en domaine d'analyse dynamique de la croissance économique et des fluctuations économiques. Est-ce que la TCE reste *a-historique*? Est-ce que les processus de la croissance économique sont déterministes ou bien stochastiques (aléatoires)?

Ensuite on propose deux classifications des théories de croissance économique contemporaines. Puis on présente d'une manière descriptive TCU et le modèle de base de TCU avec ses applications. Enfin, on formule les conclusions qui résultent de la confrontation de TCU avec les dilemmes majeurs de la théorie de croissance économique contemporaine.

En conclusion on constate pourquoi TCU ne fournit pas des nouveaux arguments en faveur d'un consensus satisfaisant sur la plupart des dilemmes. Il est donc possible à construire TCU *au sens étroit* mais l'attente formulé par S. W. Hawking n'a pas encore été réalisé dans le cas de la TCE contemporaine.

## **TOWARDS MODELLING THE INFLUENCES OF WAGE DISPERSION ON TEAM PERFORMANCE WORK IN PROGRESS**

*Daniel Schettler, University of Latvia*

**Key words:** *wage dispersion, performance, compensation*

**JEL code:** *M52*

The influences of wage differentials are an often-discussed topic in the field of compensation research. This conference paper describes the substantial literature which investigated the influence of wage dispersion on team performance (productivity).

The literature focusing on this effect offers a broad variety of different results. They do cover the whole spectrum from no significant to a significant non-linear relationship. The question if wage dispersion is beneficial to team performance or not cannot be answered without considering many issues. Future research has to shed more light on this field of research. The goal of this paper is to determine a research model for further investigations on the effects of wage dispersion on team performance.

Papers which used sports and corporate data sets will be taken into account. The majority of the published papers use sports research settings to explain the effects of wage dispersion. In sports performance statistics are published in detail and the wages are often publicly disclosed. Therefore, the derived research model will be determined for further research with a sports data set.

The presented literature is compared regarding the use of their research model variables. The use of different dependent, explanatory and control variables will be discussed. The discussion results in a model for further research in sports data setting.

## THE ROLE OF HIGHER EDUCATION IN RAISING THE QUALITY OF LIFE: ANALYSIS OF THE BALTIC STATES

*Santa Sproge-Rimsa, University of Latvia*  
*Baiba Savrina, University of Latvia*

**Key words:** *higher education, quality of life, well-being*

**JEL code:** *I25, I26, I31*

The concept of quality of life is on the today's agenda of academics. During the last four decades the concept has become very broad and complex, with no unified approach. In addition, quality of life is no longer seen only as a "well-being" theory, it includes both objective and subjective indicators. In the article is used analysis of objective indicators to determine the impact of higher education on the quality of life of an individual in the Baltic States. Research problem of the article is to identify the role of the higher education in raising the quality of life in Baltic States. Therefore the research goal is to analyse Baltic States current situation regarding higher education and how its influences the quality of life for an individual. Research objective is to analyse the concept of quality of life based on objective indicators to measure the importance of higher education. Literature analysis unambiguously indicates that education level is one of the indicators of quality of life - the higher the level of education, the higher the quality of life of an individual. Thus, on the basis of the Objective Model, it can be argued that, in theory, there is a positive correlation between quality of life and higher education. Higher education is indicated as a key factor in access to the labor market. However, using both quantitative and qualitative research methods, the labor market was analysed in the Baltic States, official statistics - wage, unemployment rate, structure of the national economy, university graduate data. It was concluded in the article that in the Baltic countries higher education does not clearly show a positive correlation with the quality of life with higher education. Main conclusion from the research is that the calculations show that in the Baltic States there is a very high level of higher education of the population, thus the correlation between higher education and quality of life is lower than indicated in theory. Thus, the obtained results indicate that it is necessary in the Baltic States to re-evaluate the employer's requirements for employees, to be able to set requirements. On the other hand, the education system as a whole should be reviewed - access to higher education and the development of vocational education.

## **ANALYSIS OF ECONOMIC SECURITY IN THE BALTIC STATES IN CONTEXT OF LIFE QUALITY**

*Janis Supe, University of Latvia*  
*Baiba Savrina, University of Latvia*

**Key words:** *economic security, life quality, Baltic States*  
**JEL code:** *D63, I31*

Life quality and human well-being is a very important topic in the science of economics. Economic security of individuals is often analysed in the context and framework of life quality, yet still there is no common approach for this kind of analysis. Previous research about economic security in the Baltic States in context of life quality is very limited. It is important to research economic security as defining state of the art in this field can help stakeholders to indicate the problems and areas where actions must be taken in order to improve economic security and life quality of individuals.

The aim of this paper is to describe and systematize theoretical background of economic security as part of life quality framework and to analyse the economic security in the Baltic States in context of life quality.

The authors have done literature review about life quality and economic security and created a framework for analysing economic security in context of life quality, drawing attention to the main applicable statistical indicators. Authors have also analysed these economic security indicators in the Baltic States based on the above mentioned framework for the last ten years.

Authors have concluded that there are differences in the economic security situation between the Baltic States. Regarding the analysed indicators, the current trend is that the highest economic security of individuals in context of life quality is in Estonia, with Lithuania and Latvia following shortly behind. Authors have described and analysed the various situation in different aspects of economic security in Latvia, Lithuania and Estonia. Authors have indicated the fields where improvements are necessary to advance economic security and life quality of individuals in the Baltic states.

This research paper contributes to theoretical and practical research of economic security as there have been very few research papers about this topic in the Baltic States. The paper also contributes to the ongoing discussion about economic security and life quality interconnections.







**NEW CHALLENGES OF  
ECONOMIC AND BUSINESS  
DEVELOPMENT 2018**

10 - 12/05/2018/Riga  
University of Latvia

# Marketing and Brand Management



## **PRODUCT PROMOTION AS BODY OF INTEGRATED MARKETING COMMUNICATION TOOLS FOR SUSTAINABLE DEVELOPMENT OF BUSINESSES**

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*Key words: sustainability; sustainable development; sustainable marketing; sustainable integrated marketing communications*

*JEL code: M14, M31*

Research background: A prominent feature of nowadays in the development of business is the development of innovative principles of governance where a key component is the formation of sustainable IMC, as it facilitates a synergy between the company's deliverables and consumer audiences. The literature predominantly describes IMC as a process and approach to the customer, yet, in order to address specific guidelines in the process of IMC towards the customer, the authors conducted research across Latvian food retail chains by polling their leading specialists with a view to find out the influence of IMC tools of product promotion upon demand and come to notable conclusions on an innovative approach to business processes, including the formation of sustainable IMC which facilitates a synergy between the company's deliverables and consumer audiences.

Purpose of the article: The goal of the research is to explore and assess integrated marketing communications as a body of product promotion tools for the development of innovative business, with the object of the research being product promotion on the market as a key component and set of tools of IMC. The subject of the research is promotion tools for a sustainable development of retail chains.

Methodology/methods: The research makes use of the results of the studies conducted by the authors on the food retail market in 2017. The authors used company data and polled leading specialists at Latvian food retail chains. In order to accomplish the goal and objectives, the authors used the following quantitative and qualitative methods of economic research – polling, comparison, grouping. The study is based on scientific papers published by Latvian and foreign scholars, general and special literature, and periodicals. The authors conducted an assessment, a market investigation, a comparative analysis, held a survey, and used the MS Excel software for data processing and analysis.

Findings: The research confirmed the hypothesis that the use of integrated marketing communications in product promotion increases the consumption of sustainable, ecological products and, consequently, the spread of sustainable lifestyle. The results of the research are of both theoretical and practical value.

## **TOURISM ENTERPRISE COOPERATION: CAN BENEFITS BE FINANCIALLY PROVED?**

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Ilze Medne, University of Latvia*

**Key words:** *cooperation, tourism, enterprise cooperation, cooperation benefits*  
**JEL code:** *M31*

Success of destination development can be seen as very complex system that consists from many organisations, enterprises, activities and connections between them. In order to make destination as well functioning system, the relationships between industry players need to be based on win-win approach for mutual benefits for sustainable and long term functioning. For private tourism enterprises for which both development and profit are important goals, question of benefits for cooperation is can not be seen as future destination development, but the short-term financial returns for the money and resources invested.

Benefits from enterprise cooperation are studied in various researches discussing the tangible and intangible benefits. Learning process as a benefit can include sharing the know-how in production, distribution, and other business activities, development of innovative policies for the industry development, sharing of perceptions, responding dynamically to a changing environment and learn from the cooperative process itself. As a frequent argument for additional cooperation benefits is that cooperation can help to avoid the long-term costs of adversarial conflicts between interest groups (Bramwell, Lane, 2000). Still the methods used for cooperation benefit analyses quite often are qualitative based on interviews and their financial tangible outcome is not proved as companies do not separate costs related to cooperation.

The aim of the study is to analyse tourism enterprise participation in tourism networks in relation to their financial outcomes as turnover and profits. A research hypothesis is that tourism enterprise financial outcomes are improving after joining tourism cooperation networks. The research involves data of financial outcomes from tourism enterprises that are part of tourism cooperation networks in Latvia. Statistical analyses software EVIEWS was used for analysing panel data of tourism enterprise financial outcomes using dummy variable as being part or not being part of tourism network. Main results and findings are intended for tourism researchers, tourism cooperation networks and tourism enterprises for the financial benefit analyses system.

## APPLIED SEMIOTIC ANALYSIS OF CREATIVE ADS

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**Key words:** *applied semiotics, advertising research, advertising efficiency, experiment*  
**JEL code:** *M37*

One of the applications of semiotic analysis in the field of advertising is the study of the ad text elements and their interconnections. However, much less attention is paid to the impact of individual ad text elements on target customers. Semiotic analysis, combined with the experimental toolkit as part of the marketing research, makes it possible to highlight the impact of individual elements of the advertising text on customers rather than the impact of the ad as a whole, which is the common practice in pre-tests.

The main purpose of this paper is to investigate the role of advertising storyline in its perception by consumers. The impact of different ads on two brand cars on an experimental group has been tested. Differences in the impact of a storyline built with and without the use of humour over the liking of advertising and the intention to buy have been studied.

Focus group discussions were used to identify the variables included in the quantitative research. The main part of the study uses a quasi experiment and a questionnaire to obtain primary data of the experiment. Such data were processed with some statistical procedures like one-dimensional and two-dimensional distributions, variance analysis, chi-square test, correlation analysis. Semiotic analysis of the advertising text was applied.

The results of the research show a connection between the use of humor in plotting, the impact of advertising and the intention to buy. The scale used can be applied in subsequent advertising surveys.

The proposed combination of semiotic analysis and experimental methods used in this paper allows for a deeper study of advertising content in terms of advertising impact efficiency. Results can expand also the understanding of the impact of ad text elements on users in both theoretical and practical future research.

## **PROTECTING THE E-CUSTOMER: LEGAL AWARENESS AND CONSUMER BEHAVIOUR OF BULGARIAN YOUNGSTERS**

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**Key words:** *e-commerce, consumer protection, consumer behaviour, legal guarantee, information asymmetry*  
**JEL code:** *M31, D18*

During the last decade the issues of protecting consumer rights in a digital world gained momentum regarding the speed and the scale of e-commerce growth. It forces the refinement of legal frameworks and a constant effort for its harmonization at least at a European level. However, the Consumer Empowerment Index indicates certain problems which seem to be more dramatic for the younger member states such as Bulgaria. Particularly alarming is the low score on awareness of consumer legislation and consumer skills which correlates with the fact that Bulgaria is among the countries with the lowest relative share of customers online. In such a dynamic field existing prior researches on the problem are scarce or outdated.

This article tries to fill the gap by focusing on the e-consumer behaviour of young people aged 18-25 who constitute a major market to be examined. The main research aim is to evaluate the impact that the unawareness of consumer rights has on consumer behaviour. It points on the reasons for the low consumer empowerment of Bulgarians and contributes to a better understanding of the purchase decision making process. The research methods used include a content analysis of the official information published by a range of online shops in order to detect the scale of the existing information asymmetry and an online survey which aims at assessing the level of legal awareness of Bulgarian youngsters. A correlation analysis is performed in order to track its impact on online purchase and after sale decisions. The legal framework is analysed through a comparative method. The issues of reinforcing consumers' knowledge about their rights in a digital environment are raised and discussed. The conclusions drawn might be useful for policy makers and the consumer society at large. Further research can include testing the effectiveness of different techniques for fostering consumer empowerment as well as making a comparative study on a cross-national basis.

## TOWARDS A GENERAL MODEL OF SUSTAINABLE INVOLVEMENT

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**Key words:** *sustainable marketing, sustainable involvement, activism, behavioural model*

**JEL code:** *M31, Q01, D12*

The constantly growing number of people who embrace sustainable initiatives and lifestyles is a sign of a raised social sensitivity to the universal problems of environmental change, social inequality and economic growth. In marketing literature it is echoed mainly in attempts to understand and influence consumer attitudes and behaviour towards green and fair trade products. These studies are, however, mainly concerned with the consumer as a buyer and neglect the other roles that he/she may perform with regard to sustainability.

This article aims at proposing a theoretical model of the factors affecting consumer intentions for sustainable action which may take the form of sustainable involvement. The selection of variables to be included in the model is based partially on the theory of planned behaviour and the ideal point model. As a second goal, there is developed a scale, which measures one of the key constructs of the model - the gap between the ideal view of sustainable development and its perceived current state.

The research methods used include semi-structured personal interviews and associative techniques to support the design of the model and an online survey among target audience to empirically test the developed scale. As a result of the study some new perspectives to the explanation of how intentions for sustainable action are being formed is added. The constructed measurement scale can be used in further research that might include testing the validity of the model. Another research direction could be examining the differences imposed by varying cultural and economic backgrounds on a cross-national basis.



## THE IMPACT OF DIGITAL MARKETING ON THE INSURANCE INDUSTRY STRATEGIES

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**Key words:** *digitalization, insurance industry, marketing strategy*

**JEL code:** *M3, L11, L16*

The digital revolution has transformed the way companies interact with customers, creating an environment where marketing, information and technology must work together. Retailers and industry giants have made significant strides in adopting digital platforms to deliver a satisfying customer experience. As mobile and social networks increase in popularity, consumers are relying on smartphones and tablets to research, compare prices and buy products online – anytime, anywhere.

Customers expect the same intuitive and streamlined experience from their insurance carriers as they do from their favorite app, search engine or online retailer.

So far, companies have focused primarily on customer-facing applications. But some insurers are beginning to realize that digital means much more than cool and convenient apps for consumers; it is a force that will touch and reshape the very core of their business.

Insurers must adjust their business models and strategies to remain competitive and take advantage of potential wallet share. Failing to adapt to the fast pace of digital change presents many risks, including losing ground to more agile players.

To succeed in this new landscape, insurers need to take a structured approach to digital strategy, capabilities, culture, talent, organization, and their transformation road map.

The aim of this paper is to explore what is happening in the digital landscape, the influence of demographics and information overload, and the case for change within the context of the value chain. Given the prevalence of digital adoption in other industries, insurance companies cannot risk sitting on the sidelines.

The main results and findings of this report is the illustration that Insurance organizations can take advantages from the transformation to digital world. Under Digitalization new corporate models being developed to better leverage employees, mergers and acquisitions, and technology investments.

Quantitative research and analytical research methods are used.

## **DISTINCTIVE PERCEPTIONS OF LATVIA AS A DESTINATION IN GERMAN, AUSTRIAN AND SWISS TOURISM MARKETS**

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**Key words:** *destination perception, destination brand, destination image*

**JEL code:** *M31, L83*

Competition among tourist destinations has become global today and even more tourists are choosing their destinations out of hundreds of possible options. Destination image and its perception play a significant role in differentiating between objectively alike alternatives. A country image is defined by I.M. Martin and S. Eroglu (1993) as “the total of all descriptive, inferential and informational beliefs one has about a particular country”. The destination image includes tangible and verifiable destination attributes, as well as perceptions of more psychological nature and emotions regarding that destination (Stepchenkova, Li, 2014). A. Milman and A.Pizam (1995) argues that when a destination wants to be successful, it must first achieve tourist awareness and second a positive image. Although the power of colours for destination brand identity development has been theoretically acknowledged from many researchers, there is a lack of empirical research in this field. The aim of the study was to find out the differences in perceptions of Latvia as a tourism destination in Germany, Switzerland and Austria, as well as to investigate whether the current and potential Latvian tourism brands correspond with the associations of the people of these countries about holiday travel. The research involved data of surveys carried out in several German, Austrian and Swiss cities and villages. During three surveys in 2015, 2016 and 2017 1200 valid questionnaires have been gathered. The questionnaire was made to determine the recognition and the image of Latvia as tourism destination as well as to determine the associations relating to Latvia expressed with key words and colours. SPSS software tools were used for analysing the data: descriptive statistics, crosstabulation, data correlation. Main results and findings are intended for organisations that are responsible for tourism image development, like, Tourism Department of Investment and Development Agency of Latvia, to improve marketing communication with countries mentioned above.

## EXPORT MARKETING PROCESS IN SMES DURING EARLY INTERNATIONALIZING STAGE

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**Key words:** *export marketing process, agile marketing, SME*  
**JEL code:** *M31*

Entrepreneurs' decision making processes under conditions of uncertainty are based on heuristic approach. There have been research attempts to explain entrepreneurial decision making process in marketing. Still the knowledge how marketing is conducted under conditions of uncertainty, as during early internationalization stage, is incomplete.

The research objective is to explore export marketing process in SMEs during early internationalization stage. Research questions:

- what factors influence export marketing process?
- how export marketing can support business needs during early internationalization stage?
- how and why export marketing process is different for traditional internationalizers and born globals?

Research Method: author has adopted qualitative research approach based on inductive analysis, and grounded theory building. Using purposeful sampling, 22 SMEs involved in international business were selected and 15 agreed to participate. They had to respond to criteria of turnover, number of employees and growth, have at least 25% of turnover from international sales, all of them exported to at least 10 countries, including outside of their home continent. Interviews took place in Latvia, 2017, August-October. 15 semi-structured face-to-face interviews conducted with entrepreneurs – business owners or in few cases export marketing managers; interviews were transcribed.

Research Results: the key challenge for SMEs is to find and validate value proposition. The success criteria is the speed of internationalization. Therefore companies use agile marketing principles that allow testing market reactions in a short period of time and continuously improving their communication effectiveness. SMEs entering international markets need to gain awareness and build trust. Study shows that companies use various marketing tools to support this need: creating thought leadership programs, building own networks and using partners' reputation and networks, cooperating with endorsers and industry media and celebrities, and others.

Conclusions: traditional marketing theory does not fully explain the marketing needs and processes of SMEs during early internationalization stage. This study results highlight the importance of value proposition validation. Therefore the author suggests the following propositions:

- P1: Value Proposition Validation is positively related to Speed of Internationalization.
- P2: Marketing Agility is positively related to Value Proposition Validation.

Limitations: the purpose of this research is to develop variables and propositions for the theory, not to test the theory. As research was conducted in Latvia which belongs to group of small and open economy countries (SMOPEC), SMEs here might be more driven to internationalization comparing to companies from larger markets.

## **DOING BUSINESS ON THE INTERNET: DEALING WITH ONLINE CUSTOMERS IN LATVIA**

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Valerijs Praude, University of Latvia*

**Key words:** *online business, customer behaviour, customer loyalty, long-term relationship*  
**JEL code:** *M31*

The purpose of the paper is to find and analyse customer behaviour in the online dimension and to find approaches and to make them satisfied and loyal to the local vendors.

Both qualitative and quantitative methods were used during research - scientific literature selection and analysis, secondary data about Internet usage trends taken from Eurostat and Central Statistical Bureau of Latvia data analysis. The main problem is to find out expectations of Latvian buyers from local sellers that will help to improve the situation of the country's economy.

It is not a surprise anymore that such kind of phenomena like online shopping is a common and usual thing which is quite often used by many people around the world. It is hard to imagine our everyday life without using computers, telephones or other devices and internet. People try to use all the opportunities to make their lives easier and to do things faster and efficient.

For the vendors who's become online, it is a challenge to transfer all their knowledge and practise from traditional trading to the online. It is impossible to do business only with already used traditional approaches because purchase as a process and customers behaviour in the online dimension differs from traditional one. That is why it is important not only to find differences but to find suitable approaches and ideas for the online business. Dealing with online customers means to realise who different and at the same point same they are to the traditional market customers, to integrate and adopt all the best practises of online dimension.

As a result, authors will show the main approaches that will be useful for the company strategies building a long-term relationship with their customers and making them loyal. The main focus is on the local companies. Which means that the results could be used in both ways theoretical and practical for the Latvian online market. The results can increase business efficiency in the online dimension and improve local company's strategy.

## SOCIAL MEDIA INFLUENCE ON CROWDFUNDING PROCESS EVALUATION MODEL

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**Key words:** *social media, crowdfunding, evaluation, influence, model*

**JEL code:** *M31, G20*

More than ever companies are using crowdfunding campaigns to collect necessary funds for their projects. One of the success factors of crowdfunding campaigns is the usage of social media sites like Facebook and Twitter for crowdfunding campaign promotion. Despite the popularity of crowdfunding campaigns, there has not been developed any model to determine the influence of social media on crowdfunding campaigns.

The aim of this paper was to develop a social media influence on crowdfunding process evaluation model that can help companies evaluate social media influence on their crowdfunding campaigns and help companies to determine necessary changes in social media communication that companies should implement to increase the chance to attract the necessary number of backers for their crowdfunding campaigns.

To achieve the aim of the paper several research methods were applied: (1) Theoretical analysis to determine which Facebook and Twitter metrics should be analysed to determine social media influence on crowdfunding campaigns; (2) Secondary data research method was applied to: a. Collect Kickstarter technology category campaign data; b. Collect data from Kickstarter campaign Facebook and Twitter accounts. Statistical package for the social sciences (SPSS) was used to conduct a correlation analysis and descriptive analysis of the collected data.

The result of the paper was that a model that can determine social media influence on crowdfunding campaign process was proposed.

In practice this paper can be used to: (1) Determine how social media sites can influence crowdfunding process; (2) Determine what companies should improve in their social media communication to improve the possibility that their crowdfunding campaigns will be successful; (3) Potential crowdfunding campaign backer can use this proposed model to determine how likely it is that the crowdfunding campaign will reach its goal. The theoretical contribution of this paper is that it can be used as a basis for in-depth analysis of social media influence on crowdfunding process.

## HOMEPAGES FOR HIGHER EDUCATION EXPORT

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*Justs Dimants, University of Latvia*  
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**Key words:** *homepage, higher education export, marketing*

**JEL code:** *M31, M38, L86*

Demographic changes in many countries have influenced numbers of students: in several cases it showed dramatic decrease in numbers of students, but from other side development of information technologies especially in webpage use and social media use have developed new approaches and new possibilities for sharing of information on study programs and higher education establishments. New innovative approaches for education export are realised also in homepages of state institutions responsible for information on studies in Latvia and higher education establishments. Different countries have different approaches and different experience which is analysed and researched in academic studies and scientific publications.

Aim of the research is to investigate available information on homepages of government institutions providing information about offered study programs in foreign languages and information about higher education institutions, as well as homepages of higher education institutions on different aspects of studies for possible foreign students for their degree studies.

Research methods used: scientific publications study, investigation of information in English in homepages of state institutions (Latvian Institute, Ministry of Education and Science, State Education Development Agency and others) and homepages of higher education institutions on study program offers, necessary information for studies available for possible foreign students, expert interviews.

Research results indicated that still there are not used options for institutions in Latvia in comparisons with other countries – more successful in attracting foreign students and performing better higher education export. There are several institutions in Latvia where important information for possible students is missing or not adequate presented.

## SENSORY MARKETING THROUGH IMPACT OF DISCOUNTS ON IMPULSE BUYING BEHAVIOR

*Umer Qadir Sofi, University of Latvia*

**Key words:** *sensory marketing, impulse purchases, point of purchase, sensory cues*  
**JEL code:** *M310, M300*

In today's Postmodern Era shopping has become a social and leisure activity, reducing the number of cognitively planned purchases made by consumers. to the effect of the sense in impulses While role of human sense prevailing to be more of caution in nature ,However, in this type of behavior cool, rational, information processing choices are uncommon and rare, and most of the decisions made are post-purchase rationalization or justification of irrational consumer behavior Even though, most impulse decisions are made when consumers are inside the store, the effect of in-store stimuli on such decisions has not been adequately explored. And the impact the senses put in it. This research is an attempt to find out the factors that affect consumer impulse buying behavior with impact of sensory cues what triggers impulse buying and how does sensory marketing aid impulse buy behavior. Evaluate the stimuli and to understand and analyses of the sensory impact, and the effect of sensory cues in impulse buying behavior

This research suggests that the presence of involvement of any sensory cues in purchasing situation is likely to have a more influence on the decision to make a purchase. Apart from this, the role of the intermediaries like sales personnel also plays a very significant role in the purchase of the products. The research methodology was divided into two stages which involved two sources for collecting the data in order to achieve the objective of project regarding the potential customers from the existing outlets of Dubai mall and mall of the emirates The primary data collection has been done by tendering questionnaire to the customers and seeking their responses for the study and taking the previous research gaps in present

In addition, the study replicated the research with the correlation between the impulse-purchase trait and impulse-purchase behavior moderated by the normative evaluation of the sensory cues behavior Results are consistent with expectations. In addition, for higher and lower autotelic individuals, the environmental stimuli (fragrance) information induced by the freshness and feel with point-of-purchase sign increased impulse-purchasing behavior. With the effect of sensory cues and impulse, stimuli almost increasing purchase too much extent.

## CONSUMER BEHAVIOUR IN ONLINE TRADE: THE PROFILE OF VARIOUS GENERATIONS

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**Keywords:** *buying behaviour, online trade, generation, lifestyle, omni-channel consumer behaviour*  
**JEL code:** *M31*

Statistics and results of marketing research performed by various marketing agencies suggest that the provision of Latvian households with an Internet connection is rising, the number of active Internet users is increasing in all age groups and there is rapid development in mobile broadband. As a result, dynamic development has been observed in online trade with customers using both Latvian and foreign online stores and e-commerce sites. The main reasons why customers prefer shopping online are lower prices, a wider range of goods and the possibility of comparison as well as more convenient deliveries.

The interaction between brick-and-mortar and virtual shopping environment has a specific impact on the consumer buying habits leading to the so-called omni-channel consumer behaviour. The specific character of the buying habits is determined by different factors, among which there is consumer age and belonging to a certain generation. The generation lifestyle concept in marketing is characterized by a different value orientation of various age groups that takes the form of a specific set of consumer behaviour factors.

The aim of the research is to assess and compare the specific features of the purchasing behaviour of the millennium and Z-generations as well as the factors influencing them when purchasing goods and services online.

The research presents the theoretical aspects by characterizing the lifestyles and buying behaviours of various consumer generations online and in the brick-and-mortar stores that determine the specific features of consumer behaviour. The theoretical part presents secondary data from the research and statistics databases as well as results of marketing research. In the empirical part, the author has analyzed the results of an online customer survey and expert assessments on the specific features of customer behaviour in the virtual environment in Latvia. Based on the results acquired in the research the author has identified the common and different features of the online behaviour of Latvian *millennium* and *generation-Z* consumers as well as the most likely trends in the online behaviour dynamics, by taking into account the experience of the trading enterprises of other countries and global developments in the area.



## THE INFLUENCE OF THE INHABITANT ON THE SELLING PROCESS

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*Margarita Dunska, University of Latvia*

**Key words:** *brokering, selling price, information of inhabitant, Austria*  
**JEL code:** *R31, M31*

**Problem statement:** Real estate housings are always brokered through agents without the information about the previous user, owner or tenant. At housing ads are only the information of the real estate available, also the brokers use such information in their visit and negotiation. The problem is that there is no investigation if the information about the previous user could influence the selling process, especially the selling price of the housing.

**Research aim:** This study investigates if the information about different owners of a housing ad can influence customers' attitude towards the real estate, customers rent intention and customers willingness-to-pay.

**Research method:** The study is based on a web supported and simulated field experiment. Therefore, the defined typical housing ad is in all scenarios the same, only the type of owner is changed. For the type of owner are four different stereotypes defined, including a positive and negative associated individual and a family.

**Main results and findings of the study:** The overall results show a significant difference if the information about the owner was positive or negative. Though the suggestibility of people in the real estate context from psychological or sociological parameters was assumed from previous literature, this study was able to support these findings.

**Theoretical and practical implications of the work:** The implication of this paper is on the one hand relevant for real estate brokers and on the other hand for the housing sellers who did not pay any attention to information about the real estate owner as a person and their influence on the pricing.

**Conclusions drawn:** It could be discovered that over 53% of the respondents are aware that they are influenced by the information about the real estate owner and take it fully consciously as a basis for decision making.

## PERCEIVED VALUES, SATISFACTION, TRUST AND STORE LOYALTY IN RETAILING

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**Key words:** *loyalty programs, store loyalty, trust, satisfaction*

**JEL code:** *M30*

Customer retention has become a major goal for most of the retail organizations due to the high competitions in the retail industry. Customers are having more than one loyalty cards and number of visit to different store create the problem for identifying patronage behavior. There are numerous questions on how to keep existing customers with them and increase the repeat purchase visit. This study proposes that the firms who use loyalty programs as the retention strategy to get the more insightful understanding of customer perception. The objective of the study was to measure the influence of perceived values of customer loyalty programs on the store loyalty development. Another objective was to ascertain the role of various influencing factors on the store loyalty development with reference to customer loyalty programs.

The researcher has divided research design in twofold, initially, researcher framed store loyalty measures to get the outcome of the analysis through qualitative and quantitative method, and reliability and validity of construct have been done at the pilot level for finalization of a questionnaire for the present study. In the final analysis, non-probability type convenience sample technique used and tested with multiple regressions by SmartPLS program. Outcomes are tested using a qualitative method on a sample drawn from the loyalty program subscriber of hypermarket store. The present study has found a significant relationship between perceived values of the loyalty program and store loyalty. This research provides the empirical support for the hypothesized relationships between perceived values and outcome variables (satisfaction, trust, loyalty programs) while also offering support for the managerial implication to make retention strategy.





**NEW CHALLENGES OF  
ECONOMIC AND BUSINESS  
DEVELOPMENT 2018**

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University of Latvia

# Regional Development and Public Governance: Europe's Economic Future



## METHODS OF PROJECT MANAGEMENT IN PUBLIC PROJECTS IN LATVIA

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**Key words:** *project management, public administration*

**JEL code:** *O22*

The main purpose of economic development in most countries and regions is to improve the quality of life. Since joining the European Union (EU), Latvia has gained the benefit of structural funds, aimed at fostering the economic and social growth of the country. The structural funds' finance is invested in both infrastructural upgrades, equipment procurement to encourage production and exports, and promotion of employment and reintegration of socially excluded persons into society. Projects (their scope, structure, and schedule) to a great extent determine the economic development of the society: changes in employment, development of infrastructure, shifting of social processes. For projects, the question of efficient administration of the invested funds has become a topical issue in utilisation of the EU structural funds.

Reforms in the public administration and improvement of the project management processes adopted by the public administration require an assessment of the project management processes in public projects in Latvia and production of propositions for the EU multiannual budget of 2014-2020. The modern-day project management is unimaginable without the application of project management methods. In the 2014–2020 planning period Latvia has 7.5 billion EUR available for the implementation of various projects in public sector.

The object of the research is public sector project management methods.

The aim of the paper is to evaluate project planning and initialization process practice in public sector in Latvia.

Research was based on an assessment of the project planning process implemented by municipalities and a more detailed analysis by the following project initialization stages in polycentric development projects and construction projects.

## ENHANCING THE FLEXIBILITY OF VOCATIONAL EDUCATION AND TRAINING INSTITUTIONS FOR MODERN LABOUR MARKETS

*Ilze Buligina, University of Latvia*  
*Biruta Sloka, University of Latvia*

**Key words:** *vocational education and training, entrepreneurship, labour force, flexibility*  
**JEL code:** *I25; I28; O15; L38*

Recent studies suggest that vocational education and training (VET) institutions are becoming important stakeholders in the development of competitive labour force at regional and national level in the lifelong-learning perspective. This requires a new level of flexibility for the VET institutions, as modern and competitive training programs need to be offered to various target groups – students, the employed and unemployed population. This obliges the VET institutions also to strengthen their entrepreneurship and internationalisation capacity which is a new challenge for many of them.

In Latvia the VET competence centres are becoming important regional players to offer innovative solutions in labour force development. This is a relatively new VET policy priority in Latvia and requires corresponding studies and analysis. However, in a survey performed in 2013 among local governments' high level public administrators in education, the authors of the paper inter alia were investigating also their opinion on the entrepreneurship and internationalisation in VET, as well as regarding the need for more flexible modular labour market oriented programs. Since at the time these were not the VET policy priorities yet, the study provides a valuable source of analyse to compare how VET policy reforms have developed in these particular aspects.

The aim of the study is to analyse the former opinions of regional public administrators on prospective VET development issues in comparison with modern VET policy developments and to draw the conclusions regarding their compliance.

Methods applied in the current paper: analysis of scientific publications, survey of public administrators. For the analysis of the surveys data - descriptive statistical analysis, cross tabulations, Mann-Whitney U test, as well as multivariate statistical analysis method – factor analysis have been applied. In the survey questionnaire for most of the questions the evaluation the scale 1 – 10 was applied to evaluate the attitude of the respondents, where 1 – not significant, 10 – very significant.

The research shows that the opinions of regional public administrators represent their foresight ability and understanding of modern labour market developments and the role of VET institutions in the process. It allows to draw the conclusion that the national VET policy developments are in compliance with the regional developments needs and the proposed roles among involved stakeholders.

## **DISREGARDING HISTORY AND CONTEXT: INNOVATION POLICY IN LATVIA POST 1990**

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**Key words:** *research and industrial policy, innovation absorption, policy transfer, policy failure.*  
**JEL code:** *C03*

Latvia has undergone a significant transformation in the last 25 years since regaining its independence, as did the other post-soviet states. The changes have been all-pervading and have also significantly affected science. While during the Soviet times Latvia was one of the more advanced Soviet republics in terms of quality of academic research, especially in pharmaceuticals, radio-electronics and physics, science had been weakened during the transition period not only due to constant lack of funding, but also lack of continuity in funding that was available. Also, while during the Soviet times a significant part of academic research performed in Latvia was linked to industry, it had to shift its efforts towards different objectives in the independent Latvia, as links with enterprises were cut. Project-based funding with specific criteria, such as quality of academic output had been driving scientific activity towards basic science and away from cooperation with enterprises.

However, when Latvia joined the EU, it became subject to EU-wide evaluations of innovation performance through Innovation Union Scoreboards. These evaluations, in turn, applied a uniform approach for all EU member states, ranking countries according to their performance using a range of indicators. The indicators included R&D expenditures, number of patents, as well as cooperation between science and industry. As a result of this, Latvian policy makers, following the indicators, devised a policy mix that targeted indicators, but did not take into account the context in which this policy mix was supposed to be implemented. In this paper we discuss how this policy mix came into being and what results did it have so far. We argue that policy mixes driven by indicators are likely to treat only symptoms, but not necessarily innovation system failures that need to be addressed, thus effectively failing to reach their ultimate objective - improvement of economic performance.



## ASSESSMENT OF STATE INFLUENCE ON THE DEVELOPMENT OF THE INNOVATION SYSTEM

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**Key words:** *state influence, innovation system*

**JEL code:** *O30*

Significant changes that occur in innovation systems are forcing many countries to make different efforts to bring existing research systems to innovative, knowledge-based economic systems. Strengthening of the state influence on the processes of interaction of participants in partnerships in innovative systems, allows to state that it is the government that is the driver of interaction of the participants of the triple helix for many countries. The purpose of the study is to assess the role of the government as the main driver of interaction between the participants in the triple helix model for its development. The study is based on the investigation of countries that belong to different types of economies: developed countries (the example of the Baltic countries), developing countries (for example, China), transition economies (for Russia as an example). The results of the research, obtained using statistical methods show that, regardless of the type of economy, the government is the main driver of innovative development. The findings provide an opportunity to take into account the role of the government in an evaluation the effectiveness of innovative systems.

## THE CURRENT STATE AND PROSPECTS OF INTERACTION BETWEEN RUSSIA AND THE BALTIC SEA REGION IN THE LNG MARKET

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**Key words:** *liquefied natural gas (LNG), export, the Baltic Sea region*

**JEL code:** *K29, I7, Q41*

The LNG market is characterized by growth and volatility, change of operating conditions. The Baltic states create gas infrastructure of LNG which is independent of the Russian Federation. Russia has not created the complex strategy of LNG production and export. The common issue for all is uncertainty of the current condition and prospects of the LNG market as well as participants interaction.

The research objective is to study the role of the Russian LNG export in the Baltic Sea region, assessment of the Russian possible prospects in the LNG market.

The research tasks are to characterize the LNG system of the Baltic sea region; the characteristic of the current state of the Russian LNG, defining Russian competitive position in the LNG market; assessment of prospects of LNG production in the territory of the Russian Federation taking into account launching the project – «the Baltic LNG plant»; prospects assessment of the Baltic LNG market development with the Russian Federation participation.

The method of comparative researches, the method of economic forecasting, the method of tariff regulation and the method of legal regulation have been used in the research.

The main results of the research include the following: defining competitive advantage of Russia in the Baltic Sea region; determining prospects of creating essential infrastructure of LNG production in the Northwest region of Russia. The investment proposal of the Russian means into LNG infrastructure of the Baltic Sea region has been proved. The following conclusions have been drawn: the Russian Federation has competitive advantages due to short delivery distances, good relationships with the majority of the Baltic states; price advantages; considerable export potential due to the possibility of developing system of the LNG mini-plants destroying monopoly of the Russian gas exporters. Thus it will allow to improve the Russian-European relationship in accordance with the possibility of implementing the Third Energy Package of the EU (2009).

The theoretical and practical importance of the research is defined by the described tendencies and prospects of the LNG Baltic market development with the Russian Federation cooperation. They can be used for forming strategic programs including implementation of the LNG projects by the Russian companies and incentivized investors. The well-founded conclusion is drawn that participation of the Russian Federation in the LNG market of the Baltic Sea region is possible, mutually beneficial and commercially reasonable.

## **THREE FORMS OF GOVERNMENT FAILURE: OVER REGULATION, WORSE PROHIBITION, OVER CONTROL**

*Maris Pukis, University of Latvia*  
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**Key words:** *government failure, over regulation, worse prohibition, over control*  
**JEL code:** *H11*

Reduction of the government failures is more and more among priorities in different countries. This is inpolitical agenda of EU as well asi n other countries. Thema is under discussion more than half of century, however effects of that phenomena – such as grey economics, bureaucratisation, fiasco of government reforms take place over the world in higher and higher degree. Attempts to increase efficiency of public administration by mechanical cuts of legislation or bureaucracy are not successful. That is reason for further research about particular government failures.

Research aim is to study impact of three government failure forms on bureaucratisation, grey economics and lost of trust on public governments. To find several factors, facilitating central and local governments failures.

Research methods are case study of dynamics of the scope of Latvian legislature and its impact of the structure of economics, policy analysis methods using groups theory and public choice theory.

Three discussed forms of government failure correspond to inadequate actions of government. There are also other forms of failure, based on unreasonable inactions. In the case of EU and Latvia substantial factors, facilitating government failure, are populist approach in policy making, belief of society on common standards as tool to achieve equity and belief of society, that total control is better than case control.

The new paradigma for legislators could be proposed: To decrease regulation by preserving only main principles of action, giving room for more flexibility of interpretation using principle of proportionality for particular circumstances.

The new paradigma for public service could be proposed: To organise execution based on increased trust to officials, increasing role individual responsibility.

Conclusions:

1. Reaction of private sector to central government and EU failures is increasing of gray economics or emigration.
2. Reaction of local governments to central government and EU failures is finding legal ways, how reduce effects of correspondig policy.
3. Reaction of bureaucrats to government failures is increasing of administrative burden and excessive dublication of controll.
4. Progress in the government failures reduction can not be achieved without supporting of public opinion.
5. Study of the factors, facilitating government failures could be substantial to avoid worse reforms.

## THE NEED TO BALANCE THE INVESTMENTS IN THE TERRITORY

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**Key words:** *marketing of territories, investments, attracting investors*

**JEL code:** *M31, R58*

The need to balance the investments in the territory has been partially researched and analyzed. The increased investment activity of the companies over the last few years poses important questions about their balancing by economic activities. The comparative advantages of the territory as a prerequisite for attracting investors can lead to the concentration of investment interests in the same sphere. This could be a problem for the future socio-economic development of the territory in several important aspects.

The purpose of this paper is to analyze the structure of investments at the level of the territorial unit and to present the risks arising from the lack of balance.

Different forms of investment imbalance can be critical to the return on investments and their cost-effectiveness. In this connection, research interest is focused on the need to balance the investments and benefits for the target audiences: businesses, consumers, residents, visitors and society as a whole.

The efforts of municipalities to create a favorable investment environment will continue to be an important incentive to attract the right investors. Coordination, synchronization and alignment of investment intentions and processes will contribute to the sustainable development of the territory and the efficient use and reproduction of resources.

## AGRICULTURAL LAND TRADE RESTRICTIONS IN EUROPE AND THE LAND MARKET SITUATION IN LATVIA

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**Key words:** *agricultural land, agricultural land market, land regulation*

**JEL code:** *Q25 P25*

The purpose of this study is to investigate the variations of trade restrictions on AL in 17 European countries and the market situation in Latvia before and after the liberalization of the AL market. Land grabbing is a topical issue globally but at the European level – especially in Eastern Europe. Recently European Parliament highlighted the need to approach the market of agricultural land (AL) beyond the boundaries set by the principles of free movement of goods, services, capital and people.

In most of the countries, there are restrictions for AL trade to non-EU natural and legal persons, while some countries prohibit AL sales to non-EU buyers. The study finds that AL sales market restrictions are more liberal in countries with higher AL price.

The impact of the current AL trade restrictions on the AL market in Latvia over the period 2012–2017 was analysed by using data on AL ownership obtained from the State Land Service of Latvia. The analysis was targeted at observed changes in the AL ownership structure, AL property size and the number and magnitude of AL purchase and sales transactions in Latvia from 2012–2016. The analysis reveals signs of AL concentration. In the year 2017, 50 of the largest AL holders – natural persons and 50 of the largest AL holders legal persons own 7% of the total area of AL in Latvia. The share of legal entities in the AL ownership structure, as well as the number of AL purchases made by legal entities has increased substantially over the period under consideration, while natural persons have sold more AL than they have bought. The Study provides an insight into the effectiveness of agricultural land market restrictions and the land market in general.

## THE IMPACT OF GLOBALIZATION ON REGIONAL DEVELOPMENT AND COMPETITIVENESS IN THE EU AND LATVIA

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**Key words:** *economic development, regional economy, competitiveness, globalisation*

**JEL code:** *R5*

The objective of this study is to conduct an analysis of regional development and competitiveness in the EU and Latvia under current conditions of economic globalization. This paper makes an attempt to evaluate a theory of regional development and regional competitiveness concept in relation to regional competitiveness of Latvia in the light of current global economic changes. The author underlines that the regional development is based on competitive advantages, which has been a subject of fundamental research by Michal Porter and that serves as a basis for the current scientific methodology to assess competitiveness of regions and countries. Such approach is also applied in regional reports and planning documents of the European Commission. The study shows two main directions in a new regional economic theory: deepening and widening of the research subject and strengthening of the research methodology. The study also underlines two approaches for regional research: an economic approach, where economic efficiency is the main determinant and a socio- economic one, which considers social aspects of economic activity. The author supports a view of many scholars to consider regional competitiveness as the capacity of a region to create and support competitive economic environment. The global competitiveness ratings based of the Global Competitiveness Report (2017) have been considered as an empirical basis of the regional competitiveness analysis and applied for the quantitative analysis of this research. The Global Competitiveness Report presents a clear evidence that the regional competitiveness on a global scale is determined by competitive, but not comparative advantages. Quantitative and qualitative analysis, i.e. literature analysis, comparative analysis, etc. conducted in this study reflect that competitiveness, under global economic conditions, is determined by the development stage of each region – competitiveness of a less developed region is more dependent on production factors, while competitiveness of a higher developed regions is based on innovation. Furthermore, the competitiveness, which is based on productivity, efficiency and profitability presents capacity of a state or a region to produce export goods and services under of a free market economy conditions, which successfully compete on the international market and is able to develop further during the transition to the next development stage. The results of this research could be useful for economic policy makers to determine the role of institutions, policy instruments and factors, which are necessary for attaining higher productivity, efficiency and profitability to move to a higher stage of economic development.

## INTELLECTUAL URBAN ENVIRONMENT

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**Key words:** *intellectual, intelligence, smart, city, culture*  
**JEL code:** *R11*

The concept of Intellectual City as a mean to enhance the life quality of inhabitants is gaining increasing importance in the agendas of policy makers.

At the global level, city governance increasingly feels need for a "new thinking", which is linked to decisions impact in long-term and the cooperation effectiveness between cities.

Consequently, an important precondition for such perceptions is the availability of cooperation opportunities and a balanced distribution of economic resources, that can be implemented in the European Union and it's partner countries through a variety of funding frameworks for available programs and projects.

It contributes to the development and competitiveness of the regions and the state by improving the quality of urban components and thus creating positive synergies between national territorial units.

Using such positive synergies strengthens existing urban components or creates new components, which improve the quality of the processes in the existing urban environment by developing the economic potential of cities and territories. The governance of the intellectual city is set by different models of city management.

Article also explores the expansion of intellectual initiatives, using an empirical study aimed at investigating the ratio of circles covered by a city's best practices. Total potential of intellectual initiatives and the understanding of the various economic, urban, creative, demographic and geographical variables might influence next generation city planning approach to create more intellectual environment factors in city development. Conclusion identifies, that the evolution patterns of an intellectual city highly depends on local context factors.

Cities and territories need to develop and become competitive. Cities with its environment compete with each other, contesting for resources. Some key factors influencing intellectual city environment: cooperation opportunities, quality of environment, creativity, mutual positive synergy and others. European cities are forced to adapt to change. The competitive intellectual potential, which development can be funded by five types of capital, is discussed in the article.

## NUCLEAR ENERGY AND RENEWABLE ENERGY IN URBAN ENVIRONMENT

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**Key words:** *renewable, nuclear, energy, safety*  
**JEL code:** *R11*

This scientific article explores the elements and characteristics, which exemplify the future potential of the regional innovation regarding renewable energy in the territory of Latvia.

In this paper, the authors, using the specialized program “ARGOS”, have made predictions about the consequences of a nuclear accident, assuming that there is a leak of radioactive substances from one of nuclear power plants close to Latvia, located either in Sweden, Finland or Russia. The economic analysis of proximity to Latvia nuclear accident management resource and available services was performed and conclusions are presented in the article.

The authors analyze the macroeconomic indicators of Latvia, future perspectives of the energy sector of Latvia, and explain the public opinion on nuclear energy and radiation safety in Latvia, using a survey, that provides an assessment and synthesis of the regional renewable energy system`s paradigm. The aim of the article is to draw attention to a number of areas, in which theoretical, empirical and politically relevant issues still exist in Latvia on managing nucleus incidents, their impact and expected consequences. The scientific paper will cover the impact of nuclear energy and renewable energy resources on the urban environment.

The impact of renewable energy resources on the urban system and its development policy are considered. The issue of further development, growth and historical identity of a regional urban environment is raised, taking into account global renewable energy policies and transnational experiences.

This paper examines the results of the study, using a new set of data on the rigor and implementation of the environmental and renewable energy policies "Summary of the advantages, disadvantages and development perspectives regarding renewable energy in Latvia" to highlight future growth opportunities for the territorial and urban environment.