

**XXI INTERNATIONAL MAY CONFERENCE ON
STRATEGIC MANAGEMENT**

B O O K O F A B S T R A C T S

Bor, May 2025

Scientific Board (SB) of the Conference:

Dorđe Nikolić, University of Belgrade, Technical Faculty in Bor, **president of the SB.**

Marija Panić, University of Belgrade, Technical Faculty in Bor, **vice-president of the SB.**

Members of SB:

Berto Usman, University of Bengkulu, Indonesia;

Daniel Pavlov, “Angel Kanchev” University of Ruse, Bulgaria;

Darko Stefanović, University of Novi Sad, Serbia;

Isidora Milošević, University of Belgrade, Serbia.

Ivan Mihajlović, University of Belgrade, Serbia;

Jacques Bazen, Saxion University of Applied Sciences, Germany;

Jovan Filipović, University in Belgrade, Serbia;

Ladislav Mura, University of Economics in Bratislava, Slovakia;

Loo-See Beh, IMU University, School of Business and Technology, Kuala Lumpur, Malaysia;

Luminita Parv, Transilvania University of Brasov, Romania;

Magdalena Radulescu, National University of Science and Technology Politehnica Bucharest, Romania.

Marek Szarucki, Krakow University of Economics, Poland;

Mario Carrassi, University of Bari Aldo Moro, Italy;

Michael Huth, Fulda University of Applied Sciences, Germany;

Milovan Vuković, University of Belgrade, Serbia;

Musin Halis, Kocaeli University, Turkey;

Pal Michelberger, Obuda University, Hungary;

Petar Mitić, Institute of Economic Science, Serbia;

Petra Grošelj, University of Ljubljana, Slovenia;

Rita Remeikienė, Mykolas Romeris University, Lithuania;

Simon Gao, Edinburg Napier University, United Kingdom;

Slobodan Aćimović, University of Belgrade, Serbia;

Slobodan Radosavljević, RB Kolubara, Serbia;

Snežana Urošević, University of Belgrade, Serbia;

Tomasz Ingram, University of Economics in Katowice, Poland;

Vasilika Kume, Tirana Business University College, Albania;

Vesna Spasojević Brkić, University of Belgrade, Serbia;

Željko Stević, University of East Sarajevo, Bosnia and Herzegovina;

Organizing Board of the Conference:

Aleksandra Fedajev, president of the Organizational Committee,
Danijela Voza, vice president of the Organizational Committee,
Milica Veličković, member,
Marija Panić, member,
Sanela Arsić, member,
Milena Gajić, member,
Adrijana Jevtić, member,
Aleksandra Radić, member,
Sandra Vasković, member.

Technical Editor: Milica Veličković, Technical Faculty in Bor

CIP - Каталогизacija у публикацији
Народна библиотека Србије, Београд

005.51(048)(0.034.2)
338.1:001.895(048)(0.034.2)
330.34(100)(048)(0.034.2)

INTERNATIONAL May Conference on Strategic Management (21 ; 2025 ; Bor)

Book of abstracts [Elektronski izvor] / XXI International may conference on strategic management – [IMCSM25], Bor, May 2025 ; [editor-in-chief Đorđe Nikolić]. - Bor : University of Belgrade, Technical Faculty, Management Department, 2025 (Niš : Grafika Galeb). - 1 USB fleš memorija ; 9 x 6 cm : tekst, slika. - (Edition IMCSM Proceedings ; vol. 21, issue (1) (2025), ISSN 2620-0597)

Sistemska zahteva: Nisu navedeni. - Nasl. sa naslovne strane dokumenta. - Tiraž 100.

ISBN 978-86-6305-159-1

a) Стратешки менаџмент -- Апстракти b) Привреда -- Иновације -- Апстракти v)
Економски развој -- Међународни аспект -- Апстракти

COBISS.SR-ID 16958132

Gold Donor



塞尔维亚紫金矿业
SERBIA ZIJIN MINING

Gold Donor



ZiJin
SERBIA ZIJIN COPPER DOO BOR

SADRŽAJ

THE IMPACT OF EXOGENOUS SHOCKS ON CAPITAL MARKETS

Bogdan Dima, Ștefana Maria Dima 1

STRATEGIC DECISION-MAKING: INVESTING IN R&D OR ACQUIRING INTANGIBLE ASSETS? AN EMPIRICAL ANALYSIS OF PUBLICLY TRADED COMPANIES

Jozef Glova 2

E-COMMERCE IN THE DIGITAL AGE: EMPIRICAL EVIDENCE FROM SERBIA

Sanela Arsić 3

MANAGEMENT OF LAST-MILE DELIVERY THROUGH THE SELECTION OF LOCATIONS FOR PARCEL LOCKERS

Željko Stević, Eldina Huskanović 4

STRATEGIC TRANSFORMATION IN E-COMMERCE: SOCIAL COMMERCE FOR SUSTAINABLE INNOVATION

Grisilda Miftari, Luis Miguel López-Bonilla, Jesus Manuel López-Bonilla..... 5

INNOVATION MODELING TRAFFIC AND TRANSPORT

Nataša Pejić 6

APPLICATION OF INNOVATIVE SOLUTIONS IN LOCAL GOVERNMENT IN CENTRAL EUROPEAN COUNTRY

Kamil Turčan, Ivana Butoracová Šindleryová 7

A COMPARISON OF DIFFERENT LEADERSHIP APPROACHES IN THE HOTELS INDUSTRY AND THEIR IMPACT ON EMPLOYEE PERFORMANCE

Jovan Momirski 8

RANKING OF THE MOST IMPORTANT GROUPS OF CRITERIA FOR THE SELECTION OF THE UNDERGROUND MINING METHOD FOR COAL DEPOSITS

Mohsen Jamshidi, Dejan Bogdanović, Hesam Dehghani 9

THE BUREAUCRATIC GRIP OF EUROPEAN UNIVERSITY ALLIANCES

Edita Lenkauskaite, Caio Cesar Souza 10

LANGUAGE LEARNING MOTIVATION AS A REFLECTION OF PERSONAL POTENTIAL: THE ROLE OF EU ATTITUDES, ACTIVE CITIZENSHIP, EMPLOYABILITY, AND INFORMEDNESS

Tamara Verežan, Zrinka Fišer, Nataša Papić-Blagojević, Ivana Jošanov-Vrgović 11

THE IMPACT OF FINTECH INNOVATION AND BANKING EFFICIENCY ON CUSTOMER LOYALTY: INVESTIGATING THE MEDIATING ROLE OF CUSTOMER TRUST

Sadiya Firdose R Z, Laxmana Rao Goranta 12

SUSTAINABILITY PROBLEM SOLVING IN THE MINING INDUSTRY: RISK ASSESSMENT APPROACH

Snežana Sando 13

STRATEGIC STRUCTURING OF HUMAN RESOURCE MANAGEMENT THROUGH THE INTEGRATION OF INNOVATIONS

Miloš Dimitrijević, Miloš Nikolić 14

ENERGY TRANSITION, ENERGY STRATEGIES, GLOBAL ENERGY SECURITY AND POTENTIAL RISKS

Slobodan Radosavljević 15

THE RELATIONSHIP BETWEEN BURNOUT AND MENTAL WELL-BEING OF OLDER PEOPLE

Rita Remeikienė, Rusnė Katerina Jančaitytė, Beatričė Rūškienė 16

THE MIXED IMPACT OF ‘SHADOW ECONOMY’ ON ECONOMIC DEVELOPMENT

Ştefana Maria Dima, Bogdan Dima, Ciprian Preda 17

WHOLE-BODY VIBRATION MEASUREMENT AT THE MINING MACHINERY OPERATOR’S WORKPLACE IN SMES

Vesna Spasojević Brkić, Mirjana Misita, Ivan Mihajlović, Katarina Dimić Misić, Martina Perišić, Nemanja Janev, Aleksandar Brkić 18

BREAKING BARRIERS: THE IMPACT OF FEMALE BOARD MEMBERS ON PHARMACEUTICAL FIRM INNOVATION, PERFORMANCE AND RISK-TAKING

Laura Raisa Miloş, Benaissa Chidmi, Marius Cristian Miloş 19

THE ROLE OF DIGITIZATION IN SHAPING THE WORKING FUTURE OF OLDER EMPLOYEES IN SERBIA

Anđelka Stojanović, Milica Veličković, Sanela Arsić 20

INTEGRATED PLANNING OF LOGISTICS PROCESSES IN THE FIELD OF WAREHOUSING WITH SIMULATION SUPPORT

Miriam Pekarcikova, Peter Trebuna, Jana Kronova, Marek Kliment 21

INDUSTRY 5.0 IN THE NEW GLOBAL CIRCUMSTANCES OF MINING WITH RISK MAPPING

Slobodan Radosavljević 22

RELATION OF QMS VISION AND STRATEGY AND BALANCED SCORECARDS ACHIEVEMENTS OF HEIs IN INDUSTRY 5.0 ENVIRONMENT

Maja Glogovac 23

INTEGRATING ENVIRONMENTAL MANAGEMENT INTO SUPPLY CHAIN STRATEGIES Stefan Ugrinov , Dragan Čočkalo, Mihalj Bakator, Mila Kavalić, Verica Gluvakov	24
HAPS BETWEEN KESSLER SYNDROME, BENEFITS FOR HUMANITY, AND TECHNOLOGICAL CHALLENGES Damir Ilić, Vladimir Tomašević, Tatjana Ilić-Kosanović	25
A COMPARATIVE STUDY ON STUDENT INTENTIONS IN BULGARIA, ROMANIA AND SERBIA TO START FAMILY BUSINESSES Daniel Pavlov, Silvia Puiu, Milica Veličković	26
CONFLICT MANAGEMENT STYLES IN PROJECT-BASED ORGANISATIONS: RELATION TO DEMOGRAPHIC FACTORS Aleksandra Radić , Nenad Milijić	27
EVALUATION OF FACTORS INFLUENCING THE USAGE OF ERP SYSTEMS: FINDINGS FROM PLS-SEM AND FSQCA Aleksandra Radić, Sanela Arsić, Đorđe Nikolić, Samo Bobek, Simona Sternad Zabukovšek	28
HIGH-ALTITUDE PLATFORM SYSTEMS: PERSPECTIVES ON CURRENT AND FUTURE TECHNOLOGICAL DEVELOPMENTS Damir Ilić, Vladimir Tomašević, Tatjana Ilić-Kosanović	29
THE ROLE OF MANAGERS IN OPTIMIZING BUSINESS PROCESSES IN THE IT INDUSTRY Zorana Janković, Snežana Urošević	30
A COMPARATIVE ANALYSIS OF MCDM METHODS BASED ON PAIRWISE COMPARISON: AHP, BWM AND FUCOM Petra Grošelj, Gregor Dolinar	31
ENCRYPTION AND INFORMATION Halima Onalla Ali, Sakina Almakhzoum, Dušan Regodic, Velimir Dedić, Maja Andjelkovic	32
APPLYING DIFFERENTIATION IN BUSINESS ENGLISH EFL CLASSROOMS: A STRATEGIC APPROACH TO ENHANCING LANGUAGE ACQUISITION AND PROFESSIONAL READINESS Slavica Stevanović, Sandra Vasković	33
STRENGTHENING STRATEGIC AND FINANCIAL STABILITY IN SCIENTIFIC INSTITUTES WITH IMPLEMENTATION OF STRATEGIC RISK MANAGEMENT Marija Jonović, Lidiya Barjaktarović	34
EVALUATING TRANSATLANTIC CRUISE SERVICE QUALITY: AN INTEGRATED SERVQUAL AND IPA APPROACH Predrag Đorđević, Anđelka Stojanović, Ivica Nikolić	35

SustainAbility: WHEN CAPITAL LETTER MATTERS

Mario Carrassi, Anna Argese, Teresa D'Andrea, Tomasz Ingram 36

TRENDS AND DETERMINANTS OF STUDENTS' ENTREPRENEURSHIP INTEREST AND CAREER ASPIRATIONS ABROAD: A COMPARATIVE STUDY OF ALBANIA AND BULGARIA

Fatma Jaupi, Anisa Kume, Daniel Pavlov 37

COSMETIC BRANDS PERCEPTION BY GENERATION Z THROUGH THE PRISM OF CONSCIOUS CONSUMPTION

Marina Sheresheva, Daria Golub, Daniel Pavlov 38

REFRAMING PERFORMANCE APPRAISAL THROUGH EMPLOYEE PERCEPTIONS: INSIGHTS FROM THE ALBANIAN BANKING SECTOR

Sllavka Kurti, Katerina Vasili, Vasilika Kume 39

IDENTIFICATION OF FACTORS FOR ANALYSIS AND EVALUATION OF HEIS PERFORMANCE

Nedeljka Živković, Maja Glogovac, Isidora Milošević 40

ANALYSIS OF INNOVATION IN BRICS COUNTRIES

Ivica Nikolić, Lidija Krstić, Anđelka Stojanović, Denis Stojkanović 41

DIGITALIZATION THROUGH E-INVOICES IN MICRO AND SMALL ENTERPRISES – CROATIAN EXPERIENCES

Ivana Miklošević 42

REVEALING HIDDEN LABOUR MARKET INSIGHTS: DEPLOYING A MACHINE LEARNING SOLUTION TO EXPLAIN SKILLS GAPS

Valters Kaže 43

CREATING CUSTOMER VALUE IN PRIVATE MEDICAL CLINICS BASED ON AN OMNICHANNEL INTERACTION SYSTEM

Marina Sheresheva, Ekaterina Yudina¹, Daniel Pavlov 44

DYNAMIC TRAFFIC LANES STRATEGY MANAGEMENT IN SMART CITY

Amit Vujic, Vladimir Tomasevic, Vladica Ristic, Marija Maksin 45

HOW NEWCOMERS INFLUENCE GROUP MICROCLIMATE?

Rita Remeikienė, Beatričė Rūškienė 46

ASPECTS OF LEGAL REGULATION OF CO₂ EMISSIONS INTO THE ATMOSPHERE: A EUROPEAN UNION PERSPECTIVE

Evaldas Raistenskis, Ligita Gasparėnienė, Rita Remeikienė 47

COMMUNICATION SATISFACTION AS A PREDICTOR OF ORGANIZATIONAL COMMITMENT

Danijela Voza, Zorana Janković, Milovan Vuković 48

AUTONOMOUS SYSTEMS ON THE BATTLEFIELD: THE MILITARY POTENTIAL AND RISKS OF SELF-DRIVING VEHICLES

Péter Szikora 49

PRICE AND VOLUME DYNAMICS: A CORRELATION ANALYSIS OF MAJOR OIL COMPANIES

Adrijana Jevtić Tomić, Dejan Riznić 50

STRATEGIC MANAGEMENT AND CAPITAL BUDGETING

Jelena Ružić, Ivana Janković, Sanela Golubović Corcione 51

ANALYSIS OF TRAINING NEEDS OF PROFESSIONAL DEVELOPMENT OF SENIOR CIVIL SERVANTS IN THE REPUBLIC OF SERBIA

Jelena Ruso, Ana Rakić, Sara Dimitrijević, Isidora Milošević 52

ASSESSMENT OF THE CRIMINOGENIC SITUATION IN THE BALTIC STATES: MULTI-CRITERIA MODEL

Box Marcus, Lin Xiang, Gasparėnienė Ligita, Remeikienė Rita 53

ECOLOGICAL DEBT RISK – HAVE WE ALREADY SPENT OUR RESOURCES FOR 2025?

Marija Panić 54

DO KNOWLEDGE MANAGEMENT AND GREEN INNOVATION CONTRIBUTE TO THE GREEN TRANSITION IN SERBIAN ENTERPRISES?

Sanela Golubović Corcione, Milica Veličković, Aleksandra Fedajev, Jelena Ružić 55

ENVIRONMENTAL ASPECTS IN THE CASE-LAW OF THE COURT OF JUSTICE OF THE EUROPEAN UNION UNDER ARTICLE 260(2) TFEU

Deimilė Prapiestytė 56

THE SIGNIFICANCE OF THE COURT OF JUSTICE OF THE EUROPEAN UNION JUDGMENT OF 30 APRIL 2024 IN CASE C-670/22 (“ENCROCHAT”) FOR THE ADMISSIBILITY OF EVIDENCE IN CRIMINAL PROCEEDINGS

Remigijus Merkevičius 57

IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE IN PROJECT-ORIENTED ORGANIZATIONS: A COMPARATIVE ANALYSIS OF SERBIA AND THE REGION

Jelena Ružić, Sanela Golubović Corcione, Ivana Jovanović 58

THE IMPACT OF THE CIRCULAR ECONOMY ON AN INDIVIDUAL’S QUALITY OF LIFE: A EUROPEAN UNION PERSPECTIVE

Ligita Gasparėnienė, Rita Remeikienė 59

THE CONCEPT OF ELASTICITY IN GEOMETRIC ROUTING MODEL OF THE FREIGHT MARKET IN PORT TRANSPORT AND TECHNOLOGICAL SYSTEM

Vyacheslav Zadorozhniy, Maksim Kolesnikov,
Victor Bogachev, Maksim Bakalov, Taras Bogachev 60

IMPLEMENTATION OF THE NEW INFORMATION SYSTEM FOR FINANCIAL MANAGEMENT (ERP SYSTEM) AT ŽRS A.D. DOBOJ

Siniša Urumović, Nikola Simić 61

IMMERSIVE SHOPPING EXPERIENCES: ASSESSING THE INFLUENCE OF AUGMENTED REALITY ON CONSUMER VALUE AND PURCHASE INTENTION

Rimante Hopeniene, Ugnė Kuzavaite 62

EMPOWERING CONSUMERS IN THE CIRCULAR ECONOMY: STRATEGIES FOR SUSTAINABLE AGRI-FOOD SYSTEMS IN THE REPUBLIC OF NORTH MACEDONIA

Katerina Bojkovska 63

ESG REPORTING IMPLICATIONS FOR ROAD CARRIERS' FINANCIAL OUTCOMES

Desislava Yosifova, Magdalena Petrova-Kirova 64

SELF-RATED HEALTH AND SICKNESS ABSENCE IN THE CONTEXT OF THE WORK ENVIRONMENT

Katarzyna Miszczyńska 65

WOMEN'S RURAL ENTREPRENEURSHIP – AN INTEGRATED APPROACH TO THE GENDER DIMENSION

Marina Nedeljković 66

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON SUPPLY CHAIN MANAGEMENT IN MOROCCO

Didi Abdi, Aziz Hamoui 67

THE IMPACT OF PROCESS AUTOMATION ON MANAGEMENT CONTROL AND THE PERFORMANCE OF TOURISM COMPANIES: A BIBLIOMETRIC ANALYSIS

Sissah Safae, Hmioui Aziz 68

VIOLENCE AGAINST WOMEN WITHIN THE CONTEXT OF DOMESTIC ABUSE IN BALTIC STATES AND ITS IMPACT ON LABOUR MARKET

Ligita Gaspareniene, Ilona Michailovič, Rita Remeikienė 69

ALIGNING DIGITAL TRANSFORMATION WITH STRATEGIC MANAGEMENT IN LOGISTICS

Diana Daskevici, Aurelija Burinskiene 70

OVERTOURISM AND SUSTAINABLE TOURISM

Lachi Cristina 71

ENTREPRENEURIAL STUDENT LEADERS' PERSPECTIVE: THE ROLE OF ENTREPRENEURSHIP INITIATIVES ON THE ENTREPRENEURIAL INTENTION OF UNIVERSITY STUDENTS	
Gail Motlhaudi	72
EFFECTIVE ELIMINATION OF NETWORK FAILURES IN BROADCAST SYSTEM	
Jovan Zlatanovic, Ivana Milosevic, Mirko Milosevic	73
GOVERNANCE QUALITY AND MACROECONOMIC DETERMINANTS AS CATALYSTS FOR ENERGY INNOVATION IN INDONESIA: A THEMATIC ANALYSIS	
Maria Marlein Warong, Ahmed Waqas	74
MADE IN ALBANIA FOR THE WORLD: A STUDY OF EXPORT STRATEGIES AND MARKET CHALLENGES	
Ariola Harizi, Denada Liça, Silvana Gashi	75
INNOVATIVE APPROACHE TO FOREST MANAGEMENT IN THE CONTEXT OF THE SUSTAINABLE DEVELOPMENT GOALS	
Ljiljana Brašanac-Bosanac, Aleksandar Valjarević, Uroš Durlević, Milorad Šolević, Tatjana Ćirković-Mitrović	76
APPLICATION OF ENGINEERING MANAGEMENT IN THE OPTIMIZATION OF THE PRODUCTION PROCESSES IN THE BAKERY INDUSTRY PGP KOLAŠIN	
Milica Utvić, Bojan Stojčetočić, Aleksandar Skulić, Aleksandra Kokić Arsić, Igor Lavrnić	77
ALTERNATIVE INVESTMENTS AS A CAPITAL MANAGEMENT TOOL	
Orlin Kolev	78
THE USE OF SMART CONTRACTS TO PRESERVE THE INTEGRITY OF COLD SUPPLY CHAINS	
Dimitrije Soleša, Radovan Vladisavljević, Svetlana Marković	79
THE IMPACT OF ECONOMIC VARIABLES ON ATTRACTING FOREIGN DIRECT INVESTMENT IN LIBYA: AN ANALYTICAL STUDY OF THE PERIODS "1997–2010, 2011–2017, AND 2018–2024"	
Amel Kamel Abdulmalik	80
HARMONIZING THE TRIPLE BOTTOM LINE: TISM ANALYSIS OF FACTORS AND BARRIERS TO SDGS ACHIEVEMENT	
Sushma Sharma, Anju Rohilla, Shubhangi Tyagi	81
DESIGNING THE SKANDIA NAVIGATOR TO MANAGE INTANGIBLE CAPITAL: WHAT RELEVANCE FOR MOROCCAN INDUSTRIAL COMPANIES?	
Issam Bahnini, Sanae Benjeloun	82
COMPARATIVE ANALYSIS OF RIVER SEDIMENT ON TOTAL SULFUR CONTENT	
Marina Mišić, Sanela Vasiljević, Andrija Ćirić, Vesna Krstić	83

FORECASTING THE GLOBAL PRICE INDEX OF COMMODITIES WITH A LARGE NUMBER OF PREDICTORS

Krzysztof Drachal, Joanna Jędrzejewska 84

DIGITAL READINESS LEVEL (DLR) AND TECHNOLOGY ORGANIZATION ENVIRONMENT (TOE) METHODOLOGY IMPLEMENTATION ON SME-S INDUSTRY 4.0 IMPLEMENTATION

Aleksandra Kovačević, Aleksandar Jankulović 85

OPTIMIZATION OF SALES CHANNELS THROUGH AI-DRIVEN CRM: SMART DATA ANALYSIS FOR BETTER RETAIL MANAGEMENT

Ankica Borota-Tišma , Draga Tišma 86

INTELLIGENT TRANSPORT SYSTEMS AS A TOOL FOR SPEEDING PREVENTION

Veselin Grozdanov 87

EXAMINING USE OF UNCONDITIONAL CASH TRANSFERS TO ENCOURAGE ENTREPRENEURSHIP EMANCIPATION: A SYSTEMATIC LITERATURE AND RESEARCH AGENDA

Kenneth Jerry Onyango, Nathaniel Boso, Hellen Otieno 88

THE MODERATING EFFECT OF STAKEHOLDERS' INFLUENCE ON THE RELATIONSHIP BETWEEN SUCCESSION MANAGEMENT AND HUMAN RESOURCE OUTCOMES IN PRIVATE UNIVERSITIES, KENYA

Hilderlith Amimo-Ogutu, Fred Walumbwa, Vincent Ogutu, Simon Ndiritu 89

SOCIAL RESOURCE ORCHESTRATION AND GROWTH OF SMALL AND MEDIUM ENTERPRISES: A SYSTEMATIC REVIEW

Loise Oburu, Joseph Onyango, Ann Ndirangu 90

WHAT YOU HAVE IS WHAT YOU GET? AUTHENTIC ENVIRONMENTAL, SOCIAL AND GOVERNANCE INFORMATION TO SCALE GREEN INNOVATIONS IN RESPONSIBLE SUPPLY CHAINS IN A GLOBAL SOUTH ECONOMY

João Pedro Passos, Lucas Sampaio Motta, Selma Oliveira 91

BRIDGING THE ESG AWARENESS GAP: CHALLENGES AND OPPORTUNITIES FOR SMEs IN NORTH MACEDONIA

Vladimir Petkovski, Irina Piperkova, Elizabeta Djambaska, Aleksandra Lozanoska 92

BLENDED, BRIEF, BUT IMPACTFUL? EVALUATING THE EFFECTIVENESS OF ERASMUS+ BLENDED INTENSIVE PROGRAMS

Jacob Cornelis Bazen, Florin Sebastian Duma 93

THE PRINCIPLE OF SUSTAINABLE DEVELOPMENT IN POLISH TAX SYSTEM

Patryk Kowalski 94

DETERMINANTS OF CO₂ EMISSIONS IN CENTRAL AND EASTERN EUROPE: AN EMPIRICAL PANEL DATA ANALYSIS	
Aleksandra Fedajev, Petar Mitić, Aleksandar Zdravković, Gabrijela Popović	95
THE ROLE AND SIGNIFICANCE OF SMART SOLUTIONS IN THE DEVELOPMENT OF REGIONS: THE PERSPECTIVE OF LJUBLJANA AS A SMART CITY	
Sara Tešanović, Marko Mišić	97
THE IMPACT OF INTERNATIONAL ORGANIZATIONS AND INSTITUTIONS ON DEVELOPING COUNTRIES	
Livia Dombrovski	98
EVALUATING RISK MANAGEMENT FRAMEWORKS IN MEETING REGULATORY STANDARDS: A CASE STUDY OF INFRASTRUCTURE PROJECTS IN NIGERIA	
Adeniyi Kolawole Ojo, Ugwu Kelechi Enyinna, Nwokedi Theophilus Chinonyerem	99
MACHINE LEARNING AND DEEP LEARNING BASED METHODS AS SOLUTION APPROACH FOR JOB ASSIGNMENT PROBLEM	
Batuhan Serdar, Abdurrahman Yunus Öztürk, Damla Can, Ali Şengün, Mukadder Manav	100
TEAM FORMATION METHODS COMPARED: BELBIN'S ROLES AND CHATGPT'S SUGGESTIONS	
Marijana Koceva, Jamina Žnidaršič, Borut Werber	101
ECOTOXICOLOGICAL EFFECTS OF MICROPLASTICS IN FOOD CHAINS (EISENIA FETIDA AND PELOPHYLLAX KL. ESCULENTUS)	
Ivana Milanović, Rastko Ajtić, Filip Popović, Glorija Ćirković, Tanja Trakić	102
RISKS IN FAMILY BUSINESSES IN BULGARIA – THE CASE OF STAPKA LTD	
Elina Syungerova	103
RISK MANAGEMENT THROUGH SAFETY STANDARDS FOR TOURISM EVENTS IN BULGARIA: THE CASE OF VIDIN DISTRICT	
Eleonora Marinova	104
EXPERT FORECASTING OF TECHNOLOGIES: THE DELFI METHOD	
Lidija Krstić	105
STRATEGIC CRISIS MANAGEMENT IN 2025: BUILDING ECONOMIC RESILIENCE IN A VOLATILE WORLD	
Maria-Emilia Dinculeană	106
DIGITAL PLATFORM FOR SHARING RESOURCES ORIENTED TOWARDS THE DEVELOPMENT OF INNOVATION IN DEEPTech	
Lucas Sampaio Motta, João Pedro Passos, Selma Oliveira	107

**A SYSTEMATIC REVIEW OF RESEARCH ON DIGITAL PLATFORMS - DEEPTech
INNOVATION: BROADENING OUR HORIZONS**

Lucas Sampaio Motta, João Pedro Passos, Selma Oliveira 108

**EXPLORING THE ROLE OF ETHICAL LEADERSHIP IN EMOTIONAL LABOR: A CROSS-
CULTURAL PERSPECTIVE WITH A FOCUS ON INDIAN WORKPLACES**

Saloni Kumari, Jagrati Asija 109

THE IMPACT OF EXOGENOUS SHOCKS ON CAPITAL MARKETS

Bogdan Dima¹ *, Ștefana Maria Dima²

¹ *West University of Timișoara, Faculty of Economics and Business Administration, Romania*

² *West University of Timișoara, Institute of Advanced Environmental Research, Romania*

Abstract: Due to the COVID-19 pandemic, the Russia-Ukraine war, the energy crisis and various geopolitical tensions, the financial and economic systems face heightened risks. The present paper examines the possibilities of a High Dimensional Latent Factor Stochastic Volatility Model to describe the capital markets return volatilities. Thus, we apply such a model to six major international capital markets (DAX, FTSE 1000, CAC 40, FTSE MIB, VIX and BITCOIN/ USD exchange rate). The analysis period is between 2020 and 2023. Such a period is rich in out-of-the-market induced perturbations.

We advance the hypothesis that, in conditions of increased uncertainty, following periods of high volatility, investors will register greater risk aversion. Consequently, they will try to ‘anchor’ at least a fraction of their traded portfolios in ‘risk-free’ assets. To empirically verify this, we involve a supplementary set of data for the same analysis period related to the evolutions of the US Treasury bonds. The results suggest that the impact exercised by higher volatility periods on ‘risk-free’ asset returns occurs in the short run. Overall, we find that a multivariate SV model with latent factors can depict the volatility of some international capital markets.

Keywords: exogenous shocks, capital markets, uncertainty, risk aversion, High Dimensional Latent Factor Stochastic Volatility Model

* *Corresponding author: bogdan.dima@e-uvt.ro*

Bogdan Dima, ORCID: 0000-0002-0820-9904

Ștefana Maria Dima, ORCID: 0000-0003-0452-7216

STRATEGIC DECISION-MAKING: INVESTING IN R&D OR ACQUIRING INTANGIBLE ASSETS? AN EMPIRICAL ANALYSIS OF PUBLICLY TRADED COMPANIES

Jozef Glova *

Technical university of Košice, Faculty of Economics, Slovakia

Abstract: This study investigates the role of intangible investment, specifically research and development (R&D) expenditures and intangible fixed assets (IFA), in explaining the market capitalisation of publicly traded European firms. Drawing on a panel dataset comprising 250 publicly-traded European companies over the period 2010–2019, the analysis employs advanced econometric techniques, including the Generalized Method of Moments (GMM) and fixed effects panel regression, to assess the value relevance of intangible assets, proxied by Tobin's Q. The empirical findings reveal a strong and statistically significant positive relationship between R&D intensity and market valuation, supporting the hypothesis that capital markets reward firms engaging in internal innovation. In contrast, the effect of intangible fixed assets on firm value appears more nuanced: GMM estimates indicate a modestly positive association, while fixed effects estimators suggest a negative relationship. Overall, the results highlight that increased investment in R&D contributes significantly to higher market capitalisation, underscoring the strategic importance of internally generated intangible capital. These findings carry practical implications for corporate financial management, particularly in innovation-intensive sectors, and advance the discourse on the valuation of intangibles in contemporary capital markets.

Keywords: R&D expenditure; Intangible Fixed Assets; Market Capitalization; European Publicly-Traded Companies; Firm Valuation.

* Corresponding author: jozef.glova@tuke.sk

Jozef Glova, ORCID: 0000-0001-5972-7771

E-COMMERCE IN THE DIGITAL AGE: EMPIRICAL EVIDENCE FROM SERBIA

Sanela Arsić*

University of Belgrade, Technical Faculty in Bor, Serbia

Abstract: Electronic commerce or e-commerce has become integral to the contemporary business landscape. Organizations widely adopt e-commerce technologies to enhance efficiency and gain a competitive edge. As one of the crucial driver of economic growth, adopting e-commerce is essential for developing countries to promote their prosperity and contribute to sustainable economic development. The factors influencing e-commerce are diverse, and understanding them is vital for businesses aiming to thrive in this competitive digital landscape. Therefore, this study aims to identify the factors that impact consumers' online repurchase intentions. Employing quantitative methods, including partial least squares-structural equation modeling (PLS-SEM) and fuzzy set qualitative comparative analysis (fsQCA), the research analyses survey data from Serbia. This study contributes to the literature by offering new insights into the relationship among the predictors of online shopping behavior and advancing the theoretical ground of how site quality, customer satisfaction, trust and commitment combine to explain high repurchase intentions better. The findings provide deeper insights into priority areas for strategic improvements in adopting e-commerce services and pave the way for future research.

Keywords: E-commerce, repurchase intention, site quality, customer satisfaction, customer trust, customer commitment, PLS-SEM, fsQCA

* Corresponding author: saarsic@fbor.bg.ac.rs

Sanela Arsić, ORCID: 0000-0002-1957-566X

MANAGEMENT OF LAST-MILE DELIVERY THROUGH THE SELECTION OF LOCATIONS FOR PARCEL LOCKERS

Željko Stević *, Eldina Huskanović

*University of East Sarajevo, Faculty of Transport and Traffic Engineering, Bosnia and
Herzegovina*

Abstract: When observing e-commerce, it can be concluded that parcel lockers are an innovative solution to the everyday challenges faced in logistics. The fast pace of life and traffic congestion make parcel delivery difficult and expensive, while parcel lockers offer a more efficient way to receive and send packages 24/7. Key advantages include reduced delivery costs, environmental benefits (less CO2 emissions), security of packages and greater availability to users. Parcel lockers are making access easier, while couriers can optimize their delivery routes. In this research, using the FUCOM (Full Consistency Method) and MARCOS (Measurement Alternatives and Ranking According to the Compromise Solution) methods, a model for selecting optimal locations for installing parcel lockers of the X-Express company for the Vitez distribution center was developed. The first step is data collection, while multi-criteria decision-making methods enable detailed analysis and ranking of potential locations. The introduction of parcel lockers contributes to the modernization of logistics, reduces administrative tasks and supports environmental sustainability.

Keywords: Parcel lockers, location, FUCOM, MARCOS.

* Corresponding author: zeljko.stevic@sf.ues.rs.ba

Željko Stević, ORCID: 0000-0003-4452-5768

Eldina Huskanović, ORCID: 0009-0007-7441-7254

STRATEGIC TRANSFORMATION IN E-COMMERCE: SOCIAL COMMERCE FOR SUSTAINABLE INNOVATION

Grisilda Miftari *, Luis Miguel López-Bonilla, Jesus Manuel López-Bonilla

University of Sevilla, Faculty of Economics and Business, Spain

Abstract: The digital revolution has reshaped the e-commerce landscape, with social commerce emerging as a transformative force driving Business Model Innovation (BMI). This study explores how social commerce facilitates strategic transformation by integrating sustainability and innovation within the evolving Industry 5.0 framework. Through qualitative research involving expert interviews and case studies, the study identifies critical enablers of sustainable innovation, including digital trust, collaborative ecosystems, and advanced technology adoption. It addresses challenges such as resistance to change, misalignment of stakeholder expectations, and complexities in operational adaptability. The research proposes a strategic framework that positions social commerce not only as a channel for customer engagement but also as a foundational element for sustainable and competitive business practices. By bridging the gap between theory and practice, the framework provides actionable insights for businesses seeking to align their innovation strategies with sustainability goals. This paper highlights the importance of balancing consumer-centric approaches with organizational agility, emphasizing how social commerce can foster resilience and long-term value creation. The findings contribute to the broader discourse on strategic management by offering a roadmap for e-commerce organizations to thrive in the dynamic and competitive digital economy while meeting sustainability demands.

Keywords: Business Model Innovation, Social Commerce, Sustainable Innovation, E-commerce, Industry 5.0.

* Corresponding author: e-mail grisilda_miftari@hotmail.com

Grisilda Miftari, ORCID: 0009-0007-0567-9859

Luis Miguel López-Bonilla, ORCID: 0000-0002-5324-7715

Jesús Manuel López-Bonilla, ORCID: 0000-0003-0623-1048

INNOVATION MODELING TRAFFIC AND TRANSPORT

Nataša Pejić*

Leget Container Transport d.o.o., Serbia

Abstract: Traffic and transportation are very important for the industry. New way of organizing and optimizing transport can help the development of a country's industry, as well as the preservation of the environment. Railway traffic can be an innovation solution for environmental protection. All types of goods can be transported by rail, with good traffic organization. Modeling of railway infrastructure and timetables is of crucial importance for the renewal of railway infrastructure and for monitoring user requests. Also, passenger railway traffic with timetable which monitor request passenger is very good solution preservation of the environment. Rail traffic with good organization can provide global transport security and a cleaner planet.

Keywords: modeling, railway, traffic, innovation transport, timetable.

* Corresponding author: natasa.p1111@gmail.com

APPLICATION OF INNOVATIVE SOLUTIONS IN LOCAL GOVERNMENT IN CENTRAL EUROPEAN COUNTRY

Kamil Turčan *, Ivana Butoracová Šindleryová

Faculty of Social Sciences, University of St. Cyril and Methodius in Trnava, Slovakia

Abstract: Intelligent mobility is an integral part of the modern world, including Slovak municipalities. The introduction of new transportation options is currently taking place in several cities in the form of various modes of transport. The research part of our contribution addresses the absence of shared vehicles in the municipality of Trnava. The global phenomenon of carsharing has found its place in the developed countries of Europe. In the context of the Slovak Republic, its implementation occurs only in selected cities and is mostly conceptual in nature. The goal of our work is to propose the implementation of shared cars in the municipality of the regional city of Trnava. We employed several methods to assess the potential of carsharing utilization by the citizens of Trnava. The theoretical part is the result of a literature search that had to be selected and summarized. The result of our investigation is defined by situational analysis and the empirical method of observation. We studied the traffic behavior of the city's inhabitants, specifically in the form of a questionnaire. The initial focus is primarily on ensuring ecological forms of transport and reducing the number of cars on the road infrastructure. The conclusion of our work presents recommendations for the implementation of a new transport service in the city of Trnava.

Keywords: intelligent mobility, local government, innovation, car sharing.

* Corresponding author: turcan3@ucm.sk

Kamil Turčan, ORCID: 0000-0002-1236-0658

Ivana Butoracová Šindleryová, ORCID: 0000-0001-8261-7490

A COMPARISON OF DIFFERENT LEADERSHIP APPROACHES IN THE HOTELS INDUSTRY AND THEIR IMPACT ON EMPLOYEE PERFORMANCE

Jovan Momirski *

Singidunum University, Belgrade, Serbia

Abstract: Leadership in the hotels industry plays a key role in shaping organizational culture, employee motivation, and overall hotel performance. Due to the dynamic nature of this industry, different leadership styles directly influence service quality, team productivity, and employee satisfaction. This paper explores the impact of different leadership styles, including transformational, transactional, servant, authoritarian, democratic, empowering, participative, and charismatic, on hotel operations, through the analysis of concrete examples and relevant theoretical models. Implementing different leadership styles can contribute to creating a more productive work environment and increasing guest satisfaction. The aim of the research is to determine the ways in which different leadership styles shape the working atmosphere, the efficiency of employees and their commitment to work. The methodological framework includes a comparative analysis of research and examples from well-known hotel chains, in order to clearly the strengths and potential disadvantages of different leadership styles. The results provide practical insights for improving leadership in hotel industry and more efficient employee management within the industry.

Keywords: Leadership, hotels, employee performance.

* Corresponding author: jovan.momirski.21@singimail.rs

RANKING OF THE MOST IMPORTANT GROUPS OF CRITERIA FOR THE SELECTION OF THE UNDERGROUND MINING METHOD FOR COAL DEPOSITS

Mohsen Jamshidi¹, Dejan Bogdanović^{2*}, Hesam Dehghani³

¹ *Arya Kani Jouyan Engineering Company, Iran*

² *University of Belgrade, Technical Faculty in Bor*

³ *Hamedan University of Technology – Department of Mining Engineering, Iran*

Abstract: The selection of the mining method for coal deposits is a very complex process that leads to the most important decision for future exploitation. This process is now implemented as a multi-criteria decision problem in which the best mining method is selected from many alternatives. In this paper, the most important groups of factors (groups of criteria) are considered to determine their influence on the mining method selection process. Six groups of criteria were considered: natural – geological conditions, technical conditions, economic conditions, technological (organisational) conditions, safety conditions and environmental protection. These criteria were ranked using the AHP method. The group decision method for ranking was applied by mining experts and managers of various underground mines in Serbia and Iran. The results show the importance of each group of criteria for selecting the best mining method for coal deposits and the differences between them. It also shows how important the process of ranking groups of criteria is for the selection of the best mining method.

Keywords: Group of Criteria Ranking, Mining Method, AHP, Coal Deposits.

* Corresponding author: dbogdanovic@tfbor.bg.ac.rs

Mohsen Jamshidi, ORCID: 0000-0002-9518-3991
Dejan Bogdanovic, ORCID: 0000-0002-4871-4366
Hesam Dehghani, ORCID: 0000-0003-2029-9540

THE BUREAUCRATIC GRIP OF EUROPEAN UNIVERSITY ALLIANCES

Edita Lenkauskaitė^{1*}, Caio Cesar Souza²

¹ *Klaipeda University, Lithuania*

² *Universidade Federal do ABC, Brasil*

Abstract: European University Alliances (EUAs) are key instruments in the European Union's strategy for higher education integration. Funded primarily through Erasmus+ and Horizon2020. These alliances aim to enhance academic mobility, promote transnational collaboration, and foster curriculum innovation. However, despite their ambitious goals, EUAs face bureaucratic complexities that may hinder their long-term sustainability. This paper explores the governance structures of these alliances, analysing the role of bureaucratic mechanisms in shaping institutional dynamics. It also examines how digitalisation and curricular mobility present a window of opportunity for overcoming administrative barriers. By assessing the impact of EU policies, funding frameworks, and institutional practices, we argue that while EUAs offer a promising model for higher education cooperation, their long-term viability depends on streamlined governance and strategic policy support.

Keywords: European University Alliances, bureaucracy, academic mobility, governance, digitalization.

*Corresponding author: edita.lenkauskaitė@ku.lt

Edita Lenkauskaitė, ORCID: 0009-0007-8460-7318

Caio Cesar Souza, ORCID: 0000-0002-6445-5157

LANGUAGE LEARNING MOTIVATION AS A REFLECTION OF PERSONAL POTENTIAL: THE ROLE OF EU ATTITUDES, ACTIVE CITIZENSHIP, EMPLOYABILITY, AND INFORMEDNESS

Tamara Verežan^{1*}, Zrinka Fišer², Nataša Papić-Blagojević¹, Ivana Jošanov-Vrgović³

¹ *Novi Sad School of Business, Novi Sad, Republic of Serbia*

² *University of Slavonski Brod, Department of Social Sciences and Humanities EDUDpt, Slavonski Brod, Croatia*

³ *University Business Academy in Novi Sad, Faculty of Organizational Studies 'Eduka', Belgrade, Republic of Serbia*

Abstract: This paper looks at personal potential through the prism of language learning motivation which is a multifaceted concept socially embedded and impacted by environment, politics, and cultural preferences and attitudes. From the perspective of the European Union (EU), the study explores the association between English learning motivation and four EU-related factors: attitude toward the EU, active citizenship, employability, and informedness. During November 2024 and January 2025, 231 students from the University of Slavonski Brod in Croatia, and the Novi Sad School of Business and the Faculty of Organizational Studies 'Eduka' in Belgrade in Serbia took part in the study. The findings reveal statistically significant positive correlations between motivation for learning English and four key factors. Active citizenship in the EU showed a stronger positive correlation with English learning motivation than employability. Additionally, the research confirmed the hypothesis that the level of informedness about the EU and opinion on the EU are associated with motivation to learn English.

Keywords: English learning, instrumentality-promotion motivation, personal potential, EU attitude, EU informedness, active citizenship, employability

* Corresponding author: tverezan@gmail.com

Tamara Verežan, ORCID: 0009-0002-2769-6979

Zrinka Fišer, ORCID: 0000-0002-1825-0097

Nataša Papić-Blagojević, ORCID: 0000-0002-1110-3414

Ivana Jošanov-Vrgović, ORCID: 0000-0003-3010-3206

THE IMPACT OF FINTECH INNOVATION AND BANKING EFFICIENCY ON CUSTOMER LOYALTY: INVESTIGATING THE MEDIATING ROLE OF CUSTOMER TRUST

Sadiya Firdose R Z¹ *, Laxmana Rao Goranta²

¹ *School of Commerce and Management Studies, Dayananda Sagar University, Bangalore, India*

² *Dayananda Sagar University, Bangalore, India*

Abstract: This research explores a model of customer loyalty determinants in the context of financial innovation and banking efficiency, with a focus on the mediating role of customer trust. It examines how fintech innovation influences customer satisfaction, bank efficiency, and trust in the Indian banking sector. The study aims to bridge the gap by analyzing the mediating effect of customer trust on the relationship between fintech innovation, banking efficiency, and customer loyalty. Using a quantitative approach, data were collected from 116 respondents through a structured questionnaire with a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The data were analyzed using SPSS version 30 and employing the Structural Equation Modelling (SEM) to evaluate the hypotheses. Findings indicate that fintech innovation and banking efficiency positively and significantly influence customer loyalty. Moreover, customer trust mediates this relationship, reinforcing the importance of trust in driving customer loyalty. The study provides valuable insights for fintech companies and banking institutions aiming to enhance customer satisfaction and loyalty through trust-building and technological advancement.

Keywords: Fintech innovation, banking efficiency, customer loyalty, customer trust.

* Corresponding author: sadiya.firdose-rs-mgt@dsu.edu.in

Sadiya R Z, ORCID: 0009-0000-8963-7929

Laxmana Rao Goranta, ORCID: 0000-0002-7911-7927

SUSTAINABILITY PROBLEM SOLVING IN THE MINING INDUSTRY: RISK ASSESSMENT APPROACH

Snežana Sando*

*Ministry of Agriculture, Forestry and Water Management, Directorate for Agrarian Payments,
Serbia*

Abstract: This paper applies risk assessment methods for determining the risks in the mining industry based on social, environmental and economic aspects of sustainability. The objectives of this work are to examine specific indicators for the mining industry related to a given state of sustainability and to identify the risks and their quantification. The risk identification is the first step in the process of risk assessment. Hierarchical Holographic Modelling (HHM) is the initial phase of mathematical theory for creating new models in terms to indicate and illustrate new types of risks and their further treatment. Hierarchical Holographic Modelling is applied to identify sources of risks for the mining industry by considering sustainability indicators. The method Risk Filtering, Ranking and Management (RFRM) is used in this study as a technique for filtering, ranking and creating new ideas for risk management. The holistic approach in this study enables a systematic and comprehensive review of risk sources and probable emerging risks. The results of this work show determined potential sources of risks and quantified the scenarios of risks as based information for risk management. The use of graphical representation, quantified and qualified data provides the basis for further research.

Keywords: risk assessment, sustainability, hierarchical holographic modeling, decision making.

* Corresponding author: ssando75@gmail.com

Snežana Sando, ORCID: 0000-0002-1234-1924

STRATEGIC STRUCTURING OF HUMAN RESOURCE MANAGEMENT THROUGH THE INTEGRATION OF INNOVATIONS

Miloš Dimitrijević*, Miloš Nikolić

“MB” University, Faculty of Business and Law, Serbia

Abstract: In an increasingly dynamic business environment, human resource management is becoming more complex, necessitating the integration of innovative approaches in strategy formulation. This paper examines the impact of digitalization, artificial intelligence, data analytics, and flexible work models on human resource management. Digital tools enhance the efficiency of recruitment, training, and performance evaluation processes, while HR analytics provides data-driven insights for strategic decision-making. Innovation fosters greater security and transparency in HR strategy development. Moreover, flexible work models and the cultivation of a digital organizational culture contribute to higher employee engagement, while the adoption of ESG criteria reinforces corporate sustainability. Organizations that successfully integrate innovative HR strategies gain a competitive advantage and ensure long-term sustainability. This study underscores the necessity of adapting human resource management through contemporary technological and organizational frameworks, fostering more resilient and productive work environments.

Keywords: innovation, strategy, management, sustainability, human resources

* Corresponding author: midi1983@gmail.com
Miloš Dimitrijević, ORCID: 0009-0006-3168-1509
Miloš Nikolić, ORCID: 0000-0003-0690-8047

ENERGY TRANSITION, ENERGY STRATEGIES, GLOBAL ENERGY SECURITY AND POTENTIAL RISKS

Slobodan Radosavljević *

¹ RB "Kolubara" d.o.o., Svetog Save 1, 11550 Lazarevac, R. Serbia

Abstract: For a long time, the energy transition has been a central topic in global policy discussions across the world's various energy systems. The energy transition refers to the shift from traditional energy sources (such as oil, coal, and gas) to renewable sources (like solar, wind, and hydropower). This process is further supported by existing international agreements. Many countries are developing their own strategies and plans to meet energy-related objectives. However, the differing approaches to energy policy often lead to global disagreements, as countries have varying interests regarding resources, energy security, and climate obligations. Global energy security is emerging as a significant challenge in the international context. Rising energy demand, geopolitical tensions, market volatility, and the vulnerability of energy systems are putting immense pressure on global stability. Potential risks associated with the energy transition include an unequal distribution of resources and technologies between developed and developing nations, which could exacerbate global social and economic inequalities. Furthermore, a rapid transition to renewable energy without adequate infrastructure may lead to energy supply instability, higher prices, and potential social unrest. In addition, the security of emerging technologies-such as smart grids and the digitalization of energy systems-raises new concerns about data protection and cybersecurity. While the energy transition is essential for achieving global sustainability goals, it presents significant challenges that require careful management and international collaboration. Developed energy strategies must strike a balance between energy security, environmental objectives, and economic interests, while also minimizing the risks that come with transitioning to new energy sources. This balance forms the foundation for the analysis of the issues addressed in this paper.

Keywords: Energy transition, energy strategies, energy security, mining, and global risks.

* Corresponding author: drslobodanr@gmail.com

Slobodan Radosavljević, ORCID: 0009-0000-3223-9743

THE RELATIONSHIP BETWEEN BURNOUT AND MENTAL WELL-BEING OF OLDER PEOPLE

Rita Remeikienė *, Rusnė Katerina Jančaitytė, Beatričė Rūškienė

¹ *Mykolas Romeris University, Lithuania*

Abstract: The risk of burnout in older people is increased by various factors, such as chronic diseases, their treatment, emotional stress, loss of a loved one, loss of mobility and independence, and financial problems. In addition, personal habits, such as lack of sleep and poor nutrition, as well as stress at work or social isolation, can lead to the development of burnout. Aging is often associated with poorer mental well-being of older adults who tend to lose their life purpose, autonomy, and disregard personal growth. Nevertheless, positive emotions, a sense of happiness, and social support can help maintain or even improve the well-being of older people. In order to improve mental well-being, it is important to promote social support, lifelong learning, and self-compassion. These factors can reduce the risk of burnout and improve the quality of life of older people. The purpose of this article is to examine the relationship between burnout and mental well-being of people aged 60 and older.

Keywords: older people, burnout, mental well-being, healthy aging, stress.

* *Corresponding author* rita.remeikiene@mruni.eu

Rita Remeikienė, ORCID: 0000-0002-3369-485X

Rusnė Katerina Jančaitytė, ORCID: 0009-0006-6390-9758

Beatričė Rūškienė, ORCID: 0009-0005-6884-3383

THE MIXED IMPACT OF ‘SHADOW ECONOMY’ ON ECONOMIC DEVELOPMENT

Ștefana Maria Dima^{1*}, Bogdan Dima², Ciprian Preda²

¹ *West University of Timișoara, Institute of Advanced Environmental Research, Romania*

² *West University of Timișoara, Faculty of Economics and Business Administration, Romania*

Abstract: ‘Shadow economy’ is an umbrella concept, which usually refers to companies, individuals or organized groups seeking to avoid taxation, the labor market requirements, the quality standards required for their products and services, bureaucratic requirements or to engage in illegal activities. Even if conventional wisdom postulates a detrimental impact of an increase in the size of ‘shadow economy’ on official sectors, there are several reasons for a more nuanced approach. Thus, we first advance a theoretical framework that combines both positive and negative effects exercised by the ‘shadow economy’ on economic development and ‘full employment’ of labor resources. Second, by estimating the size of the ‘shadow economy’ in the framework of a Multiple Indicators and Multiple Causes (MIMIC) model, we find, for a dataset of 124 post-industrial and developing economies, that ‘shadow economy’ can exercise positive and negative effects on economic development.

Keywords: shadow economy, economic development, tax burden, Bayesian Model Averaging (BMA) Weighted-Average Least Squares (WALS)

* *Corresponding author: stefana.dima@e-uvv.ro*

Ștefana Maria Dima, ORCID: 0000-0003-0452-7216

Bogdan Dima, ORCID: 0000-0002-0820-9904

Ciprian Preda, ORCID: 0000-0002-1372-0053

WHOLE-BODY VIBRATION MEASUREMENT AT THE MINING MACHINERY OPERATOR'S WORKPLACE IN SMES

Vesna Spasojević Brkić¹ *, Mirjana Misita¹, Ivan Mihajlović¹, Katarina Dimić Misić^{2,3},
Martina Perišić¹, Nemanja Janev¹, Aleksandar Brkić⁴

¹ University of Belgrade, Faculty of Mechanical Engineering, Belgrade, Serbia

² Institute of General and Physical Chemistry Belgrade, Belgrade, Serbia

³ Department of Chemical and Metallurgical Engineering, School of Chemical Engineering,
Aalto University, Espoo, Finland

⁴ Innovation Center of Faculty of Mechanical Engineering, Belgrade, Serbia

Abstract: Increased mechanization in mining results in a larger number of workers being exposed to longer durations of whole-body vibration (WBV). Occupational exposure to vibration is associated with an increased risk of musculoskeletal pain in the back, neck, hands, shoulders, and hips; the development of peripheral and cardiovascular disorders and gastrointestinal problems; and it may even increase the risk of developing certain cancers. In that aim, in this survey, whole-body vibration exposure levels were measured during the shift at 22 mining machinery operators' workplaces in 3 surface mining. A triaxial accelerometer V31 was used to measure vibration exposure. Measurements were conducted in accordance with the procedures described in applicable standards in the field. The results indicate that the observed workplaces exceeded the action limit values according to the EU Directive 2002/44/EC, as well as the lower limit values of health risks according to the ISO 2631 standard. The lower limit value of health risk according to the ISO 2631 standard was exceeded at 50% of machines. The action value of WBV according to the EU Directive 2002/44/EC was exceeded in 36% of machines. The dominant vibrations were indicated along the X and Y axes. Operators on bulldozers and loaders are most often exposed to the harmful influence of WB vibrations. Research indicates that there is a risk of harmful impact of WBV that needs to be prevented and highlights the need for further research to identify the most critical risk factors and develop effective prevention and protection strategies for mining machinery operators' workplace risks caused by vibrations.

Keywords: Whole-body vibration, mining machinery, operator, SME.

* Corresponding author: vspasojevic@mas.bg.ac.rs

Vesna Spasojević-Brkić, ORCID: 0000-0003-4642-3482

Mirjana Misita, ORCID: 0000-0002-7039-0783

Ivan Mihajlović, ORCID: 0000-0002-9489-8207

Katarina Dimić Misić, ORCID: 0000-0002-6397-7711

Martina Perišić, ORCID: 0000-0002-8385-1593

Nemanja Janev, ORCID: 0000-0001-6710-7759

Aleksandar Brkić, ORCID: 0000-0002-3509-1032

BREAKING BARRIERS: THE IMPACT OF FEMALE BOARD MEMBERS ON PHARMACEUTICAL FIRM INNOVATION, PERFORMANCE AND RISK-TAKING

Laura Raisa Miloş^{1*}, Benaissa Chidmi², Marius Cristian Miloş¹

¹ *Babes-Bolyai University, Faculty of Economics and Business Administration, Department of Business Administration-Resita, Romania*

² *Texas Tech University, Department of Agricultural and Applied Economics, USA*

Abstract: This study uses a multilevel modeling framework to explore how the proportion of women on corporate boards affects firm-level innovation, performance, and risk-taking behavior. Drawing on panel data from 74 pharmaceutical firms operating in Europe, Asia, and the United States between 2015 and 2023, the analysis focuses on three key outcomes: research and development intensity, return on equity, and debt-to-equity ratios. By allowing the slope of board gender diversity to vary by country, the model captures substantial differences across institutional contexts. A strong and consistently positive association between board gender diversity and R&D intensity is found in Denmark, China, and Ireland, while the effect is weakest in Japan and the United States. In contrast, the relationship between gender diversity and firm performance is more modest and variable: countries like Finland and Australia exhibit a positive association, whereas Japan and China show slightly negative effects. The effect of board diversity on firms' financial risk-taking is largely negative in countries such as Spain, Hungary, and Finland—suggesting more conservative leverage practices—while Denmark and Australia display near-zero or slightly positive effects. This approach contributes to the corporate governance literature by revealing how gender diversity operates through context-specific mechanisms, particularly within innovation-intensive industries such as pharmaceuticals.

Keywords: gender diversity, board of directors, pharmaceutical industry, innovation, corporate governance

* laura.milos@econ.ubbcluj.ro

Laura Raisa MILOŞ, ORCID: 0000-0001-7386-5329

Benaissa CHIDMI, ORCID: 0000-0001-8461-5405

Marius Cristian MILOŞ, ORCID: 0000-0001-9973-6322

THE ROLE OF DIGITIZATION IN SHAPING THE WORKING FUTURE OF OLDER EMPLOYEES IN SERBIA

Anđelka Stojanović *, Milica Veličković, Sanela Arsić

University of Belgrade, Technical Faculty in Bor, Serbia

Abstract: The proliferation of digital technologies has caused significant changes across various domains, particularly impacting businesses and workplaces. This transformation has considerably altered the way the labor market and economy operate. Also, digitalization presents a significant challenge for older workers, as it demands a specific set of knowledge and skills that must be continuously updated and upgraded. On the other hand, the lack of digital competencies encourages digital marginalization and the exclusion of certain social groups that are digitally deprived. Age is not an obstacle to using digital technologies, but older people often face certain difficulties when using them. As people age, the demand for various social services (health and social protection, education, finance, and others) has grown, but many of these services are only available online nowadays. Therefore, the problem of digital inclusion for the older population has become a significant area of social policy concern and presents a substantial challenge for policymakers. This study analyzes the impact of digitization on the older workforce in Serbia. Data from the Republic Statistical Office and the Eurostat database were reviewed to gather information. Findings from Serbia suggest that digital technologies create some barriers for older adults due to limited access to the labor market and inadequate opportunities for acquiring institutional support.

Keywords: Digitization, Older employees, Digital skills, Serbia.

* Corresponding author: anstojanovic@tfbor.bg.ac.rs

Anđelka Stojanović, ORCID: 0000-0001-7254-4646
Milica Veličković, ORCID: 0000-0002-4332-2216
Sanela Arsić, ORCID: 0000-0002-1957-566X

INTEGRATED PLANNING OF LOGISTICS PROCESSES IN THE FIELD OF WAREHOUSING WITH SIMULATION SUPPORT

Miriam Pekarcikova*, Peter Trebuna, Jana Kronova, Marek Kliment

Technical University, Faculty of Mechanical Engineering, Slovakia

Abstract: An innovative approach to solving wholesale logistics problems in industrial practice can yield significant results, reflected in the high flexibility and efficiency of business processes and systems. The article focuses on analysing parameters and designing a warehouse management solution for the food industry. It deals with the more efficient management of logistics flows with an orientation to supply, storage, modelling, simulation and virtualization, as digitalization correlates with its use in optimizing business processes and systems. The topic is oriented towards the use of digital software in searching and finding alternative and optimal storage solutions in the food sector. A new approach to solving common business problems moves businesses to a high level of achieving goals. The enormous variety of foods available in retail stores has a great impact on the processes of food manufacturers. The number of different processes related to production means that food businesses are increasingly complex, and raw material and packaging warehouses must be well-managed to maintain control over the amount and location of stocks. A great impact on production processes, respectively. Its complexity is influenced by the diversity of requirements and seasonality within the calendar year.

Keywords: logistics, simulation, strategy, warehousing, inventory.

* Corresponding author: miriam.pekarcikova@tuke.sk

Miriam Pekarcikova, ORCID: 0000-0002-6898-3774

Peter Trebuna, ORCID: 0000-0003-3666-5066

Jana Kronova, ORCID: 0009-0004-7102-5755

Marek Kliment, ORCID: 0000-0002-3486-6107

INDUSTRY 5.0 IN THE NEW GLOBAL CIRCUMSTANCES OF MINING WITH RISK MAPPING

Slobodan Radosavljević*

RB "Kolubara" d.o.o., Svetog Save 1, 11550 Lazarevac, R. Serbia

Abstract: Industry 5.0 represents a new evolutionary phase of process industrialization, which is based on the integration of advanced technologies with human capabilities, creating a synergy that enables greater personalization, flexibility and sustainability in production processes. In the context of mining, which faces global challenges such as: the need for smart mining technologies or completely redesigned technological processes (rapid changes), environmental pressures, legislative changes, security challenges and digital transformation, Industry 5.0 opens up new opportunities, but at the same time introduces and generates new risks. This paper investigates how the application of technologies and their techniques such as automation, artificial intelligence, Internet of Things (IoT) and robotics can partially or completely redesign technological mining operations on coal production and processing, increasing efficiency and safety, while simultaneously generating and multiplying a new format of the risk paradigm. Special attention is paid to risk mapping within the industrial framework of coal mining, with analysis of potential hazards and opportunities to reduce negative impacts through predictive analytics, digital twins and automated processes. Through the work, the complex dynamics of the relationship between new technologies and challenges in coal mining can be observed, offering strategies for effective risk management and improving sustainability in the emerging global conditions.

Keywords: Industry 5.0, mining, coal, processes, risks.

* Corresponding author: drslobodanr@gmail.com

RELATION OF QMS VISION AND STRATEGY AND BALANCED SCORECARDS ACHIEVEMENTS OF HEIs IN INDUSTRY 5.0 ENVIRONMENT

Maja Glogovac *

University of Belgrade, Faculty of organizational sciences, Serbia

Abstract: The evolution from Industry 4.0 to Industry 5.0 reflects a growing recognition of the need to balance technological advancement with societal well-being. While Industry 4.0 primarily focuses on technological progress, Industry 5.0 introduces a more human-centered approach. For any industrial revolution to take root, it is important to be accepted by higher education, as the core pillar of any industry development. Accordingly, this paper aims to investigate the current achievements of higher education institutions (HEIs) related to their quality management system (QMS) vision and strategy in the context of the new industrial revolution. In this effort, the Balanced scorecards (BSC) model was used to assess the Industry 5.0 achievements of 374 HEIs in Serbia. ISO 9004:2018-based vision and strategy variable's relationship to BSC variables' were analyzed and proved using the regression analysis. The results can be significant for HEIs' management structures in creating a development path towards the adequate application of Industry 5.0.

Keywords: Industry 5.0, high education, Balanced scorecards, QMS, strategy.

* Corresponding author: maja.glogovac@fon.bg.ac.rs

Maja Glogovac, ORCID: 0000-0003-3268-8543

INTEGRATING ENVIRONMENTAL MANAGEMENT INTO SUPPLY CHAIN STRATEGIES

Stefan Ugrinov*, Dragan Čoćkalo, Mihalj Bakator, Mila Kavalić, Verica Gluvakov

University of Novi Sad, Technical Faculty “Mihajlo Pupin” Zrenjanin, Serbia

Abstract: The paper examines how environmental management can be integrated into supply chain strategies while highlighting the necessity for sustainable practices in contemporary operation systems. The paper analysis focuses on essential aspects including environmental risk identification along with eco-efficiency measures and resource optimization strategies as well as regulatory compliance requirements together with stakeholder engagement methods and technological innovation processes. The paper introduces a theoretical framework organizing supply chain dimensions into four core elements with additional sub-element support to systematically improve performance and manage risks. The analysis shows the relationship between proactive risk assessment and advanced technology adoption which proves real-time monitoring and data analytics support adaptive management practices. This research examines how regulatory frameworks and stakeholder collaboration work together to increase transparency and accountability. Findings establish a base for scholarly research and real-world implementation by presenting organizational strategies that integrate economic goals with environmental preservation.

Keywords: Environmental Management, Supply Chain Strategies, Risk Assessment, Eco-Efficiency, Technological Innovation.

* Corresponding author: stefan.ugrinov@tfzr.rs

Stefan Ugrinov, ORCID: 0009-0000-7206-655X
Dragan Čoćkalo, ORCID: 0000-0003-2085-5420
Mihalj Bakator, ORCID: 0000-0001-8540-2460
Mila Kavalić, ORCID: 0000-0001-7053-2334
Verica Gluvakov, ORCID: 0000-0003-1083-0203

HAPS BETWEEN KESSLER SYNDROME, BENEFITS FOR HUMANITY, AND TECHNOLOGICAL CHALLENGES

Damir Ilić^{1*}, Vladimir Tomašević¹, Tatjana Ilić-Kosanović²

¹ University “Union – Nikola Tesla”, The School of Engineering Management, Belgrade, Republic of Serbia

² University “Union – Nikola Tesla, Belgrade, Republic of Serbia

Abstract: Kessler syndrome represents a significant threat to satellites in orbit and human endeavors in space exploration. The Earth's orbital environment hosts important infrastructures like the International Space Station and a high volume of satellites for communications, navigation, and Earth observation. The research aims to mitigate the dangers and potential impacts of Kessler syndrome by employing the latest technological innovations, specifically High-Altitude Platform Systems (HAPS), with carefully developed strategies for the survival and advancement of mankind. The study employs a hybrid SWOT-AHP method in designing the viable strategies for HAPS implementation in the context of Kessler syndrome. The key contribution of the research lies in demonstrating that, despite existing technological limitations, HAPS platforms can serve as viable alternatives to satellites made inoperable by Kessler syndrome. More significantly, by implementing the strategies suggested in this research, HAPS platforms can be transformed into multi-purpose systems with immense potential for a wide variety of applications in the event of cataclysmic events disabling orbital communications and navigation systems. Such platforms would be capable of functioning together with operational satellites or in a fully autonomous mode, thereby resolving key issues of Kessler syndrome.

Keywords: HAPS, Kessler syndrome, Satellites, SWOT-AHP, Strategies

* Corresponding author: damir.ilic@fim.rs

Damir Ilić, ORCID: 0000-0003-1671-2785

Vladimir Tomašević, ORCID: 0000-0001-9845-2950

Tatjana Ilić-Kosanović, ORCID: 0000-0001-9813-7379

A COMPARATIVE STUDY ON STUDENT INTENTIONS IN BULGARIA, ROMANIA AND SERBIA TO START FAMILY BUSINESSES

Daniel Pavlov¹, Silvia Puiu², Milica Veličković^{3*}

¹ University of Ruse “Angel Kunchev”, Bulgaria;

²University of Craiova, Romania;

³University of Belgrade, Technical faculty in Bor, Serbia.

Abstract: Family businesses are of great importance for the wider economy and competitiveness of individual economies. In developed countries, family business represents a backbone of economic development. In recent years, family businesses in transition countries have attracted increasing attention from researchers, because the process of transition has caused major changes in the political, economic and cultural life of these countries. The key problem of family businesses represents generational transfer, which is often difficult to overcome. Students' interest in starting family business after graduation is traditionally very low. So, the main objective of INTERGEN (The intergenerational family businesses as a stress management instrument for entrepreneurs) research group (members of this group are from nine countries) was to determine the factors which can significantly help to explain the students' willingness to engage in any entrepreneurial activity, including family business, and to overcome possible obstacles. This paper presents the comparative results of the survey conducted in three countries, Bulgaria, Romania and Serbia.

Keywords: entrepreneurial intentions, family support, Bulgaria, Romania, Serbia.

CONFLICT MANAGEMENT STYLES IN PROJECT-BASED ORGANISATIONS: RELATION TO DEMOGRAPHIC FACTORS

Aleksandra Radić^{*}, Nenad Milijić

University of Belgrade, Technical faculty in Bor, Serbia

Abstract: During the project realization, disagreements arise and cannot be avoided. Project complexity, various participants, stakeholders' interests, task requirements, and tight project deadlines create an environment for conflict issues. Every individual engaged in the project responds to conflict differently and has a distinct conflict management strategy. Therefore, this research aims to get deeper insights into conflict management styles' differences in specific demographic characteristics. Empirical research was conducted to obtain this study's objective. A total sample of 114 employees from project-based organizations operating in the Republic of Serbia was collected. The findings of the ANOVA test revealed that participants' responses differed in terms of age, work experience, and project type. Findings provide valuable insights by examining differences in conflict management styles and identifying behavioral patterns and variations based on demographic factors.

Keywords: Conflict management styles, projects, ANOVA.

^{*} *Corresponding author: aradic@tfbor.bg.ac.rs*

Aleksandra Radić, ORCID: 0000-0003-4253-8004
Nenad Milijić, ORCID: 0000-0001-8741-3892

EVALUATION OF FACTORS INFLUENCING THE USAGE OF ERP SYSTEMS: FINDINGS FROM PLS-SEM AND FSQCA

Aleksandra Radić¹ *, Sanela Arsić¹, Đorđe Nikolić¹, Samo Bobek², Simona Sternad Zabukovšek²

¹ *University of Belgrade, Technical faculty in Bor, Serbia*

² *University of Maribor, Faculty of Economics and Business, Slovenia*

Abstract: The Enterprise Resource Planning (ERP) system is a valuable information system that improves business processes in the industry. Given the importance of ERP system adoption by end users, this paper examines the driving factors behind the usage of ERP systems in manufacturing and service companies in the Western Balkans countries (WBC). To achieve this, a research model has been hypothesized and tested using Partial Least Squares Structural Equation Modeling (PLS-SEM) and Fuzzy-Set Qualitative Comparative Analysis (fsQCA) approach. Given the importance of ERP system adoption by end users, this paper examines the driving factors behind the usage of ERP systems in manufacturing and service companies in the WBC. The study's results reveal that work compatibility, perceived usefulness, and external factors are significant antecedents of attitude toward ERP use. Furthermore, a statistically significant relationship between attitude and actual ERP usage was demonstrated, confirming the moderating effect of user experience. Moreover, by applying multi-group analysis, the study indicated that there are no significant differences in beliefs, attitudes and intentions between users in the service and manufacturing sectors. The findings from the fsQCA analysis showed that work compatibility and perceived usefulness are core present conditions, while perceived ease of use is a core absent condition. These findings substantially contribute to the existing body of literature, providing both theoretical and practical implications to scholars and practitioners.

Keywords: ERP system, manufacturing sector, service sector, WBC, PLS-SEM, fsQCA.

* *Corresponding author: aradic@tfbor.bg.ac.rs*

Aleksandra Radić, ORCID: 0000-0003-4253-8004

Sanela Arsić, ORCID: 0000-0002-1957-566X

Đorđe Nikolić, ORCID: 0000-0002-9420-3612

Samo Bobek, ORCID: 0000-0001-6927-6820

Simona Sternad Zabukovšek, ORCID: 0000-0002-7651-7706

HIGH-ALTITUDE PLATFORM SYSTEMS: PERSPECTIVES ON CURRENT AND FUTURE TECHNOLOGICAL DEVELOPMENTS

Damir Ilić¹*, Vladimir Tomašević¹, Tatjana Ilić-Kosanović²

*¹University “Union – Nikola Tesla”, The School of Engineering Management, Belgrade.
Republic of Serbia*

²University “Union – Nikola Tesla”, Belgrade, Republic of Serbia

Abstract: High-Altitude Platform Systems (HAPS) is a promising technology with excellent future potential. HAPS may find application as standalone platforms or as a supplement to satellites in Earth orbit for the provision of a variety of services. The applications of HAPS technology are diverse, ranging from communications and photogrammetry to disaster response and other critical applications. Three large HAPS platforms—airships, winged HAPS, and balloons—are currently in the experimental phase, with each trying to maximize present technological possibilities to achieve the full potential of this innovation. The aim of this paper is to identify which platform holds the greatest promise for future application. To compare the potential of both platforms, the Analytical Hierarchy Process (AHP) methodology was applied. It is seen from the results that the winged HAPS have the highest potential for future development, and that airships can be also very valuable platform for specific missions, either independently or in combination with winged HAPS. The report notes the need for further, more extensive development of this new technology to fulfill its potential.

Keywords: HAPS, balloons, airships, winged HAPS, AHP.

* Corresponding author: damir.ilic@fim.rs

Damir Ilić, ORCID: 0000-0003-1671-2785

Vladimir Tomašević, ORCID: 0000-0001-9845-2950

Tatjana Ilić-Kosanović, ORCID: 0000-0001-9813-7379

THE ROLE OF MANAGERS IN OPTIMIZING BUSINESS PROCESSES IN THE IT INDUSTRY

Zorana Janković¹*, Snežana Urošević²

¹*PhD student, University of Belgrade, Technical faculty in Bor, Serbia*

²*University of Belgrade, Technical faculty in Bor, Serbia*

Abstract: In the modern business environment, business process optimization has an important role in achieving competitive advantage, especially in the dynamic IT industry. Managers in this industry must be skilled at identifying inefficiencies within business processes and guiding teams to implement innovative solutions that improve overall performance. Optimization involves the systematic improvement of operational activities through the identification of inefficiencies, elimination of redundant steps, automation of tasks, and implementation of innovative technological solutions. This paper aims to explore the role of managers in business process optimization. A quantitative study was conducted using an online survey. The research results indicate that business processes are optimized at a high level, although many respondents recognize opportunities for further improvement. Managers frequently initiate process improvement initiatives, with Agile and Lean management being the most commonly used approaches in IT companies. ANOVA analysis showed that, in most cases, there are no significant differences in the perception of business process optimization concerning managerial position.

Keywords: Business processes, optimization, managers, IT industry.

* Corresponding author: zoranajankovic2001@gmail.com

Zorana Janković, ORCID: 0009-0008-6265-1454
Snežana Urošević, ORCID: 0000-0002-6647-0449

A COMPARATIVE ANALYSIS OF MCDM METHODS BASED ON PAIRWISE COMPARISON: AHP, BWM AND FUCOM

Petra Grošelj*, Gregor Dolinar

University of Ljubljana, Biotechnical Faculty, Slovenia

Abstract: MCDM methods based on pairwise comparisons are widely used to determine the weights of alternatives and criteria in complex problems. In this paper, we compare three of these methods: Analytic Hierarchy Process (AHP), Best-Worst method (BWM) and Full Consistency Method (FUCOM). We compared the number of pairwise comparisons required and the amount of information provided by the experts as well as the consistency of the judgments. The data came from a study on the ranking of driving parameters of business and production management in small and medium-sized enterprises. The results show that AHP with the higher requirement of pairwise comparisons also leads to very reliable weights, while a lower number of pairwise comparisons in BWM and FUCOM, as appealing as it is to the experts, could significantly reduce the input data and decisively influence the ranking of items. Our study also disproves the statement repeatedly found in the literature that BWM is more consistent than AHP due to the lower number of pairwise comparisons required. Rather, we have pointed out the problem of measuring inconsistency in BWM. For FUCOM, we have provided explicit formulas for calculating the weights.

Keywords: Multi-criteria decision making, Pairwise comparisons, Analytic Hierarchy Process, Best-Worst method, Full Consistency Method

* Corresponding author: petra.groselj@bf.uni-lj.si

Petra Grošelj, ORCID: 0000-0001-9363-9783
Gregor Dolinar, ORCID: 0000-0001-9106-3995

ENCRYPTION AND INFORMATION

**Halima Onalla Ali^{1*}, Sakina Almakhzoum², Dušan Regodic², Velimir Dedić¹,
Maja Andjelkovic¹**

¹ *University "Union - Nikola Tesla", Faculty of Information Technology and Engineering,
Belgrade, Republic of Serbia*

² *MB University, Faculty of Information Technology and Engineering,
Belgrade, Republic of Serbia*

Abstract: Information technology (IT) can be defined as the study, design, and development of computer information systems. It is the science of the future, including software information systems, network management, databases, and communications systems design. These include networks, database management systems, information security, and software engineering. It should be noted that the goals achieved by IT in our lives are numerous, and these technologies enable us to accomplish tasks with ease and convenience. IT is responsible for all of these tasks, so the need to protect this private data through data and information security must be taken into account. The primary objective of this study is to define information security as the true means of ensuring the confidentiality of important information by ensuring its protection from theft and hacking, and preventing unauthorized access to it by individuals using modern technologies, including data encryption algorithms. This study also aims to examine the process of electronic authentication and information security in managing a private company, as well as to identify how to apply these concepts and use advanced technologies to achieve security and privacy for the data and information we use in all areas of our daily lives.

Keywords: Data encryption, cyber security, electronic security, electronic authentication, data protection.

* Corresponding author: halima123onalla@gmail.com

Halima Onalla Ali, ORCID: 0009-0002-6754-8954

Sokina Almakzom, ORCID: 0009-0008-3395-8481

Dušan Regodic, ORCID: 0009-0007-6804-2724

Velimir Dedić, ORCID: 0009-0007-1402-1979

Maja Andjelkovic, ORCID: : 0009-0007-3367-1125

APPLYING DIFFERENTIATION IN BUSINESS ENGLISH EFL CLASSROOMS: A STRATEGIC APPROACH TO ENHANCING LANGUAGE ACQUISITION AND PROFESSIONAL READINESS

Slavica Stevanović *, Sandra Vasković

University of Belgrade, Technical Faculty in Bor, Serbia

Abstract: In the diverse and dynamic context of English as a Foreign Language (EFL) instruction, particularly in Business English courses at the university level, differentiation stands out as a critical strategic management principle. By tailoring teaching strategies to accommodate varied learner needs, differentiation enhances language acquisition, fosters engagement, and prepares students for professional success in global business environments. This article explores the theoretical foundations, practical applications, and strategic benefits of differentiation in Business English EFL classrooms, with a focus on customizing content, processes, and assessments to address diverse proficiency levels, cultural backgrounds, and career aspirations. A proposed case study illustrates how differentiation can be implemented in a future Business English course, offering a model for educators to optimize learning outcomes and align with industry demands.

Keywords: Differentiation, EFL classroom, strategic approach, professional readiness.

* Corresponding author: sstevanovic@tfbor.bg.ac.rs

Slavica Stevanović, ORCID: 0000-0001-7026-0412
Sandra Vasković, ORCID: 0000-0002-1624-841X

STRENGTHENING STRATEGIC AND FINANCIAL STABILITY IN SCIENTIFIC INSTITUTES WITH IMPLEMENTATION OF STRATEGIC RISK MANAGEMENT

Marija Jonović¹ *, Lidija Barjaktarović²

¹ *MMI Bor, Serbia*

² *Singidunum University, Belgrade, Serbia*

Abstract: This study aims to develop a comprehensive Strategic Risk Management (SRM) framework aligned with the COSO ERM for improving strategic and financial performance in Scientific Institutes. Conducted in a nationally significant Serbian institute, the research evaluates SRM's effectiveness in addressing weaknesses, mitigating threats, and leveraging opportunities. A primary SWOT analysis survey, conducted from June 26 to July 1, 2024, involved 214 participants, with a 55.6% response rate (119 respondents). Findings highlight a sustainable business strategy and SRM's effectiveness in mitigating risks across financial, operational, asset-related, and strategic domains. Financial challenges include declining net profit and persistent negative financial results. Despite the decline in business revenues and net profit, effective asset and capital management, supported by previously accumulated reserves, enabled the Institute to maintain financial stability. To address these risks, the study emphasizes cost management, diversification, and investment in innovation to strengthen financial sustainability and competitiveness. This research underscores SRM's pivotal role in building resilience, advancing institutional goals, and enhancing adaptability for scientific institutes with national importance.

Keywords: SRM, COSO ERM, financial sustainability, SWOT analysis, innovation.

* Corresponding author: marija.jonovic.23@singimail.rs

Marija Jonović, ORCID: 0009-0000-8418-2523

Lidija Barjaktarović, ORCID: 0000-0002-5630-8595

EVALUATING TRANSATLANTIC CRUISE SERVICE QUALITY: AN INTEGRATED SERVQUAL AND IPA APPROACH

Predrag Đorđević*, Anđelka Stojanović, Ivica Nikolić

University of Belgrade, Technical Faculty in Bor, Serbia

Abstract: This study investigates the service quality of transatlantic cruises by applying the SERVQUAL model combined with Importance-Performance Analysis (IPA) and gap analysis. Transatlantic cruises are a unique segment within the rapidly growing cruise tourism industry, where high service quality is crucial for customer satisfaction and loyalty. Despite its importance, empirical research applying robust service quality frameworks to this specific sector is still limited. This research utilizes a quantitative survey approach using a structured SERVQUAL questionnaire. Gap analysis revealed negative gaps across all five SERVQUAL dimensions, indicating that passenger's perceptions consistently fell short of their expectations. The Responsiveness, Reliability, and Empathy dimensions showed the largest gaps highlighting critical areas for improvement. A modified IPA analysis identified specific attributes requiring immediate attention, such as service timeliness and staff responsiveness to passenger requests. Additionally, it provided strategic guidance for resource allocation according to the categorization of other quality service attributes. The findings from the integrated IPA and gap analysis reveal a consistent pattern of performance deficits across all evaluated attributes, thereby highlighting the necessity for comprehensive service quality improvements within the observed transatlantic cruise operator. This study provides valuable insights for cruise service providers seeking to improve service delivery and passenger satisfaction.

Keywords: Service quality, SERVQUAL, Cruise tourism, IPA, Gap analysis

* Corresponding author: pdjordjevic@tfbor.bg.ac.rs

Predrag Đorđević, ORCID: 0000-0002-8210-174X
Anđelka Stojanović, ORCID: 0000-0001-7254-4646
Ivica Nikolić, ORCID: 0000-0003-1986-4653

SustainAbility: WHEN CAPITAL LETTER MATTERS

Mario Carrassi^{1 *}, Anna Argese¹, Teresa D’Andrea¹, Tomasz Ingram²

¹ *Università degli studi di Bari Aldo Moro, Dipartimento di Economia e Finanza, Bari, Italy*

² *The University of Economics in Katowice, Faculty of Economics, Poland*

Abstract: Sustainability, while widely recognized as a global imperative, often struggles to bridge the gap between intention and action (Rockström et al., 2009; Raworth, 2017). This paper introduces the concept of SustainAbility, which reframes traditional sustainability by emphasizing the development of cognitive, behavioral, and systemic abilities necessary for lasting and transformative change (Sterling, 2011; Bandura, 1977). SustainAbility shifts the focus from static goals to dynamic processes, recognizing that long-term sustainability requires a skill-based, adaptive approach (Meadows, 2008; Kahneman, 2011). Drawing on insights from behavioral economics (Thaler & Sunstein, 2008), systems thinking (Senge, 1990) and educational psychology (Kolb, 1984), this paper explores the theoretical foundations and policy implications of SustainAbility. Key areas of focus include the role of education in cultivating systems literacy, corporate strategies for embedding SustainAbility into decision-making and participatory policymaking to build institutional resilience (Ostrom, 1990; Geels, 2011). By redefining SustainAbility through the lens of abilities, this paper advocates for a paradigm shift that integrates knowledge and emphasizes equitable and inclusive frameworks (Sen, 1999; Agyeman et al., 2002).

Keywords: Cognitive abilities, behavioral change, systems thinking, resilience, education for SustainAbility.

* *Corresponding author: mario.carrassi@uniba.it*

Mario Carrassi, ORCID: 0000-0002-2111-44592
Anna Argese, ORCID: 0009-0004-6128-3152
Teresa D’Andrea, ORCID: 0009-0008-3370-3892
Tomasz Ingram, ORCID: 0000-0002-4161-6261

TRENDS AND DETERMINANTS OF STUDENTS' ENTREPRENEURSHIP INTEREST AND CAREER ASPIRATIONS ABROAD: A COMPARATIVE STUDY OF ALBANIA AND BULGARIA

Fatma Jaupi¹ * Anisa Kume¹ Daniel Pavlov²

¹ *University of Tirana, Faculty of Economy, Albania*

² *University of Ruse “Angel Kunchev”, Bulgaria*

Abstract: This research paper presents some findings on the evolution of entrepreneurial intention among Albanian and Bulgarian students and their career aspirations. Additionally, this research analyzes their life satisfaction and reasons to continue their careers in their home country from 2020-2023. The dataset is composed of 600 responses from students in each country, 1200 students interviewed in total, evenly distributed in both countries. The findings illustrate differences in entrepreneurial intentions towards future career opportunities overseas, with major contrasts between the two countries. Notably, the results indicate that students who prefer to work abroad are likely to be entrepreneurs. Gender-based analysis revealed that male students have better entrepreneurial aspirations, while female students will likely consider seeking career opportunities abroad. Furthermore, the study provides empirical evidence to inform educational institutions and governments too, with a focus on the significance of quality entrepreneurial education and cross-border employment opportunities. This study contributes to the existing literature by integrating theoretical frameworks such as the Theory of Planned Behavior and Career Choice Models to describe how students' attitudes towards entrepreneurship are shifting. In this study, the policy implications for promoting entrepreneurial ecosystems and mitigating talent migration are also discussed.

Keywords: Entrepreneurship, Career Aspirations, Student Attitudes, Entrepreneurial Intentions.

* Corresponding author: e-mail address: fatma.jaupi@unitir.edu.al

Fatma Jaupi, ORCID: <https://orcid.org/0000-0002-8600-3768>

Anisa Kume, ORCID: <https://orcid.org/0009-0009-2817-396X>

Daniel Pavlov, ORCID: <https://orcid.org/0000-0002-4515-2206>

COSMETIC BRANDS PERCEPTION BY GENERATION Z THROUGH THE PRISM OF CONSCIOUS CONSUMPTION

Marina Sheresheva¹, Daria Golub¹, Daniel Pavlov² *

¹ *Lomonosov Moscow State University, Russia*

² *University of Ruse “Angel Kanchev”, Bulgaria*

Abstract: This paper examines the role of conscious consumption concept as a way to can help to build confidence and attract sustainability-driven young consumers of cosmetic brands. We first discuss theoretical approaches to understanding the phenomenon of conscious consumption, a specific trend in consumer behavior in which the consumer is guided by a conscious need, ethical and environmental considerations. Based on the academic literature, we conclude that conscious consumption should not be considered as an isolated phenomenon, but is an integral part of a wider system where politics, economics and social expectations interact to form sustainable practices. The empirical results presented in the literature confirm that there are specific features characterizing Gen Z consumers as more conscious than older generations. In our research, we used these particular features as basic to put forward hypotheses concerning conscious consumption impact on Russian Zoomers’ behaviour. Then we present and discuss the empirical data obtained through online survey conducted in March-April 2025. The analysis of survey results leads to the conclusion that there is a segment of young Russian conscious consumers focused on sustainable development, but not all Zoomers are ready to give preference to skin care cosmetic brands due to their eco-friendly characteristics.

Keywords: conscious consumption, Generation Z, cosmetic brands, Russia.

* Corresponding author: dpavlov@uni-ruse.bg

Marina Sheresheva, ORCID: 0000-0002-8153-7111

Daria Golub, ORCID: 0009-0007-0800-8890

Daniel Pavlov, ORCID: 0000-0002-4515-2206

REFRAMING PERFORMANCE APPRAISAL THROUGH EMPLOYEE PERCEPTIONS: INSIGHTS FROM THE ALBANIAN BANKING SECTOR

Sllavka Kurti *, Katerina Vasili, Vasilika Kume

University of Tirana, Faculty of Economics, Albania

Abstract: The Albanian banking sector is facing growing challenges in attracting and retaining skilled employees, making the effectiveness of performance evaluation systems increasingly important. This study investigates how banking employees perceive the current appraisal practices and identifies the main factors that influence their views. To achieve this, a quantitative research design was employed, using primary data collected through a structured questionnaire distributed to 182 banking professionals across various institutions and roles. To assess the strength and significance of the predictors influencing employees' views on appraisal relevance data were analyzed using descriptive statistics and multiple regression analysis. The analysis revealed that clarity of evaluation criteria ($\beta = 0.443$), objectivity of indicators ($\beta = 0.342$), and linkage to rewards ($\beta = 0.268$) emerged as the key drivers explaining 56.6% of the variance in employees' perceptions of performance appraisal system effectiveness. In contrast, the frequency of evaluations and the quality of the feedback process demonstrated a comparatively weaker influence on employees' perceptions of appraisal system effectiveness. These results suggest that improving the transparency, consistency, and developmental value of performance evaluations could play a crucial role in enhancing employee satisfaction and retention. Strengthening appraisal practices may, therefore, represent an important step for Albanian banks aiming to build a more satisfied, engaged, and resilient workforce.

Keywords: evaluation, performance, employees, perception, feedback.

* Corresponding author: sllavkakurti@fakultetiekonomise.edu.al

Sllavka Kurti, ORCID: 0000-0001-8959-8245
Katerina Vasili, ORCID: 0009-0009-6652-1275
Vasilika Kume, ORCID: 0009-0004-2932-2158

IDENTIFICATION OF FACTORS FOR ANALYSIS AND EVALUATION OF HEIs PERFORMANCE

Nedeljka Živković¹ *, Maja Glogovac², Isidora Milošević³

¹ *Belgrade Business and Arts Academy of Applied Studies, Belgrade, Serbia*

² *University of Belgrade, Faculty of Organizational Sciences, Belgrade, Serbia*

³ *University of Belgrade, Technical Faculty in Bor, Bor, Serbia*

Abstract: Analysing and evaluating various aspects of performance in HEIs requires a systematic approach. Higher Education Institutions (HEIs) are the foundation for the development of every society. By analysing and evaluating organisational performance, valuable information is gained for potential improvements in the future. HEIs should analyse, measure, and assess the achievement of results in relation to their goals, strategy, and policy. Analysing and evaluating organisational performance enables a comprehensive understanding of the organisation's strengths and weaknesses. The research was conducted among employees in HEIs by testing employees' attitudes. A questionnaire was used in the research. The aim of this study is to apply Exploratory Factor Analysis (EFA) based on original variables from the widely accepted standard ISO 9004:2018 guidelines for achieving sustainable success to analyse and evaluate organisational performance. The results of the factor analysis confirm that all obtained values are above the satisfactory values, thereby confirming the reliability of the data. For analysing and evaluating performance in HEIs, it is crucial to identify and understand the factors that may lead to improvements in overall organisational performance in the future. Based on the variables related to performance indicators, analysing and evaluating performance, conducting internal reviews, self-assessment, and re-evaluating the obtained information can improve performance in the future.

Keywords: Organizational performance, Quality, Higher Education Institutions (HEIs), Exploratory Factor Analysis (EFA)

* Corresponding author: nedeljka.zivkovic@bpa.edu.rs

Nedeljka Živković, ORCID: 0000-0001-6663-7467

Maja Glogovac, ORCID: 0000-0003-3268-8543

Isidora Milošević, ORCID: 0000-0001-5539-8253

ANALYSIS OF INNOVATION IN BRICS COUNTRIES

Ivica Nikolić^{1*}, Lidija Krstić¹, Anđelka Stojanović¹, Denis Stojkanović²

¹*University of Belgrade, Technical Faculty in Bor, Serbia*

²*The Higher School of Professional Studies for Management and Business Communication*

Abstract: The process of globalization creates intense competition in the global market, requiring the economies of all countries to gain a competitive advantage through the development of innovation. This paper analyzes the innovation capabilities of all ten BRICS member states, including both the founding countries (Brazil, Russia, India, China, and South Africa) and the new members (Egypt, Ethiopia, Indonesia, Iran, and the United Arab Emirates). The analysis is based on the values of the Global Innovation Index (GII), which contributes to the creation of an environment in which innovation factors are continuously assessed and enables a comprehensive evaluation of innovation policies. The aim of the paper is to group BRICS countries into a homogeneous cluster in order to better understand their innovation capacities based on data collected over a five-year period. The research results provide a more comprehensive insight into the position of each BRICS member, identifying both the countries that stand out as leaders in innovation and those that lag behind.

Keywords: Innovation, Global Innovation Index, BRICS, Cluster analysis.

* Corresponding author: inikolic@tfbor.bg.ac.rs

Ivica Nikolić, ORCID: 0000-0003-1986-4653

Lidija Krstić, ORCID: 0009-0009-6618-4723

Anđelka Stojanović, ORCID: 0000-0001-7254-4646

Denis Stojkanović, ORCID: 0009-0003-0686-7879

DIGITALIZATION THROUGH E-INVOICES IN MICRO AND SMALL ENTERPRISES – CROATIAN EXPERIENCES

Ivana Miklošević*

University of Slavonski Brod, Department of Social Sciences and Humanities, Croatia

Abstract: Abstract: The aim of this paper is to investigate practical experiences of micro and small entrepreneurs in the Republic of Croatia regarding the digitalization process, with a special emphasis on the implementation of e-invoices in their business operations. Qualitative methods were used within the scientific research conducted, specifically semi-structured interviews with 15 micro and small entrepreneurs operating in various sectors (trade, services, manufacturing, and construction). The scientific contribution of this paper lies in the exploration of both positive and negative aspects encountered by micro and small enterprises through the implementation of electronic invoices. Furthermore, the study identifies obstacles faced by entrepreneurs during their adaptation to new digital requirements in doing business with the public sector, as well as the level of institutional support provided. Results indicate uneven readiness for change among entrepreneurs from different sectors, with information scarcity and limited capacities identified as primary challenges. On the other hand, positive developments were observed in terms of business efficiency and administrative burden reduction for enterprises and their employees. This paper contributes to a better understanding of the real needs of micro and small entrepreneurs in adapting their business to digital transformation, and may serve as a basis for shaping support measures to facilitate their digital transition.

Keywords: Digitalization, e-invoices, micro and small enterprises, Republic of Croatia.

* Corresponding author: imiklosevic@unisb.hr

Ivana Miklošević, ORCID: 0000-0002-5882-6409

REVEALING HIDDEN LABOUR MARKET INSIGHTS: DEPLOYING A MACHINE LEARNING SOLUTION TO EXPLAIN SKILLS GAPS

Valters Kaže*

RISEBA University of Applied Sciences, Faculty of Economics and Business, Latvia

Abstract: The impact of digitalisation and globalisation on the demand for specific skills requires new approaches for developing human capital and skills at all stages, from future-oriented education and on-site training to changing human resources management and hiring practices.

The research is part of a project to design a practical instrument for individuals, employers, educators, and public authorities to benefit from the labour market and skills intelligence in real time.

The objective is to explore the relationship between values and skills with a custom-developed machine-learning solution in a nationally-representative survey of 1,741 Latvian working-age respondents, including economically active and inactive persons, and 1,023 companies represented by their recruitment and personnel development decision-makers. The survey instrument for individuals was a self-assessment questionnaire of 79 skills in 12 groups and personal values tests, deploying image-based and statement-based approaches. A survey complemented with structured interviews was deployed with employers. The novelty of the method is replacing lengthy and less precise value measurement routines with image tests using Motival machine-learning algorithms.

The results reveal a significant mismatch between the skills and personal values demanded and available in the labour market. A machine learning application provides a practical solution and opportunities to grow human capital by linking personality traits with the current skills and aspirations to obtain new skills for employees and improve the hiring process.

Keywords: human capital, skills, competencies, personal values, sustainability.

* Corresponding author: valters.kaze@riseba.lv

CREATING CUSTOMER VALUE IN PRIVATE MEDICAL CLINICS BASED ON AN OMNICHANNEL INTERACTION SYSTEM

Marina Sheresheva¹, Ekaterina Yudina¹, Daniel Pavlov^{2*}

¹ *Lomonosov Moscow State University, Russia*

² *University of Ruse “Angel Kanchev”, Bulgaria*

Abstract: The purpose of this study is to develop theoretical and methodological approaches and empirical tools that ensure the creation of value for the patient in private clinics through the integration of an omnichannel interaction system. The study includes an analysis of the integration of various communication channels and their impact on the medical services value perception. Modern concepts of consumer value, customer behavioral models, and value co-creation principles were used as a methodological basis. The empirical part was based on a mixed design that included qualitative interviews with experts and quantitative patient surveys (n=619). The results of the study confirmed the significance of personalized communications through digital and traditional channels on the growth of patient satisfaction and loyalty. The introduction of omnichannel systems integrating various communication channels improves the quality of interaction with patients, which leads to an improvement in their overall experience. Omnichannel solutions allow private clinics to create a continuous and consistent customer journey, increasing satisfaction and loyalty.

Keywords: relationship marketing, digital communication channels, omnichannel interaction system, healthcare, Russia.

* Corresponding author: dpavlov@uni-ruse.bg

Marina Sheresheva, ORCID: <https://orcid.org/0000-0002-8153-7111>

Ekaterina Yudina, ORCID: <https://orcid.org/0009-0003-5453-952X>

Daniel Pavlov, ORCID: <https://orcid.org/0000-0002-4515-2206>

DYNAMIC TRAFFIC LANES STRATEGY MANAGEMENT IN SMART CITY

Amit Vujic^{1*}, Vladimir Tomasevic², Vladica Ristic³, Marija Maksin¹

¹ *International Research Academy of Science and Art, Belgrade, Serbia*

² *School of Engineering Management, Union University "Nikola Tesla", Belgrade, Serbia*

³ *Faculty of Applied Ecology "Futura", Metropolitan University, Belgrade, Serbia*

Abstract: Integrated domains, urban mobility, information and communication technologies (ICT), advanced parking solutions, and the shared economy drive the evolution of smart city ecosystems. This paper explores the strategic management of digitized urban street lanes as a transformative tool to improve traffic efficiency and overall city security. Traditional lane configurations are typically static, denoted as (n+n), where (n) lanes are permanently assigned to each direction. This assumes symmetric traffic distribution, which fails for real-time directional imbalances. Our approach defines two dynamic directional lane vectors {A} and {B} representing the active lane allocations, with $(i+j=2n)$, the total number of available lanes. This allows real-time reallocation based on sensed traffic asymmetry. Our methodology transcends mere technological deployment, targeting infrastructure redesign for improved adaptability, security, and resilience. The proposed model enables streets to respond fluidly to dynamic demand, mitigating congestion, reducing fuel consumption and emissions, and reclaiming valuable urban time otherwise lost in traffic. A real-life case study illustrates the methodology's feasibility. We further validate our concept using a modified Nagel–Schreckenberg cellular automaton simulation enriched with game theory principles. This methodology provides a scalable path toward safer, more sustainable, and strategically managed urban infrastructure.

Keywords: Smart City, Floating Car Data, Cell Automata, Strategy Management, Security Systems.

* *Corresponding author: avujic@eplus.systems*

Amit Vujic, ORCID: 0009-0007-4901-8112

Vladimir Tomasevic, ORCID: 0000-0001-9845-2950

Vladica Ristic, ORCID: 0000-0002-8605-1698

Marija Maksin, ORCID: 0000-0002-3695-5824

HOW NEWCOMERS INFLUENCE GROUP MICROCLIMATE?

Rita Remeikienė^{1 *}, Beatričė Rūškienė²

¹ *Mykolas Romeris university, Public Safety Academy, Lithuania*

² *Mykolas Romeris university, Institute of Psychology, Lithuania*

Abstract: This paper explores the multifaceted role of group composition and the influence of newcomers on group performance and dynamics. Group composition - including diversity in skills, traits, and backgrounds - significantly affects group processes such as cohesion, communication, and decision-making. While stability fosters trust and shared memory systems, controlled turnover can inject valuable perspectives and increase adaptability. Newcomers exert both unconscious and conscious influence. Unconsciously, their arrival can reshape group norms even before formal integration, while conscious influence depends on their motivation and the group's openness to change. Newcomers can positively stimulate creativity and group reflection, yet they may also disrupt harmony and demand increased resources for integration. The outcome of their influence is largely shaped by how well existing members manage receptivity and adapt to change. Thus, strategically managing group composition and supporting newcomer integration is essential to optimizing team functionality

Keywords: newcomers, group, members, team functionality, microclimate.

* Corresponding author: rita.remeikiene@mruni.eu

Rita Remeikienė, ORCID: 0000-0002-3369-485X
Beatričė Rūškienė, ORCID: 0009-0005-6884-3383

ASPECTS OF LEGAL REGULATION OF CO₂ EMISSIONS INTO THE ATMOSPHERE: A EUROPEAN UNION PERSPECTIVE

Evaldas Raistenskis*, Ligita Gasparėnienė, Rita Remeikienė

Vilnius university, Faculty of Law, Lithuania

Abstract: This article examines the legal regulation of CO₂ emissions in the European Union through a structured analysis of key legislative instruments and climate policy frameworks. Focusing on the emissions trading system, carbon capture, utilization and storage mechanisms, and sector-specific regulatory measures, the paper explores the effectiveness, consistency, and legal implications of recent developments. Drawing on academic research, strategic planning documents, and binding legal acts, the study highlights both the progress made and the limitations that remain within the current legal landscape. While the emissions trading system has demonstrated the potential to incentivise decarbonisation, questions persist regarding allocation fairness, transparency, and cross-border enforcement. In the field of carbon capture and utilisation, the lack of clear definitions and regulatory scope continues to generate uncertainty. Similarly, new legal instruments addressing the transport sector represent a step forward but also reveal tensions between legal ambition and technological readiness. The article concludes that further legal refinement is necessary to address fragmentation, improve coordination between legal layers and governance levels, and ensure alignment between long-term strategic goals and concrete legal obligations. Strengthening legal precision and coherence is essential to support the credibility and functionality of climate law across the European Union.

Keywords: Carbon capture and storage, CO₂ regulation, Emissions Trading System, European Union climate law, Legal coherence.

* Corresponding author: evaldas.raistenskis@tf.vu.lt

Evaldas Raistenskis, ORCID: 0000-0003-3049-2926
Ligita Gasparėnienė, ORCID: 0000-0002-5535-6552
Rita Remeikienė, ORCID: 0000-0002-3369-485X

COMMUNICATION SATISFACTION AS A PREDICTOR OF ORGANIZATIONAL COMMITMENT

Danijela Voza*, Zorana Janković, Milovan Vuković

University of Belgrade, Technical faculty in Bor, Serbia

Abstract: Effective internal communication plays a crucial role in fostering organizational commitment, which is essential for the long-term success and sustainability of any organization. This study investigates the relationship between communication satisfaction factors and organizational commitment, focusing on the influence of communication satisfaction in various organizational settings. A survey was conducted among 197 employees across different industries, utilizing the Communication Satisfaction Questionnaire (CSQ) and the Organizational Commitment Instrument (OCI) to measure key factors. The results of Correlation analysis indicate a significant positive correlation between overall communication satisfaction and organizational commitment, with communication climate, feedback, and media quality emerging as the most influential factors. The Stepwise Multiple Regression Analysis proved that horizontal communication and media quality are the strongest predictors of organizational commitment. These findings suggest that organizations can enhance employee engagement and retention by improving communication satisfaction, particularly through effective feedback mechanisms and fostering a supportive communication environment.

Keywords: communication satisfaction, organizational commitment, communication climate, prediction, Stepwise Multiple Regression Analysis

* Corresponding author: dvoza@tfbor.bg.ac.rs

Danijela Voza, ORCID: 0000-0003-0895-731X
Zorana Janković, ORCID: 0009-0008-6265-1454
Milovan Vuković, ORCID: 0000-0003-1715-1078

AUTONOMOUS SYSTEMS ON THE BATTLEFIELD: THE MILITARY POTENTIAL AND RISKS OF SELF-DRIVING VEHICLES

Péter Szikora*

Obuda University, Keleti Károly Faculty Business and Management, Hungary

Abstract: The technological development of self-driving cars offers new opportunities for both civil and military applications. In the military domain, the development and application of autonomous vehicles deserves particular attention as it raises new challenges and risks, including cyber security, ethical issues and national security. This research aims to explore the societal acceptance of, and fears and concerns about, the use of autonomous vehicles in combat applications. The study analyses the views of different demographic groups, taking into account confidence in technological developments, transport safety, and ethical and legal issues related to military applications. The results show that the acceptance of military autonomous systems is closely related to public confidence in technology and concerns about the safety of technology. The research will contribute to future research investigating the integration of self-driving vehicles in military environments.

Keywords: autonomous vehicles, military applications, cybersecurity, ethical dilemmas

* Corresponding author: szikora.peter@kgk.uni-obuda.hu

Péter Szikora, ORCID: 0000-0001-8680-3880

PRICE AND VOLUME DYNAMICS: A CORRELATION ANALYSIS OF MAJOR OIL COMPANIES

Adrijana Jevtić Tomić*, Dejan Riznić

University of Belgrade, Technical Faculty in Bor, Republic of Serbia

Abstract: Understanding the relationship between trading volume and price movements is crucial for analyzing market dynamics. This study examined the correlation between monthly price changes and monthly volume changes for three major oil companies: Exxon Mobil (XOM), Chevron (CVX) and ConocoPhillips (COP). The monthly price and volume data for the period from January 2020 to May 2025 were analyzed using Pearson's correlation coefficient. The results showed a statistically significant positive correlation between price and volume changes for Exxon Mobil, suggesting that increased trading activity tends to be associated with price increases for this company. However, the correlations for Chevron and ConocoPhillips were not statistically significant during the period under review. A strong positive correlation is also found when looking at the correlation between the monthly price changes of the companies observed. On the other hand, the correlation between the volume changes of the observed companies is only strong and positive for one pair of the analyzed companies, while the other companies show a slightly negative correlation. Major oil companies may have varying short-term price-volume relationships, necessitating further research to understand these dynamics and consider other market factors.

Keywords: Price change, Volume change, Oil companies, Correlation Analysis, Stock market.

* Corresponding author: ajevtic@tfbor.bg.ac.rs

Adrijana Jevtić Tomić, ORCID: 0000-0002-8870-5790
Dejan Riznić, ORCID: 0000-0002-8213-2722

STRATEGIC MANAGEMENT AND CAPITAL BUDGETING

Jelena Ružić¹, Ivana Janković², Sanela Golubović Corcione³

¹*University Educons, Faculty of Project and innovation management Prof. dr Petar Jovanović, Belgrade,* ²*University of Nis, Faculty of Mechanical Engineering, Serbia, ,*
³*University Business Academy in Novi Sad, Faculty of Contemporary Arts, Belgrade,*

Abstract: Strategic planning and capital budgeting are key tools in organizational management aimed at achieving long-term goals and ensuring financial sustainability. Strategic planning involves defining the vision, mission, and objectives, along with developing strategies for their realization, while capital budgeting refers to decision-making regarding investments in long-term projects. This paper analyzes the role of strategic planning in the public sector, focusing on medium- and long-term strategies, as well as the importance of monitoring and evaluation through tools such as KPIs, NPV, and IRR. Capital project budgeting depends on the type and scope of the project, available financial resources, and organizational priorities. Effective management of these processes requires continuous adjustment of strategies in response to environmental changes. By integrating strategic planning and capital budgeting, organizations can achieve optimal resource allocation, improve implementation success, and realize their vision.

Keywords: Strategic planning, capital budgeting, investment evaluation, public sector management

¹ Jelena Ružić: jruzic45@gmail.com

Jelena Ružić, ORCID: 0009-0000-4715-2288

Ivana Janković, ORCID: 0009-0008-1129-2156

Sanela Golubović Corcione, ORCID: 0009-0003-1765-1002

ANALYSIS OF TRAINING NEEDS OF PROFESSIONAL DEVELOPMENT OF SENIOR CIVIL SERVANTS IN THE REPUBLIC OF SERBIA

Jelena Ruso^{*1}, Ana Rakić¹, Sara Dimitrijević¹, Isidora Milošević²

¹ *University of Belgrade, Faculty of Organizational Sciences, Serbia*

² *University of Belgrade, Technical Faculty in Bor, Serbia*

Abstract: One key resource for efficient public administration is a senior civil servant (SCS), who plays a fundamental role in integrating political decisions into administrative implementation. Therefore, the state's investment in their professional development and training is vital for the quality of public administration services. In order to achieve a high quality of public services, it is necessary to determine the real need for professional development of civil servants in managerial positions. After surveying 110 SCSs in Serbia, the results show that they generally positively evaluate the proposed features of the training program, with a particularly high level of agreement for the elements of practical application, use of technology, interactivity and creative thinking. The highest percentage of strong agreement was recorded for practical examples and enabling knowledge transfer through useful methods, indicating a preference for an applicable and dynamic approach to learning.

Keywords: public administration, senior civil servants, training needs, professional development.

^{*} *Corresponding author: jelena.ruso@fon.bg.ac.rs*

Jelena Ruso, ORCID: 0000-0003-4120-8759

Ana Rakić, ORCID: 0000-0001-7110-6441

Sara Dimitrijević, ORCID: 0009-0000-2278-9952

Isidora Milošević, ORCID: 0000-0001-5539-8253

ASSESSMENT OF THE CRIMINOGENIC SITUATION IN THE BALTIC STATES: MULTI-CRITERIA MODEL

Box Marcus¹, Lin Xiang², Gasparėnienė Ligita³, Remeikienė Rita^{4*}

^{1,2} *School of Social Sciences, Södertörn University (Södertörns högskola), Sweden*

^{3,4} *Vilnius university, Lithuania*

Abstract: The assessment of the criminogenic situation helps to identify the main threats and types of crimes, thus allowing authorities to develop preventive measures and ensure public safety. A multi-criteria assessment of the criminogenic situation in the Baltic States allows to provide the recommendations regarding which crimes should be focused on by the national police forces. This research stands out from previous assessments of the general criminogenic situation in a country or region by providing the net present value for the three Baltic States. It allows for a comparison of crime rates across these countries with consideration of 16 types of crimes. The major purpose is to assess the criminogenic situation in the Baltic States. The results of the multi-criteria assessment imply that Lithuania had the lowest crime rate compared to Estonia and Latvia in 2022. The results revealed that while each Baltic State has strengths in certain areas of crime prevention (e.g. Lithuania and Estonia's efforts against money laundering, and Estonia's success in combating corruption), they also face specific challenges, including Latvia's difficulties with robberies and serious assaults.

Keywords: crimes, criminogenic situation, Baltic states, multi-criteria model.

* Corresponding author: rita.remeikiene@tf.vu.lt

Box Marcus, ORCID: 0000-0003-0426-7936

Lin Xiang, ORCID: 0000-0003-3747-9038

Ligita Gasparėnienė, ORCID: 0000-0002-5535-6552

Rita Remeikienė, ORCID: 0000-0002-3369-485X

ECOLOGICAL DEBT RISK – HAVE WE ALREADY SPENT OUR RESOURCES FOR 2025?

Marija Panić*

University of Belgrade, Technical Faculty in Bor, Serbia

Abstract: Of all the material resources on Earth, the potential for biological regeneration is the most limited. For this reason, it is essential to map all of our demands against biocapacity. Adopting this biological viewpoint makes it evident which strategies are likely to succeed and which are bound to fail. Each year, the Global Footprint Network announces the day the world enters ecological debt, which is an estimate of the point in the year at which we have globally consumed more resources than the Earth can renew in one year. Calculations typically say that global ecological debt day is mid-summer. The ecological debt day of specific countries shows a slightly different assessment, which raises the question of when the global ecological debt day would occur if the world spent on average the same as that particular country. The calculation is done per capita, so countries whose per capita consumption is relatively low have no ecological debt at all. Serbia, which already entered the ecological debt in the middle of spring 2025, consumes resources faster than the world average and somewhat slower than the European Union.

Keywords: Global Footprint Network, ecological debt, resources.

* Corresponding author: mpanic@tfbor.bg.ac.rs

Marija Panić, ORCID: 0000-0001-7287-758X

DO KNOWLEDGE MANAGEMENT AND GREEN INNOVATION CONTRIBUTE TO THE GREEN TRANSITION IN SERBIAN ENTERPRISES?

Sanela Golubović Corcione*, Milica Veličković, Aleksandra Fedajev, Jelena Ružić

University of Belgrade, Technical faculty in Bor, Serbia

Abstract: Knowledge Management (KM) has garnered significant attention from the business sector over the past few decades. At the same time, in light of environmental challenges, dynamic firms have broadened the scope of KM by integrating environmental considerations. Effective KM practices are expected to assist organizations in achieving green innovation and green transition. This study employs the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique to explore the direct and indirect relationships among knowledge management (KM), green innovation (GI), and green transition (GT) within Serbian enterprises. The study also evaluates the direct influence of human capital and strategy on KM. Conducted from 2024 to early 2025, the research includes a sample of 212 employees and managers from various hierarchical levels across Serbian manufacturing and service organizations. The findings reveal a positive direct influence of KM on both GI and GT. Additionally, there is a significant positive mediating effect of GI on the relationship between KM and GT. The findings suggest a positive correlation between human capital and KM, but a negative correlation between strategy and KM. This research paper demonstrates that implementing a knowledge management system effectively promotes green transitions in enterprises. It provides valuable insights for both enterprises and developing countries aiming to enhance environmental sustainability.

Keywords: Knowledge Management, Green innovation, Green transition, Human capital, Strategy, PLS-SEM analysis.

* Corresponding author: sanela.golubovic@fsu.edu.rs

Sanela Golubović Corcione, ORCID: 0009-0003-1765-1002

Milica Veličković, ORCID: 0000-0002-4332-2216

Aleksandra Fedajev, ORCID: 0000-0002-6974-6631

Jelena Ružić, ORCID: 0009-0000-4715-2288

ENVIRONMENTAL ASPECTS IN THE CASE-LAW OF THE COURT OF JUSTICE OF THE EUROPEAN UNION UNDER ARTICLE 260(2) TFEU

Deimilė Prapiestytė *

Vilnius University, Faculty of Law, Lithuania

Abstract: This article explores how the European Commission ensures compliance with environmental obligations by Member States through infringement procedures, particularly under Article 260(2) TFEU. The analysis begins by outlining the legal framework governing non-compliance and financial penalties, focusing on the role of the Court of Justice of the European Union in sanctioning persistent breaches of environmental law. A review of selected judgments illustrates how the Court of Justice has applied financial penalties in cases involving waste management, air quality, and water protection. Special attention is given to the proportionality of fines and the reasoning behind the Commission's decision to initiate proceedings. The article also presents recent developments in 2024, including formal notices and actions brought against Greece and Portugal, drawing on data published by the Commission. These examples reveal that the timing and intensity of enforcement are often influenced by the complexity of the environmental issues at stake. The study concludes that while the Commission actively monitors and enforces environmental law, it adopts a flexible approach in certain cases, especially where compliance involves long-term infrastructural or administrative reform.

Keywords: Environmental law, Waste management, Air quality, European Commission, Infringement procedure, Court of Justice, Judgment of the Court establishing a failure to fulfil obligations, Non-compliance, Article 260(2) TFEU.

* Corresponding author: deimile.prapiestyte@tf.vu.lt

Deimilė Prapiestytė, ORCID: 0009-0002-0854-7484

THE SIGNIFICANCE OF THE COURT OF JUSTICE OF THE EUROPEAN UNION JUDGMENT OF 30 APRIL 2024 IN CASE C-670/22 ("ENCROCHAT") FOR THE ADMISSIBILITY OF EVIDENCE IN CRIMINAL PROCEEDINGS

Remigijus Merkevičius*

Vilnius University, Faculty of Law, Lithuania

Abstract: This article analyses the judgment delivered by the Court of Justice of the European Union (CJEU) on 30 April 2024 in Case C-670/22 ("EncroChat") and its implications for the admissibility of evidence in national criminal proceedings. According to the CJEU, a European Investigation Order (EIO) requesting evidence already held by the executing Member State may only be issued by a competent authority as defined by the issuing State's national law. When issuing such an EIO, the issuing authority must assess its compliance with (i) the classic principles of *necessity* and *proportionality* as set out in Article 6(1)(a) of the Directive and (ii) all "material conditions" prescribed by national law for the sharing of evidence in domestic proceedings. This includes, *inter alia*, evaluating the effect of the executing State's refusal to disclose the technical features of the tools used to infiltrate the encrypted telecommunications system, comparing the categories of investigated criminal offences, and the coercive procedural measures used to obtain the data in question. The ability of the issuing State to use such evidence depends directly on (i) the conditions and procedures of its collection in the executing State and (ii) the defendant's awareness and ability to effectively challenge it. Where the defendant cannot meaningfully dispute the authenticity, legality or reliability of the evidence, such evidence must be excluded. In addition, if, *in concreto*, such a coercive measure would not be permissible under the issuing State's domestic law, the exclusion of that evidence is also governed by Article 31(1) and (3) of the Directive.

Keywords: Admissibility of evidence, Court of Justice of the European Union, EncroChat, Encrypted communication, European Investigation Order.

* Corresponding author: remigijus.merkevicius@tf.vu.lt

IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE IN PROJECT-ORIENTED ORGANIZATIONS: A COMPARATIVE ANALYSIS OF SERBIA AND THE REGION

Jelena Ružić^{1*}, Sanela Golubović Corcione², Ivan Jovanović³

¹University Educons, Faculty of Project and innovation management Prof. dr Petar Jovanović, Belgrade, ²University Business Academy in Novi Sad, Faculty of Contemporary Arts, Belgrade, ³University of Belgrade, Technical Faculty in Bor, Serbia

Abstract: The paper analyzes the implementation of artificial intelligence (AI) in project-oriented organizations through a comparative study of Serbia and the region. It focuses on the impact of AI on improving efficiency, innovation, and decision-making quality, as well as the role of knowledge management and continuous learning in the digital transformation process. Using theoretical frameworks, empirical data, and case studies, the paper identifies key advantages and challenges of AI adoption in Serbia, which lags behind more developed regional countries like Slovenia and Croatia in terms of digitalization and integration of advanced technologies. Concrete examples of successful AI applications in various sectors (energy, construction, creative industries, finance) are presented, along with obstacles such as a lack of skilled personnel, limited resources, and organizational inertia. Based on the comparative analysis, the paper provides recommendations for enhancing the digital transformation of project-oriented organizations in Serbia, confirming the hypothesis that the integration of AI and knowledge management significantly contributes to increased efficiency, innovation, and competitiveness.

Keywords: artificial intelligence, project-oriented organizations, knowledge management, digitalization, efficiency.

* Corresponding author: jruzic45@gmail.com

Jelena Ružić, ORCID: 0009-0000-4715-2288

Sanela Golubović Corcione, ORCID: 0009-0003-1765-1002

Ivan Jovanović, ORCID: 0000-0002-3713-5203

THE IMPACT OF THE CIRCULAR ECONOMY ON AN INDIVIDUAL'S QUALITY OF LIFE: A EUROPEAN UNION PERSPECTIVE

Ligita Gasparėnienė*, Rita Remeikienė

Vilnius university, Faculty of Law, Lithuania

Abstract: This article explores the relationship between circular economy strategies and individual quality of life in the European Union. While the circular economy is widely promoted for its environmental and economic benefits, its social implications – particularly for everyday well-being – remain underexamined. Drawing on legal and policy document analysis, as well as comparative insights from academic and institutional sources, the study identifies how circular measures contribute to or hinder improvements in quality of life. The findings indicate that circular approaches can positively influence environmental health, job creation, and access to services, particularly when implemented through inclusive and coherent governance structures. However, uneven institutional capacity, fragmented policy implementation, and the absence of social indicators in monitoring frameworks limit the equitable distribution of benefits. The research underscores the need to move beyond material efficiency towards a socially embedded circular transition that prioritises participation, equity, and measurable well-being outcomes. It concludes that circular economy strategies must integrate quality of life considerations explicitly within their planning, funding, and evaluation processes to serve as effective tools for human-centred development across the European Union. Without such integration, the circular economy risks remaining a primarily technical or symbolic agenda, rather than a pathway to improved and more just daily life.

Keywords: Circular economy, European Union, Governance, Quality of life, Well-being.

* Corresponding author: ligita.gasparenienne@tf.vu.lt

Ligita Gasparėnienė, ORCID: 0000-0002-5535-6552
Rita Remeikienė, ORCID: 0000-0002-3369-485X

THE CONCEPT OF ELASTICITY IN GEOMETRIC ROUTING MODEL OF THE FREIGHT MARKET IN PORT TRANSPORT AND TECHNOLOGICAL SYSTEM

Vyacheslav Zadorozhniy¹ *, Maksim Kolesnikov¹, Victor Bogachev¹, Maksim Bakalov¹,
Taras Bogachev²

¹ Rostov State Transport University, Faculty of Management of Transportation Processes,
Russia

² Rostov State University of Economics, Faculty of Computer Technologies and Information
Security, Russia

Abstract: The conducted research is based on the *geometric routing model (GRM)* of the territorial oligopolistic freight transportation market formed by departure stations on the railway loop. The model is constructed by the method of economic and geographical delimitation of the «influence domains» of departure stations using such a concept as the railway line non-straightness coefficient. The specified numerical characteristic allows taking into account the specifics of road network configuration in relation to the departure stations under consideration. For a more in-depth research of the behavior of the territorial freight transportation market on the railway loop, it seems appropriate to turn to such a tool traditionally used in economic research as elasticity. This concept, being intended to measure the sensitivity of one variable in relation to changes in another variable, allows researching the relationship and predicting the behavior of various indicators of the freight transportation market. In this paper, a methodology for forecasting the territorial oligopolistic market for empty wagon transportation services is developed. The specialized software product Maxima is a universal and effective tool, which, along with traditional functions (computational, analytical and graphical), allows implementing the heuristic component in transport and logistics research. The developed approach is common for land transport and, taking into account the relevant specifics, can be used to find rational freight transportation schemes, carried out, for example, by automobile transport.

Keywords: Geometric routing model, railway line non-straightness coefficient, higher orders algebraic curves, influence domains, elasticity.

* Corresponding author: zadorozhniy91@mail.ru

Vyacheslav Zadorozhniy, ORCID: 0000-0002-8357-4151
Maksim Kolesnikov, ORCID: 0000-0002-6554-336X
Victor Bogachev, ORCID: 0000-0003-1202-7318
Maksim Bakalov, ORCID: 0000-0002-5060-5863
Taras Bogachev, ORCID: 0000-0001-9641-0116

IMPLEMENTATION OF THE NEW INFORMATION SYSTEM FOR FINANCIAL MANAGEMENT (ERP SYSTEM) AT ŽRS A.D. DOBOJ

Siniša Urumović*, Nikola Simić

Željeznice Republike Srpske a.d. Doboj, Bosna i Hercegovina

Abstract: It has been observed that most business processes and activities at ŽRS are based on paper documentation or are only partially automated. With a view to eliminating the existing shortcomings, it has been proposed that the new information system should be one from a group of modern ERP systems (Enterprise Resource Planning System) which, with their functionalities, enable the connection of business processes and organizational units that execute those processes into a single system. The advanced capabilities of modern ERP systems enable support for the business processes of individual companies - members of the holding, but also of the holding as a whole. ERP systems are modularly designed, with each module supporting a group of related business functions. The implementation of the ERP system brings numerous benefits, the most significant of which are: integration, standardization, optimization and automation of business processes, increased efficiency, recording of changes in real time, single input and single database. The implementation of the ERP system brings major changes: existing software solutions are abandoned and new ones are introduced, there is a change/redesign of existing business processes and the methods the organization functions as a whole.

Keywords: information system, ERP system, implementation at ŽRS a.d. Doboj.

* Corresponding author: sinisa.urumovic@gmail.com

Siniša Urumović, ORCID: 0009-0008-8134-1275
Nikola Simić, ORCID: 0009-0003-3057-0012

IMMERSIVE SHOPPING EXPERIENCES: ASSESSING THE INFLUENCE OF AUGMENTED REALITY ON CONSUMER VALUE AND PURCHASE INTENTION

Rimante Hopeniene^{1*}, Ugne Kuzavaite²

¹ *Kaunas University of Technology, School of Economics and Business, Lithuania*

² *iDenfy, UAB, Lithuania*

Abstract: The evolution of technology has allowed customers to go beyond the simple observation of products, so they can experience deeper brand ecosystem interactions through active engagement. Brands must implement vital technological integrations with their marketing approaches because it has become essential to stand out in competitive markets. AR applications improve consumer experiences by giving detailed product information, delivering educational content, implementing gamified experiences, and providing virtual product trial opportunities. The examination of augmented reality (AR) effects on consumer behavior continues to grow, but research exploring how AR influences consumer perceived value and purchase intentions remains limited. It should be noted that a study of the scientific literature revealed that research on consumer reactions to AR is ongoing, but detailed studies of its impact on perceived value and purchase intentions remain useful and relevant. The study explores the connection between AR solutions and their impact on consumer-perceived value and purchase intentions. The mixed methods approach included an experiment and a survey of 201 Lithuanian respondents. Respondents tested the Wanna Kicks AR virtual footwear mobile application. The results show that AR solutions improve both consumer value creation and purchase intentions. Research in four dimensions of AR (informativeness, personalization, interactivity, and location specificity) showed that informativeness, together with interactivity and location specificity, positively impacts the creation of utilitarian value (information-orientated) for consumers. The results indicate informativeness and personalization are key contributors to the formation of hedonic value formation because they focus on sensory experiences. Utilitarian value showed the strongest response to location specificity from all values examined, while personalization demonstrated the most significant impact on the formation of hedonic value.

Keywords: augmented reality, consumer value, purchase intention, utilitarian value, hedonic value, experimental research.

* Corresponding author: rimante.hopeniene@ktu.lt

Rimante Hopeniene, ORCID: 0000-0003-1183-1814

Ugne Kuzavaite, ORCID: 0009-0001-5541-7773

EMPOWERING CONSUMERS IN THE CIRCULAR ECONOMY: STRATEGIES FOR SUSTAINABLE AGRI-FOOD SYSTEMS IN THE REPUBLIC OF NORTH MACEDONIA

Katerina Bojkovska¹ *

*1 Full-time Professor, University "St. Kliment Ohridski" – Bitola, Faculty of Biotechnical
Sciences - Bitola*

Abstract: The transition to a circular economy (CE) in North Macedonia's agri-food sector is essential for achieving sustainability and resource efficiency. This study explores consumer-centric strategies that emphasize reducing, reusing, and repairing (3Rs) to minimize waste and promote sustainable consumption. Using a mixed-methods approach, the research integrates quantitative consumer surveys (n=500) with qualitative interviews (n=30) and case studies of successful CE initiatives. Secondary data from government reports and industry publications were also analyzed.

Findings reveal moderate consumer awareness of CE principles, with 72% familiar with local food systems but only 50% aware of reuse and repair strategies. While 35-40% of consumers are willing to pay up to a 5% premium for sustainable products, economic constraints limit broader adoption. Key barriers include lack of awareness (40%), higher costs of sustainable products (30%), and limited availability (25%). Regression analysis confirms that consumer awareness ($\beta = 0.58$, $p = 0.002$) and economic incentives ($\beta = 0.42$, $p = 0.01$) significantly influence CE adoption.

The study highlights the need for affordable solutions, education campaigns, and stronger policy frameworks to encourage consumer participation. A multi-stakeholder approach, engaging consumers, businesses, and policymakers, is vital for advancing a sustainable agri-food sector in North Macedonia.

Keywords: Circular Economy, Consumer-Centric Strategies, Agri-Food Sector, Sustainability, Food Waste Reduction.

* Corresponding author: katerina.bojkovska@uklo.edu.mk

Katerina Bojkovska, ORCID: 0000-0002-8651-4621

ESG REPORTING IMPLICATIONS FOR ROAD CARRIERS' FINANCIAL OUTCOMES

Desislava Yosifova, Magdalena Petrova-Kirova*

Todor Kableshkov University of Transport, Faculty of Transport Management, Bulgaria

Abstract: Until the end of 2023, European legislation does not impose an obligation, but provides freedom to companies whether to implement ESG reporting. The conceptual idea of the study is to verify whether and to what extent non-financial ESG reporting of companies - road transport companies, has an impact on their financial results and subsequent business behavior (of their management and of external stakeholders - contractors and others). The analyzed sample includes 12 companies: 2 large Bulgarian companies from road freight transport (internationally licensed) and an additional sample of 10 SME- subsidiaries of large foreign companies (when forming control groups for the needs of the difference-indifferences analysis). These companies operate on Bulgarian territory, have ESG reporting and are related to the transport, logistics, courier sectors, as well as the field of communications and telecommunications services. To evaluate the results and test the research hypotheses, value analysis methods, as well as statistical methods and models, were used. The regression model was tested for the absence of multicollinearity, autocorrelation and heteroskedasticity. The data included in the study were processed by Gretl statistical software. A difference-in-differences analysis was conducted using Stata software to trace (possibly confirm) a causal relationship and measure the effect of ESG Reports disclosure. The constructed multiple regression model is based on an accounting-oriented approach focused on operating profit. After performing correlation and regression analysis and according to the constructed models, the presence of a relationship and dependence between the values of the calculated indicators and EVA was verified and established.

Keywords: road companies, ESG reporting, corporate sustainability, financial performance; regression & correlation dependence.

* Corresponding author: e-mail address magdalena@vtu.bg

Desislava Yosifova, ORCID: 0009-0007-1430-6093

Magdalena Petrova-Kirova, ORCID: 0009-0008-3550-6438

SELF-RATED HEALTH AND SICKNESS ABSENCE IN THE CONTEXT OF THE WORK ENVIRONMENT

Katarzyna Miszczyńska *

University of Lodz, Faculty of Economics and Sociology, Poland

Abstract: Employee health and sickness absence are pivotal concerns in modern work environments. Investigations into the determinants of employees' absenteeism behavior have resulted not only in the development of an extensive catalog of such factors but also in the formulation of models that categorize these factors and illustrate their impact on employee sickness absence. Both self-assessed health and health status evaluated through the lens of disease or its precipitating factors are areas warranting examination regarding their influence on the incidence of sickness absence in European countries. The present study sought to investigate the relationship between self-rated health, chronic illnesses, and sickness absence. **Methods:** The analysis utilized data from the European Working Conditions Survey (EWCS) from 2010 and 2015, encompassing 33 European countries and focusing on working individuals aged 18-64. The findings confirmed a statistically significant association between self-perceived health status and sickness absence, indicating that individuals with a more favorable perception of their health were less likely to take sick leave. The analysis also considered the influence of gender, revealing statistically significant differences in self-perceived health status between women and men. The study highlights the significance of self-rated health as a determinant of sickness absenteeism and recommends further research in this domain, considering gender and chronic disease factors, to enhance employee health management strategies and reduce sickness absenteeism. The authors propose that integrating self-assessment of health into prevention programs and rehabilitation interventions may contribute to minimizing sickness absence.

Keywords: sickness absence, self-rated health, work environment, European countries, employees.

* Corresponding author: katarzyna.miszczynska@uni.lodz.pl

Katarzyna Miszczyńska, ORCID: 0000-0003-4924-7605

WOMEN'S RURAL ENTREPRENEURSHIP – AN INTEGRATED APPROACH TO THE GENDER DIMENSION

Marina Nedeljković *

*College of Vocational Studies for Teachers and Business Informatics Sirmium, Sremska
Mitrovica, Serbia*

Abstract: Contemporary social trends in the reconstruction of rural space, rurality and rural development impose the need for an adequate response and the willingness of local actors to actively engage in the development of the local community by mobilizing available resources, minimizing costs and maximizing productivity (which is viewed here from a sociological, not purely economic perspective). In modern societies, we are witnessing the changes that are taking place in the transformation of the rural into a modern economy, through the modernization of agricultural production, but also the expansion of the role and importance of rurality and the rural area. However, the postmodernization of rurality is accompanied by the diversification of the rural economy, but also by the need to create and implement gender-sensitive policy measures. In conditions where women, as part of the general population, comprise half of the world's population, their socio-economic development and capacity for entrepreneurship is increasingly attracting the attention of various scientific disciplines. The significance of the concept of (neo)endogenous rural development from the perspective of gender-sensitive rural policies is reflected in the expansion of the development capacities of human capital (rural women), and thus of a particular rural area.

Keywords: Female rural entrepreneurship, rural structure, gender regimes, diversification of the rural economy

* Corresponding author: marina.nedeljkovic89@gmail.com

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON SUPPLY CHAIN MANAGEMENT IN MOROCCO

Didi Abdi¹ *, Aziz Hamioui ²

¹ *National School of Business and Management
Sidi Mohamed Ben Abdellah University
Fez, Morocco*

Abstract: This study investigates the impact of artificial intelligence (AI) on the performance transformation of supply chain management in Morocco, particularly in the logistics and manufacturing sectors. The objective is to evaluate how AI contributes to improving operational efficiency, decision-making, and cost control. A quantitative survey was conducted with a random sample of 463 companies, yielding 94 responses. The data were collected using a structured questionnaire targeting supply chain managers, IT managers, and general directors. The findings reveal a growing adoption of AI-based solutions in operational processes, with a significant proportion of companies leveraging AI for automating repetitive tasks, optimizing inventory management, and enhancing delivery tracking. These AI applications are associated with notable improvements in various aspects of supply chain performance. However, several barriers hinder broader adoption, including a lack of specialized skills, budget constraints, and limitations in technological infrastructure. Despite these challenges, a large majority of respondents consider AI to be a strategic asset for the future of supply chains in Morocco. This study highlights the innovative potential of AI while stressing the need for tailored integration strategies. It provides practical recommendations for companies and calls for public policies that support training, investment, and the development of digital infrastructure.

Keywords: Artificial Intelligence, Supply Chain Management, Operational Efficiency, Logistics.

* Corresponding author: didi.abdi@usmba.ac.ma

Abdi Didi, ORCID: <https://orcid.org/0009-0003-7670-1858>

Aziz Hamioui , ORCID: <https://orcid.org/0000-0002-9032-4978>

THE IMPACT OF PROCESS AUTOMATION ON MANAGEMENT CONTROL AND THE PERFORMANCE OF TOURISM COMPANIES: A BIBLIOMETRIC ANALYSIS

Sissah Safae*, Hmioui Aziz

*University Sidi Mohamed Ben Abdellah, National School of Business and Management,
Morocco*

Abstract: In today's increasingly competitive and digitized tourism environment, companies face complex challenges related to resource management, cost optimization and customer satisfaction. Process automation offers a strategic solution to these challenges, improving operational efficiency and reducing margins of error. In this context, management control, the pillar of organizational performance, benefits fully from automation, notably through improved data collection and analysis. However, although automation offers undeniable opportunities, its impact on the performance of tourism businesses has yet to be systematically studied. The aim of this research is to explore, through bibliometric analysis, the effects of automation on management control and the performance of tourism companies. The purpose is to identify the main research trends, the expected benefits and the challenges encountered, while providing industry professionals with key elements to guide their strategy in a context of increasing digitalization.

Keywords: Bibliometric analysis, management control, tourism performance, automation.

* Corresponding author: safae.sissah@usmba.ac.ma

Sissah Safae, ORCID: 0009-0008-9220-3150
Hmioui Aziz, ORCID: 0000-0002-9032-4978

VIOLENCE AGAINST WOMEN WITHIN THE CONTEXT OF DOMESTIC ABUSE IN BALTIC STATES AND ITS IMPACT ON LABOUR MARKET

Ligita Gaspareniene, Ilona Michailovič, Rita Remeikienė*

Vilnius university, Law faculty, Lithuania

Abstract: Domestic violence is a serious problem which is particularly difficult to solve because the cases of domestic abuse often occur at home, and because it requires deep socio-cultural changes in society. This article aims at identifying which types of domestic violence are prevalent in the Baltic States and how their prevalence affects the labour market. The main types of domestic violence include physical and sexual violence (the statistical data on the cases of this violence are available), while the cases of economic and psychological violence are more difficult to detect. Thus, this article focuses on physical and sexual violence against women in domestic environment in the Baltic States. The surveys carried out in the Baltic States reveal that physical injuries are the most common consequence of domestic violence, with a significant number of women feeling that their lives are in danger. Traumas and physical injuries lead to women leaving the labour market or reducing their working time.

Keywords: domestic violence, women, Baltic states, domestic abuse, labour market.

* Corresponding author: rita.remeikiene@tf.vu.lt

Ligita Gaspareniene, ORCID: 0000-0002-5535-6552
Ilona Michailovič, ORCID: 0000-0001-6292-1508
Rita Remeikienė, ORCID: 0000-0002-3369-485X

ALIGNING DIGITAL TRANSFORMATION WITH STRATEGIC MANAGEMENT IN LOGISTICS

Diana Daskevic*, Aurelija Burinskiene

*Vilnius Gediminas Technical University,
Department of Business technologies and entrepreneurship, Lithuania*

Abstract: Digital transformation is crucial for competitiveness in the logistics sector, yet many firms struggle to align digital technologies with strategic goals. Rapid technological advancements further complicate decision-making, emphasizing the need for structured investment frameworks. This study develops an integrated decision-making framework to align digital technology with business objectives, ensuring long-term competitive advantage. A systematic literature review identifies gaps in existing research, particularly in integrating multiple strategic models into a comprehensive framework. The study synthesizes five key methodologies: Porter's competitive strategy model, the Importance-Performance matrix, the Trade-off model, the Stacey matrix, and quality-time-cost-flexibility dimensions. The proposed framework is validated through qualitative (semi-structured interviews) and quantitative (DAG analysis) research, specifically focus on prioritising digital applications to support logistics ecosystem. It supports strategic decision-making by helping firms balance cost, efficiency, and other key factors. A logistics sector case study illustrates how companies can optimize digital technology selection and implementation strategies to enhance competitiveness. This research contributes to academic and practical management perspectives, providing decision-makers with valuable insights to align digital investments with strategic business goals in a rapidly evolving digital landscape.

Keywords: strategic decision-making, integrated framework, digital technologies, logistics sector, competitiveness.

* Corresponding author: diana.daskevic@vilniustech.lt

Diana Daskevic, ORCID ID: 0009-0009-7451-6177

Aurelija Burinskiene, ORCID ID: 0000-0002-4369-8870

OVERTOURISM AND SUSTAINABLE TOURISM

Lachi Cristina *

State Univeristy of Moldova, Faculty of Economic Sciences, Republic of Moldova

Abstract: This document examines the phenomenon of overtourism within the global tourism landscape and proposes sustainable, data-driven solutions. The introduction outlines the rapid growth of international tourism and the resulting pressures on popular destinations. A global analysis follows, identifying overtourism hotspots through quantitative indicators and assessing their economic and social consequences. The integration of diverse datasets offers insights into the systemic nature of overtourism and the need for informed policy responses. Evidence-based approaches to sustainable tourism are then explored. These include policy interventions aimed at managing tourist flows, preserving local communities, and maintaining environmental balance. The effectiveness of these strategies is evaluated over time, with key lessons drawn from global best practices. The study also considers Moldova's current tourism profile, emphasizing the importance of diversifying tourism products to reduce future risks of overtourism. Strategic observations highlight Moldova's potential for sustainable development, provided that proactive measures are adopted. In conclusion, the paper presents a set of strategic recommendations, detailing specific initiatives to promote responsible tourism. Each recommendation is aligned with long-term sustainability goals and addresses both national and local priorities. Overall, this research contributes to the development of resilient tourism models in the face of growing global challenges.

Keywords: Overtourism, sustainable tourism, policy interventions, tourism development, data-driven analysis.

* Corresponding author: clachy@yahoo.com

Lachi Cristina, ORCID: 0000-0001-7768-2108

ENTREPRENEURIAL STUDENT LEADERS' PERSPECTIVE: THE ROLE OF ENTREPRENEURSHIP INITIATIVES ON THE ENTREPRENEURIAL INTENTION OF UNIVERSITY STUDENTS

Gail Motlhaudi*

*Sol Plaatje University, Centre for Entrepreneurship and Development Research, Faculty of
Economic and Management Sciences, South Africa*

Abstract: Entrepreneurship is known globally as a phenomenon that contributes to economic growth, job creation and equal distribution of wealth. This knowledge has cascaded from government and corporates to institutions of higher education. In South Africa, particularly, efforts by public and private sectors continue to be made to transform these institutions into holistic entrepreneurial universities through various initiatives. This study seeks to establish the significance of these initiatives towards inciting entrepreneurial intentions (EI) in students, from the perspective of student leaders who lead these initiatives and the related organisations. A qualitative approach using purposive sampling was taken and focus group interviews with 10 student leaders across 4 entrepreneurship initiatives were held. Through a thematic analysis of the findings, the study found that the more exposed and involved in these initiatives, irrespective of degree programme registered for, the more the students' EI was increased. The study further revealed the positive contribution of these initiatives to the university wide entrepreneurship culture, witnessed in the increased support and uptake. The study concludes that these initiatives play a positive role in students' EI and therefore recommends further support for these initiatives especially from a policy and roll out perspective.

Keywords: Entrepreneurial intention; entrepreneurship initiatives, university students, South Africa.

* Corresponding author: gail.motlhaudi@spu.ac.za
Gail Motlhaudi, ORCID: 0000-0003-0182-1479

EFFECTIVE ELIMINATION OF NETWORK FAILURES IN BROADCAST SYSTEM

Jovan Zlatanovic¹ *, Ivana Milosevic², Mirko Milosevic³

¹ *PE Transmitters and communication, Serbia*

² *School of Technical and Art Applied Studies Academy of Electrical and Computer Engineering, Serbia*

Abstract: Broadcast companies always aim to have as few interruptions and failures as possible. They have experts in the field of telecommunications and use the most modern technological solutions. However, that is not enough. It is necessary to organize continuous monitoring, and directing information to employees relevant to the part of the job and an activity plan to prevent the spread of consequences of incidents. It is also necessary to organize activities through the procedures and guidelines to avoid breakdowns. Every organization wants to improve workspace safety and efficiency and reduce costs associated with unexpected breakdowns. Preventing equipment failure should be a top priority which gives us uninterrupted work that enables user satisfaction. In this paper, one should see an organizational model that includes fault management, where every employee knows how to act to eliminate the fault promptly. Failure should last as long as possible. This procedure assigns clear roles and responsibilities to the employer. This clarity helps prevent confusion and overlap. In the event of an issue, the employee will know exactly who is responsible for addressing it, leading to quicker resolution. Broadcasting TV, radio, and mobile information is very sensitive to interruptions, so quick break resolution leads to less on-air impact.

Keywords: Broadcast, failures, incidents, interruption, prevent.

* *Corresponding author: jovan.zlatanovic@etv.rs*

Jovan Zlatanovic, ORCID: 0000-0001-8607-8332

Ivana Milosevic, ORCID: 0009-0006-5429-8844

Mirko Milosevic, ORCID: 0009-0007-7280-6897

GOVERNANCE QUALITY AND MACROECONOMIC DETERMINANTS AS CATALYSTS FOR ENERGY INNOVATION IN INDONESIA: A THEMATIC ANALYSIS

Maria Marlein Warong^{*}, Ahmed Waqas

*National Research University Higher School of Economics – Nizhny Novgorod, Faculty of
Management, Russia*

Abstract: This study explores the complex relationship between governance quality, macroeconomic determinants, and energy innovation in Indonesia. Through a thematic analysis of 236 academic sources, four key thematic areas were identified: governance challenges, macroeconomic influences, policy framework effectiveness, and barriers to renewable energy adoption. The analysis reveals that governance quality plays a critical moderating role in translating favorable macroeconomic conditions into effective energy innovation outcomes. Institutional issues such as regulatory fragmentation and corruption, along with the influence of state-owned enterprises, emerge as significant barriers. The study finds that Indonesia's energy transition is more constrained by these governance and institutional challenges than by technological limitations. Additionally, the research highlights that market-based approaches are more effective in promoting energy innovation when supported by strong governance, while policy-driven approaches can compensate for market failures in less mature governance contexts. This paper contributes to the strategic management literature by offering a framework for understanding the role of governance and macroeconomic factors in driving energy innovation in emerging economies.

Keywords: Energy innovation, governance quality, macroeconomic determinants, Indonesia, strategic management.

^{*} Corresponding author: mvarong@hse.ru

Maria Marlein Warong, ORCID: 0009-0002-2964-8196
Ahmed Waqas, ORCID: 0000-0003-2648-1001

MADE IN ALBANIA FOR THE WORLD: A STUDY OF EXPORT STRATEGIES AND MARKET CHALLENGES

Ariola Harizi *, Denada Liça, Silvana Gashi

Aleksandër Moisiu University of Durrës, Faculty of Business, Albania

Abstract: The internationalization of Albanian products, under the label “Made in Albania”, presents a strategic opportunity for enhancing national economic growth, employment, and global recognition. This paper explores the findings from comprehensive surveys and four focus group discussions conducted with a total of 12 Albanian producers across key sectors such as agriculture, manufacturing, and artisanal goods. The primary aim was to assess current export practices, identify persistent barriers to internationalization, and understand producer perceptions regarding foreign markets. Data revealed that while a significant proportion of producers are active in exports, their strategies often lack formal market analysis and structured planning. Major challenges include difficulties in meeting international quality standards, high logistical costs, limited digital marketing capacities, and a weak international brand image. Producers demonstrated a strong interest in emerging regional markets and emphasized the growing demand for sustainable and culturally distinctive products. The research highlights the need for targeted policy interventions, capacity-building programs, and public-private partnerships to support export growth. Additionally, the study underscores the role of digitalization and strategic branding in enhancing Albania’s competitiveness. Findings contribute to academic discourse on SME internationalization and provide practical recommendations for stakeholders seeking to elevate Albania’s presence in global market.

Keywords: Export practices, international markets, Made in Albania, trade barriers.

* Corresponding author: ariolaharizi@uamd.edu.al

Ariola Harizi, ORCID: 0000-0001-6662-5044
Denada Liça, ORCID: 0000-0003-0504-7601
Silvana Gashi, ORCID: 0000-0003-0504-7601

INNOVATIVE APPROACHE TO FOREST MANAGEMENT IN THE CONTEXT OF THE SUSTAINABLE DEVELOPMENT GOALS

Ljiljana Brašanac-Bosanac^{*1}, Aleksandar Valjarević², Uroš Durlević², Milorad Šolević³
Tatjana Ćirković-Mitrović¹

¹*Institute of Forestry, Belgrade, Serbia*

²*University of Belgrade, Faculty of Geography, Serbia*

³*MB University, Faculty of Business and Law, Belgrade, Serbia*

Abstract: The world and Europe face interlinked challenges that will intensify in the coming decades: increasing demand for food, water, materials and energy while mitigating and adapting to climate change and reversing environmental degradation, including biodiversity loss, nutrient emissions and land degradation. Although forest resources in Serbia are an important resource for economic growth, especially in rural areas, the traditional approach to their management and utilization is still predominant. This approach is characterized by its reliance on timber as the primary forest product, while other forest products are largely neglected and their economic valuation is often non-existent. In addition, a certain amount of wood biomass is left in the forest even though it could be economically exploited or offered to the market with minimal investment in infrastructure and technological solutions that would allow it to be used more effectively. Tackling these major challenges while promoting social, economic and environmental prosperity requires an innovative approach. Continuous transfer of know-how methods, capacity building in the field of forest management through the application of GIS and remote sensing technologies, climate smart forestry and the concept of circular bioeconomy is a possible way to improve the current situation in forestry and achieve some of the sustainable development goals.

Keywords: forest, environment protection, knowledge transfer, innovative approach, sustainability.

^{*} *Corresponding author: brasanlj@yahoo.com*

Ljiljana Brašanac-Bosanac, ORCID: 0000-0002-3324-674X
Aleksandar Valjarević, ORCID: 0000-0003-2997-2164
Uroš Durlević ORCID: 0000-0003-3497-5239
Milorad Šolević, ORCID: 0009-0002-7935-0558
Tatjana Ćirković-Mitrović, ORCID: 0000-0003-2620-1751

APPLICATION OF ENGINEERING MANAGEMENT IN THE OPTIMIZATION OF THE PRODUCTION PROCESSES IN THE BAKERY INDUSTRY PGP KOLAŠIN

**Milica Utvić*, Bojan Stojčetočić, Aleksandar Skulić, Aleksandra Kokić Arsić, Igor
Lavrnić**

Academy of Professional Studies of Kosovo and Metohija, Leposavic, Serbia

Abstract: This paper is an application of engineering management principles to optimize the production process in the baking industry, with a focus on a specific example - the company PGP Kolašin from Zubin Potok. Using modern management methods such as process flow analysis, quality control, resource management and the application of the Lean principle, key factors that affect efficiency and productivity were identified. Special attention was paid to the technological aspect of production, including the modernization of equipment and the introduction of automated production monitoring systems. The research included a detailed analysis of the current state of the production process, as well as a proposal for specific measures for improvement.

Keywords: engineering management, production optimization, Lean principles, testing methods, quality control.

* Corresponding author: milica.utvic@gmail.com

Milica Utvic, ORCID: 0009-0004-9127-6340

Bojan Stojcetovic, ORCID: 0000-0001-7418-6985

Aleksandar Skulic, ORCID: 0000-0002-5332-3087

Aleksandra Kokić Arsić, ORCID: 0009-0004-6310-6379

Igor Lavrnić, ORCID: 0009-0009-5333-418X

ALTERNATIVE INVESTMENTS AS A CAPITAL MANAGEMENT TOOL

Orlin Kolev *

Todor Kableshkov University of Transport, Faculty of Transport Management, Bulgaria

Abstract: The volatility of the investment climate, mainly due to a number of global policy actions and decisions, is leading to financial uncertainty in investment activities and personal finance and capital management policies. The popular definition of alternative investments includes investments in a heterogeneous asset class other than equities, bonds and cash. But not every asset can be classified as an alternative investment asset. For example, art objects are accepted as such, but not every work of art can be accepted as an alternative investment. To be considered as such, the asset should have the potential for sustained secondary demand and price growth prospects. The main asset classes of alternative investments include those such as watches, artworks, precious metal investment products, numismatic products, cryptocurrencies, alcoholic beverages - such as whisky, cognac, wine, etc. There are other assets that are accepted as alternative, for example the Swiss fintech app of Splint Invest offers products such as Lego sets and constructors, classic cars, diamonds and collectible cards. By their nature, it is accepted that in most cases alternative investments are in the high price range and are difficult to access by the general investment public. The paper presents empirical examples of different alternative asset classes, with an emphasis on presenting their main advantages and disadvantages.

Keywords: Alternative investment, alternative asset classes, Splint Invest, investment gold and silver, cryptocurrency.

* Corresponding author: e-mail address okolev@abv.bg

Orlin Kolev, ORCID: 0009-0002-3933-1934

THE USE OF SMART CONTRACTS TO PRESERVE THE INTEGRITY OF COLD SUPPLY CHAINS

Dimitrije Soleša¹, Radovan Vladislavljević^{2*}, Svetlana Marković³

*^{1,2} University Business Academy in Novi Sad, Faculty of Economics and Engineering
Management in Novi Sad, Serbia*

*³ University Business Academy in Novi Sad, Faculty of Law for Commerce and Judiciary in
Novi Sad, Serbia*

Abstract: The aim of the paper is to present a series of organizational and technical solutions that ensure the preservation of the integrity of cold supply chains. The implications of these technologies on the economic and health aspects of society are more than visible. With the help of the Internet of Things and new sensor technologies, it is possible to automate the monitoring of cold supply chains using smart contract technologies and thus preserve the quality of the goods that are the subject of this type of logistics.

Keywords: microcontrollers, sensor technologies, cold supply chains, blockchain, smart contracts, quality of goods.

* Corresponding author: radovan.vladislavljevic@fimek.edu.rs

Dimitrije Soleša, ORCID: 0009-0001-8254-927X

Radovan Vladislavljević, ORCID: 0000-0002-8502-8584

Svetlana Marković, ORCID: 0000-0003-2776-6519

THE IMPACT OF ECONOMIC VARIABLES ON ATTRACTING FOREIGN DIRECT INVESTMENT IN LIBYA: AN ANALYTICAL STUDY OF THE PERIODS "1997–2010, 2011–2017, AND 2018–2024"

Amel Kamel Abdulmalik *

Misrata University, Faculty of Economics and Political Science, Libya

Abstract: This study examines the impact of economic variables on attracting foreign direct investment (FDI) in Libya across three distinct time periods: 1997–2010, characterized by relative economic stability; 2011–2017, marked by economic turmoil; and 2018–2024, which witnessed a gradual stabilization following the crises. Key economic indicators such as GDP, exports, imports, and exchange rates were analyzed to assess their influence on FDI inflows. The research problem lies in understanding how economic changes affect foreign investment flows across different periods. The hypothesis tested suggests a positive relationship between these economic variables and the growth of FDI. A comparative analysis was conducted to identify significant differences in economic performance and their implications for FDI attraction. The results revealed noticeable disparities in investment responses, reflecting the unique nature of each period. Despite variations in figures, the real determinants of FDI inflows remain ambiguous, raising critical questions about how to improve Libya's investment environment. These unexplained factors present a significant area for further exploration and analysis.

Keywords: Foreign Direct Investment, GDP, Exports, Imports, Exchange Rates, Libya.

*Corresponding author: amel.ogy88@gmail.com

Amel Kamel Abdulmalik, ORCID: 0009-0000-8795-6272

HARMONIZING THE TRIPLE BOTTOM LINE: TISM ANALYSIS OF FACTORS AND BARRIERS TO SDGS ACHIEVEMENT

Sushma Sharma, Anju Rohilla *, Shubhangi Tyagi

SRM University, Delhi-NCR Sonapat, Faculty of Management and Commerce, India

Abstract: Sustainable development goals have appeared as a universal agenda for achieving economic, social, and environmental sustainability. However, organizations frequently face substantial barriers in harmonising the triple bottom line. The purpose of this study is to identify key sustainability factors and barriers across environmental, social, economic, and ethical domains and to investigate the relationship between these factors. The study applied an extensive review and total interpretive structural modeling (TISM) to analyse the key factors and barriers influencing SDGs achievement. Authentication and understanding of the relationship between the chosen drivers and barriers were carried out by consulting experts. The study emphasizing that drivers like innovation and corporate social are crucial for achieving sustainable development goals (SDGs), while barriers such as lack of commitment from top management and weak regulatory frameworks delay progress. This study develops valuable insights into the sustainability dynamics.

Keywords: Sustainability, MICMAC Analysis, ISM, Interdependencies, Sustainable development. Triple Bottom Line.

* Corresponding author: anjurohilla@srmuniversity.ac.in

Sushma Sharma, ORCID: 0000-0003-0479-4189
Anju Rohilla, ORCID: 0009-0006-2111-376X
Shubhangi Tyagi, ORCID: 0009-0002-5664-0448

DESIGNING THE SKANDIA NAVIGATOR TO MANAGE INTANGIBLE CAPITAL: WHAT RELEVANCE FOR MOROCCAN INDUSTRIAL COMPANIES?

Issam Bahnini^{1*}, Sanae Benjeloun²

¹ *Sidi Mohamed Ben Abdellah University, Faculty of Legal, Economic and Social Sciences of Fez, Morocco*

² *Company Alpha, Morocco*

Abstract: In this article, we investigate how the intangible capital of Moroccan industrial companies is managed using Skandia Navigator. In a knowledge-based economy, intangible assets such as skills, innovation and customer relations play a role in value creation. However, their management remains complicated, with traditional tools, especially for companies with little analytical skills. This study aims to design the Skandia Navigator and analyze how it can help companies to manage their intangible capital effectively. The methodology is based on a case study conducted at Alpha, a Moroccan industrial company. To collect data, we opted for direct physical observation, document analysis and interviews with managers. The results indicate that using Skandia Navigator optimizes the management of intangible assets by providing a clear and integrated view of performance. The Skandia model has been adapted for the company with five strategic axes: financial, customer, process, innovation and development, and human. This model enables the company to align its day-to-day activities with its strategic objectives, increase employee satisfaction and strengthen customer relations.

This study guarantees the Skandia Navigator's effectiveness as an indispensable tool for managing intangible capital in Moroccan industrial companies.

Keywords: Skandia Navigator, intangible capital, human capital, organization capital, relational capital

* Corresponding author: issam.bahnini@usmba.ac.ma

Issam Bahnini, ORCID: 0009-0005-8266-3848
Sanae Benjeloun, ORCID: 0009-0003-2793-2895

COMPARATIVE ANALYSIS OF RIVER SEDIMENT ON TOTAL SULFUR CONTENT

Marina Mišić¹ *, Sanela Vasiljević², Andrija Ćirić¹, Vesna Krstić^{2,3}

¹*Faculty of Science, Department of chemistry, University of Kragujevac, Republic of Serbia*

²*Mining and metallurgy institute Bor, Bor, Republic of Serbia*

³*Technical Faculty in Bor, University of Belgrade, Republic of Serbia*

Abstract: This research discusses sediment (mechanical, chemical, and organic origins) and sulfur's critical role in sediment metabolism, especially in marine environments. Various chemical forms of sulfur and their transformations are outlined. Total sulfur content in river sediment was determined using five analytical methods: ICP-OES (Inductively Coupled Plasma Optical Emission spectroscopy) (two wavelengths), Elemental CS (Carbon-Sulfur) analyzer, XRF (X-ray fluorescence) analyzer and Calorimetric bomb combined with ion chromatography (CB-IC). Certified reference material of river sediment was used for recovery test and the sample was prepared including drying, grinding, and sieving. Recovery test results were: ICP-OES 180.731 nm: 139.7%, ICP-OES 182.034 nm: 117.1%, CS analyzer: 151.2%, XRF: 125.8% and Calorimetric bomb - ion chromatography: 86.9%. Each method has specific issues: ICP-OES: Overestimation due to spectral interferences and possible acid contamination; CS analyzer: Needs blank subtraction to avoid false positives from air sulfur; XRF: Requires corrections for interferences and Ion Chromatography with Calorimetric Bomb: Sulfur loss during combustion.

Keywords: Sulfur content, ICP-OES, CS, XRF, CB-IC

* Corresponding author: marinainka95@gmail.com

Marina Mišić (Uđilanović), ORCID: 0000-0001-9595-8454

Andrija Ćirić, ORCID: 0000-0002-5698-5510

Vesna Krstić, ORCID: 0000-0002-1110-0547

FORECASTING THE GLOBAL PRICE INDEX OF COMMODITIES WITH A LARGE NUMBER OF PREDICTORS

Krzysztof Drachal*, Joanna Jędrzejewska

Faculty of Economic Sciences, University of Warsaw, Warsaw, Poland

Abstract: Bayesian dynamic mixture models incorporate time-varying relationships between the response and explanatory variables, addressing both model and variable uncertainties while integrating real-market perspectives through dynamic online estimation. These models assume that the “true” underlying model can evolve with time, making them especially suitable for commodity markets. Given numerous potentially important explanatory variables, multiple regression models can be considered. Each model provides a probability density function (pdf) for regression coefficients. The final forecast can be generated as a weighted mixture of these pdfs. This study applies Bayesian dynamic mixture models, enabling both regression coefficients and mixture weights to evolve dynamically. Computational challenges are effectively addressed by preserving pdf forms and restricting numerical approximations to pdf statistics. The analysis is applied to the monthly Global Price Index of All Commodities, provided by the International Monetary Fund, over the period between 2003 and 2024. Variables such as interest rates, market indices and exchange rates are taken as explanatory ones. Models performances are benchmarked against methods like Dynamic Model Averaging, LASSO and ridge regressions, ARIMA, and others, and evaluated with tests, such as the Diebold-Mariano, Giacomini-Rossi, Model Confidence Set, and Clark-West encompassing tests.

Keywords: Bayesian dynamic mixture models, commodity markets, forecasting, model uncertainty, dynamic estimation.

Acknowledgment

This research was funded in whole by National Science Centre, Poland, grant number 2022/45/B/HS4/00510.

* Corresponding author: kdrachal@wne.uw.edu.pl

Krzysztof Drachal, ORCID: 0000-0001-5297-6695
Joanna Jędrzejewska, ORCID: 0009-0006-4471-9078

DIGITAL READINESS LEVEL (DLR) AND TECHNOLOGY ORGANIZATION ENVIRONMENT (TOE) METHODOLOGY IMPLEMENTATION ON SME-S INDUSTRY 4.0 IMPLEMENTATION

Aleksandra Kovačević¹, Aleksandar Jankulović*

¹ Faculty of management, Belgrade Metropolitan University, Belgrade, Serbia

Abstract: Implementation of Industry 4.0 to Small and Medium Enterprises (SMEs) induces various challenges. The investigation of these issues affecting SMEs is extremely rare, and thus this research has theoretical and especially practical implication on spreading Industry 4.0 implementation. The research is focused on implementation of the Digital Readiness Level (DRL) model and the Technology Organization Environment (TOE) framework for SMEs analyzing Industry 4.0 implementation and readiness. Research demonstrates the suitability of these two models and their shared dimensions. These elements and dimensions are applied to SMEs' digital readiness for Industry 4.0 and serve as suitable instruments for this kind of examination. According to research, there are a number of new influencing factors that are crucial for the implementation of Industry 4.0. These include the volatility of business process parameters, business specificity, user satisfaction, service quality, workforce presence, external knowledge inclusion, funding program research, and the visualization of future improvements. The study suggests aspects that are of main interest to be implemented for the successful implementation of Industry 4.0 based on analysed factors and outcomes.

Keywords: Industry 4.0, SMEs, Digital readiness assessment, Digital Readiness Level (DLR), Technology-Organization-Environment (TOE)

* Corresponding author: aleksandar.jankulovic@metropolitan.ac.rs

Aleksandra Kovačević, ORCID: 0009-0001-2972-9968
Aleksandar Jankulović, ORCID: 0000-0002-0959-1519

OPTIMIZATION OF SALES CHANNELS THROUGH AI-DRIVEN CRM: SMART DATA ANALYSIS FOR BETTER RETAIL MANAGEMENT

Ankica Borota-Tišma*, Draga Tišma

Belgrade Business and Arts Academy of Applied Studies, Belgrade, Serbia

Abstract: This research paper examines the integration of artificial intelligence into Customer Relationship Management (CRM) systems to optimize sales channels in the retail sector. By leveraging smart data analysis and sophisticated machine learning techniques, the study demonstrates how dynamic pricing, efficient inventory management, and targeted customer segmentation can be enhanced to drive operational efficiency and improve overall customer satisfaction. A simulated case study based on synthetic data illustrates the practical implementation of these AI-driven strategies, showcasing measurable improvements in sales and customer engagement. Additionally, the research highlights the importance of aligning technological advancements with ethical considerations, as it addresses critical issues related to data privacy and algorithmic fairness. These discussions emphasize the necessity for retailers to adopt robust ethical frameworks while implementing AI solutions. By providing actionable insights and recommendations, this paper aims to guide retail professionals on effectively harnessing AI to transform their CRM systems and maintain a competitive edge in the rapidly evolving marketplace.

Keywords: AI, CRM, Retail Management, Dynamic Pricing

* Corresponding author: ankica.borota@bpa.edu.rs

Ankica Borota-Tišma, ORCID: 0009-0001-5463-2885
Draga Tišma, ORCID: 0009-0002-1172-3151

INTELLIGENT TRANSPORT SYSTEMS AS A TOOL FOR SPEEDING PREVENTION

Veselin Grozdanov*

Todor Kableshkov University of Transport, Faculty of Transport Management, Bulgaria

Abstract: Car traffic on the road network is increasing every year, which leads to accompanying problems with compliance with traffic rules. Road accidents in Bulgaria are an annual unwanted event, which leads to significant material and financial losses, both for individuals and businesses, but burden society with unnecessary costs. The largest number of accidents remains due to incorrect actions of drivers (about 6 thousand on an annual basis), with approximately 28% of them being due to excessive and inappropriate speed.

The state, represented by the Traffic Police under the Ministry of Interior (Republic of Bulgaria), carries out periodic actions (with some dubious success) to deal with the constantly increasing number of road accidents. The statistics of constantly increasing road accidents are not a precedent only for Bulgaria, but are noticeable on a global scale. Various events are being held in different countries around the world to deal with this negative trend. One of the most promising methods for dealing with this significant problem are intelligent transport systems. Creating innovative transport solutions for sustainable mobility can allow users to reach their destination conveniently, on time, safely, efficiently and with minimal environmental impact. The main directions and goals of implementing ITS in road transport are to achieve safe and secure transport.

Keywords: traffic accidents, fatalities, speeding, intelligent transportation systems.

* Corresponding author: vesko_vtu@abv.bg

Veselin Grozdanov, ORCID: 0009-0004-3296-790X

EXAMINING USE OF UNCONDITIONAL CASH TRANSFERS TO ENCOURAGE ENTREPRENEURSHIP EMANCIPATION: A SYSTEMATIC LITERATURE AND RESEARCH AGENDA

Kenneth Jerry Onyango¹*, Nathaniel Boso², Hellen Otieno³

¹ *Strathmore Business School, Kenya*

² *Kwame Nkrumah University of Science and Technology, Ghana*

³ *Strathmore University, Kenya*

Abstract: This theoretical paper looks at the use of unconditional cash transfers (UCT) to encourage emancipation through adoption of entrepreneurship in marginalized areas. Using an overview of existing frameworks, the paper explains how UCT could help individuals in these communities launch and grow their own enterprises. By investigating potential consequences on economic agency, resilience, and community development, it attempts to throw light on the theoretical underpinnings that link UCT to the growth of entrepreneurship. The review uses empowerment theory to analyse how UCT might promote a sense of autonomy and self-confidence, inspiring people to undertake entrepreneurial endeavors. Understanding how UCTs can support the growth of entrepreneurship in underserved areas is made easier by the framework provided by the empowerment theory. According to this theoretical analysis, UCTs can encourage economic empowerment and enhance welfare of households in disadvantaged communities, even though their efficacy may vary depending on the particular environment and implementation. The findings add to the discussion about how to use cash transfers to support economic empowerment in marginalized and conflict-prone communities.

Keywords: Unconditional Cash Transfer, Entrepreneurial Emancipation, Empowerment Theory, Social Protection, Marginalized.

* Corresponding author: kenneth.onyango@strathmore.edu

Kenneth Jerry Onyango, ORCID: 0009-0007-7783-9030

Nathaniel Boso, ORCID: 0000-0001-7043-4793

Hellen Otieno, ORCID: 0000-0003-0190-491X

THE MODERATING EFFECT OF STAKEHOLDERS' INFLUENCE ON THE RELATIONSHIP BETWEEN SUCCESSION MANAGEMENT AND HUMAN RESOURCE OUTCOMES IN PRIVATE UNIVERSITIES, KENYA

Hilderlith Amimo-Ogutu^{1*}, Fred Walumbwa², Vincent Ogutu¹, Simon Ndiritu¹

¹ *Strathmore University, Business school, Kenya*

² *Florida International University, USA*

Abstract: The growing number of private universities in Kenya continues to increase opportunities for higher education, in tandem with elevating competition, as each institution strives to attract quality employees for competitive services. Thus, retention of experienced academic administrators is increasingly becoming a key challenge in many universities, with implications on leadership stability and performance. Some universities are responding to this challenge through Succession Management (SM) and stakeholder engagement programmes, hoping to improve Human Resource (HR) outcomes. However, little is known in academia about the effect of such programmes on HR outcomes. This study sought to establish the moderating effect of Stakeholders' Influence (SH) on the relationship between SM and HR outcomes in the private universities. Using the cross-sectional data, sourced from 253 academic administrators, the study found that SM accounted for 31% of variance in HR outcomes, while the interaction term between SM and SH explained up to 51% of the variance: with a positive and significant effect (Beta = 0.718, $p < 0.000$). This led to rejection of the research hypothesis for being untrue, and the conclusion that SH had a significant moderating effect on the relationship between SM and HR outcomes in private universities, in Kenya.

Keywords: Stakeholders, succession management, human resource, private universities.

* Corresponding author: hilderlith@gmail.com

Hilderlith Amimo-Ogutu, ORCID: 0000-0002-9343-0784

Fred Walumbwa, ORCID: 0000-0002-8038-3608

Vincent Ogutu, ORCID: 0000-0002-0801-1615

Simon Ndiritu, ORCID: 0000-0002-8463-3758

SOCIAL RESOURCE ORCHESTRATION AND GROWTH OF SMALL AND MEDIUM ENTERPRISES: A SYSTEMATIC REVIEW

Loise Oburu*, Joseph Onyango, Ann Ndirangu

Strathmore University, Strathmore University Business School, Kenya

Abstract: Small and Medium Enterprises (SMEs) are crucial in global economic growth, job creation, and innovation. However, many SMEs, particularly in developing regions, continue to face challenges that hinder their growth, and the contribution of social resource orchestration to SME growth has not been adequately investigated. This systematic review synthesises the research stream to clarify the impact of social resource orchestration on SME growth and its mechanisms. The studies were evaluated using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework. Results indicate that most studies were conducted in the Global South, particularly in Africa and Asia. The studies consistently highlight the importance of social resource orchestration in shaping SME growth. Social networks, including relationships with customers, partners, and financial institutions, positively influence various SME outcomes, such as business growth, innovation, and economic performance, with effect sizes showing moderate to strong positive associations. However, direct links to SME growth were implied rather than explicitly stated. This analysis signals that while social networks are valued for improving performance metrics, the pathway to sustained growth through social resource orchestration requires further research. Addressing this gap could clarify how specific orchestration strategies support SMEs' growth.

Keywords: SME Growth, Social Capital, Social Resource Orchestration, Systematic Review

* Corresponding Author: loburu@strathmore.edu

Loise Oburu, ORCID: 0009-0005-5397-2342

Joseph Onyango, ORCID: 0000-0003-3070-2014

Ann Ndirangu, ORCID: 0000-0003-3539-6482

WHAT YOU HAVE IS WHAT YOU GET? AUTHENTIC ENVIRONMENTAL, SOCIAL AND GOVERNANCE INFORMATION TO SCALE GREEN INNOVATIONS IN RESPONSIBLE SUPPLY CHAINS IN A GLOBAL SOUTH ECONOMY

João Pedro Passos, Lucas Sampaio Motta, Selma Oliveira*

Fluminense Federal University, Brazil

Abstract: While the potential benefits of environmental, social, and governance (ESG) information have been widely reported, the state-of-the-art literature rarely highlights authentic ESG information for scaling green innovations in responsible supply chains. Using integrated reporting from two companies (cases) from a Global South economy—namely, Brazil—this study examines the authenticity of ESG information for scaling green innovations in responsible supply chains under the lens of stakeholders and Generative Artificial Intelligence (GEN-AI). Our study fills a gap in the literature and makes significant contributions: (a) it provides an overview of the (prevalent) authentic ESG information for scaling green innovations in responsible supply chains under the lens of stakeholders and GEN-AI by ChatGPT; (b) it suggests that as companies strengthen responsible supply chains with authentic ESG information, green innovations are enhanced; (c) our study provides a timely warning to managers who intend to promote green innovations and strengthen the sustainability of supply chains enabled with authentic ESG information in a Global South economy; (d) furthermore, our study sheds light to advance the theoretical arguments on ESG for green innovation in sustainable supply chains; and lastly, (e) our study contributes to supply chains to improve the sustainable development goals (SDGs): (9) Industry, Innovation and Infrastructure - building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation; (12) responsible consumption and production - ensuring sustainable consumption and production patterns, etc.

Keywords: Integrated Reporting and Authentic ESG Information. Green Innovation. Responsible Supply Chain.

* Corresponding author: selmaregina@id.uff.br

João Pedro Passos, ORCID: 0009-0009-1567-7907
Lucas Sampaio Motta, ORCID: 0009-0002-7575-2517
Selma Oliveira, ORCID: 0000-0003-0591-4955

BRIDGING THE ESG AWARENESS GAP: CHALLENGES AND OPPORTUNITIES FOR SMEs IN NORTH MACEDONIA

Vladimir Petkovski*, Irina Piperkova, Elizabeta Djambaska, Aleksandra Lozanoska

Ss. Cyril and Methodius University in Skopje, Institute of Economics - Skopje, Republic of North Macedonia

Abstract: The growing emphasis on Environmental, Social, and Governance (ESG) principles highlights the need for SMEs to integrate sustainable practices into their operations. However, ESG adoption in SMEs remains a challenge due to limited awareness, financial constraints, and lack of standardization and regulation. This study investigates ESG awareness among SMEs in North Macedonia based on a comprehensive survey assessing their knowledge, attitudes, and practices. The survey explores key ESG dimensions, including environmental responsibility, social impact, and corporate governance, as well as barriers to implementation. Findings indicate varying levels of ESG awareness, with gaps in knowledge about regulatory requirements, measurement of carbon emissions, and ethical governance practices. The study also examines the willingness of SMEs to adopt ESG strategies, including participation in ESG training, ethical sourcing, and renewable energy investments. Additionally, the research highlights the role of policy incentives, industry support, and stakeholder engagement in fostering ESG compliance. By analyzing the impact of ESG integration on business competitiveness and sustainability, the study provides practical recommendations to enhance ESG adoption in SMEs. Strengthening ESG awareness and implementation will contribute to responsible business conduct and long-term economic growth in North Macedonia.

Keywords: ESG, SMEs, sustainability, corporate governance, North Macedonia.

* Corresponding author: vladimir@ek-inst.ukim.edu.mk

Vladimir Petkovski, ORCID: 0000-0001-9733-4901

Irina Piperkova, ORCID: 0000-0003-2680-9556

Elizabeta Djambaska, ORCID: 0000-0002-4812-5166

Aleksandra Lozanoska, ORCID: 0000-0003-2496-8553

BLENDED, BRIEF, BUT IMPACTFUL? EVALUATING THE EFFECTIVENESS OF ERASMUS+ BLENDED INTENSIVE PROGRAMS

Jacob Cornelis Bazen¹*, Florin Sebastian Duma²

¹ *Saxion University of Applied Sciences, School of Business, Building & Technology, The Netherlands*

² *Babes Bolyai University, Faculty of European Studies, Romania*

Abstract: This study evaluates the effectiveness of Erasmus+ Blended Intensive Programmes (BIPs) in fostering intercultural competences and international collaboration skills among higher education students. Conducted over three years with participants from five European universities, the study uses pre- and post-program surveys to assess changes in student attitudes and self-perceived skills. Although statistical differences between the pre- and post-tests were not significant, participants reported perceived improvements in intercultural teamwork, international project engagement, and personal development. Qualitative feedback further emphasized the value of practical experiences and cross-cultural collaboration. Suggestions for improvement focused on the organization of the physical mobility component, including better planning and more cultural activities. The average program rating was 7.6 out of 10. While findings highlight a possible participation bias favouring already internationally oriented students, they also indicate the potential of BIPs to serve as impactful, inclusive international learning experiences. Future research with larger samples and control groups is recommended to better understand long-term outcomes and address access equity.

Keywords: blended mobility, international education, Erasmus+, intercultural competence, higher education

* Corresponding author: j.c.bazen@saxion.nl

Jacob Cornelis Bazen, ORCID: <https://orcid.org/0000-0001-7779-7271>
Florin Sebastian Duma, ORCID: <https://orcid.org/0000-0002-5026-4894>

THE PRINCIPLE OF SUSTAINABLE DEVELOPMENT IN POLISH TAX SYSTEM

Patryk Kowalski*

University of Lodz, Faculty of Law and Administration, Poland

Abstract: The article discusses the issue of the principle of sustainable development and its impact on the Polish tax system. This topic is current due to the global and pan-European tendencies to intensify policies for sustainable development and environmental protection. The aim of the article is to examine what legal instruments the Polish legislator has introduced into the tax law system in two dimensions: ecological tax burdens and ecological tax preferences (reliefs and exemptions). The constitutional origin of the principle of sustainable development is also emphasized.

Keywords: sustainable development, ecological tax, environmental tax, pro-ecological taxation, environmentally related tax reliefs and exemptions.

* Corresponding author: patryk.kowalski@wpia.uni.lodz.pl

Patryk Kowalski, ORCID: 0000-0003-3027-2683

DETERMINANTS OF CO₂ EMISSIONS IN CENTRAL AND EASTERN EUROPE: AN EMPIRICAL PANEL DATA ANALYSIS

Aleksandra Fedajev¹ *, Petar Mitić², Aleksandar Zdravković², Gabrijela Popović³

¹ *University of Belgrade, Technical Faculty Bor, Serbia*

² *Institute of Economic Sciences, Belgrade, Serbia*

³ *University Business Academy in Novi Sad, Faculty of Applied Management, Economics and Finance, Belgrade, Serbia*

Abstract: This paper investigates the impact of GDP growth, regulatory quality, electricity consumption, human development, and research and development (R&D) expenditures on carbon dioxide emissions (CO₂) in 15 Central and Eastern European (CEE) countries over the period 2002–2020. A three-step empirical strategy is employed, beginning with the specification of a panel data model, followed by diagnostic testing of model residuals, and concluding with the application of multiple panel estimators to ensure robustness of the results. The findings reveal that, with the exception of the Human Development Index (HDI), all other variables show statistically significant associations with CO₂ emissions. In particular, real GDP per capita growth has a strong and consistent positive effect: a one-percentage-point increase in GDP per capita is associated with a rise in CO₂ emissions per capita by approximately 0.3 to 0.35 tons. These results underscore the environmental cost of economic expansion in the region and highlight the critical role of regulatory quality and R&D in designing effective mitigation strategies. The paper contributes to the literature by providing a comprehensive, data-driven assessment of emission determinants in emerging European economies and offers valuable insights for policymakers aiming to align economic growth with environmental sustainability.

Keywords: CO₂ emissions, Central and Eastern European countries, R&D, human development, electricity consumption, regulatory quality.

* Corresponding author: afedajev@tfbor.bg.ac.rs

Aleksandra Fedajev, ORCID: <https://orcid.org/0000-0002-6974-6631>

Petar Mitić, ORCID: <https://orcid.org/0000-0003-0143-4049>

Aleksandar Zdravković, ORCID: <https://orcid.org/0000-0002-6208-097X>

Gabrijela Popović, ORCID: <https://orcid.org/0000-0002-2652-4860>

XXI STUDENTS SYMPOSIUM ON STRATEGIC MANAGEMENT

THE ROLE AND SIGNIFICANCE OF SMART SOLUTIONS IN THE DEVELOPMENT OF REGIONS: THE PERSPECTIVE OF LJUBLJANA AS A SMART CITY

Sara Tešanović^{1*}, Marko Mišić²

¹ *University of Ljubljana, School of Economics and Business in Ljubljana, Slovenia*

² *ETH Zurich, Department of Mechanical and Process Engineering in Zurich, Switzerland*

Abstract: This paper shows the role of strategic management in practice by stimulating the development of a smart region, focusing on the capital city of Slovenia, Ljubljana, as a case study. It describes an area of a town, its position, and how smart development there uses innovative technologies, sustainable practices, and citizen participation to improve the quality of life and protect the environment in a particular region. Through a comprehensive analysis of Ljubljana's current status within the strategic management of places framework, with all the challenges and policy recommendations, this paper provides insights into how strategic governance can contribute to achieving smart development goals that last. Thus, integrating theoretical frameworks and practical analysis highlights the importance of a coordinated approach to implementing smart solutions in urban environments.

Keywords: development, smart city, sustainable practices, innovative technologies.

* Corresponding author: sara.tes864@gmail.com
Sara Tešanović, ORCID: 0009-0002-9880-9811

THE IMPACT OF INTERNATIONAL ORGANIZATIONS AND INSTITUTIONS ON DEVELOPING COUNTRIES

Livia Dombrowschi*

*Academy of Economic Studies of Moldova, Faculty of International Economic Relations,
Republic of Moldova*

Abstract: This paper aims to examine the role of key international organizations and institutions on economic and social areas of developing markets, mainly focusing on their strategic impact on 3 post-Soviet states: Moldova, Ukraine and Georgia. Through a theoretical and comparative approach, will be assessed how each IO, by their financial support, policy recommendations, technical expertise and institutional assistance, has catalysed the economic flourishing and social progress of the developing countries. By analysing these countries, the research identifies the international organizations' influence in the Eastern Europe region, highlighting the success and challenges met in promoting international cooperation for sustainable economic flourishing in developing countries.

Keywords: international organization, developing countries, financial assistance, expertise, cooperation.

* Corresponding author: liviadombrowschi@gmail.com

EVALUATING RISK MANAGEMENT FRAMEWORKS IN MEETING REGULATORY STANDARDS: A CASE STUDY OF INFRASTRUCTURE PROJECTS IN NIGERIA

Adeniyi Kolawole Ojo¹, Ugwu Kelechi Enyinna^{2*}, Nwokedi Theophilus Chinonyerem³

¹ Federal University of Technology Owerri, Centre for Excellence Sustainable Procurement and Environmental Social Standard (Ces-Pess), Department of Procurement Management, Imo State Nigeria

² Federal University of Technology Owerri, Department of Logistics and Supply Chain Management, Imo State Nigeria

³ Federal University of Technology Owerri, Department of Maritime Science and Technology, Imo State Nigeria

Abstract: *Objectives:* The general aim of this study focuses on risk management framework and regulatory compliance of large-scale infrastructure in large scale infrastructure project in Nigeria. The specific objective is to assess how risk monitoring enhances regulatory compliance of large-scale infrastructure projects. *Methodology:* The study adopted a descriptive survey approach and a questionnaire as instruments for data collection using a five-point Likert scale. A calculation of sample size using the Tarro Yamane method. Out of 205 copies of the questionnaire distributed to the respondents, only 179 were filled out and returned, while the remaining 26 were not returned and used for analysis. The research hypothesis was tested and analysed using the Pearson correlation method. *Findings:* The findings revealed that effective risk monitoring positively influences regulatory compliance of large-scale infrastructure when the p-value (.000) was less than the critical value at a 5% level of significance. *Recommendations:* The study recommends that organizations should regularly develop a robust risk monitoring system that tracks potential risks throughout the entire lifecycle of the project. This framework should integrate with existing regulatory compliance requirements to ensure continuous alignment with legal and regulatory standards. Firms should conduct regular risk assessments to identify emerging risks and potential regulatory non-compliance issues. Continuous monitoring of risks allows project teams to address regulatory concerns promptly. *Novelty:* Research in this area enhances knowledge of best practices for identifying regulatory risks early in the project lifecycle and the best approaches for mitigating these risks. Using large scale infrastructure projects, the study contributes to the literature by providing empirical evidence to show the intersection of risk management and regulatory compliance in South-South Region. *Practical Implication of the Study:* By analysing large infrastructure projects, both academics and practitioners gain insights into what strategies have been successful and where improvements can be made. Study on this subject identified that lack of risk monitoring affects adversely project results leading to substantial project interruptions, cost overruns, and poor quality. *Study Limitations:* One major limitation is the lack of standardized frameworks for integrating risk management and regulatory compliance across various types of infrastructure projects.

Keywords: risk management framework, regulatory compliance, risk monitoring, stakeholders theory and large infrastructure projects.

* Corresponding author: kelechi.ugwu@futo.edu.ng
Ugwu Kelechi Enyinna, ORCID: 0000-0002-7588-4723

MACHINE LEARNING AND DEEP LEARNING BASED METHODS AS SOLUTION APPROACH FOR JOB ASSIGNMENT PROBLEM

**Batuhan Serdar, Abdurrahman Yunus Öztürk, Damla Can*, Ali Şengün, Mukadder
Manav**

Gazi University, Faculty of Engineering, Industrial Engineering Department, Türkiye

Abstract: This paper explores the integration of intelligent systems specifically machine learning (ML) and deep learning (DL) into job assignment problems across domains such as manufacturing, healthcare, and cloud computing. While traditional methods like heuristics and mathematical programming have long been applied to job allocation, intelligent approaches offer dynamic, adaptive, and data-driven solutions better suited to the complexity of modern systems. The paper answers five research questions focusing on the types of problems addressed, the intelligent techniques employed, reported benefits, key challenges, and comparisons with traditional methods as the results of the performed systematic literature review. Challenges related to data dependency, explain ability, and computational demands are also identified. This review contributes a synthesized overview of trends and emerging opportunities in the intelligent automation of job assignment systems.

Keywords: job assignment, task allocation, machine learning, deep learning.

* Corresponding author: damla.can@gazi.edu.tr

TEAM FORMATION METHODS COMPARED: BELBIN'S ROLES AND CHATGPT'S SUGGESTIONS

Marijana Koceva*, Jamina Žnidaršič, Borut Werber

University of Maribor, Faculty of organization science, Kranj, Slovenia

Abstract: This paper examines and compares the use of Belbin's software solution and the ChatGPT Chabot in project team composition. The study explores how each approach functions, their methodologies, and their advantages and disadvantages. By analysing these aspects, we provide insights into how both tools contribute to effective team formation in modern business environments. Belbin's software assesses individual team roles based on psychological traits, offering a structured approach. In contrast, ChatGPT provides a flexible, AI-driven solution that generates recommendations based on user inputs. While Belbin's method relies on predefined roles, ChatGPT adapts dynamically to different project needs. Through this comparison, we identified key differences in accuracy, adaptability, and usability. By evaluating the strengths and weaknesses of each method, we determined optimal strategies for assembling teams. This study helps users choose the most suitable approach based on their needs, offering valuable insights for organizations and individuals seeking efficient ways to form high-performing teams.

Keywords: artificial intelligence, team composition, Belbin model, ChatGPT, comparison.

* Corresponding author: marijana.koceva@student.um.si

Marijana Koceva, ORCID: 0009-0002-9431-0618

Jasmina Žnidaršič, ORCID: 0000-0002-1952-159X

Borut Werber, ORCID: 0000-0002-5185-5717

ECOTOXICOLOGICAL EFFECTS OF MICROPLASTICS IN FOOD CHAINS (EISENIA FETIDA AND PELOPHYLAX KL. ESCULENTUS)

Ivana Milanović*, Rastko Ajtić, Filip Popović, Glorija Ćirković, Tanja Trakić

University of Kragujevac, Faculty of Science, Institute of Biology and Ecology, Serbia

Abstract: The presence of microplastics in soil ecosystems is an emerging environmental issue with significant implications for biodiversity and ecological balance. These small particles, often derived from synthetic materials, can be ingested and accumulated by soil organisms, potentially causing harmful effects and entering aboveground food chains. In this study, combining field and laboratory approaches, we investigated microplastic (MPs) exposure across different model organisms within the food chain. Adult earthworms *Eisenia fetida* (Savigny, 1826) were exposed to increasing concentrations of fluorescent microplastics (7.5%, 10%, 12.5%, and 15%). After exposure, the fate of MPs was followed when the earthworms were consumed by frogs (*Pelophylax kl. esculentus*). The experiment lasted four weeks, during which growth, mortality, reproduction, development, and metamorphosis were monitored and compared to a control group. Significant differences were observed in all treated groups compared to the control. The highest earthworm mortality occurred at 15% MP concentration. Dissection showed microplastic particles in the digestive and muscle tissues of earthworms, and in the digestive tract of frogs in an unchanged form. The results obtained could contribute to the development of a comprehensive description of the risks that MPs cause in food chains and terrestrial ecosystems.

Keywords: microplastic, *Eisenia fetida*, *Pelophylax kl. esculentus*, food chains, toxicity.

* Corresponding author: ivanamilojevic19@gmail.com

RISKS IN FAMILY BUSINESSES IN BULGARIA – THE CASE OF STAPKA LTD

Elina Syungerova*

University of Ruse “Angel Kanchev”, Bulgaria

Abstract: The purpose of this report is to provide a general overview of risk and family business in Bulgaria. Therefore, its first task is to introduce the reader to some of the terms used in risk management based on a review of various sources. Its second task is related to the presentation of several successful family businesses from the city of Ruse, Bulgaria. They have been successfully developing over the years, and their family cohesion is one of the factors that help them survive during the COVID-19 restrictions. The third task is to present in more detail the activities of a family business and an analysis of some of the sources of risk. For the needs of the third task, the family business STEP Ltd from the city of Ruse was chosen due to the author's ability to directly use data on its activities as a member of the family business. This report could be interesting for professors and teachers who encourage their students to develop a family business.

Keywords: Risks, Family business, Bulgaria, STAPKA.

* Corresponding author: elinasyungerova.bg@gmail.com

RISK MANAGEMENT THROUGH SAFETY STANDARDS FOR TOURISM EVENTS IN BULGARIA: THE CASE OF VIDIN DISTRICT

Eleonora Marinova*

University of Ruse “Angel Kanchev”, Bulgaria

Abstract: The increasing organization of tourist events in Bulgaria has forced various companies to consider risk as a fundamental part of their management and creation. Risk management is an element of financial management and control, which is interconnected with the other derived elements, namely: control environment, control activities, information and communication, and monitoring. The purpose of this study is to analyse the scope of the risk management process when conducting tourist events based on standards. In order to fulfil the set goal, the following tasks have been developed: (1) to examine some basic international standards and the Bulgarian national regulatory documents related to risk management during a tourist event; (2) to present the opportunities of Vidin district to offer tourist events with international participation; (3) to analyse the risk for the festival “Traditional Feast of Petrovden” in the village of Kutovo, Vidin municipality. The presented analyses may be of assistance in risk management when organizing tourist events by local companies and municipal administration.

Keywords: Risks, standards, tourism, Vidin, Bulgaria.

* Corresponding author: elimarinova82@abv.bg

EXPERT FORECASTING OF TECHNOLOGIES: THE DELFI METHOD

Lidija Krstić*

*University of Belgrade, Technical Faculty in Bor, Engineering Management Department Bor,
Serbia*

Abstract: This paper discusses the DELFI method, with a focus on the implementation of new systems in organizations. The stages of the DELFI method, the importance of the method in decision-making at the organizational level, advantages and limitations were analyzed. The research includes a DELFI survey among experts (professors) on the implementation of a system for tracking the arrival and departure of employees. The research was conducted at the Technical Faculty in Bor. The aim of this paper is to assess the readiness and potential of the new system. The outcome obtained from the first and second round of the DELFI method was analysed by comparing the opinions of experts and analysing the degree of agreement. The results are highly applicable to organizations considering the introduction of new technology in an attempt to increase employee efficiency and accountability.

Keywords: DELFI method, expert consensus, system implementation, adoption of technology.

* Corresponding author: lkrtic@tfbor.bg.ac.rs
Lidija Krstić, ORCID: 0009-0009-6618-4723

STRATEGIC CRISIS MANAGEMENT IN 2025: BUILDING ECONOMIC RESILIENCE IN A VOLATILE WORLD

Maria-Emilia Dinculeană*

University of Craiova, Faculty of Economic and Business Administration, Romania

Abstract: As the global economy faces ongoing instability, the need for long-term economic resilience has taken center stage in policy and business discussions. Rather than responding reactively to individual crises, today's organizations must adapt to an environment where shocks are persistent and interconnected. This article investigates how resilience strategies are being redefined in 2025, moving beyond traditional financial safeguards toward more integrated approaches that include policy coordination, technological adaptation, and labor market flexibility. Drawing on recent global trends, the paper explores the tensions between short-term economic responses and the long-term investments required to maintain competitiveness and stability. It also assesses the implications of U.S. fiscal and trade policies in shaping global outcomes, with a focus on tax reform, supply chain vulnerabilities, and inflation dynamics. Finally, it considers the role of innovation and workforce transformation, particularly in light of artificial intelligence and shifting skills demands. Through this lens, the article aims to offer insights into how governments and businesses can better prepare for an increasingly complex and uncertain economic future.

Keywords: economic resilience, strategic crisis management, tariffs, volatile, instability.

* Corresponding author: dinculeana.maria.n8u@student.ucv.ro

DIGITAL PLATFORM FOR SHARING RESOURCES ORIENTED TOWARDS THE DEVELOPMENT OF INNOVATION IN DEEPTECH STARTUPS

Lucas Sampaio Motta, João Pedro Passos, Selma Oliveira*

Fluminense Federal University, Brazil

Abstract: Despite the prevalence of research on innovation intermediaries, there is limited understanding of how digital platforms contribute to resource sharing oriented towards product development and launch by deep tech start-ups in an innovation ecosystem. Identifying the resources offered by innovation ecosystems can encourage the development and launch of new products by deep tech start-ups. Thus, this project presents a (conceptual) proposal for the development of a digital platform to share resources and encourage the development and launch of new products by deep tech startups in an innovation ecosystem. This proposal is an important priority for several reasons, for example: (a) to identify strategic resources offered by innovation intermediaries to foster innovation and technological entrepreneurship in the Southern Fluminense region of the state of Rio de Janeiro; (b) it provides a valuable contribution to academia by proposing a conceptual framework for resource orchestration that can explain the performance of start-ups in the Southern Fluminense region's innovation ecosystem; (c) it serves as a guide for entrepreneurs seeking to improve product innovation in start-ups in the Southern Fluminense region context

Keywords: modeling for digital platform, resource sharing, new product development, deep tech start-ups, innovation ecosystem.

Acknowledgement: Carlos Chagas Filho Foundation for Research Support of the State of Rio de Janeiro (FAPERJ)

* Corresponding author: selmaregina@id.uff.br

Lucas Sampaio Motta, ORCID: <https://orcid.org/0009-0002-7575-2517>

João Pedro Passos, ORCID: <https://orcid.org/0009-0009-1567-7907>

Selma Oliveira, ORCID: <https://orcid.org/0000-0003-0591-4955>

A SYSTEMATIC REVIEW OF RESEARCH ON DIGITAL PLATFORMS - DEEPTech INNOVATION: BROADENING OUR HORIZONS

Lucas Sampaio Motta, João Pedro Passos, Selma Oliveira*

Fluminense Federal University, Brazil

Abstract: The growing importance of deep tech on a global scale is driven by its potential to disrupt industries, address global challenges, and provide economic and strategic advantages. As innovation continues to accelerate, the role of deep tech in shaping the future of societies and economies becomes increasingly critical. Platformization and AI technologies are expanding the innovation opportunity set and impacting the overall sustainability of innovation ecosystems. Despite the growing awareness of the need for substantial support of deep tech innovation to address societal and economic challenges, innovation ecosystem research rarely explores the cultivation of this innovation. While the potential benefits of deep tech start-ups have been widely reported, innovation ecosystem research rarely explores the current state of deep tech innovation in innovation ecosystems. Therefore, this study aims to systematize published studies that address the conceptual framework of an integrative and collaborative platform oriented towards deep tech start-ups in innovation ecosystems. Through a systematic literature review, this paper makes significant contributions: (a) it provides an overview of the existing literature on this topic in recent years; (b) it proposes gaps in the literature to promote future research on deep tech start-ups in innovation ecosystems; (c) it offers lessons for business professionals who intend to strengthen the development and launch of new products by deep tech start-ups; and at the same time promote deep tech innovation ecosystems to improve sustainability. This topic is of extreme relevance, especially in light of a new reconfiguration of markets following revolutionary changes, such as the advancement of new technologies (e.g., platformization and deep-tech), which may stimulate inequalities between nations, regions, and local communities in the world.

Keywords: digital platform, construct, resources, DeepTech innovation, DeepTech start-ups, DeepTech entrepreneurship, innovation ecosystem, systematic literature review.

Acknowledgement: Carlos Chagas Filho Foundation for Research Support of the State of Rio de Janeiro (FAPERJ)

* Corresponding author: selmaregina@id.uff.br

Lucas Sampaio Motta, ORCID: <https://orcid.org/0009-0002-7575-2517>

João Pedro Passos, ORCID: <https://orcid.org/0009-0009-1567-7907>

Selma Oliveira, ORCID: <https://orcid.org/0000-0003-0591-4955>

EXPLORING THE ROLE OF ETHICAL LEADERSHIP IN EMOTIONAL LABOR: A CROSS-CULTURAL PERSPECTIVE WITH A FOCUS ON INDIAN WORKPLACES

Saloni Kumari^{}, Jagrati Asija*

Dr. Bhimrao Ambedkar University, Agra, India

Abstract: This research explores the impact of ethical leadership on emotional labor within Indian service-sector workplaces. Ethical leadership plays a crucial role in shaping employee behaviour and emotional experiences, especially in service-oriented environments where emotional expression is central to job roles. The study aims to understand how leaders' ethical conduct influences the emotional regulation strategies such as surface acting and deep acting employed by employees. Data was collected from 100 respondents using a structured questionnaire that captured insights into their perceptions of leadership and emotional experiences at work. To analyse the data, descriptive statistics including mean and standard deviation were used to summarize the central tendencies and variability in the responses. Furthermore, regression analysis was applied to examine the relationship between ethical leadership and the dimensions of emotional labour. The findings contribute to existing literature by highlighting how ethical leadership can serve as a buffer against the negative consequences of emotional labour, thereby promoting a healthier and more supportive work environment. These insights offer practical implications for organizational policies and leadership training programs, particularly in culturally diverse and emotionally demanding service industries in India.

Keywords: ethical leadership, emotional labor, service industry, employee well-being.

^{*} Corresponding author: saloni04102004@gmail.com
Saloni Kumari, ORCID: <https://orcid.org/0009-0003-3073-032X>
Jagrati Asija, ORCID: <https://orcid.org/0009-0005-5135-628X>