

**Bucharest University of Economic Studies**

## **ABSTRACTS**

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for sustainable growth in the 21<sup>st</sup> century*

**Edited by**

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Vanesa Mădălina VARGAS

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## CONTENTS

<b>CONTENTS.....</b>	<b>7</b>
<b>GUEST SPEAKERS.....</b>	<b>19</b>
<b>MINITRACK: ACCOUNTING FOR SUSTAINABLE DEVELOPMENT .....</b>	<b>24</b>
NON-FINANCIAL REPORTING IN EXTRACTING MULTATIONALS: SUCCINCT TEXT ANALYSIS .....	26
A BIBLIOMETRIC ANALYSIS REGARDING THE DIGITALIZATION OF THE ACCOUNTING PROFESSION.....	27
PROFESSIONAL SKILLS OF FUTURE ACCOUNTANTS WORKING IN A DIGITIZED ENVIRONMENT DOMINATED BY ERP SYSTEMS .....	28
RECENT PERSPECTIVES ON OUTSOURCING OF SUSTAINABILITY REPORTING.....	29
PROFESSIONAL SKILLS AND MOTIVATION OF FUTURE ACCOUNTANTS WORKING IN DIGITALIZED ENVIRONMENT .....	30
DIGITALIZATION IN SUSTAINABILITY REPORTING – ELECTRICITY FIELD .....	31
CHANGING GENDER ROLE BEHAVIORS OF SOUTH ASIAN MEN IN DIFFERENT GENDER REGIMES: A COMPARATIVE STUDY OF COVID-19 LOCKDOWN IN PAKISTAN AND GERMANY .....	32
EQUITY CHALLENGES IN ROMANIAN EDUCATION: TOWARDS SUSTAINABLE EDUCATION FOR ALL STUDENTS .....	33
A MANAGEMENT ACCOUNTING TEACHING STRATEGY .....	34
THE FINANCIAL PERFORMANCE OF THE AUTOMOTIVE INDUSTRY DURING THE SEMICONDUCTOR CRISIS FROM CSR, GRI AND UNGC PERSPECTIVES .....	35
CORPORATE GOVERNANCE AND RISK MANAGEMENT: A NETWORK ANALYSIS .....	36
THE CHALLENGES BROUGHT BY CLIMATE CHANGES ON THE STABILITY OF THE FINANCIAL SYSTEM; THE GREEN TRANSITION.....	37
INTEGRATED FINANCIAL REPORTING WITHIN MULTINATIONAL COMPANIES AND BANKING GROUPS IN PARTICULAR IN THE CURRENT ECONOMIC CONTEXT GENERATED BY THE COVID 19 PANDEMIC.....	38

GROWING DOUBLE MATERIALITY INTO CORPORATE SUSTAINABILITY REPORTING IN ORDER TO MEET GREEN DEAL TARGETS .....	39
---	----

**MINITRACK: APPLIED ECONOMICS & STATISTICS AND DATA SCIENCE.....40**

THE IMPACT OF ORGANIC PRODUCTS ON THE ROMANIAN ENTITIES AND CONSUMERS COMPARED TO THE EUROPEAN UNION .....	43
THE EFFECT OF LOCAL GOVERNMENT DEBT FOR INFRASTRUCTURE DEVELOPMENT ON ECONOMIC DEVELOPMENT BASED ON K-MEANS CLUSTERING AND RANDOM FOREST ...	44
UNCOVERING THE HIDDEN GEMS: A BIBLIOMETRIC ANALYSIS OF THE RESEARCH AREA OF DIRECT TAXATION .....	45
ASSESSING THE EVOLUTION OF THE ENERGY MIX WORLDWIDE, WITH A FOCUS ON THE RENEWABLE ENERGY TRANSITION .....	46
CROSS-GENERATIONAL VARIATIONS OF EDUCATIONAL POVERTY .....	47
DIGITALISATION AND SKILLS AS DETERMINANTS OF INNOVATION IN EU COUNTRIES: A PLS-SEM APPROACH .....	48
MAPPING AND MODELLING THE MAIN DETERMINANTS OF MIGRATION FLOWS AT THE NUTS LEVEL IN EUROPEAN UNION USING SPATIAL DATA ANALYSIS TECHNIQUES ..	49
EFFICIENCY OF URBAN DEVELOPMENT: GAPS IN CONTINENTAL PROFILE.....	50
MIGRATION OF HEALTH WORKERS: KEY FINDINGS FROM ROMANIA .....	51
HAS THE ACQUISITION OF PROPERTY RIGHTS OVER THE FACTORS OF PRODUCTION BECOME A BENEFIT INTENDED FOR AN INCREASINGLY LIMITED NUMBER OF "PRIVILEGED PERSONS"? STUDY ON THE CURRENT SITUATION IN THE ROMANIAN ECONOMY .....	52
SPATIAL ECONOMETRIC ANALYSIS OF THE MAIN INDICATORS OF THE ROMANIAN EDUCATIONAL SYSTEM .....	53
THE IMPACT OF THE RISK PERCEPTION ON RENTABILITY IN THE ROMANIAN AGRICULTURAL SECTOR .....	54
THE INFLUENCE OF FOREIGN DIRECT INVESTMENT IN CENTRAL AND EASTERN EUROPEAN COUNTRIES.....	55
DOES SOCIAL MEDIA IMPACT THE PROFITABILITY AND THE PROBABILITY OF DEFAULT OF COMPANIES? EVIDENCE FROM ROMANIAN COMPANIES ENGAGED IN RETAIL.....	56
THE GREEN ECONOMY - THE EUROPEAN CONTEXT REGARDING RENEWABLE ENERGY.....	57



THE IMPACT OF SOCIAL STATUS ON FINANCIAL EDUCATION AND SAVING BEHAVIOR IN YOUNG ADULT POPULATION (A CASE STUDY FOR ROMANIA) .....	58
USE ARCH AND GARCH MODELS TO STUDY THE MARKET VALUE OF IRAQ'S STOCK MARKET .....	59
USING MULTIVARIATE BIDIRECTIONAL LONG SHORT-TERM MEMORY (BILSTM) NETWORKS TIME SERIES FORECASTING OF STOCK PRICE FOR MARITIME SHIPPING COMPANY IN COVID-19 PERIOD .....	60
FINANCIAL LITERACY AND ECONOMIC GROWTH. EVIDENCE FROM THE ROMANIAN ECONOMY .....	61
IMPLICATIONS OF DIGITALIZATION ON SKILLS NEEDS IN THE BUSINESS SECTOR.....	62
CAUSES AND CONSEQUENCES OF SHADOW ECONOMY AND ITS IMPACT ON ECONOMIC DEVELOPMENT .....	63
SYNCHRONIZATION OF FINANCIAL CYCLES IN SELECTED CEE COUNTRIES .....	64
AGGLOMERATION ECONOMIES, CLUSTERING POLICIES AND REGIONAL COMPETITIVENESS .....	65
A COMPARATIVE ANALYSIS OF THE GLOBAL SUPPLY CHAIN BOTTLENECKS DURING THE COVID-19 PANDEMIC.....	66
ANALYSIS OF THE ECONOMIC ENTITIES' PERCEPTION OVER THE IMPLEMENTATION OF THE SAF-T.....	67
CLIMATIC IMPEDIMENTS TO HUMAN CAPITAL: A GENDER-DISAGGREGATED ANALYSIS OF THE IMPACT OF DROUGHT ON SCHOOL ATTAINMENT AMONG RURAL CHILDREN IN PAKISTAN .....	68
DO FISCAL RULES FOSTER ECONOMIC GROWTH? INSIGHTS FROM ADVANCED AND EMERGING MARKET ECONOMIES.....	69
EXPORT COMPETITIVENESS OF PAKISTAN'S LEATHER SECTOR IN EU-27 AND AMERICAN ECONOMIES .....	70
DOES THE AVERAGE VALUE IN THE NEIGHBOURHOOD MATTERS: SPATIAL MACHINE LEARNING APPROACH TO QUANTIFY AND VALIDATE THE IMPACT OF SOCIOECONOMIC AND CLIMATIC FACTORS ON CHILDHOOD STUNTING IN PAKISTAN .....	71
NEXUS BETWEEN ECONOMIC FREEDOM, INNOVATIONS AND CO2 EMISSIONS. EVIDENCE FROM ASIAN COUNTRIES.....	72

THE IMPACT OF COVID-19 ON BANKS' FINANCIAL PERFORMANCE: UNDERSTANDING THE CHANGES IN FINANCIAL RATIOS .....	73
---	----

**MINITRACK: DIGITAL LEADERSHIP AND RESILIENT ENTREPRENEURSHIP  
IN THE METAVERSE ERA .....74**

TOP LEADERSHIP'S VIEW ON EXPANDING THE KALEIDOSCOPE CAREER MODEL IN THE POST-PANDEMIC CONTEXT .....	78
LEADERSHIP SKILLS PERCEPTIONS IN THE ALTERNATIVE EDUCATIONAL SYSTEMS .....	79
SPORTS, POPULAR GEOPOLITICS AND TECHNOLOGY: THE CASE OF SIMONA HALEP .....	80
TECHNOLOGY FOR SKILLS DEVELOPMENT IN HIGHER EDUCATION: STUDENTS' ENGAGEMENT AND MOTIVATION IN GAMIFIED LEARNING .....	81
EXECUTIVE MANAGEMENT APPROACHES TO DIGITAL TRANSFORMATION – A NARRATIVE LITERATURE REVIEW.....	82
EXPLORING ENTREPRENEURS' INTEREST IN ADOPTING NEWDIGITAL TECHNOLOGIES.....	83
BUILDING A DIGITAL ROADMAP FOR ENTERPRISES.....	84
SYNERGY IN INNOVATION, USING EMERGING TECHNOLOGIES, IN A SECURE CYBER ENVIRONMENT AT THE GOVERNMENT LEVEL .....	86
THE IMPACT OF THE COVID-19 PANDEMIC ON FOREIGN INVESTMENTS IN ROMANIA. CASE STUDY ON BRAZILIAN AND INDIAN INVESTMENTS.....	87
INDUSTRY 4.0 AS A DIGITAL JOURNEY .....	88
NATURAL GAS MARKET LIBERALIZATION IN ROMANIA .....	89
METAVERSE SUSTAINABILITY THROUGH INTEGRATED DIGITAL LEADERSHIP AND RESILIENT ENTREPRENEURSHIP .....	90
THE IMPACT OF MEDIA POLITICIZATION ON MEDIA TRUST IN ROMANIA.....	91
AN ANALYSIS OF THE CONSUMER SATISFACTION REGARDING THE BEAUTY SERVICES IN ROMANIA .....	92
PROFESSIONAL RECONVERSION IN THE METAVERSE ERA.....	93
PROVIDING AN ELECTRIC BIKE RENTAL SERVICE FOR ON-DEMAND COURIERS THROUGH THE MICRO-PROVISIONING SYSTEMS .....	94
THE ROLE OF THE COMMUNITY IN ENTREPRENEURSHIP - THE CASE OF VIETNAM.....	95

SOCIAL ENTREPRENEURSHIP AND SOCIAL INNOVATION IN THE ENTREPRENEURIAL ECO SYSTEM.....	96
---	----

**MINITRACK: ECONOMY AND ECONOMICS UNDER THE INFLUENCE  
OF THE NEW SCIENTIFIC AND TECHNOLOGICAL REVOLUTION .....97**

INSITUATIONAL QUALITY CHANGE AND GLOBALIZATION IN AN ENDOGENOUS GROWTH FRAMEWORK .....	99
DID LOW-SKILLED MEN CROWD LOW-SKILLED WOMEN OUT OF THE UK LABOUR MARKET? .....	100
ELECTRICITY PRODUCTION FROM RENEWABLE SOURCES AND THE ADOPTION OF ELECTRIC VEHICLES IN THE EUROPEAN UNION .....	101
CURRENT COMPETITION ISSUES IN THE INTERNATIONAL CONTEXT OF INFLATION.....	102
THE BEHAVIOR OF YOUNG PEOPLE IN THE RELATIONSHIP BETWEEN SAVINGS AND INVESTMENTS IN THE DIGITAL ERA .....	103
TECHNOLOGY - FRIEND OR FOE OF LARGE COMPANIES? THE IMPACT IN THE DEVELOPMENT OF INNOVATIVE STRATEGIES .....	104
THE IMPACT OF ARTIFICIAL INTELLIGENCE ON EMPLOYMENT IN THE EUROPEAN ECONOMY .....	105
MONETARY POLICY AND HOUSING BUBBLES: SHOULD CENTRAL BANKS LEAN AGAINST THE WIND?.....	106
ACHIEVING STRATEGIC AGILITY IN THE IT INDUSTRY THROUGH SCENARIO PLANNING .....	107
THE SOCIOECONOMIC CONSEQUENCES OF LIBYAN CONFLICT: FROM ECONOMIC GROWTH DECLINE TO MIGRATION CRISIS ASSOCIATED WITH THE VOILATION OF HUMAN RIGHTS.....	108
THE PROSPECTS OF THE NEW VAT SYSTEM IN EUROPE IN THE CONTEXT OF DIGITIZATION AND THE USE OF BLOCKCHAIN .....	109
THE ECONOMIC PROGRESS OF A COUNTRY AND THE INCLUSION OF PEOPLE WITH DISABILITIES IN SOCIETY – WHERE ARE WE?.....	110
IMPACT OF RELATIONSHIP QUALITY ON CUSTOMER LOYALTY: A STUDY IN THE BANKING SYSTEM.....	111
INVESTIGATING THE EFFECTIVENESS OF DIGITALIZATION ON SMES PERFORMANCE: THE CASE OF WESTERN BALKANS .....	112

<b>MINITRACK: GEOPOLITICAL CURRENT CHANGES AND PERSPECTIVES IN SUSTAINABLE BUSINESS AND TOURISM .....</b>	<b>113</b>
STUDY ON THE PRESENT AND FUTURE REQUIREMENTS OF THE LABOR MARKET IN 7 DEVELOPMENT REGIONS OF ROMANIA .....	116
ENTREPRENEURIAL ACTIVITY IN A CRISIS CONTEXT: DOES FEAR AFFECT STUDENTS' INTENTION TO START A BUSINESS? .....	117
AT THE BEGINNING OF THE ROAD. AN EXPLORATORY RESEARCH OF FAIR-TRADE COFFEE IN ROMANIA .....	118
THUCYDIDES' TRAP AND CURRENT POWER GAMES: USA - RUSSIA - CHINA.....	119
SPORTS TOURISM AS A SOFT POWER STRATEGY IN THE NEW GEOPOLITICAL CONTEXT: A BIBLIOMETRIC NETWORK ANALYSIS .....	120
CHANGES IN THE CONTRIBUTION OF TOURISM TO THE ECONOMY OF EU MEMBER STATES UNDER THE IMPACT OF CRISES.....	121
THE CULTURAL TOURISM POTENTIAL OF THE CITY OF IAȘI .....	122
DOES THE GENDER OF HOSPITALITY EMPLOYEES AFFECT THE DEFINITION OF WAGES IN SPAIN? .....	123
THE DEVELOPMENT OF SUSTAINABLE LEADERSHIP FOR TOMORROW .....	124
<b>MINITRACK: GLOBAL WORLD UNDER CRISIS: TOWARDS A NEW ECONOMIC MODEL .....</b>	<b>125</b>
NETWORKS AND GLOBALISATION, THE KEY TO RESILIENCE? .....	127
THE IMPORTANCE OF SUSTAINABLE ENERGY TRANSITION IN THE FACE OF THE GLOBAL ENERGY CRISIS: UNDERSTANDING THE IMPACT AND THE WAY FORWARD .....	128
EFFECTS OF MULTIPLE ENVIRONMENTAL POLICIES: A CASE OF TWO SUBSIDIES.....	129
BETWEEN EAST AND WEST: GEOPOLITICAL PERSPECTIVES FOR YOUNG ARAB MIGRANTS IN ROMANIA .....	130
GLOBAL WORLD UNDER CRISIS AND AFTER COVID-19 PANDEMIC: TOWARDS INNOVATION IN HEALTHCARE IN THE EUROPEAN CONTEXT .....	131
MONETARY AND FISCAL POLICY INTERACTIONS IN THE MODERN ERA: THE CASE OF ROMANIA .....	132

WORRISOME EVOLUTIONS VERSUS INVOLUTIONS AT THE LEVEL OF GEOPOLITICAL AND GEO-ECONOMIC BALANCES. CASE STUDY – RUSSIAN ECONOMY .....	133
CRISES AND UNCERTAINTY, PART OF CONSUMER BEHAVIOR IN 2023 .....	134
CROSSROADS IN THE EAST: CEE’S APPROACHES TO POST-PANDEMIC GLOBAL POLITICS ..	135
UNDER THE MICROSCOPE - ANALYZING HOW THE EU’S ENERGY POLICIES HAVE BEEN IMPACTED BY THE EU GREEN DEAL INITIATIVE.....	136
THE ASYMMETRIC IMPACT OF THE ECONOMIC CYCLE ON CONSUMER LOANS’ PROBABILITY OF DEFAULT BY DEBTORS’ INCOME CATEGORY .....	137
THE INTERACTION EFFECT OF GROWING CHINESE INFLUENCE ON THE EFFECTIVENESS OF DEVELOPMENT AID ON INCOME INEQUALITY IN HORN OF AFRICA.....	138
A STUDY OF THE RELATIONSHIP BETWEEN THE GOLD PRICE, THE EXCHANGE RATE AND THE STOCK MARKET INDEX RETURNS DURING THE CURRENT CRISIS PERIOD USING DCC-GARCH AND VAR DCC-GARCH MODELS. COMPARATIVE ANALYSIS OF ROMANIA AND POLAND .....	139
INTERNATIONAL TRADE AND CONTAINMENT MEASURES DURING THE COVID-19 CRISIS ....	140
THE ENERGY CRISIS AND THE MEASURES TAKEN BY THE EUROPEAN UNION TO OVERCOME IT. A QUALITATIVE ANALYSIS .....	141
BUSINESS INTERNATIONALIZATION AND THE NEED TO RESILIENCE IN THE STREAM OF GLOBALIZATION: RISKS AND UNPREDICTABLE TRENDS FOR COMPANIES AND BUSINESS .....	142
THE EUROPEAN BANKING REGULATION FRAMEWORK BETWEEN RISK AND ECONOMIC GROWTH THE EURO AREA VS. THE NON-EURO AREA .....	143
GLOBALIZATION AND THE FLUCTUATION OF THE STOCK EXCHANGE IN GLOBAL ECONOMY: CASE AND TENDENCIES.....	144
FOUR MODELS OF DIGITAL AUTHORITARIAN PRACTICES .....	145
DYNAMICS OF THE ROMANIAN BUSINESS ENVIRONMENT IN THE CONTEXT OF THE CRISIS GENERATED BY THE WAR IN UKRAINE .....	146
<b>MINITRACK: NEW CHALLENGES FOR A SUSTAINABLE FINANCIAL ECOSYSTEM .....</b>	<b>147</b>
STUDENT ENGAGEMENT AND ACADEMIC PERFORMANCE IN PANDEMIC-DRIVEN ONLINE TEACHING: AN EXPLORATORY AND MACHINE LEARNING APPROACH .....	149

TRENDS IN THE DEVELOPMENT OF THE PAYMENT SERVICES MARKET: A CASE OF SLOVAKIA.....	150
CORRELATION BETWEEN DESI AND LABOR FORCE PRODUCTIVITY: A CASE STUDY ON ROMANIA .....	151
COMPARING ENERGY EFFICIENCY AND RENEWABLE ENERGY IN THE EU: A CLIMATE CHANGE-ECONOMIC ANALYSIS .....	152
PROSPECTS FOR JOINING THE EURO AREA: NEW EVIDENCE THROUGH THE LENS OF THE UNCOVERED INTEREST PARITY APPROACH .....	153
WHAT DO CAPITAL MARKETS PREFER: LEFT OR RIGHT?.....	154
A GLOBAL INNOVATIVE GREEN GOVERNANCE PERSPECTIVE TO FINANCIAL ECO-EFFICIENCY DIMENSIONS .....	155
THE IMPACT OF DIGITALIZATION AND CYBER RISKS ON THE BANKING SECTOR .....	156
THE CHALLENGES BROUGHT BY CLIMATE CHANGES ON THE STABILITY OF THE FINANCIAL SYSTEM; THE GREEN TRANSITION.....	157
WHAT ROLE DOES SUSTAINABLE FINANCE PLAY IN ACHIEVING SUSTAINABLE DEVELOPMENT GOALS?.....	158
<b>MINITRACK: NEW GEOPOLITICAL PERSPECTIVES AND TECHNOLOGICAL CHALLENGES FOR SUSTAINABLE MARKETING .....</b>	<b>159</b>
AI AND NEW FORMS OF MARKET INTERACTION TO ENHANCE CUSTOMER EXPERIENCE – A MANAGEMENT PERSPECTIVE .....	161
EU TAXONOMY AS A GAME-CHANGING IN SUSTAINABILITY .....	162
CUSTOMER SELECTION CRITERIA USING EXISTING CAR SALES DATABASES .....	163
SUSTAINABLE MARKETING PRACTICES OF GLOBAL BRANDS.....	164
DIGITAL TRANSFORMATION IN MARKETING: EXAMINING COMPANIES' EFFORTS TO CREATE BRAND IMAGE WITH INNOVATIVE DEVELOPMENTS.....	165
<b>MINITRACK: RESILIENT AGRI-FOOD AND ENVIRONMENTAL SYSTEMS FOR SUSTAINABLE DEVELOPMENT AND AGILE ENTREPRENEURSHIP.....</b>	<b>166</b>
EXPLORING THE USE OF FINANCIAL INDICATORS ON FINANCIAL DECISION IN AGRICULTURAL COMPANIES .....	168

EXPLORING THE INTERACTION BETWEEN ENERGY USE IN AGRICULTURE AND FOOD PRODUCTION.....	169
MANAGEMENT OF MUNICIPAL WASTE IN ROMANIA AND HUNGARY IN THE EU CONTEXT .....	170
PROSPECTS AND DEVELOPMENTS FOR ORGANIC FARMING IN ROMANIA.....	171
THE MARKET OF ORGANIC AGRI-FOOD PRODUCTS IN ROMANIA .....	172
INFLUENCE OF FERTILIZERS AND PESTICIDES ON YIELDS – MULTIPLE LINEAR REGRESSION .....	173
SUSTAINABLE CITIES FOR A SUSTAINABLE FUTURE: INTEGRATING SUSTAINABLE DEVELOPMENT GOALS INTO URBAN PLANNING .....	174
FOOD TRACEABILITY AND ITS TOOLS FOR CUSTOMER SAFETY.....	175
ANALYSIS OF THE IMPACT OF THE COMMON AGRICULTURAL POLICY ON THE AGRICULTURAL SECTOR IN ROMANIA: A LINEAR REGRESSION MODEL .....	176
BIBLIOMETRIC ANALYSIS AND LITERATURE REVIEW ON DIGITALIZATION AND GEOPOLITICAL IMPACT OF THE AGRI-FOOD SYSTEM .....	177
SUSTAINABILITY REQUIRES CIRCULAR ECONOMY .....	178
SUSTAINABILITY REPORTING PRACTICES IN ROMANIA.....	179
THE BIOGAS AS A VARIANT OF THE CURRENT ENERGY CRISIS IN EUROPE AND ROMANIA...	180
CHALLENGES OF ACHIEVING FOOD SECURITY IN COUNTRIES WITH AGRICULTURAL RESOURCES SCARCITY .....	181
BIBLIOMETRIC ANALYSIS OF THE IMPACT OF ESG FACTORS ON FINANCIAL PERFORMANCE .....	182
THE IMPACT OF THE RESULTS INDICATORS ON THE STOCK MARKET PERFORMANCE IN THE CASE OF COMPANIES LISTED ON THE BUCHAREST STOCK EXCHANGE .....	183
POWERING THE POWERLESS: THE IMPACT OF ELECTRIFICATION ON AGRO-FOOD PROCESSING IN GHANA .....	184
ETHICAL FRONTIERS: LEADERSHIP PERSPECTIVES IN THE CONTEMPORARY FOOD INDUSTRY .....	185

<b>MINITRACK: SERVICE LEARNING, CIVIC ENGAGEMENT AND SUSTAINABLE EDUCATION .....</b>	<b>186</b>
STUDENTS' PERCEPTIONS OF THE CHANGES SPECIFIC TO THE VUCA WORLD: ONLINE AND TRADITIONAL TEACHING SYSTEM.....	190
SERVICE LEARNING – BASED PEDAGOGICAL APPROACH AND STUDENTS’ PERCEPTIONS ..	191
POLICY GAPS AND FINANCIAL BARRIERS IMPEDING DEEP ENERGY RENOVATIONS IN CYPRUS AND GREECE.....	192
KAHOOT! - A BIBLIOMETRIC ANALYSIS USING WEB OF SCIENCE DATA .....	193
EXPLORING THE USEFULNESS OF CHATGPT IN UNDERSTANDING AND PROMOTING THE CONCEPTS OF SUSTAINABILITY: A COMPARATIVE STUDY .....	194
DISTANCE LEARNING IN A PANDEMIC: UNDERSTANDING STUDENT PERCEPTIONS AND ATTITUDES .....	195
BEAUTY AND THE BEASTS: LOOKING AT THE CULTURAL ECONOMY IN TIMES OF CLIMATE CHANGE, PANDEMIC AND WAR .....	196
THE IMPACT OF NEW IT&C TECHNOLOGIES ON ACADEMIC PERFORMANCE: AN ANALYSIS OF HOW WEB 2.0 AND LARGE LANGUAGE MODELS AFFECT THE EDUCATIONAL AND RESEARCH PROCESSES IN UNIVERSITIES .....	197
SDG4: DIGITIZING EDUCATION, LIFELONG LEARNING, AND SKILLS IN THE CONTEXT OF THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT .....	198
ASSESSMENT OF GLOBAL BUSINESS LITERACY OF SLOVAK STUDENTS.....	199
A DESIGN METHODOLOGY FOR LIFELONG CAREER TRANSITIONS.....	200
COMPARATIVE STUDY OF EMPLOYERS' AND STUDENTS' VIEW OF BUSINESS MANAGEMENT SKILLS AND COMPETENCIES .....	201
ACADEMIC EXPERIENCES DURING ERASMUS MOBILITIES: MYTHS AND REALITIES.....	202
AN EMPIRICAL RESEARCH ON STUDENTS' PERCEPTIONS REGARDING MARKETING SIMULATIONS.....	203
PREMISES OF IMPROVING THE QUALITY OF THE DIDACTIC PROCESS IN PRE-UNIVERSITY EDUCATION IN THE CONTEXT OF EDUCATION 4.0 .....	204
AR TECHNOLOGY POTENTIAL FOR FACILITATING ACCESS TO ADVANCED EDUCATION FOR STUDENTS WITH ASD.....	205



THE USE OF LOGISTIC MODELS IN PREDICTING FACTORS INFLUENCING THE MILLENNIALS AND GENERATION Z'S BUYING DECISION OF INNOVATIVE PRODUCTS: EVIDENCE FROM ROMANIA .....	206
UNIVERSITY 2.0: SOCIAL, COMMUNICATIVE, AND EDUCATIONAL IMPACT OF ITALIAN ACADEMIES .....	207
<b>MINITRACK: TECHNOLOGICAL CHALLENGES FOR SUSTAINABLE DEVELOPMENT OF PUBLIC AND PRIVATE ORGANIZATIONS IN THE 21ST CENTURY .....</b>	<b>208</b>
PREDICTORS OF EMPLOYEES' WORK PERFORMANCE IN ONLINE AND ON-SITE CONDITIONS: A COMBINED USE OF PLS-SEM AND NCA .....	211
ORGANIZATIONAL MODEL FOR DEVELOPMENT AFTER WAR AND CRISIS: BANK-CENTERED BUSINESS GROUP .....	212
APPLICATION OF ARTIFICIAL INTELLIGENCE IN THE HEALTHCARE SECTOR: BENEFITS AND CHALLENGES .....	213
ASSESSING ROMANIAN MEAT PROCESSING COMPANIES' READINESS FOR SUSTAINABLE MARKETING FROM A CSRD PERSPECTIVE .....	214
DIGITAL RELIANCE WITHIN B2C AND B2G COMMUNICATION SYSTEMS IN THE POST-COVID-19 PANDEMIC ERA: A SYSTEMATIC LITERATURE REVIEW .....	215
ACADEMIC ADMISSION PROCESS: AN IOT-BASED INDOOR LOCATION CASE STUDY .....	216
STATE-MARKET RELATIONS IN THE COMPETITIVE ECONOMY .....	217
THE CONSEQUENCES OF THE PANDEMIC IN THE MANAGEMENT OF PUBLIC HEALTH SERVICES FROM A TECHNOLOGICAL POINT OF VIEW .....	218
THE IMPACT OF THE COVID-19 PANDEMIC ON THE CORPORATE PERFORMANCE .....	219
MINIMIZING SUPPLY CHAIN RISKS. MITIGATION STRATEGIES FOR SUSTAINABLE PRIVATE ORGANIZATIONS DEVELOPMENT .....	220
INVESTMENT IN RESEARCH AND DEVELOPMENT IN AN ASIAN EMERGING ECONOMY: AN OVERVIEW AND POLICY IMPLICATIONS .....	221
THE FUTURE OF SUSTAINABLE BUSINESS: THE CASE FOR A "GREEN ECONOMY" OF ENTERPRISES IN BULGARIA .....	222
DIGITALIZATION IN THE FISCAL SYSTEM IN ROMANIA .....	223
THE TYPE-2 Q-RUNG ORTHOPAIR COCOSO METHOD FOR WORKPLACE DESIGN PROBLEMS ON THE METAVERSE .....	224

TOWARDS SUSTAINABLE CONSUMPTION: CONSUMER BEHAVIOUR AND MARKET SEGMENTATION IN THE SECOND-HAND CLOTHING INDUSTRY .....	225
ADAPTING TO THE NEW NORMAL: A PESTLE ANALYSIS OF THE POST-COVID E-COMMERCE LANDSCAPE .....	226
THE NEW RECRUITMENT MODEL IN THE CIVIL SERVICE .....	227
THE IMPACT OF RISK MANAGEMENT ON THE SUSTAINABILITY OF THE INSURANCE BUSINESS .....	228
<b>MINITRACK: TRANSFORMING THE FUTURE OF LABOR: MAPPING THE ROUTE TO A DIGITALLY TRANSFORMED WORKFORCE .....</b>	<b>229</b>
ONLINE SHOPPING AND CONSUMER BEHAVIOR .....	232
AI – THE NEW PLAYER IN DIGITAL ECONOMY .....	233
DIGITALIZATION WITHIN PROCURE-TO-PAY .....	234
THE RELATIONSHIP BETWEEN PUBLIC INVESTMENT IN EDUCATION AND THE PERFORMANCE OF THE EDUCATIONAL SYSTEM CASE STUDY .....	235
DIGITAL ASSETS BOOM: ECOSYSTEM, REGULATION AND COMPLIANCE, CBDCS.....	236
SHAPING THE FUTURE: AN INTRODUCTION OF CHINA'S DIGITAL AMBITIONS.....	237
ONE BELT - ONE ROAD .....	238
ARTIFICIAL INTELLIGENCE IN EDUCATION: A SYSTEMATIC REVIEW .....	239

## **GUEST SPEAKERS**



## Sorin VÂLCEA, Cleveland State University, United States of America

**Sorin Vâlcea** is an Associate Professor in the Management and Labor Relations Department at Cleveland State University. He received his PhD in Management (with a focus on Organizational Behavior and Human Resource Management) from the University of Oklahoma. His research interests include leadership development, extra-role employee behaviors, work in teams, and employment interviews. He has published research on leader and follower development, proactivity, and methodologies in OB/HRM. His work has appeared in journals such as *Leadership Quarterly*, *Journal of Vocational Behavior*, and the *Journal of Occupational and Organizational Psychology*.

He holds a bachelor's and a master's degree in business administration from the *Faculty of Business Administration in Foreign Languages (FABIZ)* within the *Bucharest University of Economic Studies*, which he graduated in 2004 and 2006, respectively.



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**Sorin VÂLCEA**

*Cleveland State University, United States of America*

## **Keynote speech – Exploring the Impact of ChatGPT on Business School Education: Prospects, Boundaries, and Paradoxes**

The introduction of ChatGPT and other generative AIs from the Large Language Models category has sparked considerable concern about the possibility of human skills being replaced, similar to the way automation affected manufacturing jobs. This essay aims to explore the potential impact of ChatGPT on the knowledge and skills typically taught in business schools. We present the outcomes of various knowledge and reasoning tasks that were conducted with ChatGPT. We highlight areas where AI tools can enhance student learning, such as comprehending established subject domains, as well as areas where AI tools exhibit significant limitations, such as logical reasoning and critical thinking. Considering these limitations, we identify three paradoxes that conversation tools like ChatGPT pose to management education and make some recommendations.



## **Ionuț DUMITRU, Bucharest University of Economic Studies, Romania**

**Ionuț Dumitru** is Professor of Finance at the Faculty of Finance, Insurance, Banking and Stock Exchange, Department of Money and Banking, within the Bucharest University of Economic Studies. He is former chairman of the Fiscal Council of Romania, and he is currently Chief-Economist at Raiffeisen Bank Romania.

Mr. Dumitru graduated the Faculty of Finance, Insurance, Banking and Stock Exchange, has a master's degree in "Financial and Monetary Policies and Strategies" within the Doctoral School of Finance and Banking (DOFIN) and obtained his PhD degree in Finance at the Bucharest University of Economic Studies. He attended various training courses in macroeconomics and financial markets held by professors from DOFIN partner universities – Reading and ISMA Centre (UK), Erasmus (Netherlands), MIT, Columbia and New York University (US), as well as a several training programs on management and financial markets.



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**Ionuț DUMITRU,**  
*Bucharest University of Economic Studies, Romania*

**Keynote speech – Looking Back, Looking Forward:  
real convergence story of Romania 33 Years  
after the fall of communism**

This paper aims to assess economic developments and the real convergence story of Romania versus its regional peers over the past more than three decades, and to try also to look forward to the challenges and the opportunities for the next decades.

First, we analyze the real convergence story of Romania vs its peers looking at most important real convergence indicators development since 1989. We assess the convergence of Romania with EU economic development standards, evaluating also the level of business cycle synchronization of Romania with the eurozone countries.

Secondly, we analyze medium and long term trends in the European economy, and we try to discuss what Romania should do to foster its convergence process in the next decades. In particular, a renewed focus on macroeconomic stability is needed, to deal with persistent budget and current account deficits of Romania. Also, structural reforms in different areas are needed to improve medium to long term potential GDP growth of the country. The long term trends at the global and regional level and its implications on Romania are also analyzed. We are focusing on green transformation, demographics and geopolitics which will have important implications for Romania and CEE region.

## ***Minitrack: Accounting For Sustainable Development***

### **Chairs:**

- **Nadia ALBU, Bucharest University of Economic Studies, Romania**
- **Irena JINDRICOVSKA, Metropolitan University Prague, Czech Republic**

Accounting has a role to play in delivering the UN Sustainable Development Goals (SDGs) by creating visibility on risks and opportunities, and on the progress made. Organizations are called to incorporate SDGs in their objectives and strategies, and they must design aligned control and reporting systems. Capital markets and other users demand organizations to be sustainable, besides their financial performance. Regulators and standard setters issue requirements for organizations to disclose sustainability-related information. Therefore, accounting is part of the wider network working together to achieve the SDGs.

The main topics covered by the hereby call for papers are related to:

- Accounting with the use of artificial intelligence, machine learning, robotics blockchain
- Automation of business processes, financial reporting, and accounting documentation
- Advantages of cloud computing in accounting
- Professional skills of future accountants working in digitalized environment
- Technology driven changes in the traditional accounting system
- Technology enhanced decision-making in public and private accounting
- Understanding trust in accounting information systems
- Forensic accounting after this coronavirus pandemic





**Nadia ALBU** is professor of accounting and Deputy Dean of the Faculty of Accounting and Management Information Systems, in charge with research and international relations. Dr. Albu has been a teacher and researcher at ASE since 2000 and had in parallel an extensive international experience, including a master's degree obtained in 2001 from Université d'Orléans, France, a Fulbright visiting professor grant obtained in

2014, a Deloitte-IAAER scholar grant between 2013-2016, and a visiting professorship at ESSEC Business School, France, since 2016. Dr. Albu is actively following the changes in the accounting profession globally, being part of teams conducting research for IFAC and Edinburgh Group. Her main research interests focus on the transformations of accounting systems in emerging markets, investigating the change and inertia in the accounting field (corporate reporting, auditing, management accounting etc.), acknowledging the importance of interdisciplinary research for an in-depth understanding of accounting phenomena in their environment.

**Irena JINDRICOVSKA** is professor at the Metropolitan University Prague, Czech Republic. Dr Jindrachovska has expertise and conducted research on the topics of accounting and corporate finance, sustainability, and international trade. She previously worked with Anglo-American University Prague, Masaryk Institute of Advanced Studies CTU, Prague, Czech University of Life Sciences, Prague, but also with University of Buckingham, UK and University of Wales Aberystwyth, UK. She worked in multinational research teams and published in accounting and management journals.



## NON-FINANCIAL REPORTING IN EXTRACTING MULTATIONALS: SUCCINCT TEXT ANALYSIS

**Irena JINDRICOVSKA**

*Metropolitan University Prague, Czech Republic, Prague, Czech Republic*

**Dana KUBÍČKOVÁ**

*University of Finance and Administration, Prague, Czech Republic*

**Marie FIŠEROVÁ**

*Prague University of Economics and Business, Prague, Czech Republic*

**Abstract.** In this paper, we analyse recent annual reports of world mining giants. The motivation is that mining and extracting is a controversial industry. In this paper, we explore the dimensions of the chairman's statements of the ten largest mining multinationals in the post-COVID period. We perform a textual analysis of selected multinationals using the analytical software LIWC2022. Concentrate on their approach to mining and CSR issues as can be discerned from the text of the report. We explore letters to shareholders in nine dimensions of the text: namely, the dimension of Allure, Moral, Social, Negative tone, Positive tone, Cognitive processes, I-words, Authentic and Analytic which are evaluated by the linguistic programme LIWC2022. In our exploration, we have discovered that there are some interesting differences. Based on the analysis, we can state that identified differences depend on the cultural and historical environment in which the companies operate. The highest scores were found in cognitive processes in BARICK, which is a Canadian gold mining company. And in the case of positive emotions. This concerned especially the Chinese company China Shenhua Energy. On the contrary, the lowest scores were found in negative emotions. Nevertheless, here, the differences between the companies were not very important. The authenticity values were both positive and negative, but the companies did not display any great differences in the group of analysed companies.

**Keywords:** annual reports, controversial industry, sustainability reporting.



## A BIBLIOMETRIC ANALYSIS REGARDING THE DIGITALIZATION OF THE ACCOUNTING PROFESSION

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**Liliana IONESCU-FELEAGĂ**

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**Abstract.** This study presents a bibliometric analysis of publications on digitalization of the accounting profession. The analysis is based on articles retrieved from the Web of Science (WoS) database. The paper uses Microsoft Excel and VOS Viewer to analyze and visualize data for a final set of 628 articles found by searching for “accounting”, “digitalization” and other words closely related to digitalization. The results show that the literature in this field has increased over time, especially in the last few years, reaching the highest number in 2022. The analysis reveals information on performance analysis and science mapping and shows that the United States is the most active and influential country of research in this field. According to the findings, strong collaborative networks exist between authors from different countries. The results of the study could be of interest to researchers as it highlights the most important research constituents and articles with the highest impact in this field.

**Keywords:** accounting, digitalization, bibliometric, analysis, WoS.

## PROFESSIONAL SKILLS OF FUTURE ACCOUNTANTS WORKING IN A DIGITIZED ENVIRONMENT DOMINATED BY ERP SYSTEMS

**Laura-Eugenia-Lavinia BARNA**

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**Abstract.** The massive evolution of the digitization concept in recent years has also gained momentum among accounting professionals, as a result of the massive use of IT systems called ERP (Enterprise Resource Planning) systems. Thus, their entire activity is focused on the processing of financial-accounting data with the help of ERP (Enterprise Resource Planning) systems. The modular structure of ERP (Enterprise Resource Planning) systems can be integrated for other departments within an organization, but in this article the financial-accounting module of the ERP (Enterprise Resource Planning) system will be discussed, in order to identify the main skills of future accountants. The research method for this article is qualitative, based on the bibliometric analysis of the digitization of the accounting profession, focusing primarily on what skills future accountants should develop. The results obtained indicate a significant increase in the analysis capacity of the future accountants, greatly reducing the part of manual data processing that they did manually in the past. The conclusion of the article demonstrates how much the activities of professional accountants have evolved as a result of the digitization of their activities, using ERP (Enterprise Resource Planning) systems.

**Keywords:** ERP systems, future accountants, skills, digital.

## RECENT PERSPECTIVES ON OUTSOURCING OF SUSTAINABILITY REPORTING

**Adrian ISIP**

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**Abstract.** Nowadays our society is more interested in the businesses being committed to sustainability goals. Stakeholders assess the business sustainability relying on the impact of performed activity on environment and social dimensions. Today the non-financial performance should be for organizations as important as making financial profit. Large companies have the legal obligation to prepare sustainability reports while other smaller entities do so voluntarily. To improve the stakeholders' perceptions, some organizations use impression management to highlight their efforts on sustainability. This paper investigates the recent perspectives on outsourcing of sustainability reporting shared by clients and providers considering the motivations and the process. We conducted a qualitative research by mobilizing core competences theory as theoretical framework, Romanian business environment as context and semi-structured interviews as method involving 24 participants. Following core competences theory the results indicated that companies facing limited internal competences resort to external services for sustainability reporting. Some enterprises make the outsourcing decision for sustainability reporting and even engage voluntarily limited assurance services to increase their credibility with the stakeholders. The aim of the largest companies outsourcing the sustainability reporting is also to obtain a high rank in the Corporate Sustainability and Transparency index and use that achievement to improve their reputation. Both clients and providers claimed that today most companies publish their sustainability reports on their websites and share their content on social media platforms. According to the experts the new European directive on sustainability reporting adopted in 2022 coming into force from 2024 determines an increase in the number of reporting companies, then the entities will have the obligation to make more disclosures and engage mandatory limited assurance services. Our research has implications for reporting companies and professionals and our main contribution was to show the current state of sustainability reporting and emphasize the near future challenges and opportunities.

**Keywords:** external services, sustainability reports, non-financial performance, stakeholders, core competences theory.



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## PROFESSIONAL SKILLS AND MOTIVATION OF FUTURE ACCOUNTANTS WORKING IN DIGITALIZED ENVIRONMENT

**Ana-Maria COCARIU**

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**Abstract.** Digitalization occupies a very important place in the development and sustainability of businesses. The rapid development of big data implies the development of certain skills and capacities of accounting professionals, so that they are prepared from all points of view for the constant changes that appear in the field, including the implementation in the software programs used. This process of adaptation and intensive use of technology was accentuated during the pandemic period, caused by the spread of the SARS-COV-2 virus, so that accounting professionals also had to direct their attention even more to the technological side, keeping their motivation and not being overwhelmed by this situation. This study aims to find out how did professionals in the financial-accounting field perceive this need to organize their activity exclusively online, if they encountered difficulties, if they needed additional knowledge and skills to continue their activity and if they were supported by the companies. In order to achieve these objectives, a structured research was implemented through a survey that was distributed to professionals in the financial-accounting field and to the members of The Body of Expert and Licensed Accountants of Romania (C.E.C.C.A.R.). The answers provided can represent the initial framework for rethinking the skills that future accounting professionals need, so that their role has the same important impact for companies.

**Keywords:** human capital development, professional skills, accounting, digitalized environment.

## DIGITALIZATION IN SUSTAINABILITY REPORTING – ELECTRICITY FIELD

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**Abstract.** Nowadays digitalization is a must for companies and the COVID crisis showed us that businesses could adapt better to changes through digitalization. Sustainability reports offer a bigger picture of businesses. Given the ongoing war between Russia and Ukraine as well as the energy crisis and climate change, the current interest in electricity is justified. This paper's objective is to determine the level of training offered by the companies from the electricity field, moreover to see from the sustainability reports, how digitalization is used, and based on the discussion about the fact that the area of “science, technology, engineering and mathematics”(STEM) is dominated by men, we wanted to see the distribution of gender in electrical Romanian companies. We used data from Eurostat for 2022, about the percent of companies that provided training to improve their staff's knowledge of information and communications technologies skills, from the field of “Electricity, gas, steam, and air conditioning supply”(according to the Statistical Classification of Economic Activities developed in the European Community) and we analyzed the sustainability reports of the year 2021, for 5 big Romanian companies from the field of electricity. Our findings show that for the field mentioned, Denmark is on the first place with 88.7%, on the last place is Croatia with 13.9%, and Romania is on the 20th place with 22.6%. From the sustainability reports it results that all companies analyzed use digitalization for simplifying different activities, as: communication, electronic invoicing, employee training, production processes, etc. Another conclusion here is that 75% (Min 70.06%, Max 80.45%) of the employees are men and 25% (Min 19.55%, Max 29.94%) are women, and 3 out of 5 companies mentioned that offer working from home. This paper is the first one that analyzes the sustainability reports regarding digitalization and gender distribution in the Romanian electricity field.

**Keywords:** digitalization, sustainability reporting, electricity, gender equality.

## CHANGING GENDER ROLE BEHAVIORS OF SOUTH ASIAN MEN IN DIFFERENT GENDER REGIMES: A COMPARATIVE STUDY OF COVID-19 LOCKDOWN IN PAKISTAN AND GERMANY

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**Abstract.** This comparative study of COVID-19 lockdown aims to underline changes in gender role behaviors of South-Asian men (husbands) living in different gender regimes: Pakistan and Germany. As a nascent contribution to existing discourses of political science (gender regimes), international migration, and men and masculinity, the study compares self-reported changes in husbands' masculine and feminine role behaviors with perceptions of their wives during the lockdown period. A gender role behavior scale is adapted to design an online survey and collect data through convenient and snowball sampling techniques. By computing analysis of variance (ANOVA) with repeated measures, the study infers that the COVID-19 driven first lockdown has limited the mobility of men (husbands). Thus, they have reported a significant decline in their traditional masculine role behaviors (outside the home) in both countries. Nonetheless, a subsequent increase does not appear in their feminine role behaviors. Although temporary suspension of their breadwinning roles due to lockdown has allowed them to modify their gender role behaviors by sharing increased domestic and caregiving tasks in families, a significant change does not appear in their behaviors. Findings conclude that social upheaval (COVID-19) does not convince men (husbands) to interchange their masculine and feminine role behaviors in families. Thus, inferences support key primis of bio-socialists that gender role behaviors are inherited and may change through cultural advancements (through gender education and enabling legal frameworks) in relatively less gender-egalitarian societies and proper 'gendered integration' initiatives in relatively more gender-egalitarian societies.

**Keywords:** migration, masculinity, gender-regimes.



## EQUITY CHALLENGES IN ROMANIAN EDUCATION: TOWARDS SUSTAINABLE EDUCATION FOR ALL STUDENTS

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**Abstract.** This article aims to analyze, from the perspective of the objectives of sustainable development, as they were stated in the report of the World Commission of Environment and Development (WCED), "Our Common Future", the challenges faced by the education system in Romania, especially those that come from the perspective of equity, ensuring access to education (regardless of level), its ability to offer equal chances and opportunities that allow students to develop and reach their own potential. The multiple reforms of the system had the objective of increasing quality, adapting it to the fast pace of changes in society, economy or technologies, to the prospects of preparing graduates for a better insertion in a labor market that is also changing. Beyond the output of the system, which can be evaluated from the perspective of sustainable development, it is important that the system itself evaluates to what extent it satisfies these objectives. To what extent is the equity of the system ensured, how deep are the gaps between urban and rural environments in terms of access to resources, to what extent is social inequity reproduced in the educational system, how much is the principle of equal opportunities respected, are aspects of maximum importance in defining a sustainable education system. The main objective of the article is to realize an econometric model between dropout rate and the proportion of education expenditures. We will do prognosis until 2025.

**Keywords:** development, education, prognosis.

## A MANAGEMENT ACCOUNTING TEACHING STRATEGY

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**Abstract.** Traditionally, a cohort of students receives the same homework. Therefore, it is easy for them to take the solution from a colleague or website, which will have the consequence that they will not accumulate the knowledge and/or competence for the respective applications. The research question of this paper is: How can a professor determine students to engage in management accounting homework? The paper presents a teaching strategy useful for disciplines related with management accounting. It involves the creation of applications in which the amounts (variables) are missing. The students have to complete the text with some specific data for each of them. Applications for all the chapters included in the syllabus of management accounting and performance measurement and control were created. The text and solutions to the example built for “Internal transfer price”, and answers to a questionnaire are included in the paper. The study improves the literature on the strategies which can be used in teaching management accounting, in order to ensure the engagement of the student with the requirements. Also, the described teaching method is useful both in an online and offline environment, as it is more likely for the students to find the motivation to solve the applications.

**Keywords:** teaching strategy, management accounting, deep learning, homework, teaching conception, transfer pricing.

## THE FINANCIAL PERFORMANCE OF THE AUTOMOTIVE INDUSTRY DURING THE SEMICONDUCTOR CRISIS FROM CSR, GRI AND UNGC PERSPECTIVES

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**Abstract.** The global semiconductor crisis, as a consequence of the SARS-CoV-2 pandemic, highlights a difficult period for the Automotive industry. According to the literature review, CSR promotes social good beyond the law and interests of a firm and its shareholders, while the GRI and UNGC provide guidance to companies regarding the reporting of sustainability performance. This paper aims to identify the influence of Corporate Social Responsibility, Global Reporting Initiatives and United Nation Global Compact on financial performance in the Automotive industry for 2021. In order to achieve the research purpose a quantitative method was performed through statistical and econometric analysis. The econometric analysis is based on two regression equations, for CSR and GRI-UNGC, the data being collected from Thomson Reuters database. In the sample for CSR model, there are 198 companies, while for the GRI-UNGC model, the total number is 213. This research aims to assess the influence of CSR, GRI and UNGC on the financial performance of companies in the Automotive industry. The results of the CSR model emphasizes that there is a positive influence of the CSR Sustainability Committee, CSR Sustainability External Audit, and CSR Sustainability Report Global Activities on the financial performance. For the GRI-UNGC model, a positive influence has been found on GRI Reporting Guidelines. On the other hand, negative influences have been identified on CSR Sustainability Reporting and Global Compact Signatory. This study fulfills the gap in research on the semiconductor crisis in relation to sustainability reporting, and it is useful in developing future research perspectives.

**Keywords:** CSR, GRI-UNGC, semiconductor crisis, sustainability, financial performance.

## CORPORATE GOVERNANCE AND RISK MANAGEMENT: A NETWORK ANALYSIS

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**Abstract.** The prevalent circumstances given by the context of financial crisis, corporate bankruptcies, or accounting misconducts, marked in the twenty-first century's first part, are still a topic of interest. As researchers' focus on aspects related to corporate governance mechanisms and risk management has increased over time, the research conducts a network analysis between these concepts. Aiming to debate approaches regarding the intellectual structure in corporate governance and risk management research, the current study conducts an analysis within the extant literature by using the bibliometric review. The study's analysis is performed on a final dataset of 561 bibliometric records published starting with year 2000 until early 2023, extracted from Web of Science Core Collection database. The study combines bibliometric coupling and co-word analysis as bibliometric tools in observing the development patterns and networks of research themes in the field of corporate governance and risk management. The scientific mapping analysis over the dataset that focuses on the themes related to corporate governance and risk management is made by using VOS viewer visualization software. The main findings reveal that the researchers' focus still lies on the meaning of a good corporate governance practice and its effectiveness in line with the risk management processes implementation, improvement, and quality. The needing for more research in the field with a steady focus on the moderating factors of the relationship between corporate governance and risk management is still existing in the majority of the studies. This research provides a comprehensive overview over the evolving literature in corporate governance and risk management, and highlights the extensive and the gaps in the extant literature for future studies opportunities.

**Keywords:** corporate governance, risk management, bibliometric analysis, science mapping, research network.



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## THE CHALLENGES BROUGHT BY CLIMATE CHANGES ON THE STABILITY OF THE FINANCIAL SYSTEM; THE GREEN TRANSITION

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**Abstract.** Climate change and environmental degradation are the defining global challenges of our time. Combatting climate change is imperative for the future of humanity. This study looks at environmental regulations that need to be complemented with a sustainable finance framework to direct funds to investments able to reduce exposure to these climate risks. The study presents briefly the main trends of the capital market and the strengthening of the supervision of the sector by increasing the capacity to react to the rapid evolution of the market, analysing the financing of investments that have a positive impact on the environment and society in general. Therefore, the article will propose some solutions that could be considered for achieving the objectives of sustainable development and combating climate change. The research concludes that only strategic planning can lead to sustainable development in combating climate change in Romania.

**Keywords:** climate, financial system, challenges, change, strategic planning.

## INTEGRATED FINANCIAL REPORTING WITHIN MULTINATIONAL COMPANIES AND BANKING GROUPS IN PARTICULAR IN THE CURRENT ECONOMIC CONTEXT GENERATED BY THE COVID 19 PANDEMIC

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**Abstract.** The speed with which corporate structures evolve, the diversification of markets and the abundance of available information, thanks to the various channels of obtaining them, raise difficulties in selecting and identifying the truth. In the field of accounting, financial statements are the main source of information that underlies the decision-making process of participants in economic activity. Their production and presentation are complex processes, with an impact on the utility they give to those to whom they are addressed. Thus, the cognitive potential of financial reports, of the information they contain, is a concern for those who prepare them as well as for researchers. Integrated financial information uses a common language for the business environment so that business information can be understood and comparable at the international level. Scientific research approaches this type of reporting from the perspective of financial institutions in the current economic and social context. The review of scientific literature and the development of research hypotheses address conceptual boundaries in the case of integrated financial reporting. We analyzed the important factors that address the links between management decisions and financial statements. Two research questions are found in the scientific approach: Does integrated reporting have a major importance within financial institutions in the current economic and social context? What is the role of integrated financial reporting in creating added value within banking institutions? Research objectives refer to the need to identify and obtain accurate and real-time information through integrated financial statements. The findings of the study are that based on the integrated financial statements, decision-makers can take measures to support or recover the economic activity in the long term, allocating resources and creating pluses in their activity.

**Keywords:** Banking institutions, related parties, integrated financial reporting, performance indicators, corporate reporting.

## GROWING DOUBLE MATERIALITY INTO CORPORATE SUSTAINABILITY REPORTING IN ORDER TO MEET GREEN DEAL TARGETS

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**Abstract.** The transition to a clean, a just, and a sustainable European economy, in line with the objectives of Green Deal, is an ongoing activity. Global warming, post-pandemic recovery, the challenges and difficulties arising from the conflict situation in Ukraine, have all intensified the efforts of the Member States in order to reduce the dependency on natural resources and to achieve sustainable growth. European companies are also facing these challenges, as the net-zero emissions targets are expected from business environment. From these considerations, in 2022, the European Commissions adopted the Corporate Sustainability Directive and presented the first draft of European Sustainability Reporting Standards, as essential tools, aimed to increase transparency and quality of non-financial data. Both documents incorporate the principle of double materiality as a reporting criterion. This paper investigates the frequency with which the two materiality perspectives were reported by 128 European companies operating in five industries. The research is based on a content analysis of 512 Sustainability Reports published for the period 2019-2021. The general findings of the analysis highlight a current low stage of integrating the principle of DM in sustainability reporting, but with obvious perspectives of awareness of its content, usefulness and purpose. Cross-sector oscillations were observed, with a clear detachment of energy companies, which is considered to be a positive aspect, given that the greening of the energy sector is one of the European Green Deal's targets.

**Keywords:** double materiality, CSRD, Green Deal, sustainability, content analysis.



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## **MINITRACK: APPLIED ECONOMICS & STATISTICS AND DATA SCIENCE**

### **Chairs:**

- **Adriana Ana Maria DAVIDESCU (ALEXANDRU), Bucharest University of Economic Studies, Romania**
- **Roberto DELL'ANNO, University of Salerno, Italy**

The objective of the Mini-Track entitled Applied Economics and Statistics and Data Science is to bring together academic scientists, researchers, research scholars to present and discuss the most recent innovations, trend, patterns and practical challenges faced and solutions adopted in the fields of quantitative modelling, applied statistics, and data science. High-quality research contributions describing original, empirical or experimental unpublished work in the following areas are cordially invited for presentation at the conference:

Applied Statistics in Social Science, Biostatistics and Bioinformatics, Data Collection and Applications, Data Mining, Data Science, Demography, Design of Experiments, Econometrics (Macro and Micro Econometrics), Mathematical Statistics, Measurement, Network Analysis, Sampling Techniques and Applications, Spatial Statistics and Econometrics, Statistical Analysis of Internal and International Migration, Statistical Applications in International Comparisons, Statistical Modelling and Simulation, Official Statistics, Statistical Software (R, SAS, Python), Statistics in Education, Other Areas of Applied Statistics and Applied Quantitative Analysis, Quantitative approaches in entrepreneurship and innovation, Business Statistics, Business analytics.

The Mini-Track welcomes papers and research in the previously mentioned topics but is also open for researchers and practitioners bringing research papers or use cases in other areas related to the broader context of Applied Statistics and Data Science.





**Adriana Ana Maria DAVIDESCU (ALEXANDRU)** is Full Professor at the Department of Statistics and Econometrics of the Bucharest University of Economic Studies Romania and senior researcher at the Department of Labour Market Policies of the National Scientific Research Institute for Labour and Social Protection, having more than 14 years of experience in socio-economic research. She has more than 14 years of expertise in the field of informal

economy coordinating or being member of the research team of national and international projects. The main areas of interest include among others: labour market analysis, sustainable development, regional development, analysis and evaluation of public policies, human resource management, etc.

She has extensive experience in the evaluation of projects and public programs as an expert in quantitative analysis and application of statistical and econometric methods in the process assessment, being involved in projects for policy assessment and measures to encourage active ageing, assessment of active measures on reducing unemployment and increasing employment, evaluation of employment increasing measures oriented toward rural area population, evaluations and forecasts of informal employment in strengthening the institutional capacity of The National/Regional Agency for Employment, assessment of the National Strategy for Research, Development and Innovation 2014-2020.

She has demonstrated knowledge and experience with quantitative and qualitative economic analysis and modeling techniques, background in the field of macroeconomics, as well as experience in applied econometrics, macroeconomic and microeconomic analysis, data validation and statistical analysis, predictive analysis, expertise in employment policy and labour market analysis. She was member of member of European correspondents Eurofound 2014-2018, The European Foundation for the Improvement of Living and Working Conditions (Eurofound) Romania and also CNSPIS member during the period 2016-2018.

**Roberto DELL'ANNO** is Full Professor of Public Economics at the University of Salerno (Italy) and the Scientific Head of LaBETI (Research Laboratory of Economics and Technologies for Innovation) at the Department of Economics and Statistics of the University of Salerno.

He holds a Ph.D. in “Public Economics” from the University of Salerno, a Master degree in “Economics and Finance” at the University “Federico II” of Naples (Italy) and an International Master degree in “Economics & Complexity” at the University of Barcellona (Spain), University of Roskilde (Denmark) and University of Salerno (Italy). He has been Visiting Research Scholar at the Faculty of Economics of the University of Cambridge (UK) and the Andrew Young School of Policy Studies of the Georgia State University (Atlanta, Georgia, USA). Dell’Anno has been Assistant Professor of Public Economics at the University of Foggia (Italy), Research Fellow (Post-Doc) at the Department of Economics and Statistics of the University of Salerno (Italy) and Marie Curie Fellow for Early Stage Researchers at the Department of Economics of the University of Aarhus, Denmark.



He has published more than fifty articles in economic journals and he is currently an Associate Editor of the International Journal of Social Economics. He has been co-editor for the Italian Journal of Public Economics and reviewer for more than fifty scientific academic journals, international editors, private and public research institutions.

His main research interests are in Informal Economy, Tax Evasion, Corruption, Behavioral Public finance, Bibliometrics and Measurement of Latent Variables.

## THE IMPACT OF ORGANIC PRODUCTS ON THE ROMANIAN ENTITIES AND CONSUMERS COMPARED TO THE EUROPEAN UNION

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**Alexandra - Nicoleta CIUCU (DURNOI)**

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**Abstract.** Today people are living in an era governed by emergence, sustainability, and continuous changes in every sector of our lives. Nowadays, every individual desires to change their lifestyle into a healthier one. Therefore, organic or bio products have captured everyone's attention, becoming more and more used by every individual determined to have a healthier life. This trend puts pressure on economic entities, especially on the processes carried out, such as production and selling these products. The aim of this paper, first of all, is to analyse the market of organic products in the European Union in general and in Romania in particular. The purpose of this analysis is to observe if the same diversity of organic products can be encountered both in the European Union and in Romania, or if it's necessary that some of them to be imported. Second of all, the most important producers from Romania are analysed in order to determine the issues that might occur in the production process when dealing with the consumers' needs. To this extent, a questionnaire is put forward for discovering if the consumers from Romania are buying bio products and which products, and, as well as, if they are buying from the local producers or from the imported ones. Thus, descriptive statistics and sentiment analysis are used for observing the problems of local producers compared to the producers from the European Union. The purpose of this analysis is to come up with a solution for the local producers for better meeting the consumers' demand. Moreover, following the application of the questionnaire, as expected, the majority of Romanian people are determined to have a healthier life by consuming more organic products, especially from local producers.

**Keywords:** sustainability, organic products, sentiment analysis, descriptive statistics.

## THE EFFECT OF LOCAL GOVERNMENT DEBT FOR INFRASTRUCTURE DEVELOPMENT ON ECONOMIC DEVELOPMENT BASED ON K-MEANS CLUSTERING AND RANDOM FOREST

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**ZongHui MAO**

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**Abstract.** Some provinces in China have encountered local government debt issues. The main cause of government debt is the issuance of bonds by the government to raise funds for infrastructure development, aiming to leverage the positive externalities of infrastructure and the increased employment opportunities brought about by infrastructure construction to drive local economic growth. However, if the economic benefits of funding infrastructure through government debt are limited, the government should focus on reducing its debt burden. Existing literature has shown divergent views on the relationship between government debt and economic development. Some studies argue that government debt hampers economic growth, while others believe that proactive government debt can stimulate economic development, and some suggest that an increase in government debt can promote local economic growth within certain thresholds, but beyond a certain point, it can impede economic development. This study examines the impact of local government debt on economic growth across different provinces in China using panel data from 2015 to 2021. Through K-means clustering, the 31 provinces in China are divided into three categories based on factors determining promotion and suppression effects. For each province category, this study employs a random forest model to predict the percentage increase in economic growth corresponding to the percentage increase in government debt, while controlling for other variables affecting economic growth. The predicted results from the random forest model demonstrate that the influence of increasing local government debt on economic development varies across different province categories. This study's main contributions lie in adopting K-means clustering to categorize the provinces, which provides a targeted classification for debt-related issues.

**Keywords:** K-means Clustering, Random Forest, Government Debt, Economic Growth, Infrastructure Construction.

## UNCOVERING THE HIDDEN GEMS: A BIBLIOMETRIC ANALYSIS OF THE RESEARCH AREA OF DIRECT TAXATION

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**Abstract.** Direct taxation is a type of tax imposed on the income, property, or wealth of individuals or organisations. It is an important source of revenue for governments and is used to fund public services such as education, healthcare, and infrastructure. The aim of this study is to explore the research field of direct taxation through bibliometric analysis. The quantitative research method involves statistical analysis of publications and other bibliographic data to better understand the impact and patterns of direct taxation in scientific research and scholarly publications. The dataset contains 557 documents extracted from Scopus published within the period 1954-2022. The first empirical results show that interest in this subject increased around 2009. The source International Tax and Public Finance published the most articles on the subject of direct taxation, while the most cited article is 'Taxation and foreign direct investment: A Synthesis of empirical research' by De Mooij and Ederveen from 2003.

**Keywords:** direct taxation, bibliometric analysis, Scopus.

## ASSESSING THE EVOLUTION OF THE ENERGY MIX WORLDWIDE, WITH A FOCUS ON THE RENEWABLE ENERGY TRANSITION

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**Abstract.** In the current context, the focus on optimising energy distribution is intensified by high-impact events such as resource scarcity, import dependence, war, inflation, or environmental threats. As a consequence, international agencies have built extensive policies and targets that will reflect directly into the general energy distribution. One of the most crucial would be the 65% share of electricity that is bound to be generated from renewables until 2030. To study the feasibility of that goal, we will analyse the evolution of the energy mix worldwide in the last two decades, identifying the shift towards alternative energy sources, while also pinpointing the agents of change in terms of the low-carbon transition. The methodology will consist of a bootstrap clustering algorithm that has been computed for 3 moments: 2000, 2010, and 2020, generating clear differences in terms of energy distribution. In the second part of the paper, we have employed an ARIMA model that aims to predict the share of renewable energy by 2030, with the worrying conclusion that if the current rhythm continues, the goal will not be met and the climate could face severe consequences.

**Keywords:** energy mix, renewable energy, bootstrap clustering, time-series, prediction.

## CROSS-GENERATIONAL VARIATIONS OF EDUCATIONAL POVERTY

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**Abstract.** According to the theory of skill-biased technological change, labour markets are characterized by an increasing demand of more highly skilled workers. On the other hand, the process of educational expansion raises the number of those better educated. In this context, basic qualification levels are devaluated in the labour market. A certain level of education could be sufficient for allowing a successful participation in the labour market for specific groups of people, while for others it may be insufficient. Taking these aspects into consideration, the present paper aims to reveal how absolute and relative measures of educational poverty change their relevance across generations in the case of Romania.

**Keywords:** educational poverty, positional goods, cohorts.

## DIGITALISATION AND SKILLS AS DETERMINANTS OF INNOVATION IN EU COUNTRIES: A PLS-SEM APPROACH

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**Abstract.** Increasing the level of innovation among EU countries became a primary concern as it can contribute to a higher level of competitiveness, generate new business opportunities and promote economic growth. This paper aims to examine the extent to which the states' digital and the skills systems' performance impact the innovation output, as well as determining whether the level of digitalisation can lead to an increase in the individuals' competencies. For conducting this research, we employed a partial least square structural equation modelling technique. The data used to achieve the study's objective was collected from composite indicators computed for all 27 EU countries, for a period of analysis spanning the years from 2017 to 2021. As a proxy for the countries' digital performance, we use the Digital Economy and Society Index (DESI), while for the skills systems' performance and innovation outputs, we utilise the European Skills Index (ESI) and the innovation output dimension of the Global Innovation Index (GII). The results indicate a statistically significant impact between digital performance and the innovation output, with a moderate effect size, partially mediated by the skills systems' performance. Moreover, the findings emphasise that a higher level of digitalisation determines an increase in the individuals' competencies. The study also presents some implications for policymakers and governments, providing theoretical suggestions for future work and enhances the understanding of the complex relationship between digitalisation, skills, and innovation, by shedding new light on the trajectories' coevolution of the analysed constructs.

**Keywords:** innovation, digitalisation, skills, pls-sem.



## MAPPING AND MODELLING THE MAIN DETERMINANTS OF MIGRATION FLOWS AT THE NUTS LEVEL IN EUROPEAN UNION USING SPATIAL DATA ANALYSIS TECHNIQUES

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**Abstract.** Spatial data analysis approaches have grown in popularity in recent years as there has been an increased interest in studying migration at the regional level. We employed in our analysis the Nomenclature of Territorial Units for Statistics (NUTS) level, which offers a more thorough view of migratory patterns inside a nation as well as among EU countries. Using spatial data analytic tools, this research aims to investigate the key determinants of international migration at the NUTS level. Using data from the Eurostat database, we undertake an extensive analysis of migration movements in a sample of European Union countries. We apply spatial econometric models to examine the relationship between crude rate migration and other relevant variables as independent variables. Although the available data at the NUTS level of regional ranking are limited, we believe that we included the most comprehensive set of relevant variables in our analysis. Our study contributes to the existing literature on migration determinants by highlighting the importance of spatial analysis techniques in understanding migration factors at the NUTS level.

**Keywords:** spatial analysis, spatial econometrics, spatial distribution, European Union, NUTS level, migration.

## EFFICIENCY OF URBAN DEVELOPMENT: GAPS IN CONTINENTAL PROFILE

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**Abstract.** Urban development represents a fundamental direction in the transition process towards the green economy, a sustainable economic model. The paper aims to identify the degree of efficiency of economic development in the context of sustainable development for 41 cities in Romania, Germany, Japan, the United States and Australia. To achieve this objective, the Data Envelopment Analysis (DEA) method is used, with the aim of identifying the gaps regarding the sustainability of the analyzed cities. The main results showed that there are cities that have a model of sustainable economic development, but certain cities present significant gaps from the point of view of efficient sustainable economic development.

**Keywords:** DEA, urban development, efficiency, sustainability, green economy.

## MIGRATION OF HEALTH WORKERS: KEY FINDINGS FROM ROMANIA

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**Abstract.** The migration of medical staff causes the loss of human resources in health sector compromising the capacity of the health system of developing countries to deliver medical services equitably. This paper presents an overview of migration of health workers from Romania and the pull and push factors related the trends observed during the last ten years. We start with the literature and data review on health practitioners' migration, with particular emphasis on push and pull factors. Two main directions of study are followed in this paper. The first one is to analyse the migration trends of Romanian physicians and nurses, trends and flows and also of graduates of tertiary education in health care fields of education. The second one is the estimation of the pull and push factors determining the migration of health care staff from Romania. In discussion section of this paper, the identified push and pull factors are analysed and there are formulated some ideas of measures that could contribute to reducing the brain drain of medical personnel from Romania.

**Keywords:** migration, regression analysis, health care workers.

## HAS THE ACQUISITION OF PROPERTY RIGHTS OVER THE FACTORS OF PRODUCTION BECOME A BENEFIT INTENDED FOR AN INCREASINGLY LIMITED NUMBER OF "PRIVILEGED PERSONS"? STUDY ON THE CURRENT SITUATION IN THE ROMANIAN ECONOMY

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**Abstract.** The current study operates with the premise that the economic policy of the Romanian State should be adapted in such a manner as to favor a wider spread of property rights over the factors of production among Romanian society, in general, and among Romanian entrepreneurs, in particular. The simple protection of already acquired property rights, although necessary, cannot be considered to be sufficient for an efficient and ethical functioning of the institution of private property, being also very relevant the concrete vocation of interested people in tangibly acquiring property rights; this statement will be detailed and properly justified in the current study. By presenting certain statistical and factual data, as well as certain relevant indices, it will be demonstrated that there are certain tendencies in the current economy of Romania to concentrate ownership over capital in the hands of a rather limited number of participants in economic life, an aspect that is likely to produce unfavorable economic, social and ethical consequences, which should be susceptible to long-lasting echoes. At the same time, economic and legislative policy measures that encourage the widest possible access to new property rights and, as a reverse, the legislative levers that are added to market mechanisms, and that sanction the accumulation of capital not followed by its efficient capitalization, will be identified and presented. Last but not least, through this study, we aim to outline certain proposals for economic and legislative policy measures through which the identified imbalances could be diminished and prevented for the future.

**Keywords:** private property, distribution of property rights, ownership concentration, capital accumulation.



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## SPATIAL ECONOMETRIC ANALYSIS OF THE MAIN INDICATORS OF THE ROMANIAN EDUCATIONAL SYSTEM

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**Abstract.** The Romanian education system is a system characterized by a series of main indicators that follow, quantitatively, a general situation at the level of each county. Among them are the passing rate of the national Baccalaureate exam (end of the high school cycle) or the National Evaluation (end of the secondary school cycle), the dropout rate, the number of graduates, the number of qualified and unqualified teaching staff, school infrastructure. Analyzing the data at the level of each county in Romania, it is possible to create an overview of the educational system, both at the pre-university and university level. However, analyzing these data taking into account the links that may exist between counties and their correlation with economic indicators, such as GDP or the unemployment rate, it is possible to observe a direct or indirect influence that a neighboring county has on another county neighbor. Romania is characterized by several central poles that have a special influence on the neighboring counties. Thus, this study aims to analyze the indicators of the educational system in each county of the country by highlighting the relationships that exist between neighboring counties.

**Keywords:** education, econometric, spatial econometric, Romania.

## THE IMPACT OF THE RISK PERCEPTION ON RENTABILITY IN THE ROMANIAN AGRICULTURAL SECTOR

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**Monica Aureliana PETCU**

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**Abstract.** This study examines the effect of rentability on the perception of the risks in the agri-business sector in Romania. The risk analyzed are related to production, market, institutional, personnel and financial and the rentability is assessed using return on assets and return on equity. The research methodology consists in a qualitative study, with the data collected using field questionnaires. The convenience sampling was used as sampling method for 201 companies with farming activity in the vegetal nutrition area, the population being very large, and the financial data for 2021 consisted of analyses basis. A one-way ANOVA test was performed using SPSS software, combined with a descriptive analysis and post-hoc tests the Tukey test. The results of the study show that it is likely that both return on assets and return on equity have a significant effect on the market risk perception. The market risk is related to the price volatility for agriculture inputs and crops, the farmers with higher rentability being more aware of these risks.

**Keywords:** risk, ROE, ROA, market risk, personnel risk.

## THE INFLUENCE OF FOREIGN DIRECT INVESTMENT IN CENTRAL AND EASTERN EUROPEAN COUNTRIES

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**Abstract.** After the collapse of the socialist economies and the planned system in the early 1990s, the countries of Central and Eastern Europe (CEE) developed various strategies to attract foreign investment to achieve sustained economic growth and to engage with global trade chains, aspect which was limited during the socialist period. The objectives of the article are to identify the influence and benefits that foreign direct investments bring to the economy of the countries of Central and Eastern Europe that joined the European Union in 2004, as well as their impact on the rate of economic growth, labour productivity, unemployment rate and an average gross salary. The research methodology used is the multiple regression model with panel data, using an independent variable, foreign direct investments and three dependent variables, labour productivity, economic growth rate and average gross salary. The software used for data analysis is EViews. Excell and Tableau were used for graphs and tables. Previous research shows that membership of the European Union has increased foreign direct investment flows to new member states by up to 28%. As the article analyses foreign investment in Central and Eastern European countries that joined the European Union after 2014, they had a positive economic shock, the relationship between foreign direct investment, change in average gross wage, labour productivity and economic growth being evident by the demonstration found in the case study. This relationship is more important for emerging economies because they suffer more from economic problems. After analysing the data, it is observed the existence of a direct and strong link between direct foreign investments and the rate of economic growth, between foreign direct investments and labour productivity and between the average salary and labour productivity.

**Keywords:** Foreign Direct Investment, Eastern Europe.

## DOES SOCIAL MEDIA IMPACT THE PROFITABILITY AND THE PROBABILITY OF DEFAULT OF COMPANIES? EVIDENCE FROM ROMANIAN COMPANIES ENGAGED IN RETAIL

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**Abstract.** Natural Language Processing has recently become an extremely important tool to quickly identify potential dysfunctions of a company, from its client's point of view. Customers' experiences can be much more quickly understood and shaped using modern language processing techniques. Ultimately, it's all about maintaining or increasing the company revenues and also, avoiding losses and preventing bankruptcy. If until recently years, the assessment of the probability of bankruptcy of a company was performed exclusively using credit scoring techniques, based on AltmanZ score, in recent years, and due to the evolution of computing and processing capabilities of big data, models for forecasting the probability of bankruptcy have evolved to complex machine learning and deep learning models, also trying to incorporate alternative data, so not only financial data. In this paper, I tried to highlight in the Romanian market, in the retail sector, the influence of comments and articles in the media on the probability of bankruptcy and the financial situation of companies. The methodology used consists of supervised machine learning algorithms used to classify companies into companies with high or low probability of bankruptcy, but also NLP algorithms to identify the feelings generated by press articles and comments in the online space with respect to the retailers analyzed. The conclusion of this paper is that there is a strong correlation between the positive feelings generated by a retailer in the online environment and its increased profitability, while also reducing the probability of default. This correlation is especially present in large companies with a massive online presence. The paper makes an important contribution by including as an independent variable of the numerical model, the sentiment score generated by each analyzed company in the online environment, but also by building a sentiment dictionary in Romanian language, which substantially improves the accuracy of the analysis.

**Keywords:** social media, data science, natural language processing (NLP), credit scoring.





# icESS

## THE GREEN ECONOMY – THE EUROPEAN CONTEXT REGARDING RENEWABLE ENERGY

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**Abstract.** The increased price of energy and the limited resources of the planet have increased the worldwide attention to renewable energy resources. The purpose of this paper is to present the European context regarding these renewable sources. In addition, the evolution over time of some indicators relevant to this field is described for better shaping the general audience understanding on the current status on the renewable sources. Using a statistical approach, the paper ranks the member states in terms of the consumption of renewable resources in areas such as transport and electricity. Throughout the research, it has been noted that there are significant differences between member states. An example to reinforce what was previously described is the fact that, for the share of renewable energy in gross final energy consumption, the minimum value is approximately eight times lower than the maximum.

**Keywords:** renewable energy, green economy, descriptive statistics, sustainable development.

## THE IMPACT OF SOCIAL STATUS ON FINANCIAL EDUCATION AND SAVING BEHAVIOR IN YOUNG ADULT POPULATION (A CASE STUDY FOR ROMANIA)

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**Abstract.** Financial education in Romania is at the lowest level amongst European Union Countries, as per the latest Standard and Poor's Study. In the midst of challenging times, financial well-being of the population is fundamental for achieving sustainable growth of the economy. This implies knowledge, skills and competences in the area of personal finances. This exploratory analysis examines the relationship between financial saving behavior in young adult population in Romania, their financial education level and their social status, focused on their living situation, whether parents are divorced and the level of income. Individual psycho-characteristics were explored, such as self-control and future orientation. A sample in excess of 2,000 Romanian young adults participated in a web-based questionnaire, aged 14 to 30 years. We explored to find the determinants of financial saving behavior and investigated the relationship between financial saving behavior and level of income, self-control, future orientation, financial education, social status, living with family, divorced parents, number of siblings and other socio demographic characteristics. For exploratory analysis, we proposed the statistical test t-test to test hypotheses of gender differences in the financial savings behavior and self-control scores and a regression model with financial savings behavior as dependent variable. The results are discussed in terms of recommendation for effective financial education methodology, the role of family through social status, focusing on enriching skills, competences and behavior, targeting the financial well-being of the population for sustainable growth of the economy.

**Keywords:** Financial savings behavior, financial education, social status, sustainable growth, sustainable economy, financial well-being, young population.



# icESS

## USE ARCH AND GARCH MODELS TO STUDY THE MARKET VALUE OF IRAQ'S STOCK MARKET

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**Abstract.** Studying time chains that tend to be cluster clusters of fluctuations in the form of periods of uncertain rise and decline in the market is important in the subject of building dynamic time chain models and then using those models to predict the values of studied phenomena. Understanding fluctuations in the market value of Iraq's stock market is of great importance because the continuity of these fluctuations constitutes a major crisis towards the market economy and other aspects. This research examined fluctuations in the market value of Iraq's monthly stock market for the period from December 2004 to February 2022 for the purpose of building a fluctuation model from the ARCH family.

**Keywords:** ARCH, GARCH, stock market.

## USING MULTIVARIATE BIDIRECTIONAL LONG SHORT-TERM MEMORY (BiLSTM) NETWORKS TIME SERIES FORECASTING OF STOCK PRICE FOR MARITIME SHIPPING COMPANY IN COVID-19 PERIOD

**Ahmad GHAREEB**

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**Abstract.** Coronavirus disease (COVID-19) has caused a global health and economic crisis with widespread repercussions on sea transportation and trade. This research paper investigates the impact of the COVID-19 pandemic on the increase in the prices of maritime shipping transport and the associated effect on the stock prices of shipping companies. The pandemic has caused significant disruptions in global trade, leading to an unprecedented surge in demand for shipping services, which has resulted in a considerable increase in freight rates. In this study, I will propose a forecasting method based on Multivariate Bidirectional Long Short-Term Memory (Multivariate BiLSTM) networks to predict stock prices for three of the most important companies in the world in maritime transport. BiLSTM is a deep learning algorithm that can capture both past and future temporal dependencies in time-series data, making it suitable for analysing and predicting stock prices. A novel optimization method is proposed for stock price prediction. It is based on a Multivariate Bidirectional Long Short-Term Memory (Multivariate BiLSTM) model and utilizes the Adam optimizer. Four accuracy measures are introduced into the system: Root Mean Square Error, Mean Absolute Error, Mean Absolute Percentage Error, and Median Absolute Percentage Error. According to the experimental results, the Multivariate BiLSTM can provide a reliable stock price forecasting with the highest prediction accuracy.

**Keywords:** COVID-19, Bidirectional Long Short-Term Memory, Multivariate, Predicting, Stock price.



# icESS

## FINANCIAL LITERACY AND ECONOMIC GROWTH. EVIDENCE FROM THE ROMANIAN ECONOMY

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**Abstract.** Financial literacy lead to stronger overall economy as it leads to better resource allocation. Also, being financial literate allows an individual to better understand concepts such as interest rates, inflation, loans or savings. The goal of this study is to identify the main macro-economic variables in relation to financial literacy for the Romanian economy. With this indicators a financial literacy index was computed using PCA in order to assess the level of financial knowlegde. This computed index is used to track changes over time and to see how financial literacy impacts economic growth. The main findigs show that building a financial literacy index is an usefull tool to improve financial literacy. Furthermore, such index may aid policymakers and other interested parties to better understand and improve financial literacy levels so that individuals and economic agents will be prepared to make more efficient financial and economic decisions even during and unstable political and social climate.

**Keywords:** financial literacy, financial literacy index, economic growth, macro-economics.



# icESS

## IMPLICATIONS OF DIGITALIZATION ON SKILLS NEEDS IN THE BUSINESS SECTOR

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**Abstract.** Digitalization and mainly artificial intelligence led to significant disruptions at all levels of society, changing how we live, communicate, build communities, work, and learn. The impact of digitization on the labor market is largely documented, but there are still important debates on how future jobs will look like. On the one hand, some scenarios announce the massive shifts and destruction of jobs with rhythms that cannot be managed well by societies, while others are pointing instead to transformations of skills needs. Robots will take some jobs, but most companies will have to cope with changing tasks and skills required. Moreover, new jobs and new skills will emerge. So, our paper aims to investigate the links between digitalization and skills needs among digitalized enterprises, focusing on those implementing artificial intelligence solutions. In this respect, we use various multivariate techniques to analyze the data made public for the Flash Eurobarometer 486 (2020) on "SMEs, start-ups, scale-ups and entrepreneurship".

**Keywords:** digital transformation, skills needs, skills shortage.

## CAUSES AND CONSEQUENCES OF SHADOW ECONOMY AND ITS IMPACT ON ECONOMIC DEVELOPMENT

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**Abstract.** This research examines the shadow economy's impact and implications on the economic development at the level of the European Union, from 2009 until 2020, through the MIMIC Model. The statistical analysis has revealed two contradictory outcomes which also reflect the suppositions that are found in the literature. Namely, the shadow economy and economic development are at the same time strongly correlated, whilst also being weakly correlated, strictly depending on the chosen variables. Therefore, from a statistical point of view, we conclude that the shadow economy directly impacts economic development, but there is a lack of transparency on behalf of the European Union member states when providing data related to the informal sector. However, by employing the MIMIC Model, we discovered that the causes leading most to work in the informal sector are the lack of quality in public administration institutions and reduced government efficiency, which at least theoretically, affects the economic development of any country. The paper contends that, with a strong framework of public policies, the size of the shadow economy can be diminished.

**Keywords:** shadow economy, economic development, MIMIC Model, causality, regression.

## SYNCHRONIZATION OF FINANCIAL CYCLES IN SELECTED CEE COUNTRIES

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**Abstract.** The COVID-19 pandemic had a strong economic impact, but its effects were felt also in the financial area. As a result of the recent economic recovery, there has been registered a significant growth of the lending activity in Central and Eastern European countries. This study illustrates that these increases have generated, for countries such as Hungary, the re-entry of the financial cycle in the expansion phase, being recorded positive deviations of credit from its long-term trend, situation which was not seen since the period before the last financial crisis. The results of the analysis also show that the financial cycle has a longer duration compared to the business cycle, as well as a higher amplitude. Thus, the turning points of the financial cycle are rarer, but they generate stronger effects than those of the business cycle. Regarding the synchronization of financial cycles at the level of the analyzed CEE countries, the results of this paper illustrates a strong correlation between the financial cycles of Romania, Bulgaria, and Hungary.

**Keywords:** financial cycle, synchronization, CEE countries, credit-to-GDP gap, Hodrick-Prescott filter.





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## AGGLOMERATION ECONOMIES, CLUSTERING POLICIES AND REGIONAL COMPETITIVENESS

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**Abstract.** The concentration of resources, enterprises, population in the regions of the national economy creates conditions for the emergence of an agglomeration effect or agglomeration economies. Regional agglomerations can accelerate the development of the national economy and increase its competitiveness, but at the same time, they have a significant impact on the sustainability of the national social - economic security. The article analyzes agglomeration economies and clustering policies as determinants of regional competitiveness. The purpose of the article is to examine the opportunities and risks of regional clustering for the sustainable development of the regional economy and the acceleration of its competitiveness.

**Keywords:** agglomeration, socio-economic development of the region, agglomeration effect, clustering, regional competitiveness.



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## A COMPARATIVE ANALYSIS OF THE GLOBAL SUPPLY CHAIN BOTTLENECKS DURING THE COVID-19 PANDEMIC

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**Abstract.** Global supply chains are essential for the smooth functioning of the global economy, as they enable the movement of goods, services, and capital across borders. However, disruptions to these supply chains, such as bottlenecks, can lead to higher prices for producers and consumers. The impact can be particularly severe in the case of large-scale disruptions, such as those caused by the COVID-19 pandemic. Several studies have examined the impact of global supply chain bottlenecks on macroeconomic variables. In a study by Chen et al. (2021), the authors analyzed the impact of supply chain disruptions on producer prices in the United States. The study found that disruptions led to higher producer prices, with the largest impact on intermediate goods. Flick and Tillmann (2023) estimated the impact of supply chain shocks on international container trade. They impose restrictions on the sign of some responses and shocks during selected episodes (events specific to some disruptions in the supply chain). The study concludes that supply chain shocks lead to a significant increase in consumer prices and a drop in real economic activity in the euro area. In this paper we illustrate the impact of the global supply chain bottlenecks on the main macroeconomic variables, as inflation, producer prices, industrial production and balance of goods and services for the CEEs countries such as Romania, Czech Republic, Hungary and Poland. We analyze the shock in the context of a Bayesian Vector Autoregressive (BVAR). The study will compare the shocks administered pre/post the outbreak of the COVID-19 pandemic. Finally, based on the value of GSCPI (Global Supply Chain Pressure Index) we make a near-term conditional forecast on the macroeconomic variables of the specified CEEs countries.

**Keywords:** Supply Chain, Inflation, Production, COVID-19, VAR.

## ANALYSIS OF THE ECONOMIC ENTITIES' PERCEPTION OVER THE IMPLEMENTATION OF THE SAF-T

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**Abstract.** According to the official statistics, Romania is confronting with one of the lowest tax and tax collection rates at the general consolidated budget compared to the other Member States of the European Union, which cause the tax authorities to adopt some measures in order to reduce the grey economy. One of the measures adopted since 2022 was to implement the Standard Tax Audit File (SAF-T), such as Statement 406, which includes information about suppliers, customers, purchase/sale invoices, payments, goods movements, assets, products, balances, accounting accounts. The introduction of the SAF-T in Romania has been influenced by encouraging figures on the level of tax revenue collection in countries that have already implemented this system, for example Poland, Lithuania, Norway and Portugal. An analysis of the adoption of this tax reporting system must be made having in view the impact it has on the two parts of the tax report (State through the National Agency for Fiscal Administration and taxpayer). If this reporting system on the level of budget revenue, it is known from the information regarding the budget implementation available on the website of the Ministry of Public Finance, an analysis on its perception among economic entities and the challenges they face has not been performed. In order to establish the economic environment's perception over the implementation of the SAF-T we used a questionnaire that allowed to obtain relevant data of their position regarding the introduction of the Statement 406. The statistical validation of the questionnaire was realised using the Alpha (Cronbach) coefficient utilized to study the internal consistency of the specific items.

**Keywords:** The Standard Tax Audit File, tax reporting system, taxpayer, digitalization of the tax audit, tax liability.

## CLIMATIC IMPEDIMENTS TO HUMAN CAPITAL: A GENDER-DISAGGREGATED ANALYSIS OF THE IMPACT OF DROUGHT ON SCHOOL ATTAINMENT AMONG RURAL CHILDREN IN PAKISTAN

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**Abstract.** This study analyzes the impact of drought on children's school attainment in rural agricultural households in Pakistan. The causal relationship between drought-induced income changes and school attainment is identified by taking a cue from the evidence established in a similar setting. The route identified suggests that drought results in tightening the budget constraint of agricultural households who find it challenging to maintain a living without cutting down expenditure on education. Further, the impacts are gender-disaggregated; boys are less likely to complete schooling because of the onus of family's responsibility falling on them during distress compared to girls. These implications may be termed a consequence of the negative income effect. The drought-induced wage decline also causes a decrease in the opportunity cost associated with an extra year of schooling, termed the substitution effect. The net effect depends on whether the income effect dominates over the substitution effect or vice versa. Moreover, the asset holding during distress helps agricultural families cope with the drought-induced adverse effects on educational attainment. Using pooled cross-sectional surveys spanning over two decades, we employ ordinary least squares with district and survey fixed effects to estimate the impact. We find that the drought-induced income decline caused a decline of 4 months of schooling for all children and 6 months for male children. The effect of asset holding on school attainment is negative, which is counterintuitive to theory, implying the existence of the Simpson paradox or a reverse causality from asset accumulation to lower school attainment. However, the combined effect of asset holding, and drought is positive on school attainment. Hence, consumption smoothing through income transfer, an early warning system, sustainable land and water management practices, and assets transfer can help in the unhindered educational attainment during drought in Pakistan.

**Keywords:** Assets Holding, Drought, Income Effect, Substitution Effect, School Attainment.

## DO FISCAL RULES FOSTER ECONOMIC GROWTH? INSIGHTS FROM ADVANCED AND EMERGING MARKET ECONOMIES

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**Abstract.** In this study, we seek to find the relevance of fiscal rules for economic growth for advanced and emerging market economies. We analyse 200 advanced and emerging market economies from 1985 to 2020 using generalised methods of moments (GMM). We find that the fiscal rules impact economic growth positively for advanced economies whereas negatively for emerging market economies. Further, we also find that budget balance rules contribute significantly to the positive impact of fiscal rules for advanced economies. For emerging market economies, however, debt rules, budget balance rules and expenditure rules reduce economic growth, whereas revenue rules contribute positively towards economic growth. Also, we find evidence for effective governance to impact economic growth positively; however, the presence of fiscal rules constrains this impact both in advanced and emerging market economies.

**Keywords:** Fiscal rules, Economic Growth, GMM, Dynamic Panel data.

## EXPORT COMPETITIVENESS OF PAKISTAN'S LEATHER SECTOR IN EU-27 AND AMERICAN ECONOMIES

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**Abstract.** Current study aims at to measure comparative advantage and competitiveness in the leather and leather products of Pakistan in EU-27 and American economies. The data obtained from the International Trade Center (ITC) were gathered for this study between 2004 and 2021. The present study employed Revealed Comparative Advantage (RCA), Symmetrical Comparative Advantage (SRCA), Normalized Revealed Comparative Advantage (NRCA), Relative Export Advantage (REA), Trade Balance Index (TBI), Vollrath index (RCA#) and Additive Revealed Comparative Advantage (ARCA) indices to measure competitiveness, competitive and comparative advantage of Pakistan's leather exports. The findings of RCA, SRCA, REA and Vollrath index highlight that Pakistan enjoyed a high comparative advantage in EU-27 and American economies. The findings of TBI portrays that Pakistan is the net-exporter in EU-27 and American economies. The NRCA index's findings display that the economy of Pakistan experienced a comparative advantage in this industry in the EU-27 and American countries during 2004-2021. The positive ARCA index represents comparative advantage during the selected time span in EU-27 and American markets. According to the findings of current study, Pakistan should improve the quality of leather products to enhance the market share in EU-27 and American economies. There is a dire need to boost the leather sector's comparative and competitive advantage through policy support and facilitation by all stakeholders in order to achieve growth in the livestock and agriculture sectors and increase the income of connected stakeholders.

**Keywords:** Competitiveness, Exports, Leather sector, RCA, ARCA.

## DOES THE AVERAGE VALUE IN THE NEIGHBOURHOOD MATTERS: SPATIAL MACHINE LEARNING APPROACH TO QUANTIFY AND VALIDATE THE IMPACT OF SOCIOECONOMIC AND CLIMATIC FACTORS ON CHILDHOOD STUNTING IN PAKISTAN

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**Abstract.** This study investigates the spatial inequalities in childhood stunting at a district level in Pakistan and validates the importance of spatial lag in predicting childhood stunting. To do so, we retrieved the data related to socioeconomic features from MICS 2017-18 and climatic data from Integrated Contextual Analysis. We used a multi-model approach to address our research questions. First, we employed Ordinary Least Squares Regression (OLS) to analyse and test the linear relationships among selected variables. Then we used various spatial models to detect and capture the impact of spatial spill over on childhood stunting. In the end we used XGBoost and Random forest machine learning algorithm to examine and validate the importance of spatial lag component. We found clear pattern of spatial clustering and geographical disparities in childhood stunting. Multidimensional poverty, high climate vulnerability and marriage before the age of 15 worsened childhood stunting. In contrast, low climate vulnerability, high exposure to mass media and high women literacy reduces childhood stunting. Furthermore, XGBoost and Random forest feature extraction results indicate that the average value in the neighbourhood plays a significant role in predicting childhood stunting in the nearby districts which confirms the spatial spill over effect being not bounded by geographical boundaries.

**Keywords:** climate vulnerability, multidimensional poverty, spatial clustering, geographical disparities, machine learning.

## NEXUS BETWEEN ECONOMIC FREEDOM, INNOVATIONS AND CO2 EMISSIONS. EVIDENCE FROM ASIAN COUNTRIES

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**Abstract.** The essential objective of these research is to show the pattern and impact of CO2 emissions in Asian economies and respond to the question: what regulates the enormous surge in CO2 emissions to Asian countries in recent time. The result of study will assist policy makers to formulate and implement policies to decrease CO2 emissions. Based on data of Heritage foundation USA and the World Development Indicators of 30 Asian countries, we investigated the factors of CO2 emissions from 1996 to 2018 using spatial econometric techniques. Research results suggest that financial development proxy of economic freedom have extensive and optimistic influence on CO2 emissions in Asian countries, while CO2 emissions and R&D spending show a clear spatial relationship across all areas, implying that spatial estimation approaches are appropriate for this study. Actually, innovations don't significantly affect CO2 emissions. The expansion of high-income, hightechnology, and high-CO2 emission regions, however, may dramatically reduce CO2 emissions in neighboring nations, according to data from group-based research. The "pollution haven theory" and the importance of environment safety awareness in social development both receive a lot of attention. Governments should thus focus the positive ripple implications of technological developments and grow their economies.

**Keywords:** Economic Freedom, Innovations, CO2 emmission, Spatial Analysis, Asian Countries.



## THE IMPACT OF COVID-19 ON BANKS' FINANCIAL PERFORMANCE: UNDERSTANDING THE CHANGES IN FINANCIAL RATIOS

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**Abstract.** This paper studies how financial performance of North American and global banks have changed after the COVID-19 crisis by comparing the banks' financial ratios of the first and second quarters of 2020 to the first and second quarters of 2019. The results confirm that the profitability and efficiency ratios of North American banks have significantly declined in 2020 after the outbreak of COVID-19. On the other hand, the real effects of the COVID-19 crisis become more evident in the second quarter for global banks with significant decrease in profitability and efficiency (ATO) ratio despite no significant changes in the first quarter. Finally, the paper performs a regression analysis whether the number of confirmed COVID-19 cases has a significant effect on the observed changes in the financial ratios. The results show that the number of COVID-19 cases is a significant determinant of the observed changes in the profitability, efficiency and Tier 1 capital ratios of banks in the first quarter of 2020. And, higher the number of confirmed cases in the banks' home country lead to a deterioration in these specific ratios. Similar results hold in the second quarter as well and the number of COVID-19 cases start to have an impact on a wider range of risk ratios including EM, TLE and CAPSTR in the second quarter of 2020 indicating an increase in risk levels due to the COVID-19 crisis.

**Keywords:** COVID-19, bank performance, financial ratios, risk level, efficiency, profitability.

## **MINITRACK: DIGITAL LEADERSHIP AND RESILIENT ENTREPRENEURSHIP IN THE METAVERSE ERA**

### **Chairs:**

- **Mihail BUȘU, Bucharest University of Economic Studies, Romania**
- **Luis Miguel Ciravegna Martins DA FONSECA, Porto School of Engineering, Portugal**
- **Enrico PRINZ, EM Strasbourg Business School, France**

Business leaders now consider accelerating the shift to digital business to be the most critical priority in the following years. It is clear to pay attention to the fact that COVID-19 has widened the digital business gap, separating digitally advanced firms that could adapt to the pandemic quickly from those that had to play catch-up. Firms find it hardest to break free from legacy (non-digital) strategic mindsets when their businesses are successful. Digital leaders help to shift the leadership team to think about the business opportunities from a technology perspective and explore how they can use technology to create new sources of customer value. Internet will eventually evolve into the metaverse, which will come to represent the next major computing platform. If the concept can be actualized, it is expected to be as transformative to society and industry as the mobile phone. The metaverse is also expected to have a strong connection with the real-world economy – and eventually become an extension of it. In other words, the metaverse must have the ability for companies and individuals to participate in economic activity in the same way they do today. This mini-track is intended to connect academics, companies, communities and development organizations by providing a networking space between business and human development, between business strategy and development expertise.

The main topics covered by the hereby call for papers are related to:

- Equality, digital rights and digital inclusion
- Digital innovation process – how your business changes, not just your communication

- Digital internal communications and engagement strategies for employees and management
- Practical experiences around digital transformation and change management in organizations
- Customer journey as the basis for digital projects
- IoT and competitive strategies in smart products' markets
- Industry 4.0
- Hi-tech projects in Information Technology
- Integration of technology, innovation and entrepreneurship
- Market data analytics in a disruption era
- Implications of digitalization on consumer behavior
- Challenges of the new international environment for business
- Business models for clean energy and resource efficiency

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His research focuses on Statistics and Econometrics, Economic Modelling, Circular Economy, Competition Policy, Decisional Processes, Financial Risks and Risk Management. He has published more than 20 ISI Web of Science articles in international journals, including Mathematics, Symmetry, Physica A: Statistical Mechanics and its Applications, Amfiteatru Economic, Energies, Economic Computation and Economic Cybernetics Studies and Research and Processes.

Dr. Bușu is reviewer of the international journals Management & Marketing, Challenges for the Knowledge Society, Amfiteatru Economic, Mathematics, Economies, Energies and Journal of Risk and Financial Management. In 2019 was the recipient of the Georgescu Roegen Award for outstanding scientific research. Since 2015, Mihail Bușu is a member of Romanian Actuarial Association.



**Luis Miguel FONSECA** is Professor at ISEP, Porto School of Engineering, of Quality and Organizational Excellence, Business and Industrial Management and Sustainability, at MSc and BSc courses, since 1989. He is also Professor (invited) of Sustainability and Social Responsibility at University, Department of Production, and Systems | School of Engineering, from 2103. Luis Fonseca holds a PhD in Management (ISCTE-IUL, 2012), an MBA (IEP/ESADE, 1993), a Specialization in Quality

Engineering (UNL/ISQ, 1987) and is Electrical Engineer (UP, 1982). He is presently President of the North Delegation of APQ (Portuguese Association for Quality), is an ASQ (American Society for Quality) Fellow Member, and is Senior Member and Industrial Engineer and Management Specialist by Ordem dos Engenheiros (Portuguese National Association of Engineers). Luis Fonseca was CEO of the leading Portuguese systems certification body (APCER) for more than 10 years, and Vice-President of the IQNet Association, following a previous career (since 1982), as Quality and Process Control Manager and engineer at several multinational companies. He is a researcher at CIDEM- Centre for Research and Development in Mechanical Engineering with the main primary research focus on Quality and Organizational Excellence, Business and Industrial Management, Sustainability, Social Responsibility, and Circular Economy. Luis Fonseca is a regular presenter and speaker to both academic audiences and practitioners and published more than 20 academic papers in Scopus indexed journals, and authored several chapters, related to his research and practitioner fields. He is also an active reviewer for relevant Journal in his areas of expertise. Enrico Prinz is an Associate Professor of Finance and Corporate Governance as well as Director of Internationalization at EM Strasbourg Business School / University of Strasbourg (France). His main research area is international corporate governance and comprises the topics board interlocks, diversity of decision-making instances as well as managerial compensation and value creation. He has published articles in peer-reviewed journals, including Journal of Management and Governance, Review of Managerial Science, Finance Contrôle Stratégie, Journal of Business Economics, and Swiss Journal of Business Research and Practice.

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## TOP LEADERSHIP'S VIEW ON EXPANDING THE KALEIDOSCOPE CAREER MODEL IN THE POST-PANDEMIC CONTEXT

**Isabelle BICLESANU**

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**Abstract.** The Kaleidoscope Career Model (KCM) considers an individual's career alters in response to needs for authenticity (A), balance (B) and challenge (C), as the situation changes. However, leaders are expected to deliver pertinent results regardless of environment. The COVID-19 pandemic created career shocks for many and required quick adaptation. This paper investigates the influence the COVID-19 pandemic had over the way the three KCM dimensions manifest for top leadership, and the possibility for a fourth dimension of KCM in the post-pandemic context. 86 structured interviews using both openended and close-ended questions were conducted with male and female top leaders. The findings reveal the pandemic affected all three dimensions of KCM, with limited differences in terms of the way different career stages (i.e. early, mid, blossom, late) and leadership positions (i.e. C-level, entrepreneurs, board members) view these changes. However, several differences were found when considering genders (i.e. men, women), especially for the balance dimension. Part of these results are contrary to previous research. The majority of interviewees suggested "relationships" (i.e. "dealings" (D)) could be a 4th dimension of KCM in the post-pandemic context, expanding the kaleidoscope from a three mirror system (i.e. "ABC") to a four mirror system (i.e. "ABCD").

**Keywords:** Kaleidoscope Career Model, leader, manage, COVID-19, satisfaction, career success, career development.



# icESS

## LEADERSHIP SKILLS PERCEPTIONS IN THE ALTERNATIVE EDUCATIONAL SYSTEMS

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**Abstract.** The perceptions of leadership skills in alternative educational systems have gained significant attention in recent years. This paper provides a concise overview of the perceptions surrounding leadership skills in alternative educational systems, highlighting key findings from existing research and literature. There were for significant leadership skills analysis in the article: self-management, entrepreneurial spirit, focus on results and power to delegate. Our results show high correlations between these skills. These perceptions highlight the effectiveness of the Montessori approach in preparing students for future success and leadership roles.

**Keywords:** alternative educational system, leadership, skills, Montessori.



# icESS

## **SPORTS, POPULAR GEOPOLITICS AND TECHNOLOGY: THE CASE OF SIMONA HALEP**

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**Abstract.** This paper explores the intersection of sports, popular geopolitics, and technology using the case of Simona Halep as a sporting hero annexed for geopolitical discourse. Drawing on the scientific literature context of popular geopolitics and the logic of Murphy, we argue that nation-states try to impose a dominant geopolitical stance through sports imagery. We also examine how Simona Halep's successes on the tennis court have been used to promote a positive Romanian self-imagery, and how Romanian foreign policy has utilized the image of Simona Halep to achieve improved country branding internationally. The “3mm” documentary about Halep is discussed as a technological challenge presented to this national imagery. We argue that the documentary, which was meant to create engagement between the sporting hero and the wider public, was also used to create an emotional grip with the national symbol Simona Halep and, thus, to create an affective bond with the viewers. The decision to air the documentary on December 1st, the national day of Romania, was crucial in creating a sense of national pride but failed to enhance the visibility of Romanian (sports) cultural products in an international setting. We demonstrate that sports have immense geopolitical power, and that mediatic technologies such as documentaries can be used to create engagement and to enhance national identity. The study's findings hold implications for future understandings of popular geopolitics and technology, and for policy makers seeking to leverage sports and other cultural products for nation branding and soft power.

**Keywords:** sports geopolitics, sports diplomacy, tennis, country branding, popular geopolitics.



## TECHNOLOGY FOR SKILLS DEVELOPMENT IN HIGHER EDUCATION: STUDENTS' ENGAGEMENT AND MOTIVATION IN GAMIFIED LEARNING

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**Abstract.** Recently, technology has been increasingly integrated in higher education through gamified learning, which applies game design principles to educational content. The purpose of the present paper is to assess and depict students' engagement in gamified learning in business and economics higher education, and to understand the relationship between engagement and motivation in gamified learning. In order to analyse engagement in gamified learning, we use Nicola Whitton's scale and employ an exploratory factor analysis on the collected data. The analysis reveals three specific engagement factors: the first factor represents resistance and lack of interest in new challenges, distinct from those in a traditional learning system; the second factor reflects the appreciation of the challenge-solving journey and the satisfaction derived from completing them; the third factor is related to students' adaptability and self-confidence. Our results show that second and third factors exhibit positive associations with students' learning motivation, while the first factor indicates no association with learning motivation.

**Keywords:** gamified learning, learning motivation, engagement, internship, skills, higher education.

## EXECUTIVE MANAGEMENT APPROACHES TO DIGITAL TRANSFORMATION – A NARRATIVE LITERATURE REVIEW

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**Abstract.** This paper explores the role of executive management in responding to the challenges of new digital technologies through a review of the relevant academic literature. We focus specifically on management attitudes and perceptions that relate to the digital transformation of their organizations. Our objective is to survey the current understanding that arises from existing qualitative studies and empirical results, and to then summarise the emerging perspectives, consolidate common findings, reconcile conflicting results, and to clarify the developing themes, all with a view to establishing a basis for future research and interim proposals for on-going business strategy. More specifically, we address the following questions relating to this academic literature: What general thematic areas emerge in digital transformation management? What are the general areas of consensus in digital transformation management? What areas of digital transformation management remain unclear or unexamined? We find identified themes of awareness, approach, and impact in the general response of management to digital transformation, in each case demonstrating a variety of levels of understanding and activity. This plays out consistently in terms of corporate strategy and the extent to which management adopts a comprehensive and systematic methodology. In contrast, less explored areas relate to business ethics, internal governance arrangements, and overall coherence in approach throughout organizations and at all levels and areas of responsibility. These gaps suggest that future research should be directed at better understanding these issues and challenges in order to support businesses in implementing successful digital transformation strategies.

**Keywords:** digital transformation, leadership, business strategy, management challenges.

## EXPLORING ENTREPRENEURS' INTEREST IN ADOPTING NEWDIGITAL TECHNOLOGIES

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**Abstract.** The adoption of new digital technologies is essential for companies to maintain competitiveness and stay relevant in the current business environment. However, the cost of such technologies often serves as a significant impediment, particularly for smaller businesses or startups with limited resources. This study aims to investigate the extent of interest among entrepreneurs in adopting new digital technologies in the absence of financial barriers. To achieve this objective, the study involved direct interactions with a limited database of companies across varying sizes and industries. The study presented a hypothesis to entrepreneurs, allowing them to obtain a digital solution without incurring financial costs. The hypothesis aimed to eliminate the financial barrier that is typically viewed as the primary obstacle to the adoption of digital technologies. Nevertheless, additional factors, such as lack of awareness, perceived complexity, or resistance to change, may hinder technology adoption. Therefore, this study will delve into the decision-making processes and underlying motivations of entrepreneurs in relation to the adoption of new digital technologies. The study aims to provide a unique perspective on the motivations of entrepreneurs in adopting new technologies in such a context, and offer valuable insights into the factors that influence such decisions, as well as the perceived benefits and drawbacks of digital solutions. The research seeks to analyze entrepreneurial intentions and draw conclusions related to industry, company size, and revenue. Specifically, the study aims to identify whether there are differences in perceptions of digital technology adoption based on these variables. The investigation aspires to reveal how industry, company size, and revenue impact entrepreneurial intentions towards digital technology adoption, providing a nuanced understanding of these variables' influence on decision-making. The research team seeks to gain insights into these factors to contribute to the development of tailored digitalization strategies for businesses of varying sizes and industries.

**Keywords:** digital technology adoption, digital transformation, entrepreneurial mindset, financial costs, strategic digitalization.



# icESS

## BUILDING A DIGITAL ROADMAP FOR ENTERPRISES

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**Abstract.** More and more organizations nowadays are embedding digitalization into their core values. Recent studies have shown that the concept of digitalization is a game changer for all the agents within the value chains of worldwide economy and it is not only creating value but might disrupt it also unless implemented in a structured way. This paper presents an insight into industrial operations and recommends a method of building a digital roadmap, from defining the general scope, identifying the digital strategy relevant to the respective business model while considering specific business opportunities and needs to forming the foundations of the digital component such as relevant technologies and solutions or defining use-cases to enablement of those into the organization all while building up specific digital competencies and capabilities. A more digital leadership becomes a must to enable this new technology operating model and for that roles and responsibilities within organizations are now focused on facilitating collaboration in the industry ecosystem and enabling rapid and agile data architecture whilst ensuring cybersecurity as well. The paper presents the lessons learnt as well from such a digital journey with the goal of bringing enterprises closer to the optimal performance mode while adjusting to the fast-paced metaverse era.

**Keywords:** digitalization, strategy, operating model, roadmap, agile.

## BRIDGING THE DIGITAL DIVIDE: ANALYZING EU COUNTRIES' PROGRESS TOWARDS SUSTAINABLE DEVELOPMENT GOALS

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**Abstract.** The article analyzes the level of digitalization in the European Union (EU) member countries and correlates the results with the Sustainable Development Goals formulated by the United Nations. The paper provides figures on the number of enterprises receiving orders online, the share of enterprises' turnover on e-commerce, the number of employed ICT specialists by sex (female), and the number of individuals using the internet for interacting with public authorities in order to determine the differences between the member states. The next step carried out in the current article was to conduct a three-year forecast of the previously listed indicators. The methods used to make predictions are Autoregressive Integrated Moving Average (ARIMA) and Double Exponential Smoothing. The results highlight a projected increase in individuals using the internet for interacting with public authorities, the rise in e-commerce turnover, the expansion of high-speed internet coverage, and the growth in the percentage of female-employed ICT specialists. Moreover, this research provides valuable insights into the correlation between digitalization and sustainable development in the European Union. The forecasted trends indicate positive advancements toward multiple Sustainable Development Goals (SDGs). These findings demonstrate the EU's commitment to achieving SDG targets related to effective institutions, public access to information, economic productivity, technology access, quality education, and gender equality. The study emphasizes the crucial role of digitalization in driving sustainable development and underscores the progress made by the EU in aligning its efforts with the SDGs.

**Keywords:** Forecast, ARIMA, Double Exponential Smoothing, Digitalization, Sustainable Development Goals, sustainable growth.

## SYNERGY IN INNOVATION, USING EMERGING TECHNOLOGIES, IN A SECURE CYBER ENVIRONMENT AT THE GOVERNMENT LEVEL

**Marius STEFAN**

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**Abstract.** In an information society in which the quality of life, as well as the prospects for social change and economic development, depend to a greater extent on information and its exploitation, the institutional field of management of IT applications for European funds becomes a matter of national importance, with critical values for national security. Reinventing government can be achieved through digitalization and government computerization, which involves modernizing the current IT infrastructure through specific external funding sources such as European funds, doubled and secured by advanced cyber protection and defense capabilities against possible vulnerabilities or cyber attacks. Knowledge and scientific information are of enormous importance in the global informational society, by: supporting innovation, promoting economic development, making decisions in an efficient and transparent way, at the governmental level and especially for the implementation and use of intelligent technologies in the development of the degree of digitization of public services through financing provided by European funds and the National Recovery and Resilience Plan. In order to move on to building the knowledge society, it is necessary to reduce the digital gap, which accentuates disparities in development, excluding groups and even countries, from the benefit of information and knowledge. The limiting factor in development will be related to the human capacity to assimilate and develop these technologies, to use them in new fields of activity, for new products and services.

**Keywords:** Synergy in innovation, intelligent technologies, e-Busines, digital transformation awareness, cybersecurity.

## THE IMPACT OF THE COVID-19 PANDEMIC ON FOREIGN INVESTMENTS IN ROMANIA. CASE STUDY ON BRAZILIAN AND INDIAN INVESTMENTS

**Beatrice TROCINESCU**

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**Abstract.** A virus originating from China, was declared a pandemic by the World Health Organization, at the beginning of 2020. The international epidemiological situation generated by the outbreak of the COVID-19 pandemic has strongly influenced the economic balance. Thus, worldwide in 2020 there were decreases in foreign investments, which are the key element in global economic development. In Romania, according to relevant institutions, foreign direct investments are influenced by cheap workforce, qualified workforce, as well as the availability of natural resources, with great potential. This paper includes two parts, made up of descriptive research and qualitative research. The descriptive research is based on statistics and data from the official reports of the National Trade Register Office. The aim is to identify the number of companies with foreign participation in the share capital during the 2020-2022 COVID-19 pandemic, compared to 2019. Also, the paper identifies the fields of interest for foreign investors from Romania, as well as their nationality. The qualitative research is carried out with the support of the diplomatic representatives of Brazil and India in Bucharest. The method used is the survey based on questionnaires, and the goal is to identify Brazilian and Indian investments in Romania during the pandemic. The impact on foreign investments in Romania was not devastating, the data indicates that from December 2019 to December 2022, they increased by 7.6%. As for the number of foreign investors, Italy leads the ranking, but according to the value of the share capital subscribed, the Netherlands is at the top of the ranking. During the pandemic, Romania attracted significant Brazilian and Indian investments on the market. The contribution of this paper consists in the fact that it is demonstrated that the COVID-19 pandemic did not affect foreign direct investments in Romania, on the contrary, this period was beneficial.

**Keywords:** COVID-19, Romania, foreign investments, Brazil, India.

## INDUSTRY 4.0 AS A DIGITAL JOURNEY

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**Abstract.** The fourth industrial revolution also known as Industry 4.0 is an opportunity for every enterprise to start their digital journeys. This paper focuses on the four pillars of digitalization which are strategy, foundations, enablement and rollout and continuous improvement through adoption of big data, internet of things, automations and additive technologies. Each enterprise can adopt a different operating model while going through the digital transformation of their manufacturing operations depending on data and connectivity, human-machine collaboration and interactions, robotics and analytics. This paper presents the method called Lighthouse used to automate operations in sites by capturing a high number of use cases, then acting as a benchmark for other locations. The paper will present a business case of a digital journey from process optimizations like automatic sampling or labelling to reliability elements such as sensors and vision modules to 3D printers, converting the respective operating site into a digital factory. It will also explain advantages of the suggested method, as well as what opportunities for sustainability a digital factory creates like eco-efficiency and minimizing scrap and waste. Digitalization is here to stay and constantly evolve so the proof of concept of the Lighthouse method will be beneficial to manufacturing enterprises in reshaping how they currently operate their logistics and supply chain business processes.

**Keywords:** digitalization, strategy, big data, automations, optimizations, supply chain, manufacturing.



## NATURAL GAS MARKET LIBERALIZATION IN ROMANIA

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**Stelian GRASU**

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**Abstract.** The liberalization of the natural gas market in Romania is a very important element in the development of the Romanian economy in general and the development of this sector in particular. In this article, the authors make an analysis of the gas market liberalization process, highlighting its long and short term effects. The article also gives an overview of the evolution of the percentage of household customers that have switched from the regulated regime to the competitive regime and of the number of suppliers with household customers in their portfolio in the competitive regime. Connections to natural gas distribution systems and the evolution of natural gas prices in a regional context are also discussed in this article.

**Keywords:** gas sector, liberalization process, distribution system, ANRE.

## METaverse SUSTAINABILITY THROUGH INTEGRATED DIGITAL LEADERSHIP AND RESILIENT ENTREPRENEURSHIP

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**Abstract.** The metaverse is an emerging space that is rapidly becoming a new frontier for entrepreneurs to explore. As the world becomes increasingly digitized, building sustainable businesses in the metaverse requires a unique set of skills and strategies. This paper aims to explore the integrated approach to digital leadership and resilient entrepreneurship as a means of building sustainable businesses in the age of the metaverse. The literature on the metaverse is relatively new, but there has been extensive research on digital leadership, resilience, and sustainability in the business world. Previous studies have shown that digital leadership is a crucial factor in driving digital transformation and creating sustainable businesses, while resilience is key to overcoming the challenges that arise from uncertainty and change. This paper employs a qualitative research approach, using a multiple case study analysis of successful sustainable businesses in the metaverse and also through a descriptive analyses approach. The research questions include: What are the key elements of digital leadership and resilient entrepreneurship in building sustainable businesses in the metaverse? How can these elements be integrated to create a successful business model in the metaverse? The study found that successful businesses in the metaverse have several key elements in common, including a clear understanding of their target audience and their needs, the ability to leverage emerging technologies to create immersive and engaging experiences, and a focus on creating sustainable business models that align with social and environmental values. This paper contributes to the field of studies by exploring the integrated approach to digital leadership and resilient entrepreneurship in the context of the metaverse. By providing a comprehensive analysis of successful sustainable businesses in the metaverse, this paper offers valuable insights for entrepreneurs and business leaders looking to navigate this rapidly evolving landscape.

**Keywords:** metaverse, digital leadership, resilient entrepreneurship, sustainable businesses, companies.



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## THE IMPACT OF MEDIA POLITICIZATION ON MEDIA TRUST IN ROMANIA

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**Abstract.** Declining public trust in media is causing concern in many societies on the world map. In modern democracies, trust in the press is an essential element of political communication, people's perceptions of the political sphere being most often mediated and influenced by the information provided by mass media. In this paper, the authors are analyzing the impact on media politicization on media trust using a binomial regression with data collected from the Eurobarometer 96. The main conclusion of the article is that Romanians' trust in political parties has been and remains at low levels, not exceeding 20% over the last two decades.

**Keywords:** mass media, public trust, politicization, impact.



# icESS

## AN ANALYSIS OF THE CONSUMER SATISFACTION REGARDING THE BEAUTY SERVICES IN ROMANIA

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**Abstract.** In this article, the authors start from the premise that the level of customer satisfaction determines the success or failure of a salon or specialist practice, while knowledge of the key factors that influence satisfaction levels can shape service providers' future strategies and actions towards business development and improvement. This paper presents a research model resulting from a literature review and applied to Romanian residents. The choice of the sample was made considering the economic potential of the population, the growing business environment, and the population density of the localities in our country. The aim of the present study was to identify the factors influencing the satisfaction of consumers of beauty services.

**Keywords:** beauty services, consumers satisfaction, consumer behaviour.

## PROFESSIONAL RECONVERSION IN THE METAVERSE ERA

**Bianca Alexandra BLANUTA**

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**Abstract.** We are in the technology-dependent, metaverse era. An era where speed rules, technology advances and innovates so fast that we are forced to adapt to change. And this adaptation to change leads to professional change, namely the need to retrain, the need to move into technology jobs. The scientific literature on the topic offers us a variety of information, due to the numerous professional reconversions to the IT field. We all work with such technologies in our daily lives, at work and beyond, even at home, in our personal lives, which is why we rely more and more on technology and the benefits it brings. In order to carry out our study, we used the qualitative research method, through which we were able to find out important details related to retraining in the IT field. The study outlines the professional advantages brought by the Metaverse, but will also identify challenges for the future.

**Keywords:** metaverse, professional reconversion, digital leadership.

## PROVIDING AN ELECTRIC BIKE RENTAL SERVICE FOR ON-DEMAND COURIERS THROUGH THE MICRO-PROVISIONING SYSTEMS

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**Abstract.** This study aims to identify whether micro-provisioning can be applied to the field of on-demand deliveries, by making electric bike rental services available to couriers in major urban centres in Romania. At present, there is insufficient literature on micro-provisioning and green delivery. The research provides a new and clear perspective on the advantages, disadvantages, implications, and opportunities of adopting this delivery alternative to the delivery market and to delivery companies in Romania. In the elaboration of this article, the literature review, regarding the concept of micro-provisioning and the way it has been implemented, as well as the single case study analysis method, were used as research methods. The analysis of the case studies reflects the fact that the concept of micro-provisioning can be successfully implemented in rural environments, but in urban areas we have only identified enterprises operating on a large scale, some of them even operating on three continents. In Romania, the financial advantages are demonstrated in this study, but there is not enough data to deduce whether the gains are sufficient to induce deliverers to abandon conventional delivery methods.

**Keywords:** micro-provisioning, social entrepreneurship, green delivery in Romania, electric bikes, electric bike rental companies in Romania.

## THE ROLE OF THE COMMUNITY IN ENTREPRENEURSHIP - THE CASE OF VIETNAM

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**Abstract.** Communities play an essential role in entrepreneurship development. More specifically, communities not only contribute to maintaining but also to promoting and supporting entrepreneurship development. So it makes sense to enhance the role of the community in entrepreneurship. However, the influence of each community is different in impact on entrepreneurship. This study aimed to explore assessments of the community's role in supporting and developing entrepreneurship. From there, we can have a concrete perspective on the relationship between the role of community and entrepreneurship. The study was carried out based on an online questionnaire survey with 201 community members in Vietnam. The Importance-Satisfaction Analysis was used to analyze the influence of community roles. The results show that Support in promoting products or services is a role that is assessed as important and needs to be developed. The roles of the community in Support for business knowledge and information, Financial support or giving loan, Support for relationships, and Space for exchange and development should be maintained and steadily developed. Community roles in Using services or buying goods, Support for labour need development restrictions. Finally, communities should reduce their investment in Participating in events and exchange activities organised by enterprises, and regularly encourage enterprises. These results contribute to a better understanding of the role of the community in entrepreneurship. Through this article, stakeholders such as communities, local managers, and policymakers will have solutions to improve the role of the community. The paper ends with a discussion of the results and implications of the study.

**Keywords:** community, community role, Importance-Satisfaction Analysis, entrepreneurship, Vietnam.

## SOCIAL ENTREPRENEURSHIP AND SOCIAL INNOVATION IN THE ENTREPRENEURIAL ECO SYSTEM

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**Alula Nerea GEBEREMESKEL**

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**Abstract.** Globally, the top priority of government policy objectives is to develop an atmosphere that is conducive to social entrepreneurship in order to address complicated socioeconomic concerns. Several legislative measures have been suggested to achieve this goal, but seldom has it been examined if and how much they may reshape the ecosystems for social entrepreneurship. By examining the Social Innovation and Entrepreneurship Development Fund (SIE Fund), a current policy study trying to do so in China, this paper offers a unique empirical study to demonstrate how public policies may potentially drive social innovation. We first consider how the SIE Fund encourages innovation within the social firms it funds, and then we consider potential effects on the social entrepreneurship ecosystem in china. The findings demonstrate that the SIE Fund's initiatives have qualities that set them apart from social entrepreneurs that existed before. Furthermore, it was discovered that there were signs of product, process, marketing, and innovation in the development of new or improved social practices. This research demonstrates how various public policy measures may help to support the extension, diversity, and innovation of the social entrepreneurship ecosystem. The findings have important policy ramifications, particularly for surrounding East Asian nations that are traditionally defined by a strong government and that are now dealing with comparable structural, demographic, and socioeconomic problems that demand for creative responses.

**Keywords:** public policy, social enterprise, social innovation, social entrepreneurship, social policy.



## **MINITRACK: ECONOMY AND ECONOMICS UNDER THE INFLUENCE OF THE NEW SCIENTIFIC AND TECHNOLOGICAL REVOLUTION**

### **Chairs:**

- **Dragoş HURU, Bucharest University of Economic Studies, Romania**
- **Angela ŞUTAN, Burgundy School of Business, Université Bourgogne Franche Comté, France**

The paradigmatic evolution of the current period of time shows that science, in general and economics in particular, allows us to build higher and higher ladders to reach the fruits that hang higher and higher. Economic theory tries to explain in this context the recent differences between countries in terms of technological skills, economic convergence in the global model that simply does not exist but is based on the assimilation of theoretical knowledge and technologies from what we can define as foreign countries. The absorption of international technologies, the integration of economies in international production chains become very important in explaining the differences in the growth potential of national economies and both lead to the increase in the possibilities of divergence within the world economies. Humans have limited capacity in the face of technology in many ways and at the same time technological progress is similarly dependent on technological progress and at the same time determines it. Scientific advances and technological changes are important factors of the recent economic performance, which determines a new arrangement of international relations at the geopolitical level. The interest in studying the economy as the functioning of economic systems and as epistemic implications in the theoretical system represents our proposal for debate and research within this module of the scientific conference.



**Dragoș HURU** is an Associate Professor in Economics, Director of the Department of Economics and Economic Policy, Director of the Research Center for Economic Analysis and Policy at the Academy of Economic Studies in Bucharest. In 2003 he obtained his doctorate, with the theme “Investments as a factor in economic development (the case of Romania)”. He has taken and continues to take courses in: Microeconomics; Macroeconomics; Intermediate Microeconomics;

Applied Microeconomics; Applied Intermediate Microeconomics; Firm Theory; European Economic Integration; Transnational Firms; Economic effects of European enlargement; European Microeconomics; Competition in the European economy; Economic strategies and game theory; Economic strategies in reticular systems of economy; Entrepreneurial initiative; Ethics and social responsibility in the EU; During his professional activity he has been a member of over 25 research projects and is the author / co-author of numerous publications. The area of interest in research is outlined in the study of the functioning of the market economy, of the strategies and impact of the different microeconomic components at the macroeconomic level, and in the impact that economic policies have on the economy and society in Experimental Economics.

**Angela SUTAN** is a Professor in Behavioral Economics; Head of LESSAC (Laboratory for Experimentation in Social Sciences and Behavioral Analysis); Decisions and Behavior Research Axis Coordinator; Co-Director of the MSc Data; Science and Organizational Behavior CEREN (EA 7477); Burgundy School of Business, Université Bourgogne Franche Comté



## INSTITUTIONAL QUALITY CHANGE AND GLOBALIZATION IN AN ENDOGENOUS GROWTH FRAMEWORK

**Maria Romana MONGIELLO**

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**Abstract.** Using a pooling mean group estimator for a panel data set between 1996-2018, this paper studies the impact of institutional quality change and globalization on growth, after controlling for other relevant covariates in the endogenous growth theory that are capital-labour ratio and technological progress, for which we use education as a proxy variable. The PMG estimator allows a greater degree of parameter heterogeneity than the usual estimator procedures used in empirical growth studies by imposing common long run relationship across clusters while allowing for heterogeneity in the short run responses and intercepts. For a better performed analysis we distinguished between High-Income Countries and Low-Income Countries. For the former group the endogenous growth theory is confirmed: the technological progress acts with a significant impact in the long-run growth rate, while the capital-labour ratio with a negative impact on growth, meaning that countries reached their stationary state. The greatest effect is generated by institutional quality, respect to globalization that is positive and significant. For the latter group results are the opposite: institutional quality change plays summarily a negative effect on the economy, suggesting that it could curb the economy, while the capital-labor ratio plays still an high effect showing that the economy still have to reach the stationary level.

**Keywords:** Institutional Quality, Globalization, Technological Change, Growth Theory, Heterogeneous Dynamic Panels, Pooled Mean Group Estimator,  $I(0)$  and  $I(1)$  regressors.



# icESS

## DID LOW-SKILLED MEN CROWD LOW-SKILLED WOMEN OUT OF THE UK LABOUR MARKET?

**David MESA-RUIZ**

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**Abstract.** The development of information and communications technologies (ICT) has been proven to have polarized employment opportunities across the skill spectrum in the last decades. It created incentives to substitute capital for labour performing routine tasks making these redundant, while it triggered a rise in the relative demand for workers who perform high-skilled non-routine tasks, and (indirectly) those performing low-skilled non-routine tasks. These effects have been heterogeneous by gender when looking at occupational groups. Meanwhile, it has been observed that female participation decreased in low-skilled occupations. In a recent paper, these two trends have been linked in the US labour market. Low-skilled men, employed in blue-collar occupations, once unemployed, switched to interpersonal occupations, crowding out of the US labour market some low-skilled women, occupied in interpersonal occupations. This paper aims to assess this phenomenon in the UK by analyzing changes in the UK local labour markets and transitions in the overall UK economy.

**Keywords:** Gender, Labour, Technological Change, Shift-Share.

## **ELECTRICITY PRODUCTION FROM RENEWABLE SOURCES AND THE ADOPTION OF ELECTRIC VEHICLES IN THE EUROPEAN UNION**

**Liviu Andrei TOADER**

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**Abstract.** In the context of climate change and the EU's common goal of reducing carbon dioxide emissions for high air quality, we ask whether electric cars will bring environmental benefits and what these will be, and whether they will continue to grow as Europe uses more renewable energy in the future, creating a new prospect for the circular economy. The use of renewable energy plays an essential role in reducing pollution and replacing diesel or petrol vehicles with electric ones contributes to the same goal by reducing emissions. The aim of the current research is to determine and analyse the relationship between the uptake of electric vehicles in Member States, in terms of the share of newly registered electric cars, and the share of electricity generated from renewable sources. The Pearson correlation coefficient will be used to determine the type and strength of the correlation between the share of renewable electricity and the share of electric cars registered in 2020 in EU Member States. The estimated results of the correlation analysis show a small to moderate relationship between the two indicators, but we will analyse which external factors cause the variables to change in the same direction due to indirect causes or remote mechanisms, as both contribute to the EU's ambition to reduce greenhouse gas emissions and become climate neutral by 2050.

**Keywords:** renewable energy, electric vehicles, energy sector.

## CURRENT COMPETITION ISSUES IN THE INTERNATIONAL CONTEXT OF INFLATION

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**Abstract.** The current international context of inflation has triggered changes in the economic behaviour of individuals and of undertakings. The specific literature has already evaluated the possible effects of competition on inflation. The present paper brings a new perspective, dealing with the consequences of inflation in the field of competition, assessing anti-competitive behaviour of undertakings occurring in the current context of inflation at global level. Increasing prices are nowadays a major problem for consumers as well as for producers. Undertakings have explained the increased prices as related to the high inflation rates. Competition authorities have nevertheless investigated, if such price increases are really inflation-related or if there are anti-competitive agreements on increased prices using the general context of inflation and aiming enhanced profits for undertakings. Such an investigation is presented in the present paper as a case-study based on the information of the Romanian Competition Authority. The paper brings in question to what extent the increase of price levels is related to inflation and to what extent it can be assessed as an anti-competitive agreement between actors with market power. As a research method, the present paper uses metadata, data from National Competition Authorities as well as from the European Commission as a Supranational Competition Authority, case-studies and economic indicators provided by Eurostat. The research approach is based on an international, multidisciplinary perspective, presenting possible measures and solutions to avoid anti-competitive behaviour in the given economic context of inflation.

**Keywords:** competition, inflation, anti-competitive behaviour, market power.

## THE BEHAVIOR OF YOUNG PEOPLE IN THE RELATIONSHIP BETWEEN SAVINGS AND INVESTMENTS IN THE DIGITAL ERA

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**Abstract.** Young people are a disadvantaged category of the population because their incomes are insufficient in relation to individual and collective needs. Young people, because they are at the beginning of their journey and have a forming personality, are evaluated according to the status and financial power of their parents. They lack skills and professional experience, so the only thing they can stand out with is consumerism and branded items, being the largest consumers of luxury goods, which are priced very high in relation to their purchasing power. What young people do not understand is that not every accumulated good is an investment; purchasing a pair of sneakers from a famous brand is not an investment, but consumption, and that money could be put to work to generate more money, therefore investing in assets, not liabilities. The present study aims to show the behavior of students from ASE-Bucharest in terms of saving and investing, over a period of 6 months. In the digital age, we should be investing more, but it seems we are consuming more, given the global access to websites of companies that sell their products online in the best conditions so far. At the same time, financial education is very weak, it is almost non-existent in schools, and those who start trading on various websites pay for their courses and are just starting out. To take advantage of the digital age and invest efficiently, we must pay more attention to financial education, thus individuals must learn how to manage their income in order to satisfy their needs and desires as best as possible, both at an individual and community level.

**Keywords:** investments, consumption, savings, e-commerce, digitalization.

## TECHNOLOGY - FRIEND OR FOE OF LARGE COMPANIES? THE IMPACT IN THE DEVELOPMENT OF INNOVATIVE STRATEGIES

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**Abstract.** Should we fear technology or rather embrace it and identify how we can position it as a necessary and useful weapon in the war to differentiate yourself in the marketplace as a company? The impact of technology does not come only among companies, but also contributes to the evolution of mankind and individuals. Digital transformation is the integration of digital technology into all areas of a business, fundamentally changing the way managers operate and deliver value to customers. It is also a cultural shift that requires organizations to continually challenge the status quo, experiment and be comfortable with failure. Today's organizational environment is often defined as frantic, disorganized or even chaotic. From the lowest hierarchical level in organizations, employees believe that they experience a high pace of change and observe both in their own organization and in others progress for technologies, nanotechnologies, robotics and engineering. All contribute to the rapid development of the economy and society. Competitive advantage means that an enterprise obtains more profits or benefits than its competitors in terms of cost, technology, brand, management and so on (Barney, 1991). Existing studies have mainly adopted a resource-based view to explain the effect of green innovation on firms' competitive advantage. The paper consists of three chapters and presents both approaches to the specialized literature and the analysis of the evolution of the impact of technology in large companies. The first chapter focuses on theoretical concepts about digitization, Artificial Intelligence and Machine Learning, while the second part focuses on existing data at the level of Romania, the European Union and beyond. At the same time, the paper will end with a series of proposals for the integration of technology in the strategy development process in large companies.

**Keywords:** artificial intelligence, machine learning, impact, strategies.



## THE IMPACT OF ARTIFICIAL INTELLIGENCE ON EMPLOYMENT IN THE EUROPEAN ECONOMY

**Gabriela CĂLINESCU**

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**Abstract.** In recent years, the influence of artificial intelligence on economic systems has garnered considerable attention. The current state of scientific literature on the topic shows that artificial intelligence has effects on productivity, employment, income distribution, and economic growth. It also influences several economic sectors, including manufacturing, transport, customer service, finance, and banking. On the one hand, artificial intelligence has the potential to significantly increase productivity and efficiency, which can result in economic growth. Nonetheless, artificial intelligence also has the potential to disrupt employment and lead to income inequality. This paper examines the effects of artificial intelligence on employment by using the qualitative methods of the case study and document analysis. Moreover, data mainly sourced from Eurostat is analysed. The findings indicate that artificial intelligence has the potential to considerably boost productivity and economic growth but may also result in job displacement and wealth disparity. In addition, the results show that artificial intelligence contributes to the automation of jobs and the creation of new ones. Moreover, the impact of artificial intelligence on employment depends on the economic sector in which it is implemented. This paper was co-financed by The Bucharest University of Economic Studies during the PhD program.

**Keywords:** artificial intelligence, employment, European economy.

## MONETARY POLICY AND HOUSING BUBBLES: SHOULD CENTRAL BANKS LEAN AGAINST THE WIND?

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**Abstract.** There is a long debate among academics and professionals on whether Central Banks should apply a leaning against the wind policy by raising interest rates more than it would be necessary to ensure price stability in order to temper a bubble in the residential real estate sector. Though the use of a Vector Auto Regressive Bayesian model, this paper aims at contributing with answers related to this paradigm by studying the impact of monetary policy on housing prices in Romania and analysing the potential opportunity cost that such an intervention may have on economic welfare in the short run. Using both a Cholesky and a sign restriction identification, the results indicate that a monetary policy shock aimed at increasing the interest rate leads to a decrease in real housing price dynamics. It was also noticed that increasing credit dynamics leads to an increase in real housing price dynamics. GDP dynamics react negatively to the same monetary policy shock, but with a significantly smaller magnitude compared to the change in real housing prices. The results could justify Central Bank's intervention on tempering housing prices by raising interest rates over and beyond, adding further value to the existing literature.

**Keywords:** Monetary policy, Housing bubbles, Central Bank.

## ACHIEVING STRATEGIC AGILITY IN THE IT INDUSTRY THROUGH SCENARIO PLANNING

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**Abstract.** Nowadays we live in a highly connected world, where change is unstoppable and unpredictable. Companies need to navigate across continuous challenges, explore future avenues and survive in a highly competitive business environment. Considering the turbulent changes framework, strategic agility has become an appealing opportunity for companies. Strategic agility represents the ability of a company to sense and respond to external change, providing a relevant response in a timely manner. In this respect, we aim to explore the use of scenario planning through the three dimensions of strategic agility: strategic sensitivity, leadership unity and resource fluidity. Focusing on the IT industry in Romania, the paper outlines how strategic agility dimensions are applied with the help of scenario planning method. The outcome aims to add valuable insights to the literature on the topic of strategic agility, its three dimensions with application to IT through the support of scenario planning method.

**Keywords:** strategic agility, scenario planning, strategic sensitivity, leadership unity, resource fluidity.

## THE SOCIOECONOMIC CONSEQUENCES OF LIBYAN CONFLICT: FROM ECONOMIC GROWTH DECLINE TO MIGRATION CRISIS ASSOCIATED WITH THE VIOLATION OF HUMAN RIGHTS

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**Abstract.** Our paper, which is a part of our doctoral thesis, aims at analyzing the international migration to and through Libya to the European Union countries, from the perspective of political economy, during 2011-2021. The underlying cause of the ongoing conflict in Libya traces back to the Arab Spring that took place in 2011 in The Middle East and North Africa. The so-called Arab Spring was a significant mass protest that started in Tunisia after Mohammed Bouazizi, a vendor street seller, who burned himself alive as a sign of discontent with the behavior of public servants. It soon spreaded to Arab countries. To control the protest and disperse protestors, some Arab countries resorted to oppressive measures. Muammar al-Gaddafi, the notorious leader of Libya, crashed the protestors using violence. However, the joint military intervention by the U.S., the UK, and France assisted the opposed coalition forces to topple Ghaddafi's regime and form a transitional national council. Nonetheless, it did not take long for factions to involve in civil war as result of desire for taking political power to rule the country. Since then, Libya has been going through conflict for more than a decade. There are numerous parties that are involved in Libyan conflict, but the main two ones are Government National Accord (GNA), recognized by the UN, and Libyan National Army (LNA). The result of Libyan conflict has been a significant change in the socioeconomic condition on the ground. It has led to decline in economic growth and overall living standards. Thus, it caused a migration crisis associated with the violation of human rights. This paper seeks to explore the devastating socioeconomic consequences of Libyan conflict. In brief, it begins with an overview of Libyan conflict. Next, it explores the impact of conflict on economic growth. Then, it continues with the discussion of migration crisis associated with the violation of human rights. Finally, it concludes the discussion.

**Keywords:** Libyan Conflict, economic growth, migration, crisis.

## THE PROSPECTS OF THE NEW VAT SYSTEM IN EUROPE IN THE CONTEXT OF DIGITIZATION AND THE USE OF BLOCKCHAIN

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**Ionela MUNTEANU**

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**Abstract.** The European Union is currently undergoing significant transformations in its value-added tax (VAT) system as a result of rapid digitalisation and the integration of blockchain technology into everyday life. This article provides an overview of the emerging VAT framework in Europe in an international context, discussing the implications and benefits of this necessary modernisation process. The main research focus was accounting, based on the premise that the foundations of taxability and economic development are based on the reliable information provided by accounting. The research methodology consisted of a bibliometric analysis of a total of 1274 articles indexed in the Scopus database between 2015 and 2023, accounting research being the main theme and blockchain technologies and tax systems being the secondary themes. The findings of this article point to significant incentives in the field of research on the relationship between blockchain technologies, accounting, and tax systems. The implications of the digital age on VAT mechanisms present new opportunities and challenges and nevertheless impose pressure for law clarification. The results of the study provide a comprehensive series of interesting data analysis both for professionals using blockchain technology in economic activities and for academics by providing new research paths.

**Keywords:** VAT, blockchain, cryptocurrencies, tax.

## THE ECONOMIC PROGRESS OF A COUNTRY AND THE INCLUSION OF PEOPLE WITH DISABILITIES IN SOCIETY – WHERE ARE WE?

**Ancuța-Anisia CHELBA**

*Ștefan cel Mare University of Suceava, Suceava, Suceava*

**Abstract.** The subject of disabled people began to be more and more debated in Romania, as well as in other countries. However, it is important to be aware of where we really stand when it comes to this topic. This article aims to highlight the existing relationship between the economic progress of a country and the social inclusion of people with disabilities. The major objective of this study is to make a comparison between what we want to have, to live, and what we actually have, and which we still do not live. The work is structured in three parts and follows the proposed goal.

**Keywords:** inclusion, disabilities, Romania, economic progress.

## IMPACT OF RELATIONSHIP QUALITY ON CUSTOMER LOYALTY: A STUDY IN THE BANKING SYSTEM

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**Dinh Van HOANG**

*Ho Chi Minh City Open University, Ho Chi Minh City, Vietnam*

**Abstract.** In recent times, the notion of relationship quality has attracted a lot of interest in the domains of consumer behavior and marketing. This research aims to investigate the influence of service quality, intimacy, and ethics as antecedents on the elements of relationship quality (satisfaction, trust, and commitment) and loyalty in the Vietnamese banking business. Utilizing the mediating function of relationship quality, this research seeks to enhance the understanding of the factors influencing customer loyalty. A survey of 302 bank customers in Vietnam was conducted. The findings show that service quality and ethics have a substantial impact on customer trust, satisfaction, and commitment, resulting in greater loyalty. Furthermore, the study provides managerial implications for Vietnamese banks to improve their service quality and ethical standards to develop customer trust and commitment, resulting in increased customer loyalty in Vietnam's banking industry.

**Keywords:** service quality, intimacy, relationship quality, customer loyalty.

## INVESTIGATING THE EFFECTIVENESS OF DIGITALIZATION ON SMES PERFORMANCE: THE CASE OF WESTERN BALKANS

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**Ermira KALAJ**

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**Abstract.** This study aims to assess the level of digitalization of Small and Medium Enterprises (SMEs) and its influence on the economic performance of SMEs in Western Balkan countries. We use panel data from Enterprise Surveys (ES) for the years 2018 to 2020 to address the study topic. The European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), and the World Bank Group (WBG) collaborated on the survey. The selected countries are Albania, Bosnia and Herzegovina, North Macedonia, Kosovo, and Montenegro. The questionnaire helps us comprehend the challenges faced by businesses in the private sector. The collection is based on business experiences and perceptions of their operating environments. The performance of SMEs is the dependent variable used in the empirical analysis. Sales, employee, and fixed asset growth are the variables used in our article to assess the performance of the organization. The vector of independent variables, on the other side, consists of information about the enterprise's age, size, ownership structure, legal status, accessibility to formal banking services, and ownership by gender. Moreover, we will concentrate on the ES questions below to estimate the degree of digitization of SMEs: (1) Does the establishment have its own website? (2) Started or increased business activity online? (3) Started or increased remote work arrangement for its workforce? Preliminary empirical research results shed light on the positive effect of digitalization on firms' performance. However, the magnitude and statistical significance are different among the countries included in the sample.

**Keywords:** firm performance, digitalization, innovation, entrepreneurship.



## **MINITRACK: GEOPOLITICAL CURRENT CHANGES AND PERSPECTIVES IN SUSTAINABLE BUSINESS AND TOURISM**

### **Chairs:**

- **Gabriela ȚIGU, Bucharest University of Economic Studies, Romania**
- **Jose MONDEJAR JIMENEZ, University of Castilla-La Mancha, Spain**

The recent economic and social changes caused by the crisis generated by the new coronavirus demonstrate the adaptability of the business environment to radical and sudden changes. Some companies are able either to adapt themselves harder or leave the market, still, others manage to reinvent themselves quickly, through managerial strategies often adopted along the way. Is this a sustainable business model? Or should such situations be better anticipated and prepared?

While governments and international institutions are looking for solutions to support companies, workers and communities, firms need to identify new business models, reinventing their personnel policy and even repositioning themselves into the new digitized environment. Even business models take on new dimensions.

On the other hand, current geopolitical developments have shown, once more, that the business pattern related to technology must remain the key of development and recovery. Are technological and geopolitical cycles changing the economy and the business environment? Does this illustrate a fresh start in tourism?

The main topics covered by the hereby call for papers are related to:

- Business sustainability under the conditions of technological and geopolitical uncertainty
- The business environment in the era of rapid technological and geopolitical change
- Sustainability and managing threats from the business environment
- The impact of geopolitical risks in tourism business models
- Metaverse business models

- Sustainability within the context of boosting the ability to learn and innovation
- The impact of digitalization on business and its impact on the local tourism development
- The development of sustainable leadership
- Sustainability and the link to the quality of human capital
- Innovation as a mediator between CSR practices and performance



**Gabriela ȚIGU**, Professor Ph.D., is the Dean of Business and Tourism Faculty within the Bucharest University of Economic Studies, and a member of Tourism and Geography Department. With an experience in academia but also in tourism practice for about 30 years, Gabriela Țigu carries out both teaching and research activities in areas of expertise such as: Management of tourism destinations, Sustainable tourism, Management of operations in tourism, Business ethics, Human resource management in tourism. She is an author of

22 published books, more than 150 articles and scientific papers, as well as 33 national and international research contracts; as a visiting professor she was involved into didactic activities and doctoral boards as well within universities from France, Spain, Sweden, Turkey, Cyprus and Italy. She is also a scientific Ph.D. supervisor of doctoral thesis in the field of Business Administration. Since 2017, she is the director of the postgraduate program “Strategic Hospitality Management”, organized in partnership by the Bucharest University of Economic Studies and École Hôtelière de Lausanne, Switzerland, the best hotel school in the world, according to recent international rankings. Gabriela Țigu is also a tourism journalist and vice-president of the FIJET Romania Tourism Press Club, member of the Advisory Committee of the Romanian Competition Council, member of the board of the Academic Association for Research in Tourism and Services CACTUS, member of the World Committee on Tourism Ethics, within the World Tourism Organization.

**Jose MONDEJAR JIMENEZ** is full professor of statistics at the University of Castilla-La Mancha, Faculty of Social Sciences in Cuenca, Spain. He has developed his teaching experience at the University of Castilla-La Mancha and the University of Florence. José is the author of ninety-seven indexed articles, forty-two of which have been published in indexed journals in Journal Citation Reports, coordinator or co-author of twenty books (seven of them international) and thirty-two book chapters (seven of them international). He is a principal investigator on nine research projects and participates in three European, two national, and thirteen regional research projects. He has directed four doctoral dissertations. He has contributed to a total of one hundred and twelve papers in prestigious scientific conferences in his teaching and research area, forty-three of which are national and sixty-nine international. He has developed research mobilities at universities and research centres: University of Florence, Institut Hautes Etudes Economiques et Commercial INSEEC-Paris, University Diego Portales in Santiago de Chile and University of Bath.



## STUDY ON THE PRESENT AND FUTURE REQUIREMENTS OF THE LABOR MARKET IN 7 DEVELOPMENT REGIONS OF ROMANIA

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**Olimpia STATE**

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**Gheorghe ORZAN**

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**Abstract.** As a result of the emergence of new business models, the role of intellectual capital increases steadily and, in addition to human capital, the relational capital acquires a growing importance in all strategies, public policies and also the business plans of companies. From this perspective, the correct understanding of the logic of the triple helix, that of the synergistic relationship between the government, business and university environments, becomes essential for switching from a knowledge-centered education to one focused on sustainable cognitive skills and abilities. Considering that, in any country, the labor market is in a state of continuous mobility, with changes in the occupational structure of the workforce, reflecting the main trends of economic development, within the BREIT project, a team from Bucharest University of Economic Studies (ASE) carried out a phenomenological research study, conducted among employers in 7 development regions of Romania aimed at contributing to the knowledge of current educational and economic realities in order to develop quality educational services, adapted to these realities and to facilitate the integration of university graduates in the market work. The results of this research were transmitted and discussed during thematic meetings, with a large number of partner companies from all these development regions, ensuring the representativeness of the sample and the relevance of the conclusions drawn.

**Keywords:** triple helix, intellectual capital, relational capital, business performance, quality educational services.

## ENTREPRENEURIAL ACTIVITY IN A CRISIS CONTEXT: DOES FEAR AFFECT STUDENTS' INTENTION TO START A BUSINESS?

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**Claudia Elena TUCLEA**

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**Abstract.** This paper examines the determinants of the entrepreneurial intention of business students in a specific crisis context, respectively the COVID-19 pandemic. One aim of this study was to evaluate whether the negative feelings associated with a crisis, in our case the fear of COVID-19 impacts the entrepreneurial intention, among other factors. To the best of the authors knowledge, this is one of the few papers testing models that describe the entrepreneurial intention in a crisis context. Moreover, this is the only paper including the fear of COVID-19 in such a model. The results are based on a survey with 242 respondents from an important higher educational institution in the Eastern European area. Structural equation modelling techniques were used to analyze the data and test our hypotheses. The findings show that the entrepreneurial intention is significantly determined by students' entrepreneurial competencies, their personal attitudes toward being an entrepreneur and the perceived behavioral control. The entrepreneurial competencies are significantly influenced by the perceived competence of the lecturing team and to a certain degree by the perceived relevance and adequacy of the curriculum. More importantly, our results show that the fear of COVID-19 does not significantly affect students' intention to open their own firm. We also report some findings that were not hypothesized. Interestingly, the perceived relevance and adequacy of the entrepreneurial curriculum, the competence of the lecturing team and students' entrepreneurial competences reduced students' fear of COVID-19. Accordingly, this paper widens the literature regarding the entrepreneurial intentions and entrepreneurial education. Also, officials and university managers can better understand what impacts the students' intention to open a firm. Lastly, our finding regarding the lack of influence of fear of COVID-19 on the entrepreneurial intention can be extended in other crisis contexts.

**Keywords:** entrepreneurial intention, entrepreneurial competencies, fear of COVID, student personal attitudes toward being an entrepreneur, perceived competence of the lecturing team.



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## AT THE BEGINNING OF THE ROAD. AN EXPLORATORY RESEARCH OF FAIR-TRADE COFFEE IN ROMANIA

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**Oana MIONEL**

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**Abstract.** While worldwide it increases by annual percentages of over 20%, on the Romanian market the commercial "fair trade" phenomenon has just started. In this context, this article proposes a research on the importance of "fair trade" coffee for Romanian consumers and how its marketing helps growers in different parts of the world. The article is based on an exploratory methodology for identifying the units (shops, coffee shops, etc.) and brands that sell "fair trade" coffee in Romania. The results of the analysis show that, initially having a high price in relation to the other "generic" types, fair trade coffee, without the help of retailers, goes unnoticed among Romanian buyers. Also, having the habit of documenting themselves from other sources and paying little attention to labels, only a small proportion of Romanians are aware of the existence of a fair-trade logo.

**Keywords:** Romania, coffee, fair trade, trade, brands.

## THUCYDIDES' TRAP AND CURRENT POWER GAMES: USA - RUSSIA - CHINA

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**Denisa ȚĂRANU**

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**Abstract.** Two major factors are currently shaping the current geopolitical changes, namely (a) the entry into the cyber phase of history and (b) the hybrid conflict in Ukraine, with global implications for the realignment of the world geopolitical system. From this context, the research questions derive: what is the significance or usefulness of the 'lessons of history', such as the 'Melian War' and the 'Thucydides Trap', today? Can the main geopolitical players of the moment (USA, China, Russia) escape from this trap? In this regard, the objectives of the paper are (1) to delineate the theoretical framework for the "Thucydides trap", (2) to apply this framework to the current geopolitical conditions, and (3) to identify the premises for whether the current major geopolitical players can still escape from the "Thucydides trap" (given the precedent of the escalation of the Ukrainian conflict). The results of this study are based on a long period of research, critical analysis of the literature, and publication on the subject. The applicability is evident, both theoretically and practically, by conceptualizing a phenomenology in manifestation and providing tools for analyzing and understanding current geopolitical changes that will shape the future business environment.

**Keywords:** Thucydides' trap, geopolitical players, USA, China, Russia.

## SPORTS TOURISM AS A SOFT POWER STRATEGY IN THE NEW GEOPOLITICAL CONTEXT: A BIBLIOMETRIC NETWORK ANALYSIS

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**Abstract.** In the rapidly evolving landscape of international relations, nations are increasingly employing soft power strategies to achieve their political, economic, and cultural objectives. Among these strategies, sports tourism has emerged as a dynamic tool for projecting a nation's image and influence on the global stage. This study aims to provide a comprehensive bibliometric network analysis of the existing scholarly literature on the use of sports tourism as a soft power strategy, particularly in the context of the evolving geopolitical landscape. Drawing upon a systematic search and analysis of relevant academic articles from reputable databases, this study presents a comprehensive overview of the current state of research in the field. Through the application of bibliometric techniques, including co-citation and co-authorship analyses, we identify key thematic areas, influential authors, and interconnections within the scholarly discourse surrounding sports tourism as a soft power strategy. Ultimately, this bibliometric network analysis provides a comprehensive overview of the current scholarly landscape surrounding sports tourism as a soft power strategy. By synthesizing existing knowledge and revealing patterns of collaboration and research focus, this study contributes to the broader understanding of the transformative potential of sports tourism in the evolving geopolitical context.

**Keywords:** sports tourism, soft power, geopolitics, bibliometric analysis.



## CHANGES IN THE CONTRIBUTION OF TOURISM TO THE ECONOMY OF EU MEMBER STATES UNDER THE IMPACT OF CRISES

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**Abstract.** The year 2020 represents a turning point for both the global economy as a whole and the tourism sector in particular. After a sustained upward trend over a decade, tourism was one of the biggest "losers" of the pandemic crisis. Based on these assumptions, this paper proposes an analysis of the changes in the contribution of the tourism sector to the economy of the EU Member States from a macroeconomic perspective. To achieve this objective, several research questions were addressed: (1) Was tourism more affected than the economy as a whole? (2) In which direction was the impact of the crisis on tourism more pronounced: on the contribution to GDP or on the employed population, by sector or in terms of the multiplier effect? (3) Has the relationship between domestic and international tourism changed? And what about the contribution of tourism to member countries' exports? To answer these questions, a quantitative analysis was conducted based on secondary data - the statistics provided by the WTTC: Total contribution of travel and tourism sector to GDP, Total contribution of travel and tourism sector to employment, Direct contribution of travel and tourism sector to GDP, Direct contribution of travel and tourism sector to employment, Share of tourism in exports, tourist domestic & international spending. The results obtained were also interpreted in the context of the economic policies of the authorities, both at macroeconomic and sectoral level dedicated to tourism.

**Keywords:** tourism sector, crisis, macroeconomic impact, economic policies, European Union member states.

## THE CULTURAL TOURISM POTENTIAL OF THE CITY OF IAȘI

**Georgia-Daniela TACU HÂRȘAN**

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**Abstract.** The research aimed to analyze the cultural tourism potential of the city of Iași. In this sense, the objectives were defined in order to verify the hypothesis that the city of Iași has a cultural potential that can be exploited, sustainably, from a tourist perspective. The research was carried out between April and May 2022, resorting to the in-depth interview method and employing, as a tool, the conversation guide. The questionnaire consisted of 10 open questions. The interviews were conducted both onsite (in the physical presence of the interviewee) and online. The purpose of the research was the evaluation of the opinions of some theoreticians and practitioners in the field of tourism on the way in which the most important cultural tourist objectives in the city of Iași are administered and on the prospects for the development of Iași cultural tourism through the promotion and management of these objectives.

**Keywords:** cultural tourism, Iași, sustainable tourism.

## DOES THE GENDER OF HOSPITALITY EMPLOYEES AFFECT THE DEFINITION OF WAGES IN SPAIN?

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**José MONDÉJAR-JIMÉNEZ**

*University of Castilla-La Mancha, Cuenca, Spain*

**Abstract.** Analysing gender differences in key industries is one of today's priorities to achieve a more egalitarian society. In hospitality, the classic approach is through Mincerian regressions or wage decompositions. This paper addresses this issue through Partial Least Squares Structural Equation Modelling (PLS-SEM) and Importance-Performance Map Analysis (IPMA). The results confirm and measure the relations between Human Capital, Labour Conditions, Market, and Wages, and examine the relative importance and performance of each indicator in explaining Wages. Therefore, there are narrow gender differences, and measures are suggested. The main limitation lies in the design of the constructs. This article contributes to the literature by providing an alternative analysis.

**Keywords:** human capital, labour conditions, Spain, hospitality, wages, tourism.



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## THE DEVELOPMENT OF SUSTAINABLE LEADERSHIP FOR TOMORROW

**Titus SUCIU**

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**Abstract.** The paper summarizes the best managerial practices and principles of success of the most prolific managers, researchers and specialists in personal development at this time. The successful businessman/businesswomen respects the ethical and moral standards of his time. As a practical part, the article presents three successful ideas, two famous iconoclasts and a new business idea. The three ideas of success with impact for humanity are: marriage, laws of motion and universities. A special importance is given to iconoclasts like Henry Ford and Picasso. The COVID pandemic necessitated the emergence of a new business in tourism: the Cube Concept, which responds to the need for social distancing. At the conclusions, the matrices of the main standards of the leaders/entrepreneurs of tomorrow are detached, following the strong ideas of the analyzed literature and the presented case studies.

**Keywords:** leaders, success, case studies, iconoclasts.

## **MINITRACK: GLOBAL WORLD UNDER CRISIS: TOWARDS A NEW ECONOMIC MODEL**

### **Chairs:**

- **Radu MUȘETESCU, Bucharest University of Economic Studies, Romania**
- **Cristian PĂUN, Bucharest University of Economic Studies, Romania**
- **Carmen-Elena DOROBĂȚ, Manchester Metropolitan University Business School, United Kingdom**

The suggested topics covered by this panel are:

- Economic & business cycle's theory and evidences
- Economics of crisis, global and regional crisis contagion
- The causes and cures for modern crisis
- The social and economic effects of crisis
- The markets and the state under crisis
- Crisis management
- Globalization of crisis

The list is not an exclusive one, the researchers being encouraged to participate with works that are analysing any aspects of crisis in modern economies. Theoretical and empirical studies are welcomed both in this section.

**Radu MUȘETESCU** is an economist specialized in International Business with postgraduate studies in Geopolitics and Geoeconomics. Member of the Department of International Business and Economics in the Academy of Economic Studies in Bucharest. Visiting professor at the University of Szczecin in Poland (2014) and National Intelligence Academy in Bucharest (2016, 2017). Interested in the economic dimension of the national security as well as business-government relations in international politics.





**Cristian PĂUN** is a full professor of International Finance and International Risk Management to the Bucharest University of Economic Studies. His academic works are focused on the topic of risk management, international crisis contagion effect, banking and monetary policy issues. He was involved in various research projects covering different scientific areas such as a s risk management, international crisis contagion effect, the risk aversion of individual investors, rating

systems, the effectiveness of European Funds, financing of innovative SMEs'. He worked as financial consultant for few important Romanian consultancy companies for developing financial models in various business plans for complex investment projects in the construction, pharma, textiles etc. sectors. He is the Executive Director of the Romanian Society for Economics since 2009 and the vice-dean of the Faculty of International Business and Economics since 2016 (responsible for research activities). Today he is the President of the Romanian Fund for Guarantees and Loans for SMEs since January 2020.



**Carmen-Elena DOROBĂȚ** is a PhD economist, and currently Associate Professor (Senior Lecturer) in Strategic Management at Manchester Metropolitan University Business School in the UK. Research interests include strategic management and entrepreneurship, the history of economic thought, and monetary and trade theory and policy. She is also a Fellow of the Ludwig von Mises Institute, USA, a Fellow of the Higher Education Academy, UK, and a Certified Management and Business

Educator by the Chartered Association of Business Schools.

## NETWORKS AND GLOBALISATION, THE KEY TO RESILIENCE?

**Daniela MANEA**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Dorel PARASCHIV**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Emilia ȚIȚAN**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Mihaela MIHAI**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Simona-Andreea APOSTU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** Rethinking the concept of resilience in the post-pandemic period is urgently needed considering an uncertain and unpredictable future. To identify the necessary solutions for the recovery of the economy, the involvement of all actors in the socio-economic and political environment is vital. Strengthening regional development, enhancing global cooperation and developing sustain-able business models in the field of digital entrepreneurship are necessary pil-lars in revitalising the economy and creating a sustainable economy. In this context, using data for the countries of the European Union, it was shown, us-ing statistical methods (correlation, regression), that globalisation and net-works are necessary to achieve resilience. Thus, new opportunities are open-ing up for creating development strategies that can prepare socio-economic systems for future shocks and uncertainties.

**Keywords:** resilience, globalisation, networks, correlations, regression analysis, cluster analysis, Europe.

## THE IMPORTANCE OF SUSTAINABLE ENERGY TRANSITION IN THE FACE OF THE GLOBAL ENERGY CRISIS: UNDERSTANDING THE IMPACT AND THE WAY FORWARD

**Maria-Floriana POPESCU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Gheorghe HURDUZEU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** The energy crisis that the world is facing today is not just a temporary shortage of a particular energy source, but a broader challenge related to the sustainability of our energy systems. Energy crises can have significant economic, social, and environmental impacts, as they affect the availability of essential resources that drive economic growth and development. The rapid increase in the global population, along with the growing demand for energy in developing countries, has led to a strain on traditional fossil fuel resources. This energy crisis has created a need for a fundamental shift in the way we produce and consume energy, a shift commonly referred to as the energy transition towards renewable energy sources such as solar, wind, and hydropower is necessary. This is a complex process that involves not only technological advancements but also changes in policy, regulation, and consumer behaviour. However, the energy transition is not without its challenges. The intermittent nature of renewable energy sources, for example, requires the development of energy storage technologies that can store excess energy during times of low demand and release it during times of high demand. Furthermore, the energy transition requires significant investments in infrastructure, such as transmission lines and charging stations for electric vehicles. This can be a challenge for developing countries, which may lack the resources to make such investments. Overall, the energy crisis and the energy transition are complex and interconnected issues that require a coordinated global response. Therefore, this paper aims to present the role governments, businesses, and consumers play in moving towards a sustainable and resilient energy system that meets our energy needs while protecting the planet for future generations.

**Keywords:** energy crisis, energy transition, sustainability, efficiency.



## EFFECTS OF MULTIPLE ENVIRONMENTAL POLICIES: A CASE OF TWO SUBSIDIES

**Val VLAD**

*Penn State, The Behrend College, Erie, United States of America*

**Abstract.** The paper uses a theoretical model with imperfect competition. A polluting industry analyzes the optimality of investing in two types of environmental R&D: a process R&D and an end-of-pipe R&D. The incentives are represented by three policy instruments: one environmental policy – limiting production to reduce pollution, and two types of subsidies -aimed at incentivizing the industry to undertake more R&D investment. The conditions for optimal levels of subsidies are set such as to maximize the total welfare. In addition, two policy scenarios are analyzed. In one the emission-neutral condition is applied to determine if there is any piecemeal improvement to the welfare. In another scenario, the welfare-neutral condition is applied to determine if there any piecemeal decrease in emission.

**Keywords:** Market Structure, Environmental Regulation, Research and Development (R&D), ‘Process’ R&D, ‘End-of-Pipe’ R&D, Subsidy, Abatement Technology.

## **BETWEEN EAST AND WEST: GEOPOLITICAL PERSPECTIVES FOR YOUNG ARAB MIGRANTS IN ROMANIA**

**Vlad ROȘCA**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Monica ROMAN**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Dorel PARASCHIV**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Smaranda CIMPOERU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Elena-Maria PRADA**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Ioana MANAFI**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** Romania is recently becoming an emerging destination for young migrants from Arab countries. In this paper, we adopt a transnationalistic position in terms of geopolitical comparisons between host and home countries in order to understand the perspectives that young Arab migrants in Romania have. The qualitative research is based on data collected through twenty semi-structured, psychographic interviews (conducted between January 2020 and November 2021) with young Arab migrants (aged 18 to 29) living in Romania. Findings reveal that the return to the home countries is not a valid option due to lack of security and stability. Instead, most young Arab migrants see their future in Romania thanks to better employment opportunities and living conditions. This also opens up the possibility of a transnationalistic relationship between Romania and the sending countries, with the migrants settling in Romania on the long-term while also maintaining contact with the home countries thanks to improved transportation and communication technologies.

**Keywords:** migration, resilience, geopolitical perspectives, Arab migrants.

## GLOBAL WORLD UNDER CRISIS AND AFTER COVID-19 PANDEMIC: TOWARDS INNOVATION IN HEALTHCARE IN THE EUROPEAN CONTEXT

**Georgiana Beatrice GHEORGHE (COȘOVEANU)**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Gheorghe HURDUZEU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** Innovation is regarded by economists and politicians as one of the main drivers of economic growth. It helps to explain why some companies, regions and countries perform better than others in terms of higher productivity and income. Equitable access to health products is a global priority, and the availability, accessibility, acceptability, and affordability of health products of assured quality need to be addressed in order to achieve the Sustainable Development Goals. As part of the EU pharmaceuticals strategy, and drawing lessons from the COVID-19 pandemic, the European Commission plans to evaluate and revise the EU's general legislation on medicines for human use to ensure a future-proof and crisis-resistant medicines regulatory system, while supporting the competitiveness, innovation and sustainability of the EU's pharmaceutical industry. Indicators have only indicative value. Performance of innovation systems is measured by average performance on 27 indicators of the European Innovation Scoreboard (EIS). The new EIS measurement framework distinguishes between four main types of indicators and ten innovation dimensions, the main drivers of innovation performance are external to the firm and cover three innovation dimensions: Human resources, Attractive research systems, as well as Innovation-friendly environment. The revision of the EU pharmaceutical legislation represents an opportunity to ensure Europe is able to benefit from the cutting-edge in medical science and remain a global leader in pharmaceutical innovation. Without Intellectual Property protection, there is no incentive to invest in medical innovation, and without innovation, there will be no new therapies. Achieving both back innovation and boost access will improve the health of European citizens and drive Europe's resilience and economic growth. In conclusion, we consider that where innovation happens matters: to patients, to health systems, to academia and to SMEs. It matters for jobs, resilience and economic growth in Member States and across the EU, including Romania.

**Keywords:** innovation, health, access, economic growth, globalization.

## MONETARY AND FISCAL POLICY INTERACTIONS IN THE MODERN ERA: THE CASE OF ROMANIA

**Alin-Ioan VID**

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**Abstract.** This paper aims to highlight the interdependence of the monetary and fiscal policy by estimating a rolling regression between the low-frequency components of the time series for representative policy indicators. For the fiscal policy, an indicator that contains only variables that are under the control of the fiscal authorities has been built, while monetary policy is represented by the short-term interest rate on the interbank market, in line with the well-known approaches. Monetary and fiscal policy are independent, the estimation shows. Furthermore, their interdependence grade has decreased since 2000, in line with the regulation in this area and the European integration of the Romanian economy. However, certain episodes in the economic activity, such as the global financial crisis of 2008, led to increases of the interdependence grade of those policies, as the policy makers had to intervene in order to contribute to a sustainable macroeconomic re-stabilization.

**Keywords:** monetary policy, fiscal policy, macroeconomics.

## WORRISOME EVOLUTIONS VERSUS INVOLUTIONS AT THE LEVEL OF GEOPOLITICAL AND GEO-ECONOMIC BALANCES. CASE STUDY – RUSSIAN ECONOMY

**Flavius Cosmin DARIE**

*Brasov, Romania*

**Abstract.** The international political and economic landscape is increasingly turbulent and at its level the dosage of influencing factors is changing with increasing speed. In the specialized literature, in addition to the studies that deal with the dynamics, nature and complexity of the globalization phenomenon, there is more and more research that has deglobalization as its subject, and the economic factors with an impact on the business environment are outclassed by the political and geostrategic ones. The climate of friendship and collaboration, prevalent in most of the post-war period, gives way to confrontation, strategic rivalry, disruption of basic economic flows. The trade liberalization process, to which the General Agreement of TT (since 1995 the World Trade Organization) contributed over 60 years, seems to have stopped, trade sanctions, the relaunch of protectionist policies, the embargo applied to some signatory states of all multilateral agreements becoming more frequent. The main aim of this research paper is to analytically examine the effectiveness of the sanctions on the Russian economy using the asymmetric EGARCH approach. Hence, this research paper investigates the volatility of the Russian ruble against the US dollar and Euro. Furthermore, this research paper examines the accuracy of the EGARCH approach by also investigating the volatility of the Euro against the US dollar. Although the literature on the volatility of RUB/USD and RUB/EUR exists, it neglects to recognize the risk associated with a stronger Russia-China alliance, particularly in these turbulent times. This research paper will contribute to enrich the literature associated with volatility modelling of foreign exchange-rates throughout periods of major economic distress while also raising awareness of the potentially most powerful alliance in the world considering both economic and military aspects.

**Keywords:** turbulent business environment, strategic rivalry, trade sanctions, protectionism, currency volatility.

## CRISES AND UNCERTAINTY, PART OF CONSUMER BEHAVIOR IN 2023

**Alexandru - Mihăiță ICHIM**

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**Abstract.** The unexpected is a part of human life. People never have certainty about what can happen in the future. People live with uncertainty. The unexpected was present in people's life more than ever in the last three years. This has manifested as a global crisis. The crises have led to changes in people's behavior in many ways. Whether we're talking about the COVID-19 pandemic, climate change, the war in Ukraine, the fuel crisis, or the semiconductor crisis, all these crises have contributed significantly to the changes in people's behavior. Viewed from an economic perspective, these facts have influenced consumers to adopt new behaviors. Thus, consumers have been influenced by the crises and their short- and medium-term consequences. But, how can we anticipate the consumer's behavior? People's behavior cannot be anticipated, because people are unpredictable. This article tries to anticipate the harmonized monthly indices of consumer prices for Europe. To do this will use a forecast. The forecast will include these harmonized monthly indices of consumer prices from January 2020 to January 2023. It is important to try to forecast these harmonized monthly indices of consumer prices because we can prevent the consumer's behavior from several crises that are unfolding simultaneously. On the other hand, this forecast can represent a place to start for some protective measures which can be adopted by the authorities, the merchandisers, and consumers.

**Keywords:** Crisis, consumer, behavior, changes, forecast.

## CROSSROADS IN THE EAST: CEE'S APPROACHES TO POST-PANDEMIC GLOBAL POLITICS

**Mihai Christopher Marian RADOVICI**

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**Abstract.** The research overlooks the CEE sphere, through the prism of primordial international relations hypotheses, by understanding that various global dynamisms and their unfolding often leads to a transitory stage between relative uncertainty and negative certainty, addressing the matter by underlining recent negative factors and their connex synergic modulations or exponential growth within both the continental and global arena. In this context we can note how post-humanist and non-human elements, like the COVID-19 pandemic, created a suite of contradictions within international stages, against the background of worsening geopolitical and geostrategic developments. Therefore, the paper examines current socio-economic and political dynamics, drawing parallels to CEE region' shifting role at the present juncture. A trend of pursuing relatively independent courses, for some regional actors, alongside Brussel's umbrella, can be identified as early as mid-2010s, only to become more stringent during the pandemic momentum, representing a pendulum which at times hindered further integratory pathways or the bloc's presence consolidation. Additionally, the state of public opinions or voting patterns, coupled with a tendency to move towards authoritarian capitalism, testifies the demos' perception regarding CEE statehood and EU membership, bridging together high support of communitarian initiatives with a feared sovereignty loss, aspects that translate in fluctuating instrumentalization of foreign policies. The pandemic proved to be a soft reset for these trends, as CEE performed relatively better, all while receiving considerate support from the EU institutions, marking a point in which prerequisites were met for reformatting their positions within the continental network, especially under a more sustainable development of socio-economic integration. Conditionality of support for EU strategies' implementation could prove to be impactful on CEE's trajectories, generating an aftermath similar to the accession period in which groupings spearheaded multilevel interconnectedness, aspects particularly needed in light of the post-pandemic global reordering. Meanwhile, closer binding the CEE and its expanded neighbourhood allows to take further steps towards a closely knitted community and strengthen EU's actorness, agency and autonomy within the world politics and global economy.

**Keywords:** Central and Eastern Europe, COVID-19 pandemic, International Politics, Regional and European Affairs, International Organizations.



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## UNDER THE MICROSCOPE - ANALYZING HOW THE EU'S ENERGY POLICIES HAVE BEEN IMPACTED BY THE EU GREEN DEAL INITIATIVE

**Stefan-Marian DUMITRU**

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**Abstract.** A game changer for the European Union in terms of energy policies, this is how the European Green Deal was presented in 2020, when the initiative was launched. But game changers are more of an expectation, than a rule, from a Union that has historically been sluggish in reaching internal consensus and progressing its policies. In this paper, I will research the magnitude with which change has resulted in the elaboration of policies, due to the EU's Green Deal, whilst also analyzing the impact of the Renewable Energy Directive and its iterations, along the years.

**Keywords:** EU, energy policy, renewables, Green Deal.



## THE ASYMMETRIC IMPACT OF THE ECONOMIC CYCLE ON CONSUMER LOANS' PROBABILITY OF DEFAULT BY DEBTORS' INCOME CATEGORY

**Radu POPA**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** The aftermath of the Global Financial crisis highlighted the dangers of deteriorating economic conditions on households' ability to service their loans. While many papers have focused on the impact of unemployment on the probability of default, only few have access to granular data across the economic cycle. This paper seeks to complement the current literature using granular debtor-level data from the Romanian credit registry from 2009 to 2014, monitoring how changes in household income category impact the probability of default for consumer loans. I show that the impact of unemployment is depends on the state of the economic cycle, as well as the debtor's previous income category. In a similar manner, improvements in probability of default due to income increases are strongest for low-income debtors. Furthermore, I find that the economic recovery in supported the greatest gains in solvency for low-income debtors, while the payment discipline of high-income individuals is impacted to a lesser degree by the economic cycle. Given robust developments in labor market, as well as generous governmental support programs, these results explain current low level of NPLs for consumer loans in the aftermath of COVID crisis and the importance of temporary assistance programs for households.

**Keywords:** household finance, credit risk, financial cycle.

## THE INTERACTION EFFECT OF GROWING CHINESE INFLUENCE ON THE EFFECTIVENESS OF DEVELOPMENT AID ON INCOME INEQUALITY IN HORN OF AFRICA

**Alula GEBREMESKEL**

*Bucharest University of Economic Study, Bucharest, Romania*

**Maruf Mohammad Sirajum MONIR**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Nicoleta-Elena CRISTEA**

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**Abstract.** China's worldwide impact has grown dramatically in recent years. In the past couple of decades, China's engagement in multifaceted socioeconomic activities such as aid and investment has increased steadily, – especially in East Africa. However, the West portrays the relations, particularly the aid component, which consists of a concessional loan with a grant element of 25%, as deleterious, trapping countries in debt and negatively influencing socioeconomic life in a variety of ways in the long run. This research seeks to investigate the climate from the perspective of Income Inequality (IIQ), specifically the moderating effect of Chinese influence on the efficiency of China's Official Development Aid in reducing IIQ in East African countries. The study used unbalanced panel data from eight East African nations over a 20-year span. Interaction effect of growing China's influence power denoted by Formal Bilateral Influence Capacity, is measured using random effect, Moderated Multiple Regression (MMR), and subgroup analysis (FBIC). The findings indicate that Chinese FBIC has a moderating effect which homologize or strengthen the existing inverse causal effect relationships of Chinese ODA and IIQ in Horn of African countries. The result suggests that China's growing influence enhances the effectiveness of Chinese ODA in reducing IIQ.

**Keywords:** income inequality, development assistance, Chinese global influence, interaction effect, major power.

## A STUDY OF THE RELATIONSHIP BETWEEN THE GOLD PRICE, THE EXCHANGE RATE AND THE STOCK MARKET INDEX RETURNS DURING THE CURRENT CRISIS PERIOD USING DCC-GARCH AND VAR DCC-GARCH MODELS. COMPARATIVE ANALYSIS OF ROMANIA AND POLAND

**Maria-Cristina ZWAK-CANTORIU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** The events of recent years had a significant impact on the financial markets and on the economy in general, causing an increase in volatility in many sectors of activity. The purpose of this study is to carry out a comparative analysis that seeks to highlight the evolution trends of volatility in the prices of stock indices in Romania and Poland, as well as two key variables, namely the exchange rate and gold prices. The main objective of this paper is to show that, by using multivariate GARCH econometric models, it is possible to capture the change over time in the variation of the used variables' volatility, especially during the financial crisis. Using these advanced econometric models, the paper illustrates the degree of weak dependence between the price of gold and the returns of the exchange rates due primarily to the exchange rate, which can be influenced by factors, such as inflation, interest rates and the state of the economy, factors that can affect also the price of gold, but, given that the current period is one represented by economic uncertainty, investors are looking for safe assets, such as gold. The originality of this work lies in the case study carried out on two stock market indices from emerging countries in Eastern Europe, as well as their USD exchange rate and the price of gold. The results showed that there is an inverse relationship between the performance of the stock markets of Romania and Poland and the price of gold, given that, during the periods when shares have a tendency to increase, the price of gold can decrease, because investors move towards riskier and more speculative assets. There was also no relatively high correlation between the stock market indices and the exchange rate.

**Keywords:** crisis period, multivariate GARCH, stock index return, gold price, exchange rate.

## INTERNATIONAL TRADE AND CONTAINMENT MEASURES DURING THE COVID-19 CRISIS

**Luminița NICOLESCU**

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**Adrian Tudor TUDORACHE**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Gheorghe HURDUZEU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** The COVID-19 pandemics generated a health crisis but also an economic crisis that manifested globally and determined economic disturbances at various levels. Due to the rapid spread of the COVID-19, governments all over the world took measures to contain the virus and its health related effects. However, the measures also impacted the economic life of countries, companies and individuals. The present paper focuses on the study of the linkage between the containment measures taken by authorities to limit the spread of the virus (measured via the Stringency index) and one important economic activity, the international trade of a country (looked at as both exports and imports). The study considers two European countries, Romania and Poland, respectively and the analysis comprises the main years of the pandemics, 2020 and 2021. The methods employed are descriptive analysis and inferential analysis, via the correlation analysis. The results illustrate that there is a negative association between the measures taken by authorities to diminish the spread of the COVID-19 virus and the international trade of the countries, with stricter measures being linked with decreases in international trade. However, for the overall period 2020-2021, the linkages are weak in both countries and the exports and imports have been influenced differently in Romania as compared to Poland. The paper contributes with more evidence about the influence of the COVID-19 containment measures on the economy.

**Keywords:** COVID-19 crisis, international trade, containment measures, Romania, Poland.

## THE ENERGY CRISIS AND THE MEASURES TAKEN BY THE EUROPEAN UNION TO OVERCOME IT. A QUALITATIVE ANALYSIS

**Livia CEBOTARI**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Ada PAIERELE**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** The energy crisis that broke out in the fall of 2021 quickly became global, affecting several powerful economies around the world. The European Union, which is a major importer of energy resources, has become the epicentre of this crisis, facing both a shortage of natural gas and an explosive increase in fossil fuel prices. The escalation of the military conflict in Ukraine, in February 2022, highlighted the vulnerability of the European Union in the field of energy security, especially emphasizing the dependence of the EU bloc on energy resources imported from Russia. To minimize the negative effects, the EU adopted several measures to manage and counter the energy crisis. In this context, the aim of the article is to critically evaluate the effects of the measures taken by the authorities of the European Union and member states, using the qualitative research method. To achieve the proposed goal, the following objectives were formulated: defining the concept of energy security and presenting its importance for a country; establishing the premises and causes of the energy crisis that began in 2021; determining the differences between the current crisis and other previous energy crises; analysis of the effects of the energy crisis on various branches of the economy. This paper is the result of the study of specialized literature on the topic addressed, both official documents of the European Parliament and the European Commission, as well as academic articles and, last but not least, studies published by various prestigious think tanks. In addition, the research is based on the analysis of data published by Eurostat. Following the analysis carried out, it was determined that the current energy crisis highlights the need for a review of the way in which the security of the EU's energy supply is guaranteed. The reality of our days can be an impulse to accelerate the transition from conventional energy resources to renewable ones, or, on the contrary, it can represent a new challenge regarding the power of supplying various sectors of the economy with alternative energy resources.

**Keywords:** Energy crisis, European Union, Russian Federation.

## BUSINESS INTERNATIONALIZATION AND THE NEED TO RESILIENCE IN THE STREAM OF GLOBALIZATION: RISKS AND UNPREDICTABLE TRENDS FOR COMPANIES AND BUSINESS

**Anis BENABED**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** This paper presents and investigates the volatility of business internationalization in the stream of globalization in times of risks and unpredictable trends, Globalization and digitalization have made the world a global market where companies can take advantage of to prove their competitiveness, due to the high level of competition in domestic markets, the international economic flow has undergone dynamic changes and challenges in the geographical structure of internationalization. The research question are “Does the stream of Globalization with its risks and trends make business internationalization volatile?” and what are the main risks that economies and business could face?”. The methodology of research focused on literature review and data analysis in qualitative quantitative way. The results showed that, the uncertainties regarding negotiations and international economic relations have an impact on business and companies at the international level. The main focus to balance business resilience in companies according to this analysis should be between rating the impact of disruption or loss and describing risks and they could be mitigated In conclusion, Globalization has a global importance and impact on business and companies that move to the internationalization process, if something happens in any part of the global economic area, it transmits straight away between economies, in times of risks and unpredictable trends companies in general and business in particular need to focus on the way of resilience to survive. Before entering international or foreign markets, companies ought to fully understand their products and the sector in which they intend to expand and operate as well, by drawing carefully a resilience plan to possible risks that may hit their business from time to time.

**Keywords:** globalization, business, business internationalization, volatility, trends.

## THE EUROPEAN BANKING REGULATION FRAMEWORK BETWEEN RISK AND ECONOMIC GROWTH THE EURO AREA VS. THE NON-EURO AREA

**Florin DANESCU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Cati URSU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** Although the theoretical dilemma about the importance of bank financing and its impact on economic growth persists, European banking regulations have become more and more complex, more demanding, and with an increasing impact on financial intermediation and economic growth. At the same time, the European banking market has faced, on the one hand, a level playing field gap compared to the US market and, on the other hand, first and foremost for that matter, with an internal level playing field gap between the „Euro area +” vs. the „Non-Euro area-”. The influencing factors are many: the type of economy, the depth of financial, the governance, and the soundness of state institutions, economic freedom vs. political freedom, the level of general financial education and of entrepreneurial education, the quantity, structure, and quality of the entrepreneurial environment, the funding structure, the proportion between bank lending and financial lending. The analysis of some quantitative, structural, and qualitative ratios identified to represent the components related to volume, price, market risk, operational efficiency, and performance of the European banking sectors has allowed us to deepen the essential aspects that led to these gaps along with the means to a subsequent redirecting towards the intended path. The result of this analysis has revealed that a unique approach for the regulatory treatment between the two areas has opposite effects and does not support the target – the accession of the „Non-Euro area” to the „Euro area +” or the completion of the much coveted and expected banking union that would create most of the prerequisites to solve the level playing field gap between Europe and the US.

**Keywords:** banking regulatory framework, single banking union, capital accumulation, bank financing, financial intermediation.

## GLOBALIZATION AND THE FLUCTUATION OF THE STOCK EXCHANGE IN GLOBAL ECONOMY: CASE AND TENDENCIES

**Anis BENABED**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Mihai CIOBOTEA**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** This paper investigates the impact of Globalization on the fluctuation of the stock exchange in the global economy. Globalization has interconnected and turned different markets and economies into a global economy. Economic globalization is about the global mobility of goods and services, people, technology and capital, it is about the fact of trading blocks and economies, countries and regions become interdependent. The research questions are “Does globalization impact the stock exchange?” and “Is there a fluctuation in the global economy and stock exchange at the global level?” As research method we focused on literature review and data analysis in qualitative quantitative way by focusing on data and correlation of some indexes by studying the interconnection between markets, we chose some representative indexes. For this purpose, we made the assumption that the stock exchanges are representatives for the global economy. The results showed that the Stock Exchange indexes, for different countries, are strongly correlated, and the occurring fluctuations in the advanced economies can be seen in all the indexes in the same time. One main aspect modifying the world economic shape, inducing fluctuations, is the change due to intelligent economy, to the implementation of new technologies and substituting human contribution in industry. The most important game changer is the spread of machine learning, deep learning and AI techniques, in many businesses. In conclusion, due to Globalization, markets and economies are highly connected especially with the incorporation of digitalization processes that help show the transmission of economic trends from between economies faster, the stock exchange is linked to the market system that is impacted by globalization.

**Keywords:** globalization, stock exchange, fluctuation, economy, business, trend.



## FOUR MODELS OF DIGITAL AUTHORITARIAN PRACTICES

**Khaled IMRAN**

*University of Pécs, Pécs, Hungary*

**Abstract.** To consolidate control within and beyond their borders, authoritarian regimes develop novel practices that allow them to apply digital communication technologies, surveillance techniques, Big Data analysis, and digital means of manufacturing public consent and spreading disinformation. When the practices are expanded and replicated beyond the regimes' borders, it is often labelled "exporting digital authoritarianism". In the last decade, China and Russia, with their palpable record of human rights violations, have been repeatedly accused of exporting digital authoritarianism, especially to other hybrid and authoritarian regimes. However, data-based surveillance practices and the export of surveillance software by Western democracies have often been off the radar. Using a qualitative comparative analysis based on secondary resources, this article proposes four models of digital authoritarian practices: Chinese, Russian, Western, and Imported. Despite some overlaps, these four models contain distinctive policies and practices. With its "Sharp Eyes" and "Golden Shield" initiatives that allow monitoring, recording, and analyzing its citizens' real-time offline and online movements, the Chinese model is arguably the most institutionalized, digitally sovereign, and comprehensive. The Russian model, on the other hand, is dependent on tight information control, a strong and flexible legal regime, and low-cost, low-tech practices. In the West, government agencies and tech giants are using legal loopholes to carry out arbitrary data surveillance and extract huge amounts of personal data. Such practice is continuously undermining notions of human rights and legal and institutional capability and, in a way, albeit not to the degree of China and Russia, promoting authoritarianism. The last model, the Imported model, is followed by the smaller authoritarian and hybrid regimes, and naturally, their digital authoritarian practices are diverse. These regimes lack digital sovereignty and therefore depend on other states and companies for surveillance or disinformation campaigns.

**Keywords:** digital authoritarianism, data governance, big data, China, Russia.

## **DYNAMICS OF THE ROMANIAN BUSINESS ENVIRONMENT IN THE CONTEXT OF THE CRISIS GENERATED BY THE WAR IN UKRAINE**

**Nicoleta CRISTACHE**

*Dunarea de Jos University of Galați, Galați, Romania*

**Oana PRICOPOAIA**

*Dunarea de Jos University of Galați, Galați, Romania*

**Sabin MURARIU**

*Dunarea de Jos University of Galați, Galați, Romania*

**Abstract.** The war in Ukraine has generated from the outset profound changes in the structure of business relations both regionally and globally, leading to multiple crises: food, energy, humanitarian and social crises. The aim of the research is to analyse the impact of this war on the dynamics of the Romanian business environment by highlighting vital needs and ways of responding to new challenges and changes in the social and economic sphere. The study was conducted using quantitative research tools and involved data processing using structural equation modeling through SEM-PLS. The study concluded that the multiple crises caused by this war pose a threat to the Romanian business environment and the living standards of the population.

**Keywords:** multiple crises, impact of war, business environment.

## **MINITRACK: NEW CHALLENGES FOR A SUSTAINABLE FINANCIAL ECOSYSTEM**

### **Chairs:**

- **Emilia Mioara CÂMPEANU, Bucharest University of Economic Studies, Romania**
- **Aneta HINTOŠOVÁ BOBENIČ, University of Economics in Bratislava, Slovakia**

Under the auspices of the sustainable development goals, the current challenges faced by governments and economic agents require greater attention to financial stability and sustainable finances. Therefore, relying on data and scientific research results, we can better see the world today through the eyes of the future. Worldwide actions ‘are not good today, if yesterday did not think of tomorrow.’ Innovations and new forms of crisis manifestation impose the need to adapt while providing services and products capable of fulfilling the society requirements while maintaining high performance and low risks. It will lead to thinking out of the box especially in the finance domain with strong competition performances driven.

*“Omul își uită nevoile lui vechi pentru a simți lipsuri noi”/ “People forget their old needs to feel new shortcomings.”*

*(Grigore Moisil)*

The functions, priorities, challenges, and capabilities of finance are driven by assessing financial stability and sustainable finance. These impose considering traditional financial aspects and adapting to new context with forward-looking approaches. Continuous improvement and innovation in a competitive environment are the remedy of a balanced attention to critical areas of business and governments measures with a more oriented focus to human perspective, environmental, social and governance issues. The broad changes induced by technologies and digitization require new approaches to finance, whether we refer to individuals, organizations, and governments. Therefore, the academic community and scientific research can make genuine contributions to financial stability and sustainable finance.

The main topics covered by the call for papers are focused on sustainable finance with connection in the following area:

- Risks and financial services
- Banking
- Capital markets
- Asset management
- Insurance
- Corporate finance
- Sustainable well-being
- Fiscal sustainability
- Public policies
- Taxation



**Emilia Mioara CÂMPEANU** studied at the Faculty of Finance and Banking at the Bucharest University of Economic Studies and is Professor with expertise on public finance, fiscal policy, government budgets and public debt. Also, she is vice-dean of the Faculty of Finance and Banking with responsibilities for scientific research, development and innovation. Also, she has experience as principal investigator and member of research project (national and international) and a vast publishing activity

materialized through books and published works.

**Aneta HINTOŠOVÁ BOBENIČ** is an associate professor in the field of business economics and management and currently works at the University of Economics in Bratislava, Faculty of Business Economy with seat in Košice, Slovakia. She holds master degrees in business economics and management, as well as in law and PhD. in sectoral and intersectoral economics. Her pedagogical and research activities are mainly focused on international business, strategic management, payment systems and related aspects. During her academic career, she held the position of vice-dean for international affairs, as well as vice-dean for science and doctoral studies. She has completed many lecture stays abroad, at several European universities and in Japan, as well as a research stay in the U.S. under the Fulbright Scholarship Program. She regularly publishes the results of her research in renowned domestic and especially international journals as well as presents them at international conferences. Her practical experiences lie mainly in performing consulting activities, especially for foreign companies allocating their investments in Slovakia.



## STUDENT ENGAGEMENT AND ACADEMIC PERFORMANCE IN PANDEMIC-DRIVEN ONLINE TEACHING: AN EXPLORATORY AND MACHINE LEARNING APPROACH

**Emilia Mioara CÂMPEANU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Iustina Alina BOITAN**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Dan Gabriel ANGHEL**

*Bucharest University of Economic Studies; Institute for Economic Forecasting,  
Romanian Academy, Bucharest, Romania*

**Abstract.** Fostering student engagement to acquire knowledge and achieve academic performance needs to understand how students engage in learning and its influence on academic achievement. This provides valuable information that helps improve learning experiences and outcomes. In particular, our paper follows three complementary research objectives: (1) Defining a comprehensive list of student engagement components (dimensions) and conducting a questionnaire analysis to find out how students resonate with the various types of engagement in the context of the switch to online education due to the pandemic occurrence; (2) Investigate the statistical relationship between the various types of student engagement and the academic performance of the respondents to uncover those components that are associated with obtaining high academic performance; (3) Identifying the level of importance or relevance exhibited by each dimension of engagement in relation to academic performance. The paper relies on a mixed methods approach by expanding the traditional dimensions of student engagement and employing a machine learning framework to identify which specific dimension of student engagement exhibits the main impact on student academic achievement. The findings reveal that the most relevant dimensions of student engagement, during remote education, that contribute the most to outcomes are represented by the behavioural, social, cognitive, and emotional engagement dimensions. Furthermore, the switch to online education appears to have inverted the positive relationship between social and cognitive engagement and academic achievement. Despite the challenges, the student's interest in class participation and homework completion was stimulated, and they managed to adapt without difficulty to study independently.

**Keywords:** student engagement, academic achievement, remote education, linear regression, machine learning.

## TRENDS IN THE DEVELOPMENT OF THE PAYMENT SERVICES MARKET: A CASE OF SLOVAKIA

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*University of Economics in Bratislava, Košice, Slovakia*

**Glória BÓDY**

*University of Economics in Bratislava, Košice, Slovakia*

**Abstract.** The current payment services markets face significant challenges reflecting changes in the global business environment. These changes induced also important modifications of the relevant legislation regulating the functioning of the payment services markets. One of its goals, besides strengthening the security of payment services, is to make especially electronic payments available to everyone. These efforts are accompanied by application of innovative payment technologies as well as expansion of the activities of non-bank payment service providers. The aim of the present paper is to identify the most prevalent trends in the recent development of the payment services market. In particular, we look at the aspects of digitization and structural aspects of payments and payment services market. The qualitative analysis of these trends is supplemented by available data for the period of 2017-2021 demonstrated on an example of Slovakia, which has been a member of the eurozone since 2009. Thus, the overall look at the European payment services market with the implications for its future development is provided as well.

**Keywords:** payment services market, digitization, electronic payments, Slovakia.

## CORRELATION BETWEEN DESI AND LABOR FORCE PRODUCTIVITY: A CASE STUDY ON ROMANIA

**Paula LAZĂR**

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**Maria-Oana FILIPESCU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** A new type of economy has been emerging throughout worldwide economies even before the COVID-19 pandemic but more so afterwards. “Digital economy” is somewhat of a new concept but the impact it holds is massive. The Digital Economy and Social Index (DESI) is a measure of the digital progress registered in European member states and it helps counties reinforce national policies to develop key digital areas. In a fast-forward world where digitalization has eliminated all types of borders and production factors can move freely, the labor force is continually adjusting to the technological challenges brought by the new status-quo. The structure of the labor force is constantly changing and that might impact its productivity, more so under the impact of digitalization. In this context, our paper investigates whether there is a correlation between DESI and the labor force productivity at national level in order to emphasize the need of a digitally transformed workforce. The data has been collected for the period 2014-2021 from the European database (Eurostat) and from country reports on DESI. Employing both a qualitative and quantitative analysis, the article will showcase the importance of accelerating the digital transformation of the work force, i.e. increasing workers’ knowledge and digital skills. The results of the study can be used by both academics and policymakers in their future research activities and decision making related to labor force digitalization.

**Keywords:** digitalization, digital skills, labor force.

## COMPARING ENERGY EFFICIENCY AND RENEWABLE ENERGY IN THE EU: A CLIMATE CHANGE-ECONOMIC ANALYSIS

**Andra Nicoleta MECU**

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**Florentina CHIȚU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Georgiana-Ionela MARIN**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Gheorghe HURDUZEU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** The European Union has set ambitious targets for both energy efficiency and renewable energy use as part of its strategy to combat climate change. This paper presents a comparative analysis of the effects that the achievement of these objectives have on climate change (greenhouse gas emissions) and economic growth in the EU states. The scientific literature on the topic suggests that energy optimization and green energy are both critical factors in mitigating climate change and promoting sustainable economic development. While the first concept measures the reduction of energy consumption and the reduction of emissions, the second increases the share of energy production from non-fossil fuels and creates new jobs in this sector. However, there is a lack of research that compares the relative effectiveness of these two approaches in achieving these goals. By conducting a regression analysis, we aim to identify and evaluate the impact of energy efficiency and renewable energy use on greenhouse gas emissions and economic indicators in the EU member states. The main expected results can provide valuable insights on the impact that increasing energy efficiency and the degree of use of renewable energy can have on climate change on the one hand and sustainable economic growth on the other hand.

**Keywords:** climate change, renewable energy, economic growth, energy efficiency.



## PROSPECTS FOR JOINING THE EURO AREA: NEW EVIDENCE THROUGH THE LENS OF THE UNCOVERED INTEREST PARITY APPROACH

**Cosmin-Octavian CEPOI**

*“Victor Slăvescu” Financial and Monetary Research Centre, Bucharest, Romania*

**Iustina BOITAN**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Ionela COSTICĂ**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** The paper investigates the prospects of five European candidate countries for the euro area accession in the light of the uncovered interest rate parity (UIP) theory. Testing the UIP validity is relevant for policymakers since EURO adoption requires exchange-rate stability. Using monthly data from May 2002 to December 2022, we provide country-level empirical evidence on the effect of interest rate differentials on the expected exchange rate change. The econometric analysis employs a threshold regression approach by controlling for both the global and country-specific financial stress as threshold variables. UIP appears to hold for only one country (Romania) if considering global financial stress as threshold, and for two countries (Czech Republic and Sweden) if employing Country Level of Financial Stress Index as threshold.

**Keywords:** uncovered interest rate parity, financial stress, EURO adoption, threshold regression.

## WHAT DO CAPITAL MARKETS PREFER: LEFT OR RIGHT?

Răzvan UIFĂLEAN

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract** The aim of this paper is to examine the impact of government political orientation on capital market performance on the European Union stock markets. We investigate whether capital markets have a preference for the left-wing parties over the right-wing or vice versa. Within the study, 2 data panel models with fixed and random effects have been implemented (one multivariate and one single variate) with an additional dynamic panel model using the Arellano- Bover estimator on an annual dataset. We used 3 different data panels, in order to highlight any significance or correlation that might have otherwise been lost in case the model would have been run only on one group of countries. The data spanned from 1995 to 2020 and the panels are: the European Union, the Central and Eastern Europe countries and the Advanced Economies in Europe. Several regressions have been employed using political, financial, and economic variables to test the main hypothesis, namely if the financial markets reacts to the orientation of the government in place. We found an overall significant influence of government's political partisanship on market returns in the case of the European Union and in the case of countries included in the CEE classification, for most of the performed models. The markets in these countries do have a preference for left-wing regimes with a difference in the market performance which varies in between 4.6% to 8.4%, depending on the econometric model of reference. However, for Advanced Economies there was no robust evidence to sustain the hypothesis. Furthermore, other variables such as GDP per capita, Market Capitalization and Financial Crisis turned out to be statistically relevant. This paper's contribution to the academic literature consists of a larger scrutinized time period as well as new divisions of countries which had not been analyzed, in tandem, before.

**Keywords:** Stock Market Returns, Political Partisanship, Multivariate and Dynamic Econometric models, European Union.

## A GLOBAL INNOVATIVE GREEN GOVERNANCE PERSPECTIVE TO FINANCIAL ECO-EFFICIENCY DIMENSIONS

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**Aliona BÎRCĂ**

*Academy of Economic Studies of Moldova, Chişinău, Republic of Moldova*

**Abstract.** Users of financial reports need today more often a set of new data to be able to assess the efficiency of economic operations and take the most adequate decisions. In this context, the content and structure of such reports are being adapted to new lines in sustainable development, adjusted to global warming, post-COVID-19 realities and re-orientations on the energy markets. This study aims to identify the new dimensions of financial eco-efficiency from the perspective of the influence exercised by the innovative green governance. For this purpose, the authors identified the factors with the highest influence on financial co-efficiency assessment. The research methodology combines quantitative data processing methods and content analysis for specific data collection. The study sample comprised the annual reports for the years 2020 and 2022 of the 50 leading companies in the world. These reports were directly extracted from the web pages of the companies included in the sample, broken down by geographical region, the sample also containing the companies listed in the main part of the Bucharest Stock Exchange. The results showed a significant impact of financial efficiency on innovative green governance as expressed by the indicators of liquidity, solvency, return and financial balance. As independent variables, environmental and social performance through the prism of the Environmental and Social Management System components have been researched

**Keywords:** financial eco-efficiency, corporate green innovation, environmental and financial performance, climate change and sustainability reporting, environmental and social management system.

## THE IMPACT OF DIGITALIZATION AND CYBER RISKS ON THE BANKING SECTOR

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*Bucharest University of Economic Studies, Bucharest, Romania*

**Cătălina-Ioana TOADER**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** The banking sector has been permanently changed by digitalization, which transformed banks in a more efficient, cost saving and customer friendly organizations. But this process of transformation and evolution has brought a new threat to the attention of the risk officers, namely the cyber risks, which materialize through data breaches, phishing attacks or malware. In order to mitigate the consequences, which can be severe, ranging from financial losses to reputational damage and loss of customer trust, it is essential that the banking sector has in place effective cyber risk management. This paper analyzes the relationship between digitalization and cyber threats in the banking industry, presents the challenges of managing these risks and provides recommendations for banks to improve their risk management practices. The results suggest that banks should have in place integrated cyber risk management policies, with strategic pillars such as regular risk assessments, employee training, and the implementation of the latest security technologies.

**Keywords:** risk management, cyber risks, digitalization, banks.

## THE CHALLENGES BROUGHT BY CLIMATE CHANGES ON THE STABILITY OF THE FINANCIAL SYSTEM; THE GREEN TRANSITION

**Claudia Emanuela CONSTANTINESCU**

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**Bianca-Florentina NISTOROIU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** Climate change and environmental degradation are the defining global challenges of our time. Combating climate change is imperative for the future of humanity. This study looks at environmental regulations that need to be complemented with a sustainable finance framework to direct funds to investments able to reduce exposure to these climate risks. The study presents briefly the main trends of the capital market and the strengthening of the supervision of the sector by increasing the capacity to react to the rapid evolution of the market. Analysing the financing of investments that have a positive impact on the environment and society in general. Therefore, the article will propose some solutions that could be considered for achieving the objectives of sustainable development and combating climate change. The research concludes that only strategic planning can lead to sustainable development in combating climate change in Romania.

**Keywords:** climate, financial system, challenges, change, strategic planning.

## WHAT ROLE DOES SUSTAINABLE FINANCE PLAY IN ACHIEVING SUSTAINABLE DEVELOPMENT GOALS?

**Wafaa SHABBAN**

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**Abstract.** Moving to a circular economy with low carbon emissions is the main recommendation for saving our planet. The most influential call to action for ending poverty and saving the planet had been adopted by United Nations in 2015, known as Sustainable Development Goals (SDGs). Sustainable finance represented one of the most notable trends in the past few years, shifting from caring about achieving short-term profit to creating long-term value. It needs more effort to manage all resources toward achieving sustainable outcomes by taking into account environmental, social, and governance aspects when making investment decisions. The main purpose of the study is to analyze the role of sustainable finance in achieving Sustainable Development Goals by providing an overview of the diverse acceptations, in broader or narrower scope, as retrieved by the scientific literature, financial intermediaries, and international bodies in the field of sustainable finance. The paper comprehensively synthesizes the taxonomy of sustainable finance activities by outlining their dynamic, continuously evolving nature. It is examined, through in-depth desk research, the potential role sustainable finance may play in achieving Sustainable Development Goals and climate neutrality, in order to answer the main research question. Using finance as a tool to achieve social, economic, or environmental sustainability is an attractive issue for many researchers, but most of the studies focused only on studying the effect of sustainable finance on one of the Sustainable Development Goals. Consequently, the added value of this paper is of a theoretical and conceptual nature. The results suggest that the main role of sustainable finance is to support moving to a sustainable economy, which further contributes to the achievement of SDGs by acting as an effective tool in this transition to a green economy and promoting development in renewable and clean energy, while at the same time catalyzing social and economic sustainability.

**Keywords:** sustainable finance, climate finance, impact finance, green finance, sustainable development goals.

## **MINITRACK: NEW GEOPOLITICAL PERSPECTIVES AND TECHNOLOGICAL CHALLENGES FOR SUSTAINABLE MARKETING**

### **Chairs:**

- **Ionel DUMITRU, Bucharest University of Economic Studies, Romania**
- **Georgiana GRIGORE, University of Leicester, United Kingdom**

This minitrack aims to focus on the critical issues and innovative strategies reshaping the marketing landscape in the light of changing international circumstances and technological advancements. The rise of new technologies, coupled with geopolitical shifts, is propelling a significant transition towards sustainable marketing practices.

Given that we are moving towards an era marked by geopolitical uncertainties and technological disruptions, it is essential for businesses to navigate these shifts effectively. The role of technology in bridging the gap between conventional marketing practices and sustainable models has become more significant than ever before. The digitalization of business and marketing operations, especially against the backdrop of the COVID-19 pandemic, has shown the potential to shape sustainable marketing practices.

The key topics that this panel seeks to address include:

- Geopolitical dynamics and their impact on marketing strategies
- Sustainable marketing practices in a technology-driven business environment
- Digital transformations in marketing and their role in sustainability
- Employee and stakeholder engagement in sustainable marketing practices
- Experiences and challenges in integrating sustainability in marketing strategies
- The role of data analytics in driving sustainable marketing
- Impact of technological advancements on consumer behavior and marketing practices
- The changing international environment and its challenges for sustainable marketing



**Ionel DUMITRU** is Professor of International Marketing and Strategic Marketing at Marketing Department and vice-dean in charge of scientific research and international relations of Marketing Faculty, Bucharest University of Economic Studies. He is member of the University Senate of the Bucharest University of Economic Studies, the academic governance commission. Conference chair at Emerging Trends in Marketing and Management International Conference Bucharest, Romania. He is

reviewer at Amfiteatru Economic Journal, Journal of Emerging Trends in Marketing and Management and International Conference on Marketing and Business Development. He is project manager of the research project “Partnerships for Competitiveness for the Transfer of Knowledge through the Development of Innovative Computational Models for the Growth and Sustainability of the Romanian Business Sector” (ASECOMP) co-financed by the European Development Fund Regional, through the Competitiveness Operational Program, Project ID P\_40\_382, having a 5-year duration.

**Georgiana GRIGORE** is a Senior Lecturer (Associate Professor) at University of Leicester in the United Kingdom and lead for the Consumption, Markets and Society research group. Her areas of interest includes marketing and corporate social responsibility (CSR) concepts and practices, changes that result from digital media.





## AI AND NEW FORMS OF MARKET INTERACTION TO ENHANCE CUSTOMER EXPERIENCE – A MANAGEMENT PERSPECTIVE

**Ioana Cecilia POPESCU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Irina Bogdana PUGNA**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Martin HENSON**

*University of Essex, Essex, United Kingdom*

**Abstract.** Artificial intelligence (AI) is currently the technological disruptor with the most critical impact in business, and with a great potential in marketing. AI-based solutions are radically transforming marketing environments and companies' customer interaction, with short-term opportunities, but with long-term challenges from management perspective. In this paper, we explore marketing managers' attitudes towards AI marketing channels, the potential impact of AI on customer interaction, and the challenges that impact marketing managers' ability to use AI to enhance customer experience. In addressing these issues, we adopt an exploratory interpretive approach. Primary data were collected by semi-structured interviews with 12 senior managers from different industries and companies, having key-roles in their organisations' marketing structures or related to marketing communications and customer interaction structures. These revealed cognitive and behavioural challenges, involving an accurate understanding of the technical possibilities, managing organizational capacities and competencies, and leading coherent organizational change. Our main recommendations, with practical implications are: (1) Companies need to take proactive steps to become learning organizations, ensuring that they are alert to all relevant possibilities and potential; (2) Businesses need to develop dedicated strategies, including a senior leadership role to ensure the agenda is properly represented and evaluated against competing priorities; dedicated teams for studying, innovating, and implementing new interaction channels; focused and ambitious financial commitment; strategic collaborations with entrepreneurs and relevant start-up companies; mechanisms for garnering feedback from customers; developing appropriate internal change management strategies; and establishing meaningful key performance indicators to measure achievements; (3) Strategies need to be integrated within a self-conscious organizational culture that sets an overall rate of change and which understands that these radical changes warrant patience in terms of results, building appropriate institutional resilience, with proper attention to cultural issues and business ethics.

**Keywords:** artificial intelligence, management attitudes, ai-based marketing channels, customer interaction, customer experience.

## EU TAXONOMY AS A GAME-CHANGING IN SUSTAINABILITY

**Magdalena CIOBANU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Alin STANCU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** The focus of this paper is to understand how firms are responding to the EU taxonomy; find out what strategies they have in place; explore relationships between company responses to certain aspects of the market and with various stakeholders. The importance of the EU taxonomy is given by its role in helping the implementation of the European Green Deal by creating a green classification system, establishing a list of environmentally sustainable economic activities. It is a transparency tool that introduces mandatory disclosure obligations in relation to three indicators: capital expenditures, operation expenditures, and turnover. This mandatory disclosure is applicable to financial institutions that offer financial products on the European market and to all large companies with more than 500 employees. According to the European Commission, this reporting obligation covers 11,700 large companies and groups across the EU. The major added value of this material is given by the novelty of the topic and its implication in the medium- and long-term in relation to a sustainable marketing strategy of the companies. Another added value is to understand how businesses react to the EU taxonomy in terms of methodology for publicly disclosing the KPIs.

**Keywords:** sustainable marketing, EU Taxonomy, stakeholder response, Green Deal.

## CUSTOMER SELECTION CRITERIA USING EXISTING CAR SALES DATABASES

**Sabin-Alexandru BĂBEANU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** The main objective of the paper is to identify a general framework of the promotion of smart car products, the customer's requirements, and the market trend, when the way of promotion changes. In this environment, it is necessary to use artificial intelligence to consult platforms / databases, from which the profile of each customer can be extracted and the market requirement can be generalized. The specialized literature provides, in this sense, a series of market innovations, but the technological innovations required by customers, by age groups and more, the adaptation of promotion to gamification or even metaverses are not specified. As a result of the new market requirements, in a continuous modification, the research will be an empirical one, from which the consumer behavior, globalization and technological innovations required by the client will result. Thus, the analysis of platforms / databases was carried out in order to identify the requirements formulated by the client, as well as the SWOT analysis of product promotion. The limitations of the research are due to the fact that the data collected from the specialized literature is minimal. For this reason, research is also necessary in the environment of profile companies, from which it can be concluded whether they have implemented modern tools to promote intelligent auto products and, moreover, whether they use simulating environments based on artificial intelligence, for the presentation of the products. Promotion in the online environment leads to the use of electronic resources and the need to implement artificial intelligence.

**Keywords:** the customer, the market, marketing innovation tools.

## SUSTAINABLE MARKETING PRACTICES OF GLOBAL BRANDS

Uğur ERDOĞAN

*Selçuk University, Konya, Türkiye*

**Abstract.** Sustainable marketing approach; It can be explained as a way of providing customers with cost-effective, solution-oriented and value-based goods or services that put the customer in the center, adopt the understanding of environmental protection, care about the value judgments of the society. Changing and developing environmental conditions lead businesses to different marketing approaches. In particular, the increase in the awareness of customers and the development of their questioning parties have led to the emergence of a sustainable marketing approach. Global brands do not remain indifferent to this transformation in marketing, and they determine their strategies accordingly. This study examines the concept of sustainability, sustainable development and sustainable consumption and draws a general framework about the concept of sustainable marketing. Within the scope of the study, sustainable marketing practices of global brands were examined. Global brands that take into account the changing customer expectations with the effect of globalization and contribute to sustainability will continue to maintain their place in the global market.

**Keywords:** sustainable marketing, global marketing, globalization.

## DIGITAL TRANSFORMATION IN MARKETING: EXAMINING COMPANIES' EFFORTS TO CREATE BRAND IMAGE WITH INNOVATIVE DEVELOPMENTS

**Baris CORUMLU**

*Selcuk University, Konya, Türkiye*

**Abstract.** This study aims to examine and evaluate the technological marketing strategies applied in the perspective of digital marketing, which has become the focus of attention of brands, consumers, investors and the media, from a scientific and academic point of view. In this context, in a rapidly increasing competitive environment, it is necessary for businesses to develop new marketing strategies in order to be the center of attention of consumers and sell their products. As consumers spend more time on the internet, changes are observed in consumer purchasing behavior. Therefore, innovative approaches brought by the internet must be taken into account when determining new marketing strategies for companies. Considering the developments in technology, the effects and importance of technologies such as augmented reality, virtual reality, NFT applications, metaverse on the activities of businesses are increasing. In this study, the reasons why digital marketing applications are preferred in terms of brands, how these applications follow in the process and the efforts of brands to strengthen their image within the scope of these activities are examined. The data related to the research were collected with the "document review" and "literature review" methods, which are qualitative research methods. It is expected that the study will be a source for research and studies on digital marketing activities to be carried out in the fields of production, informatics, marketing and art disciplines.

**Keywords:** digital marketing, metaverse marketing, innovation.

## **MINITRACK: RESILIENT AGRI-FOOD AND ENVIRONMENTAL SYSTEMS FOR SUSTAINABLE DEVELOPMENT AND AGILE ENTREPRENEURSHIP**

### **Chairs:**

- **Simona Roxana PĂȚĂRLĂGEANU, Bucharest University of Economic Studies, Romania**
- **Mariarosaria LOMBARDI, University of Foggia, Italy**

The agri-food and environmental systems have shown the signs of the transition to a more sustainable model, yet the effects of the COVID-19 pandemic have proved that the path to achieving the goals of the 2030 Agenda for Sustainable Development is paved with resilient entrepreneurial intentions that strive to enable sustainability at all business levels, as well as efficient management during times of crisis. The objective of this Mini Track is to explore multidimensional solutions to global challenges faced by the actors involved in the agri-food and environmental sectors. Moreover, this Mini Track aims to bring together academic scientists, researchers, decision makers, entrepreneurs and representatives of the business environment with the goal of collaborating towards identifying more resilient and agile managerial approaches specific to the agri-food and environmental systems. Papers related to all three dimensions of sustainable development (economic, environmental, and social) are highly welcome.

The main topics covered by the hereby call for papers are related to:

- Sustainability reporting practices
- International and local developments in sustainability reporting requirements
- Controlling for sustainability
- Professional skills of future accountants working for sustainable organizations
- Technology driven changes in the traditional accounting system for sustainable development
- Accounting education for SDGs

**Simona Roxana PĂTĂRLĂGEANU**, Associate Professor, PhD, studied Agrifood and Environmental Economics (EAM) at the Bucharest University of Economic Studies. Vice-dean of the Faculty Agrifood and Environmental Economics, her research is situated in the field of Eco and Agrifood Economics and Decision Making.



**Mariarosaria LOMBARDI** has been assistant professor in the scientific area of Commodity Sciences at the Department of Economics, University of Foggia (Italy) Since 2006. Graduate in Economics, she took Ph.D. in Commodity Sciences at the University of Bari (Italy). She mainly deals with economic and environmental aspects of innovations applied to production processes. Since 2015, she has been member of the rural hub Vazapp, that is applying social innovation in agriculture. In 2019, she became “climate shaper” as certificated by FAO and Future Food Institute.

## EXPLORING THE USE OF FINANCIAL INDICATORS ON FINANCIAL DECISION IN AGRICULTURAL COMPANIES

**Irina Daniela CISMASU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Monica Aureliana PETCU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Dumitru Florin MOISE**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Adrian ANICA-POPA**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** As the agri-business sector needs higher level of financing compared with other business areas due to the longer life cycle of the products, the farmers must consider more options to assure the financing sources for investments. These options are related to long term loans for land and machines purchasing, leasing contracts for machines purchasing, own sources, grant funds or longer payment terms in relation with the suppliers. Based on the data from 201 Romanian farmers collected through a questionnaire method, we examine if financial indicators as debt ratio, liquidity ratio, return of assets and return of capital significantly affect the behavior of the farmers in term of financing solutions. The testing method is one-way ANOVA using SPSS software and the test of homogeneity and robust tests were performed as well. The decisions of getting financing through long-term solutions as loans and leasing or grant funds are affected by the financial position indicators as total debt ratio and liquidity ratio for optimizing the balance sheet position. The one's related to the usage of the own sources are linked with the return of equity. Having enough internal sources, the shareholders prefer to invest their own money. Depending on the return on assets, the farmers may decide to invest using the leasing. Assessing the behavior in term of financing options, this study provides insights for the other stakeholders of these companies which have the goal to participate at the sustainable development of the agri-business sector.

**Keywords:** debt ratio, liquidity ratio, return on assets, return on capital, financing decision.



## EXPLORING THE INTERACTION BETWEEN ENERGY USE IN AGRICULTURE AND FOOD PRODUCTION

**Elena-Mădălina DEACONU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Andreea APETREI**

*Catholic University of Valencia, Valencia, Spain*

**Gyöngyi TORÓ**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** This study aimed to explore the academic community's interest in the relationship between energy usage and food production through bibliometric analysis. Using the Web of Science database, 798 research articles published between 2000 and 2023 were analyzed. The results of the analysis showed an increase in interest in this topic, with the United States, India, Germany, England, and Italy having the highest number of studies in this field. The research categories most commonly used for such studies were Environmental Sciences (22.431%), Energy Fuels (20.551%), Green Sustainable Science Technology (18.045%), Food Science Technology (12.406%), and Biotechnology Applied Microbiology (10.652%). While these results suggest there has been an increased interest in this field, the data also revealed that the participation of countries from the global south is modest. Consequently, this study emphasizes the need for further investigation into the development of clean energy technology and legislation that promotes the sustainability of food production.

**Keywords:** energy consumption, food production, agriculture, renewable energy, sustainable development, climate change, bioenergy.

## MANAGEMENT OF MUNICIPAL WASTE IN ROMANIA AND HUNGARY IN THE EU CONTEXT

**Bianca Eugenia LEOVEANU-SOARE**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Ina NIMERENCO**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** At the EU level, practices aimed at changing municipal waste management methods towards sustainable management systems are regulated. In the waste hierarchy, the first option is represented by the prevention of waste generation, but the emphasis is also on recycling and energy recovery. The present study analyzes the dynamics of municipal waste management, in the period 2018-2021, in Romania and Hungary in the European Union context. The general results regarding municipal waste management at the level of the two countries, highlighted increases in the values of some indicators in terms of the quantities generated, but these values are below the average recorded in the EU. With regard to the indicators of efficient management of municipal waste, the two states have made efforts, but they are far below the European average, especially regarding the quantities recycled, composted and utilized for energy. In this sense, the low recycling rates in Romania of 11.3%, and in Hungary of 34.9%, in 2021, compared to the European average, which is around 49%, are noted, being far below the target proposed for 2020 by 55%. For this reason, the storage rate is high in both countries, 80% in Romania and 50% in Hungary. Both states must make efforts to increase municipal waste recycling rates and reduce the amounts stored, especially Romania, so as to better put into practice the principles of integrated waste management and meet the objectives assumed upon accession in this regard.

**Keywords:** municipal waste, generation, landfill, recycling rate.



# icESS

## PROSPECTS AND DEVELOPMENTS FOR ORGANIC FARMING IN ROMANIA

**Laura CIOBANU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Raluca-Mihaela DRĂCEA**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Gyöngyi TORÓ**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** One of the objectives set out in the European Green Pact, respectively in the Farm to Fork Strategy and the EU Biodiversity Strategy is that by 2030 25% of the agricultural land should belong to organic farming. This objective implies a higher level of ambition for the development of organic production from the side of Romania as well. In different EU Member States, the ecological surface varies between 0.5% and -25% and considering these baselines, they should have different targets for 2030. The aim of this paper is to assess the level of the development of organic farming in Romania and to capture the main trends, considering the continuation of policies support and funding efforts through Common Agriculture Policy. The methods used are descriptive, comparative and numerical analysis, and data used are from the official website of the Romanian Ministry of Agriculture and Eurostat. The results reveal that in Romania in the last decade the area used for organic agriculture has doubled, more specifically it has increased from 288,261 ha in 2012 to 578,718 ha in 2021 and represents 4.42% of the utilized agricultural area, still below the EU average (9%).

**Keywords:** organic farming, Common Agriculture Policy, organic market, Romania.



# icESS

## THE MARKET OF ORGANIC AGRI-FOOD PRODUCTS IN ROMANIA

**Andreea- Daniela GIUCĂ**

*Bucharest University of Economic Studies, Bucharest, Romania,*

**Monica GAIDARGI**

*Bucharest University of Economic Studies, Bucharest, România*

**Abstract.** An important trend influencing consumer behavior and consumption choices is the trend towards a healthy lifestyle with a balanced diet. Especially among millennials, the demand for ecological products obtained from sustainable production processes has increased significantly, due to the increase in their level of information and purchasing power. The consumption of organic food products is on the rise, the main reason being the assimilation of environmental protection principles. The main purpose of this research is to study the demand and supply of ecological food products based on the analysis of the specialized literature of reports and statistical data.

**Keywords:** organic agri-food products, consumption, Romania.

## INFLUENCE OF FERTILIZERS AND PESTICIDES ON YIELDS – MULTIPLE LINEAR REGRESSION

**Gabriela-Dalila STOICA**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** Agriculture, in all its segments, especially crop production, is directly affected by a multitude of factors, such as the amounts of fertilizers, pesticides, but also by dangerous weather phenomena, and their effects cannot be minimized or ignored. The purpose of the paper is to highlight the evolution of total productions and average productions of the main cereal crops in Romania and to highlight the impact that the use of chemical fertilizers and pesticides has on crop yields. To achieve this goal, a quantitative and qualitative analysis of the indicators provided by national and international databases, such as the National Institute of Statistics and Eurostat, was carried out. In addition, by means of the SPSS software, a multiple linear regression was carried out, where the established dependent variable (cereal yield) was explained in proportion to 60% of the amount of chemical fertilizers used, respectively 35.7% of the amount of pesticides.

**Keywords:** fertilizers, pesticides, production, regression.



# icESS

## **SUSTAINABLE CITIES FOR A SUSTAINABLE FUTURE: INTEGRATING SUSTAINABLE DEVELOPMENT GOALS INTO URBAN PLANNING**

**Maria Cristina STERIE**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Lucia BOTA**

*Valahia University of Târgoviște, Târgoviște, Romania*

**Eduard Alexandru DUMITRU**

*Research Institute for Agricultural Economics and Rural Development, Romania*

**Steliana RODINO**

*Research Institute for Agricultural Economics and Rural Development, Romania*

**Abstract.** This paper presents a detailed bibliometric analysis of the existing literature on the integration of sustainable development objectives in cities. The purpose of this analysis was to identify the trends and evolution of research in this field, as well as to highlight the significant contributions of researchers and institutions in promoting sustainable development in the urban environment. They identified and evaluated relevant articles published in specialized journals and academic databases. Topics covered in these papers include: policies and strategies for sustainable urban development, tools and technologies for measuring sustainable city performance, best practices in urban planning and development, and the impact of urban development on the environment and citizens' quality of life.

**Keywords:** sustainable development, cities, Romania.

## FOOD TRACEABILITY AND ITS TOOLS FOR CUSTOMER SAFETY

**Ilinca STERIU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** Consumers today demand to know the origin of the food they eat. To meet this demand, manufacturers have set up a food traceability system. Food traceability is simply the application of traceability principles to the food chain. In concrete terms, this means allowing professionals to follow foodstuffs and find out about the transformations they have undergone from the farm to the point of sale. It just makes possible to provide consumers with more information about food without modifying the health quality of the food in question, but its implementation by professionals in the agri-food sector and the world of catering contributes to food safety because it makes it possible to proceed with the targeted recall of products in case of risk of contamination. Its implementation is used to identify the risks of food poisoning, to more easily operate withdrawals of food products, protect public health and finally identify the causes of a problem by going up the food chain. It is in this context , the paper seeks to provide some elements for a debate on traceability, an instrument currently in full development aimed at reassuring consumers. These measures are taken within a more global framework of change in agricultural policy, which is evolving from agricultural protectionism to measures more centered on the defense of consumers. It is currently a matter of re-legitimising agricultural policy, strengthening food security, while improving European competitiveness, thanks to the contribution of new information and communication technologies applied to the sector.

**Keywords:** food safety, traceability, agri-food policies, competitiveness.

## ANALYSIS OF THE IMPACT OF THE COMMON AGRICULTURAL POLICY ON THE AGRICULTURAL SECTOR IN ROMANIA: A LINEAR REGRESSION MODEL

**Maria Cristina STERIE**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Eduard Alexandru DUMITRU**

*Research Institute for Agricultural Economics and Rural Development,  
Bucharest, Romania*

**Abstract.** This study analyses the impact of the Common Agricultural Policy (CAP) 2014-2020 on the agricultural sector in Romania using a linear regression model. The data used for the analysis were collected from Eurostat and include key variables such as CAP expenditure, agricultural production, arable land area and GDP. Clearly, the funding that agriculture has received during this programming period has contributed significantly to its development, and it still needs funding to meet the current challenges and to reduce disparities with other EU countries.

**Keywords:** Romania, regression, agriculture.



## **BIBLIOMETRIC ANALYSIS AND LITERATURE REVIEW ON DIGITALIZATION AND GEOPOLITICAL IMPACT OF THE AGRI-FOOD SYSTEM**

**Ana Maria BADEA**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Anamaria HOLOTA**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Dragoş BUJOR**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Andreea Bianca ENE (CONSTANTIN)**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Cristina DRAGOI**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** The phenomenon of globalization does not bypass the agri-food industry, in which companies are under pressure to incorporate new knowledge to improve efficiency, food safety, and sustainability. Digitalization is an essential aspect of this transformation, driving significant progress through the integration of artificial intelligence, robotics, and 5G technology. The aim of this research is to analyze existing studies on the digitalization of the agri-food sector, identify trends, and create an overview of the interest given to the field. The study also addresses the geopolitical influences that stand in the way of the digitalization of the industry. Although digitalization offers many benefits, it also presents several challenges that must be addressed. This study aims to highlight both the advantages and drawbacks of digitalization in the agri-food industry.

**Keywords:** digitalization trends, agro-food industry, leadership.



# icESS

## SUSTAINABILITY REQUIRES CIRCULAR ECONOMY

**Cornelius SECIU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** In this paper I discuss about some possible of circular economy methods in a sustainable process. I am starting with defining the concept of sustainability and circular economy regarding the uses of both concepts in the human's lifestyles. In this context, as methodology I am showing some case studies in which sustainability requires circular economy and if we are able to understand those concepts to show limitations regarding sustainability.

**Keywords:** sustainability, circular economy, lifestyle.

## SUSTAINABILITY REPORTING PRACTICES IN ROMANIA

**Costin STĂNESCU COVASALĂ**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** According to one of the Big Four consultancies, although companies in Romania are not legally required to publish sustainability reporting, the majority of the top 100 enterprises in the country have done so in the past two years (top 100 ranked by annual sales). However, the detailed practices of such reporting are not yet subject to a legally mandated standardised approach. At the same time, sustainability reporting is absent among small companies. In this context, sustainability reporting regulation is under development in the country. Most of the literature on the topic revolves around the Global Reporting Initiative standards, European Union regulations in the field, guidance from the Bucharest Stock Exchange, and reports published by large companies and consultancies. This is a literature review of the emerging sustainability reporting practices in the Romanian corporate sector to date. Also, by observing emerging sustainability reporting practices, this article aims to understand if such sustainability disclosures influence investors' interest in companies. The article addresses those interested in the sustainability reporting practices of big corporates in Romania and the main approaches in this field. The article also aims to offer insights into how smaller companies could also start developing sustainability reporting.

**Keywords:** sustainability, reporting, Romania, regulation.

## THE BIOGAS AS A VARIANT OF THE CURRENT ENERGY CRISIS IN EUROPE AND ROMANIA

**Camelia NEGREA**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** Europe is currently facing a military crisis, a crisis that is beginning to be felt acutely in the consumer's daily shopping basket. The situation is becoming more and more dramatic as energy becomes a "queen on the chessboard". The economies of many countries in Europe have already started to prepare for an eventual energy crisis, and are beginning to look for sustainable alternatives, both in the medium and long term, to meet current demands. Gas is starting to become a "weapon". Moreover, rumours that certain countries are going to stop supplying it, are affecting the collective mentality and implicitly inducing collective panic, leading to chain prices. One of the options I would propose, implicitly targeting Romania, would be to focus on biogas production. At the moment, biogas is not as "popular" as other options with mass production, but I think it could be the key to energy stability at both European and national level. The methodology on which the paper will be based is based on the analysis of case studies and existing data, adapted as much as possible to the current situation in which we find ourselves. The current studies so far have been based on a more comparative analysis, in which the advantages and disadvantages of producing this biogas are considered. However, more than this is needed now, I believe that biogas should be seen as an element of a potential recovery and balance strategy in the European economy. For these reasons, an analysis of this subject is imperative at this moment, taking into account the economic situation at European level, as well as in the case of Romania. I would like the results to reflect a potential direction of action for the governments of the countries affected by this crisis.

**Keywords:** biogas, energy, economic security, challenge.

## CHALLENGES OF ACHIEVING FOOD SECURITY IN COUNTRIES WITH AGRICULTURAL RESOURCES SCARCITY

**Anton Theodor DIMITRIU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Mahmoud TARHINI**

*Philadelphia Private School, Dubai, United Arab Emirates*

**Raluca Andreea ION**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Jonel SUBIC**

*Institute of Agricultural Economics, Belgrade, Serbia*

**Theodor DIMITRIU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Cătălin Gheorghe ZEMELEAGĂ**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Abstract.** Food security is a topic of significant interest, the new approach shifting from people access to sufficient towards safe and nutritious food, emphasizing the structure of the diet and the importance of the nutrients in assuring a healthy life. But malnutrition problems affect people worldwide, in different forms, both undernourishment and overweight and obesity, mostly in countries where agricultural resources, as one of the main source of food, are scarce. Such a country is United Arab Emirate, where people have access to sufficient food, but based on imports, signaling a low level of food self-sufficiency. Moreover, the alarming rate of obesity of 30% raises questions about the structure of the diet and nutrition security. Statistical data referring to food and nutrition security in United Arab Emirate have been analysed and predictions have been made using machine learning algorithms. The results are relevant for underpinning food policy at macroeconomic level, helping decision makers in finding solutions for improving nutrition security and food self-sufficiency.

**Keywords:** food security, obesity, nutrition security, water and resource scarcity, machine learning algorithms.

## BIBLIOMETRIC ANALYSIS OF THE IMPACT OF ESG FACTORS ON FINANCIAL PERFORMANCE

**Loredana-Georgia IVAN**

*University of Craiova, Craiova, Romania*

**Abstract.** The concept of environmental, social, and governance – ESG – has gained a lot of attention in recent decades, focusing on how companies harm or benefit the society. In the light of these changes, strategies had to be redesigned and include the sustainability factor, which calls into question the extent of the impact of ESG factors on the financial performance. Given the upward trend in the number of papers and total citations, the findings indicate that ESG is a developing area in the study of sustainable economics and the literature provides findings that conflict with one another regarding this relationship. In order to analyze publication trends, citation patterns, and keyword mapping, the research used bibliometric analysis by applying the VOSviewer software, highlighting the significance of the tendency for the sustainability effects on business, using data for the research gathered from the online Scopus platform.

**Keywords:** ESG, financial performance, sustainability, bibliometric analysis.

## THE IMPACT OF THE RESULTS INDICATORS ON THE STOCK MARKET PERFORMANCE IN THE CASE OF COMPANIES LISTED ON THE BUCHAREST STOCK EXCHANGE

**Ioan-Alexandru DUMITRESCU**

*University of Craiova, Craiova, Romania*

**Abstract.** The article aims to develop an empirical study to measure the impact brought by the communication of financial results on the stock market performance of companies listed on the Bucharest Stock Exchange. This study identifies the factors that influence share price and market capitalization and calculates to what extent the performance indicators manifest this impact. Over time, the researched theme has been the subject of numerous studies developed on various national capital markets. The respective studies allow an overall knowledge of the factors that can influence stock market performance, but the specifics of each national market do not allow the formulation of general conclusions valid for all cases. The research method used in the elaboration of the study is that of data regression analysis, applied using the SPSS statistical program. The research is developed on the real data reported by 50 companies listed on the Bucharest Stock Exchange, which make up the study sample. The financial data were extracted from the financial reports prepared by the companies, and the stock data from the history of the Bucharest Stock Exchange. The analysis undertaken confirms the link between the independent variables, the results indicators, and the dependent variables, the share price, respectively the stock market capitalization. Thus, the stock market performance is influenced by the results recorded by the companies listed on the Bucharest Stock Exchange. The research paper contributes to outline the general assembly regarding the impact of accounting information on stock price volatility. Also, the study increases the body of knowledge in the economic field, by characterizing the Romanian capital market.

**Keywords:** performance, stock market, results, influence, price.

## POWERING THE POWERLESS: THE IMPACT OF ELECTRIFICATION ON AGRO-FOOD PROCESSING IN GHANA

**Enoch VUKEY**

*University of Ghana, Accra, Ghana*

**Benjamin MUSAH ABU**

*University for Development Studies, Ghana*

**Abstract.** This paper analysed the effect of the use of electricity on agro-food processing in Ghana using the Ghana Living Standards Survey round 7 (GLSS7) collected by the Ghana Statistical Service in 2016/2017. To correct for selectivity bias and endogeneity, the extended probit model was applied (control function approach was applied for robustness) to estimate the determinants of electricity use and agro-food processing on one hand and the treatment effect of the former on the latter on the other hand. Specifically, the issue of endogeneity was addressed using the presence of electricity from national grid as an instrument of electricity use. The findings revealed that factors that have simultaneously significant influence on electricity use and agro-food processing are age of household head, sex of household head, education of household head, industry of employment of head, household ownership of food processor, access to information (i.e., ownership of radio, tv and phone), locality of household, perception of rainfall pattern, extension office in community, value of assets, household living in forest and savannah ecological zones. Further, the findings showed that the use of electricity by households has a positive impact on the probability of engaging in agro-food processing, implying that household electricity use boosts agro-food processing in Ghana. These findings have practical implications for designing policy instruments to promote agro-food processing.

**Keywords:** agro-food processing, electricity use, endogeneity, extended probit, Ghana.



## ETHICAL FRONTIERS: LEADERSHIP PERSPECTIVES IN THE CONTEMPORARY FOOD INDUSTRY

**Dragos BUJOR**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Andreea Bianca ENE (CONSTANTIN)**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Julia Anamaria ŞIŞU**

*Bucharest University of Economic Studies, Bucharest, Romania,*

**Abstract.** The food industry plays a critical role in society's well-being. However, it is also a challenging industry that faces a range of issues such as ethical concerns, food safety, environmental impact, and sustainability issues. Leadership in the food industry has become a critical issue, with the need for leaders to embrace ethical and responsible practices to ensure the industry's sustainability and success. Unlike other industries, the food industry deals with products that are seasonal and perishable, therefore it is difficult to hold inventory through to the conclusion of ethical disputes, which means that the products must be sold quickly to avoid spoilage. The study is founded on a review of the specialized literature and is based on the research question „What are the main emerging ethical concerns in the food industry and how can be managed?”. It is established on the following objectives: identifying and describing the main emerging ethical concerns in the food industry and determining the roles and responsibilities of leadership in addressing these ethical concerns. The authors reviewed the articles related to leadership in food industry and found the multidimensional nature of the food industry's ethical concerns, which include the practices of food production, processing, distribution, and consumption. The research may be limited by factors such as the availability and accessibility of resources, the relevance and generalizability of the results, potential subjectivity, methodological constraints, and the continuous evolution of the food industry. Possible directions for future research in examining emerging ethical concerns in the food industry and the associated leadership roles include conducting in-depth case studies, utilizing both quantitative and qualitative research methodologies, and evaluating the impact of ethical leadership. By embracing ethical leadership, the food industry can address the social and environmental challenges facing the sector and ensure a sustainable future for generations to come.

**Keywords:** Ethical Leadership, Food Industry, Sustainability, Responsible Practices, Social Challenges.

## **MINITRACK: SERVICE LEARNING, CIVIC ENGAGEMENT AND SUSTAINABLE EDUCATION**

### **Chairs:**

- **Magdalena IORDACHE-PLATIS, University of Bucharest, Romania**
- **Dumitru MIRON, Bucharest University of Economic Studies, Romania**
- **Vasileios NTOUROS, National and Kapodistrian University of Athens, Greece**

Higher education institutions have the capacity to meet global challenges in the current global context. Areas, such as health, climate, environment, energy, digitalization, society, crisis have been considered priorities for education, research and social responsibility actions of educational leaders. Societal challenges made all institutions to work together to raise awareness and take action in joint approaches. In this context, higher education institutions, alliances of universities and networks of different stakeholders promoted knowledge, skills and competences together with civic engagement of staff and students towards responsible citizenship and community development. Therefore, sustainability has become a priority for academic leadership and higher education institutions have increased their role in coping with societal challenges, concrete actions being identified at individual, institutional and social level.

“Higher education will be a key actor in meeting the United Nations’ Sustainable Development Goals (SDGs) by 2030. We commit to supporting our higher education institutions in bringing their educational, research and innovation capacities to bear on these fundamental global objectives and to deploying resources to ensure that our higher education systems contribute to the achievement of the SDGs.” (Rome Ministerial Communiqué, November 2020, p. 4, [http://www.ehea.info/Upload/Rome\\_Ministerial\\_Communique.pdf](http://www.ehea.info/Upload/Rome_Ministerial_Communique.pdf))

New innovative pedagogies, such as service learning prove the tremendous higher education capacity of response not only to the global challenges, but also to the stakeholders needs. In other words, addressing the current complexity and dynamism of initiatives based on innovation, entrepreneurial and civic approach

transforms higher education institutions in effective contributors to the achievement of the SDGs.

The main topics covered by the hereby call for papers are related (but not limited) to:

- Service learning and challenges for universities
- SDGs challenges and university practices
- Civic engagement and community impact
- Sustainable university initiatives
- Strategic partnerships for civic universities
- Innovative pedagogies for sustainable education
- Social entrepreneurship and students' initiatives
- Sustainable entrepreneurship and university support
- Strategies for sustainability and educational leaders' efforts
- Transnational interaction and cooperation with stakeholders
- Inclusiveness, innovativeness and interconnection in academic environment



**Magdalena IORDACHE-PLATIS** is full professor at the University of Bucharest with over 30 years of experience, teaching Marketing, Micro and Macroeconomics, vice-rector for Quality Management, Social Responsibility and Relationship with Social Partners. She is an external reviewer on quality assurance for higher education at foreign quality assurance agencies and reviewer at different international journals. She was a member of the Thematic Peer Group of

EUA Teaching & Learning Initiative (2017): Empowering students for their future professional life and civic engagement and mini-track chair at several editions of the European Conference on Management, Leadership and Governance – ACPI (2016, 2017, 2019, 2021). She was the country manager in the Horizon 2020 project called Students Achieving Valuable Energy Savings (SAVES 2) during 2018-2021. Under the CIVIS project (ERASMUS+) she is the institutional coordinator of the Open Lab group aiming to cooperate with different stakeholders in the process of identifying and addressing to local challenges. She is also the institutional representative in the University Industry Innovation

Network (UIIN) and the institutional manager of the KA2 project: “Service-Learning: Intersectoral Collaboration Practices for the development of students’ soft skills and socially engaged universities”. Main areas of interest include: academic leadership and university rankings, civic engagement of academic community, university-industry cooperation, stakeholder commitment and student participation.

**Dumitru MIRON** is a Full Professor at the Department of International Business and Economics. Having a university career of more than 40 years, he has as areas of professional and scientific concern: The Economics of European Union; European Business Environment (holds a Jean Monet course); International Trade and Trade Policies; Entrepreneurship and Business Development; Global Economic Governance. He has published 26 books as the sole author, coordinator or co-author, is author of over 55



scientific papers published in specialized journals in the country and abroad where the main challenges faced by the institutional environment business in Romania, Europe and other regions of the planet. He was project manager for 3 projects, member of implementation teams or expert in 12 other projects funded by the Structural and Cohesion Funds of the European Union. He is one of the members of „Team Europe, Romania, in which he contributes to the promotion of the contingent problems with the European affairs in the Romanian society. Between 2005 and 2008, he served as Secretary of State for Higher Education and European Integration at the Ministry of National Education, where he represented Romania at the Bologna Follow-Up Group. He was vice-Dean of the Faculty of International Business and Economics during the period 1991-2000; vice-rector of the Academy of Economic Studies in Bucharest during the period 2000-2012; Dean of the Faculty of International Business and Economics in 2012-2016 and since 22nd of January 2020 was elected as President of the Bucharest University of Economic Studies Senate..

**Vasileios NTOUROS** is a Researcher at the National and Kapodistrian University of Athens. He holds a MSc in Environmental Physics and his expertise is on Physics of the Built Environment. He has participated in several innovative EU funded projects focusing on the public's engagement with the projects' outputs. Vasileios has also worked for university spin off companies as a visiting researcher seconded from his institution, to disseminate knowledge generated in universities to the wider public and thus



increase the impact university research has to society. Lately, he acts as an advisor, supporting the actions and initiatives of other EU funded projects particularly in driving behavioral changes and civic involvement based on campaigns, training and serious games. In his most recent position, Vasileios is involved in developing sophisticated university training programmes for professionals of the built environment in order for sustainable practices to be followed in the construction industry. Throughout his career, he works for inclusive, innovative and interconnected academic environments and he is a strong supporter of students' initiatives and entrepreneurship. The main research topics he attends are energy efficiency, industrial decarbonization and behavioral change while his research interest expands to sustainable development, circular economy and climate change mitigation strategies.

## STUDENTS' PERCEPTIONS OF THE CHANGES SPECIFIC TO THE VUCA WORLD: ONLINE AND TRADITIONAL TEACHING SYSTEM

**Mihaela MINCIU**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Razvan Catalin DOBREA**

*Bucharest University of Economic Studies, Bucharest, Romania*

**Adina-Liliana PRIOTEASA**

*Bucharest University of Economic Studies, Bucharest, Romania*

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**Abstract.** The business environment in which organizations conduct their activities is constantly changing, so today there is an increasing focus on preparing students for a volatile, uncertain, complex and ambiguous (VUCA) world. The epidemic caused by the SARS-CoV-2 virus was an extreme situation, specific to the VUCA world, in which both teachers and students had to develop new skills to be able to continue their activity, adapting almost every day to a new situation. In such contexts, characterized by challenging situations, it remains the responsibility of higher education institutions to prepare students to manage uncertain and insecure events so that they have the necessary skills and abilities to integrate into the labour market after graduation. Therefore, this article aims to present the preparedness of students for the VUCA environment, an environment marked by rapid change. In this sense, a quantitative research was carried out among students of the psycho-pedagogical module, second year, Teacher Training Department, Bucharest University of Economic Studies, investigating the main factors that determine the appearance of changes in teaching activities, the connection between teaching style and the way of adapting to unexpected situations, as well as the way of combining theoretical information with practical situations. The results obtained reveal that promoting a participatory teaching style during class time, where students are involved in the teaching-learning process, especially in working teams, helps them to accumulate new information more quickly, as they adapt more easily to unexpected events caused by various factors (schedule/programme changes, force majeure situations, etc.). Also, the research indicates that the presence and active participation of students in courses/seminars has a significant influence on the ability to adapt to new contexts, allowing them to develop certain skills that will help them in their future professional activity.

**Keywords:** VUCA, teaching, education, pandemic, COVID-19.

## SERVICE LEARNING – BASED PEDAGOGICAL APPROACH AND STUDENTS’ PERCEPTIONS

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**Abstract.** Universities across Europe have more opportunities to develop teaching and learning strategies in the framework of ERASMUS + projects. Several development directions in innovative pedagogy focus on societal challenges. Service learning has proved as an efficient mechanism to increase the level of civic engagement of students and graduates, where they learn, act, and reflect on the lessons learned from the service to community. Service learning is currently more applied than theoretical, diverse in the way of implementation and the level of the decision-making process. Several guides describe what service learning is, but universities, still do not have a unique and clear way of promoting it. Open labs in universities are context of promoting service learning through projects. Therefore, promoting service learning through teaching has a lot of room for improvement. The objectives of this paper are: to describe the service learning approach; to analyze the opportunities to develop service learning in universities; to analyze the students’ perceptions on the service learning pedagogy. The methodology include: the literature review on service learning, descriptive research on service learning opportunities and research based on a questionnaire to identify the students’ openness towards such a pedagogical approach. Findings show that service learning is a pedagogical methodology which can be integrated into teaching and learning strategy, but needs more time to be tested, accepted, and understood by the community of professors and students.

**Keywords:** service learning, teaching and learning strategy, societal challenges, ERASMUS+, students’ perceptions.

## POLICY GAPS AND FINANCIAL BARRIERS IMPEDING DEEP ENERGY RENOVATIONS IN CYPRUS AND GREECE

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**Abstract.** Deep energy renovations are key for the European Union to turn climate goals into concrete actions and cut carbon emissions by 55% by 2030 as well as to help Europe's economic recovery following the pandemic outbreak. Buildings became society's focal point, structures under severe strain that had to adapt to changes with millions of people using their homes not only as resting places but also as their working spaces. However, in order to significantly reduce carbon emissions by 2030 and achieve a carbon neutral building stock by 2050 a better understanding of the impediments to the application of energy-efficient solutions in buildings is required which in turn will boost deep energy renovations. Within the framework of UPGREAT project, a targeted survey for building experts has been conducted, aiming to identify policy gaps and financial barriers for energy efficiency implementation methods to further boost building renovations in Cyprus and Greece. Five hundred and one (501) blue and white collar professionals of the building sector located in these two countries participated in the survey. According to the findings, more than half of the respondents stated that very few ambitious policy packages have been defined but there's not enough development whereas, in both countries, the main policy gap is the poor national legislative framework for renovation of existing buildings. A mix of high capital costs, poor financial incentives and lack of funds hinder deep energy renovations while based on the results improved financing solutions coupled with consultancy and training are deemed from the majority as necessary tools to step up the pace of building renovations in these two countries indicating the role universities may play in this complex environment.

**Keywords:** buildings, renovations, policy gaps, financial barriers, survey.



## KAHOOT! - A BIBLIOMETRIC ANALYSIS USING WEB OF SCIENCE DATA

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**Abstract.** Gamification has become widely spread in classrooms at all educational levels during the COVID-19 pandemic. Through integrating game elements (like points, chronometers) into teaching, educators have enhanced students' experience both during online as well as in physical classes. Integrating easy to use gamification platforms such as Kahoot! has become increasingly popular during higher education courses as they made learning more fun, engaging, and interactive to the new generation of students becoming a global cultural phenomenon. Also, there is an increasing body of scientific research in this area. The current paper focuses on Kahoot!, one of the most popular gamification platforms. The main objective of the research is to perform a meta-analysis of the scientific papers concerning this gamification platform. In this respect, data from Web of Science was retrieved and a database comprising of all Clarivate research papers on Kahoot topic was used. In order to reveal the main topics covered by the papers, the word cloud technique was used. A secondary objective of the paper is to analyse the type of sentiment that Kahoot is associated with. In this respect, a sentiment analysis is performed. For both the word cloud as well as for the sentiment analysis, a corpus consisting of the abstracts of the papers included in the database was used.

**Keywords:** Kahoot!, gamification, learning.

## EXPLORING THE USEFULNESS OF CHATGPT IN UNDERSTANDING AND PROMOTING THE CONCEPTS OF SUSTAINABILITY: A COMPARATIVE STUDY

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**Abstract.** This study explores the potential benefits of using ChatGPT artificial intelligence chatbot, an advanced natural language processing model, to structure information, improve clarity and understanding, and promote the concepts of sustainability and carbon footprint. While ChatGPT was released to the public in November 2020, the scientific community, and not only, is already exploring its potential, limitations, capabilities, biases, copyright issues, and implications for legislation or EU regulation of the technology in various articles, books, and studies. This study compares ChatGPT responses to questions on sustainability, sustainable development, sustainability measurement and economic viability with randomly selected responses from researchers on the Research Gate platform. It also compares its responses to findings from several studies. The aim is to determine in which situations ChatGPT can be more efficient than traditional research for understanding the concepts of sustainability and carbon footprint, considering its known limitations. The research methodology is qualitative analysis where the results from ChatGPT were validated by cross-referencing with reliable sources, a critical step to ensure the reliability and validity of the findings. The conclusions of this study validate the potential for using ChatGPT to help enhance environmental awareness and sustainability efforts. Its capacity to provide quick, understandable, and accurate responses to various questions related to sustainability or carbon footprint offers a novel and accessible method to be utilized for educating the public and promoting eco-friendly practices. The contribution of the paper is to present the innovative application of ChatGPT and provide insights into the benefits of using AI-driven tools that could potentially transform the way we approach today's complex environmental challenges.

**Keywords:** ChatGPT (Chat Generative Pre-Trained Transformer), sustainability, Carbon footprint, environmental awareness.

## **DISTANCE LEARNING IN A PANDEMIC: UNDERSTANDING STUDENT PERCEPTIONS AND ATTITUDES**

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**Abstract.** During the COVID-19 pandemic, many educational institutions were forced to switch to distance learning to ensure continuity of education while minimizing health risks. Our study on online learning during the pandemic investigates the impact of distance learning on students. The goal is to understand their experiences with online learning, including the benefits and barriers they encountered. In addition, this study examines the online assessment system and students' preference for online presence or physical attendance in courses and seminars. The study was conducted through a survey that took place between April 2022 and March 2023. The results indicate that students had mixed experiences with online study, with some benefits such as flexibility and reduced commute time, but also obstacles such as technical problems and lack of interaction with fellow students. Moreover, the online evaluation system was perceived as efficient, but some students expressed concerns about the reliability of the process. Overall, students showed a preference for online learning over traditional physical attendance, but about a quarter of them showed a preference for a blended learning approach that combines both online and physical attendance in courses and seminars. The findings of this study have implications for educators and policymakers in designing effective online learning environments that meet the diverse needs and preferences of students.

**Keywords:** distance learning, continuity, experience, flexibility, preference.

## BEAUTY AND THE BEASTS: LOOKING AT THE CULTURAL ECONOMY IN TIMES OF CLIMATE CHANGE, PANDEMIC AND WAR

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**Abstract.** Arguably, art is about more than mere beauty (as it includes a touch of ethics besides aesthetics), while culture is about more than mere artistry (adding crafts to arts and other community bonds). The definitional complexity/complicacy of culture(s) fades when civilization (singular) is called in the ideational spectacle. Among other things, cultures deal with the pleasantry of idiosyncratic beauty, whilst civilization is reigned by reasoned utility and practicality. Yet, things get even more intricate when cultures and civilization, or their deep alterations, inter(re)act: for instance, cultural expressions are sensitive to deviations in the forward march of civilization, be they natural hazards (pandemic), manmade horrors (war), or mixed misadventures (climate change). Arts, as distillates of cultures, capture assorted feelings spurring from to disruptive/distorting events, in specific forms, twisting and turning the sense of “beauty” as well: from Jacques-Louis David’s raves of Napoleonic wars to Picasso’s desperation in “Guernica”, from Boccaccio’s “Decameron”, a tale of post-plague resilience, to mountain storm-like thrills in Richard Strauss’s “An Alpine Symphony”, to name only a few notorious examples. The present article will only start from the reality of calamities depicted in arts, pursuing the economic processes germane to the artistic/creative sector in times of societal debacle, detecting qualitative and quantitative transformations in cultural production and consumption, across various artistic domains. The current situation, the one of a multilayer crisis, will be scanned against a brief historical track record. The stake of this study is to get a glimpse on “the state of the arts”, noticing the limitations of economic verdicts in arts fiefdoms, and opening an original research avenue on the robustness, resilience and antifragility of cultural and creative sectors.

**Keywords:** art, cultural, creative sectors, climate change, pandemic, war.

## THE IMPACT OF NEW IT&C TECHNOLOGIES ON ACADEMIC PERFORMANCE: AN ANALYSIS OF HOW WEB 2.0 AND LARGE LANGUAGE MODELS AFFECT THE EDUCATIONAL AND RESEARCH PROCESSES IN UNIVERSITIES

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**Abstract.** Digital technology is an integral part of the research and educational processes in universities. Hybrid education has already overtaken the traditional model used prior to 2020. Virtual classes have evolved into a space where the educational process begun in physical classes can be continued and expanded. The use of digital educational platforms such as Moodle or Google Classroom is on the rise and facilitate the use of assessment automation on an ever-increasing scale. Evaluation methods must be remodeled in such a way that they are less vulnerable to artificial intelligence programs such as ChatGPT. The emergence of large language models, as well as other aspects of technological evolution, are putting increasing pressure on the academic world, forcing it to become significantly more adaptable and resilient. The intense use of the IT&C technologies in the education sector began with the introduction of web 2.0 tools. With the pandemic, societies faced a revolution in the IT&C sector. Websites and applications that make use of user-generated content, the increased network connectivity and enhanced communication channels started becoming tools used in education to enhance the quality of the entire process. The Universities had to adapt then just like they have to now, even though specific challenges may be different. This paper presents a comparison of how Web 2.0 and the evolution of large language models affected the educational and research processes in universities and how everything adapted to their specific reality.

**Keywords:** education, digitalization, large language models.

## SDG4: DIGITIZING EDUCATION, LIFELONG LEARNING, AND SKILLS IN THE CONTEXT OF THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

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**Abstract.** In the context of sustainable development and the SDGs of the 2030 Agenda, quality education remains a priority. Undoubtedly, in the age of technology, digital competences and skills are essential to give everyone equal opportunities to learn and develop, to build sustainable careers linked to the jobs of the future and to become active citizens. In this respect, digitizing education and ensuring the availability of digital infrastructure and equipment became all the more relevant after the outbreak of the COVID-19 pandemic, which changed the international order. However, on average, two out of five Europeans aged between 16 and 74 still lack these skills (Digital Economy and Society Index). Moreover, school drop-out is still a reality, with an EU average of 10%. Therefore, this paper aims to analyse SDG4 on quality education, namely the digitization of education and lifelong learning, as a response to the challenges of the future in the context of Agenda 2030. In order to achieve this objective, a qualitative research through content analysis was conducted based on international writings, publications and articles from various authors, specialists and entities in the field. In addition, the research was further explored by means of a case study on Romania. The results show us that, basically, all forms of learning and jobs in the future will require a certain level of digital skills and competences. Moreover, the constant technological changes demand continuous exponential training and efficient practices in order for Romania / EU to remain economically competitive, politically stable and prosperous. In this respect, reducing social disparities, ensuring access to quality education and securing equality during society's digital transition are of crucial importance.

**Keywords:** sustainable education, digitalization, lifelong learning, skills.

## ASSESSMENT OF GLOBAL BUSINESS LITERACY OF SLOVAK STUDENTS

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**Abstract.** University students, especially those studying business and economics, face the challenges of a global business environment. This applies particularly to students in countries intensively involved in international business, where a significant portion of foreign-owned companies operate. This is the case of Slovakia, which is considered one of the most open European economies with value added created by foreign-controlled companies exceeding 40%. Hence, future graduates who aspire to work in these companies or in the field of international business are expected to be globally literate and we consider it important to prepare them for this future global business career. The present paper, besides brief introduction of the concept of global business literacy is aiming to assess it on a sample of Slovak students, which should ultimately lead to an adjustment of their readiness to operate in the field of international business. For this purpose, the data from the 46-item survey completed by 150 Slovak university students studying business and economics are used. The data are processed using principal component analysis as well as correlation analysis. Our results show that students who completed a course focused on international business and those who traveled or lived outside their home country report significantly higher level of global business literacy in some components. At the same time, we also identified certain gender differences in this regard. Some pedagogical implications are further discussed in the paper.

**Keywords:** global business literacy, international business, Slovakia.

## A DESIGN METHODOLOGY FOR LIFELONG CAREER TRANSITIONS

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**Abstract.** As technology facilitates job automation, individuals feel more motivated to engage in activities which are in alignment with their values and life purpose. This trend accelerates the demand for career education through vocational guidance and mentoring. Well-thought out work design is highly connected with employee well-being, enhancing a positive work attitude and the organizational performance. Not only will workers perform various job tasks in the future, but the duties will be markedly different from what they have studied. Talent mobility and upskilling is currently one of the main focuses of companies that will lead to a migration of the workforce towards more tailored forms of labor. Despite this accelerated transformation of the world of work, the general concept of work design - including task management, operations, relationships, skills, evaluation - is resistant to change. Assessing and evaluating one's skills, as well as planning a strategy on how to develop new competences, is an individual process. This article provides a methodology for designing a personalized lifelong career transition plan, in the context of work automation and the use of digital technologies. Combining theoretical research with qualitative field exploration, and the author's experience in design, a framework for designing bespoke work has been created, to increase the person-job match in any organization and industry. The methodology consists of assessing and reporting of skills, identification of gaps in knowledge, mapping work opportunities, and linking individuals' abilities with the most suitable technology by way of design. The research introduces the concept of job design - a process through which people can create customized work activities they want to perform that enable their talent, foster enjoyment, and motivate them to take personal initiative. The method has been tested through a series of workshops, the conclusions of which shall be presented at the end of this paper.

**Keywords:** job design, skills taxonomy, lifelong learning, upskilling, work automation.



## COMPARATIVE STUDY OF EMPLOYERS' AND STUDENTS' VIEW OF BUSINESS MANAGEMENT SKILLS AND COMPETENCIES

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**Abstract.** This article compares employers' and students' views on the skills and competencies that business administration graduates need to acquire. The opinions of the two categories, mentioned above, regarding the skills and competencies in the business administration field are identified based on a questionnaire administered to the students at the University of Bucharest, Faculty of Business and Administration and based on the opinions expressed by prospective employers. The present study also aims to identify and analyze the main differences between employers' expectations and how students are prepared during their university years. The results of the study can be used to update and improve the curricula of the study programs in the field of business administration, so that they correspond better to the requirements of the labor market.

**Keywords:** skills, competencies, business administration, questionnaires, labour market.

## ACADEMIC EXPERIENCES DURING ERASMUS MOBILITIES: MYTHS AND REALITIES

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**Abstract.** Launched more than 30 years ago, the ERASMUS mobility scheme for students is the cornerstone of European educational initiatives, with more than five million students participating in an exchange abroad. In its already long history, critics of this initiative have often formulated counterarguments based on the quality of the academic experience participants benefit from. These led to the formation of several myths, that include 1). the idea of a different treatment for ERASMUS students, often more lenient, 2). the idea that the ERASMUS experience is more about traveling and partying, 3). the idea that ERASMUS participants have a lower academic performance during their period abroad and return with lower grades. These concepts have also spread among students. Given that they might serve as a deterrent for potential participants considering undertaking a mobility, our objective is to challenge them and see if they are validated or refuted by the experience of former participants. To challenge the validity of these myths, we will explore the academic experience associated with the ERASMUS exchange before, during, and after their mobility. This includes assessing elements related to the decision to become mobile and the destination selection, academic integration, and participation at the host institution, balancing the academic schedule with the other components of the mobility, and finally, perceived returns (for example in terms of disciplinary learning or changing/ clarifying their academic path). We will also assess the narratives of former participants for preconceived ideas related to the academic experience and then analyze if those met by their own experience. To perform this analysis, we will rely on a database of fifty-eight interviews with former ERASMUS participants from 3 countries (Romania, Poland, and Spain) that went to more than 20 destinations. This will also allow us to compare different national perspectives, both concerning the home and the host country.

**Keywords:** ERASMUS mobility, student, host university, experience.

## AN EMPIRICAL RESEARCH ON STUDENTS' PERCEPTIONS REGARDING MARKETING SIMULATIONS

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**Abstract.** In higher education institutions, simulation-based learning is an effective tool for marketing learning. Considering the expanding use of digitalization in recent years, marketing simulations based on computers have become an increasingly important tool for students and for teachers. This paper aims to identify and analyze the advantages and disadvantages of marketing simulations from the students' perceptions. In order to achieve these objectives, the author collected the data through a quantitative research method by using a questionnaire. The results of this study show that the main advantages are: active learning, fast results, learning through play, and making decisions based on results, while the main disadvantages are: coordination with team members, high time consumption for understanding the simulator, the complexity of the simulator, and the difficulty of making decisions. The paper also improves the literature of the field of marketing simulations.

**Keywords:** marketing simulations, students, empirical research.

## PREMISES OF IMPROVING THE QUALITY OF THE DIDACTIC PROCESS IN PRE-UNIVERSITY EDUCATION IN THE CONTEXT OF EDUCATION 4.0

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**Abstract.** Pre-university education is in a dynamic process of continuous transformation, and the impact of the restrictions imposed by the COVID-19 pandemic have generated major transformations. If until then only some teachers were motivated to go through training programs for the development of digital skills, to use applications, platforms and digital resources in teaching, and students occasionally learned using digital resources, during the pandemic they had to adapt to the new context, to quickly adopt and immediately apply in the classroom, with students, digital solutions for both teaching and assessment. After the removal of the restrictions imposed during the pandemic, both teachers and students benefited from the experience gained during the restrictions and continued to use open educational resources, learning platforms, forms for evaluation and feedback, groups for quick communication. A large volume of open educational resources have been created during the pandemic and afterwards, with various facilities, useful for supporting the teaching process and facilitating learning, which are expected to lead to improved school performance. This study presents the results of a research conducted by interviewing 91 teachers from pre-university education in Romania. Its purpose was to identify the most important aspects that positively influence the school performance of students. The determining factors influencing student results were identified as follows: teaching adapted to students' learning pace supported by applications; the involvement of parents, leading teachers to reduce absenteeism; student participation in remedial activities.

**Keywords:** adaptive learning, Improving student performance, continuous training, online learning.

## AR TECHNOLOGY POTENTIAL FOR FACILITATING ACCESS TO ADVANCED EDUCATION FOR STUDENTS WITH ASD

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**Abstract.** Facilitating access to advanced education and research is the mission of a proactive and future-oriented university. The university must also direct its attention to categories with disabilities such as students with ASD (Autism Spectrum Disorders). For this purpose, Augmented Reality (AR) can be used through applications that offer different types of support, as well as learning robotization processes. Students with ASD have diverse intellectual potential and can significantly contribute to scientific progress. It is important that universities recognize the intellectual potential and talent of students with ASD and provide appropriate support and accessibility to develop their skills and achieve their academic and research performance. Throughout this paper, we aimed to point out aspects of critical importance from these categories: conceptual and practical evolution, influencing factors, advantages and difficulties, perspectives but also risks regarding the lack of action in this direction. This work integrates qualitative literature review research with quantitative bibliometric research. The analysis section highlights the extent to which universities provide adaptation and orientation facilities in new spaces, taking into account the difficulty of people with ASD to adjust to unfamiliar spaces. We will present, both based on the literature and from the practice of the field at a global level, the technologies and platforms used in the development of AR applications for orientation in space. The research conclusions have an impact towards at least three directions: 1. Scientific impact, respectively enriching the specialized literature with new perspectives transmitted in a clear, concise and targeted manner; 2. Applicative impact, increasing the potential of implementing innovations in this field; as well as 3. Informative impact on the general public, which contributes to broadening the spectrum of knowledge but also to strengthening the image in the local community of the efforts made by researchers in this revolutionary field of AR.

**Keywords:** AR technology, Autism Spectrum Disorder (ASD), advanced education, students' abilities, AR application.

## THE USE OF LOGISTIC MODELS IN PREDICTING FACTORS INFLUENCING THE MILLENNIALS AND GENERATION Z'S BUYING DECISION OF INNOVATIVE PRODUCTS: EVIDENCE FROM ROMANIA

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**Abstract.** Nowadays, in the context of technical and scientific progress, major changes can be observed in contemporary society. Therefore, the development and introduction of innovative products in the business market entail major influences on the adoption of a lifestyle by consumers. One of the major benefits of innovation is its contribution to economic growth and thus it is essential to be able to identify what people consider important when looking for novelty in purchased products. This study aims to identify the main factors that influence the decision to buy an innovative product, at the level of generations x and y and to discover the possible differences and specific features. It emphasizes the importance of higher education in the development of sustainable principles and consumer choices and it also attempts to outline the profile of the innovative products consumer and determine the best predictors using logistic models. The difference between those that already bought a product and between those that intend to buy it's also studied. Overall, this article examines the main factors of influencing a consumer's purchase decision and checks which apply and which do not apply in the case of innovative products. The study is conducted on 500 people and captures the differences regarding the decision to buy innovative products between the two generations characterized by the degree of use and increased familiarity with communication, media, and digital technologies. It will be noticed that many of these generations associate innovation with sustainable choices.

**Keywords:** Generation Y, Generation Z, intergenerational consumer behavior, innovative products, logistic models.

## UNIVERSITY 2.0: SOCIAL, COMMUNICATIVE, AND EDUCATIONAL IMPACT OF ITALIAN ACADEMIES

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**Abstract.** The study presented here arises from the need to survey the diffusion of social media in the Italian university panorama. The University has changed its communication route in addition to the institutional web portals. Its first colonization of social media through the opening of social media, such as Facebook, YouTube, Twitter, and Instagram. Italian universities are increasingly 2.0. Numerous researches have dealt with the use of social media by universities. As a result, an increasing number of Italian universities are innovating their online services and more attention to interaction with their users, using social media and official apps for mobile devices. What are the challenges in the educational field? What are the consequences regarding reputation and socialization between lecturers, students, and people from outside the University?

**Keywords:** University 2.0, Social Media, Educational, Learning.

## **MINITRACK: TECHNOLOGICAL CHALLENGES FOR SUSTAINABLE DEVELOPMENT OF PUBLIC AND PRIVATE ORGANIZATIONS IN THE 21ST CENTURY**

### **Chairs:**

- **Cezar – Petre SIMION, Bucharest University of Economic Studies, Romania**
- **Oana Matilda SABIE, Bucharest University of Economic Studies, Romania**
- **Katarina VALASKOVA, University of Zilina, Slovakia**

The objective of the minitrack entitled Technological challenges for sustainable development of public and private organizations in the 21st century is to bring together academicians with the representatives of the public and private organizations from different domains, such as: human resource management, public services, business environment, management of private organization, public management, development of public strategies and public policies, project management, etc. The minitrack will allow both presentation of new research from the participants and also the discussions about the new challenges faced by the actors involved in the transformation of the two sectors in the 21st century sustainable growth context. The main topics of the workshop will revolve around:

- Enhancing the capacity for innovation in Governance and Public Management;
- Technological challenges for public organizations sustainable growth;
- Innovation in Management of Private Organizations;
- New ways of collaborating and communicating between different stakeholders after COVID-19 (secure future communication systems and networks for public and private organizations, platforms for market support to SMEs, etc).

The minitrack welcomes papers and research in the previously 4 mentioned large topics but is also open for researchers and practitioners bringing research papers or use cases in other related topics falling under the broader context of Technological challenges for sustainable development of public and private organizations in the 21<sup>st</sup> century.

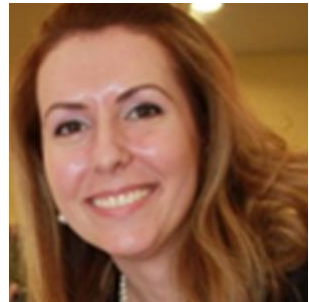




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research projects. In parallel with his teaching activity, he worked for 10 years as a scientific researcher at INCD URBAN – INCERC, the period in which he was for 4 years the head of the Construction Economics department. Also in parallel with the teaching activity, he was involved in the management teams within the University of Economic Studies as director of the Research and Innovation Management Department and vice-dean of the Faculty of Management.

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13 publications are included in the first two quartiles, several of them were published by renowned publishers such as Taylor & Francis, Springer or Elsevier. Significant scientific-research and publishing activities, documented by exact and relevant scientometric values in the research field, are confirmed not only by citations to her publications, but also by wide international cooperation or several requested lectures at international scientific conferences organized by Bucharest University of Economic Studies (Romania), South-West University Neofit Rilski (Bulgaria), WSB University (Poland), Institute of Technology and Business (Czech Republic), and OTH Regensburg (Germany). In addition to publishing and scientific research, she has been engaged in review and editorial activities, as evidenced on Publons and membership in the editorial boards of several journals registered in the SCOPUS or Web of Science databases.

## **PREDICTORS OF EMPLOYEES' WORK PERFORMANCE IN ONLINE AND ON-SITE CONDITIONS: A COMBINED USE OF PLS-SEM AND NCA**

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**Abstract.** Organizations are currently facing several problems, some of which are driven by the COVID-19 pandemic consequences, which has changed the way employees perform their duties. Because human resources are critical to each organization's growth, it is important that they figure out the most effective strategies to improve their employees' work performance. This study aims to assess the extent to which information resources, work conditions, and employee competencies influence their employees' work performance. Furthermore, the research focuses on how the relationships between these variables manifest themselves depending on whether the employees performed their duties online or on site. To collect data for this study, a survey was used, and the data was analysed using a combined PLS-SEM technique and necessary conditions analysis (NCA). The sample consisted of 347 respondents who worked online or on-site in Romanian companies. The main findings highlighted that, regardless of whether employees worked online or on-site, both the employees' competencies and the organizations' informational resources positively and significantly influenced the employees' work performances, while the work conditions had no significant effect. Moreover, the findings revealed that, for employees working online, the organization's informational resources and work conditions are a meaningful and significant necessary condition for work performances. Theoretically, the findings of this study potentially add to the body of current literature. From a practical standpoint, the main implications arise from the fact that the findings of this research can be of great use to decision makers in organizations that can discover the effects of considered factors on the work performances of their own employees and identify which are the variables they should focus on when they want to achieve a certain level of the employees' work performances, depending on how they carry out their work (generally online or on-site).

**Keywords:** Employees conditions, online work, on-site work, work performance.

## ORGANIZATIONAL MODEL FOR DEVELOPMENT AFTER WAR AND CRISIS: BANK-CENTERED BUSINESS GROUP

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**Abstract.** Wars and crises, which have wreaked havoc throughout human history, have cost nations their industries and economic resources. Following conflict and crisis, leaders created new organizational structures in order to address the unfavorable situations. Developing economies, especially those engaged in development efforts after a crisis, have established business groups as a solution. The world has experienced devastating wars and crises in the first years of the last century. Turkish leaders, who lived through the First World War, the War of Independence, and the Great Depression of 1929 in a period of nearly 20 years, transformed the negative social and economic conditions into success with a unique business model. The leaders of the period, whose financial system collapsed due to wars and crises, who did not have enough entrepreneurs and lost almost all their businesses, started the development process by establishing "Bank-Centered Business Groups" as a solution. "İş Bank" in 1924, and "Sanayii and Maadin Bank", founded in 1925, were established with a bank-based business group model. The Bank-Centered Business Group is an innovative organizational model. When evaluated from the perspective of the social conditions of the innovative enterprise (SCIE), the emergence of innovative enterprises depends on industrial, organizational, and institutional conditions. Established innovative businesses are transformed depending on the changes in the surrounding conditions. Bank-based business groups founded in the last century have also experienced organizational transformations according to environmental changes. Can the bank-based business groups model be a solution for the countries aiming to develop in today's conditions where wars and crises are experienced? Our study seeks to answer questions such as, "What are the organizational structure and the transformations of the bank-centered business group model?" and "How will the bank-centered business group model be effective in the future?"

**Keywords:** organizational model, war, crisis. business.

## APPLICATION OF ARTIFICIAL INTELLIGENCE IN THE HEALTHCARE SECTOR: BENEFITS AND CHALLENGES

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**Abstract.** The majority facets of contemporary life, including entertainment, commerce, transportation, business, education, and healthcare, are being impacted by big data and machine learning. A healthcare paradigm shift is underway, propelled by the proliferation of healthcare data and the rapid development of analytics tools. This research examines the state of AI applications in the healthcare industry, their effects, and their prospects for the future. According to the findings, there is a lot of confidence that the use of artificial intelligence (AI) will result in significant advancements in every aspect of healthcare, from diagnosis to therapy. Many pieces of evidence already exist that show AI systems are capable of executing various jobs on par with or even better than humans. The scientific literature review also revealed that AI applications for the healthcare industry present advantages as well as challenges. In order to take full advantage of the benefits that technology has to offer, successful use of AI would necessitate good strategy and planning to improve the overall care service and processes.

**Keywords:** artificial intelligence, healthcare, AI applications, diagnosis, eHealth, benefits, challenges.

## ASSESSING ROMANIAN MEAT PROCESSING COMPANIES' READINESS FOR SUSTAINABLE MARKETING FROM A CSRD PERSPECTIVE

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**Abstract.** In the recent difficult and turbulent context, the meat processing industry in Romania can change its course and consider its environmental, social, and governance impact (ESG). This article seeks to highlight how companies subject to the Corporate Sustainability Reporting Directive (CSRD) are engaging in sustainable marketing by analysing their sustainability reporting. The performance indicators studied on the 1,336 registered meat processing entities determined 10 companies that fit the CSRD criteria. For each of those, the corporate site was inspected, and a data base was created considering different variables related to sustainable marketing. Based on various research studies, a macro environment analysis using the PESTEL framework (Haven, 2007) and a micro environment assessment based on Porter's 5 forces (Porter, 1979) were applied to the group of the 10 eligible companies. The results suggest that the top meat processing companies in the industry lag behind in articulating coherent sustainable marketing strategies and have little time for improvement, should they consider their ESG impact. However, this could be an opportunity to adopt more sustainable practices, especially in terms of their environmental footprint.

**Keywords:** Sustainability reporting, sustainable marketing strategies, meat industry, CSRD.

## DIGITAL RELIANCE WITHIN B2C AND B2G COMMUNICATION SYSTEMS IN THE POST-COVID-19 PANDEMIC ERA: A SYSTEMATIC LITERATURE REVIEW

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**Abstract.** In the framework of this study, we carried out a systematic review of the literature on digital reliance within B2C and B2G communication systems in order to reveal the particularities of this phenomenon in the post-COVID-19 pandemic era. For the systematic literature review on this topic, articles published in representative databases were selected using the PRISMA 2020 flow diagram. As a result of the systematic literature review, a significant number of articles on the subject of digital reliance on B2C and B2G communication systems were identified, most of them indicating the increase in the use of these communication systems in the post-COVID-19 pandemic era. Both in the B2C and B2G fields, the COVID-19 pandemic has resulted in the proliferation of remote communication methods, digital signatures, digitally encrypted documents, secure online connections, e-portals, online meetings, virtual public spaces and other forms of digital communication.

**Keywords:** digital communication, COVID-19, cybersecurity.

## ACADEMIC ADMISSION PROCESS: AN IOT-BASED INDOOR LOCATION CASE STUDY

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**Abstract.** Nowadays, individuals belonging to different demographic segments and social categories are surrounded by a large variety of devices, serving to facilitate comprehension of complex phenomena and enabling access to ideas that were previously perceived as intangible. Technology produces a positive impact in people's lives by inducing a sense of control, usually backed by solid fundamentals, that changes an individual's perception of the world and the tasks that can be accomplished with its aid, having implications in various spectra of life: personal, social, educational and professional. Within the academic environment, digitalization engenders heightened interest from students, prospective candidates and stakeholders alike, with respect to the potential advantages that a university can provide, appreciating its openness to innovation and projecting a mindset oriented towards performance and continuous progress, enabling the institution to provide outstanding education standards. The university's emphasis on student's integration within the academic environment outlines its underlying principles, highlighting the significance of setting up a smooth collaboration, starting from their initial interactions. In this context, the present paper proposes an indoor localization ecosystem that integrates specific IoT technologies, built in a Big Data processing scenario, to assist applicants' desire of enrolling in a university, with the aim of facilitating the discovery of buildings and venues covered by the often-complex admission process, through the utilization of the devices that they possess. The solution provides timely and up-to-date geospatial data regarding essential landmarks such as the admissions office, financial service or academic departments. Furthermore, the application has the ability to furnish precise information concerning the availability of personnel accountable for counseling candidates, and simultaneously guide them through the campus. Last but not least, users can receive personalized recommendations regarding courses, labs and extracurricular activities suited to the student's interests, giving applicants confidence and support throughout the admissions process, helping them make informed decisions and paving the way for a future partnership between the university and the student.

**Keywords:** indoor location, Big Data, Internet of Things, academic admission.



## STATE-MARKET RELATIONS IN THE COMPETITIVE ECONOMY

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**Abstract.** Human activity is, by definition, rational activity. In our opinion, this involves two main aspects: on the one hand, the purpose of the respective activity, namely the satisfaction of all kinds of the individuals and communities needs with the help of goods and services it produces and provides, and on the other hand, the effort respectively, the expenditure of resources or productive factors for obtaining and providing the goods and services in question. The production and distribution of goods and services by public authorities or by the free market, possibly accepting the supplier status, has lately entered more and more into the sphere of concerns of various specialists. There are pros and cons opinion both regarding the market and the state. A recurring issue in the history of economic thinking is about finding the best way to produce and provide goods and services necessary to satisfy the needs of individuals and social groups. Contemporary societies, based on various forms and types of the competitive market economy, basically march on the contribution of the market. The question arises as to whether this is sufficient and justified, or if the governmental action is also necessary, namely the state intervention in economy, possibly in the form of its acceptance as a supplier. The ideological debate tends to favor the market and even to argue its fundamentalism. If we are offering total credit to the market, which means that its provide all the goods and services, then, in our opinion, two main aspects must be discussed, as follows: the first concerns the goals of the economic-social activity and the opportunity of the desired results - it is argued, from this point of view, that the free competitive market system can lead to the highest degree of individual freedom, which can be a highly opportune goal; the second concerns the degree in which the free competitive market system can really represent the best way to achieve predetermined goals.

**Keywords:** rational activity, the state-market relationship, the competitive market system, individual freedom, competitive valences of the market and the state.



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## THE CONSEQUENCES OF THE PANDEMIC IN THE MANAGEMENT OF PUBLIC HEALTH SERVICES FROM A TECHNOLOGICAL POINT OF VIEW

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**Abstract.** The pandemic of the 21st century lasted for two years and has repercussions even today. Romania has encountered a real challenge in countless fields and on many levels, being obliged to find quick and innovative solutions for recovery. A common problem of public institutions was the lack of technology in the services offered, something that had been wanted for many years, and the change was occurring slowly. With the pandemic, this process took place almost instantly in public organizations, being the only solution for the institutions to function, and the citizens (beneficiaries) to feel as little as possible the changes brought by this phenomenon. This paper will address this change, in the health system- being one of the most important and vulnerable areas. The public health units did not focus on the technology of services provided to patients - starting with online consultations or telemedicine, so the purpose of this article is to determine the level of implementation and use of technology after the end of the pandemic, and the benefits brought by this forced reform (from the point from the point of view of employees and beneficiaries). Theoretical documentation at national and international level has been used to construct the study; identifying and analyzing the problems found on the basis of the information obtained by questionnaires; interpretation of results and drawing up the conclusion.

**Keywords:** public organizations, pandemic, technology.

## THE IMPACT OF THE COVID-19 PANDEMIC ON THE CORPORATE PERFORMANCE

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**Abstract.** Global economic growth has been profoundly impacted by the COVID-19 epidemic. It has exacerbated current issues and heightened the need for economic transformation, modernization, and qualitative growth. It has also sparked new technical innovations that have given rise to novel macroeconomic forms of business models, consumerism, as well as social policies. The current organization needs to become more agile and resilient to handle upheaval and keep up pace in a turbulent and uncertain world. The purpose of this paper is to explore the impact of firm- and country-specific indicators to the performance of enterprises under the COVID-19 pandemic.

**Keywords:** national economy, corporate performance, financial performance, COVID-19.

## MINIMIZING SUPPLY CHAIN RISKS. MITIGATION STRATEGIES FOR SUSTAINABLE PRIVATE ORGANIZATIONS DEVELOPMENT

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**Abstract.** This article provides an overview of academic papers that discuss strategies for minimizing risks in supply chains. The sources cover a range of topics, including risk identification and management, classification of different types of risks, and practical guidance on risk assessment and mitigation strategies, thus providing to supply chain managers and researchers a better understanding of the various risks that can impact supply chains, and the strategies that can be employed to minimize those risks. Research methodology used to study and analyze the risks associated with supply chains and develop strategies to minimize those risks is simulation modeling, used to create a virtual model of a supply chain and simulate different scenarios to identify potential risks and test the effectiveness of different risk mitigation strategies identifying potential challenges that could be implemented in real supply chains. The study focused on the risk of product shortages due to unexpected demand or supply disruptions, testing several parameters to measure the effectiveness of three risk mitigation strategies: Stockpiling, building up inventory to ensure that there is enough product on hand to meet demand during a disruption; Diversification, creating alternative suppliers options to reduce the impact of supply disruptions; Collaborative planning, suppliers and customers sharing information and coordinating production and delivery schedules. The simulation results showed that each of the three risk mitigation strategies was effective in reducing the risk of product shortages. However, we found that the most effective strategy was a combination of all three strategies. The study also highlights the importance of supply chain visibility in risk mitigation. Improving visibility into supplier operations and inventory levels allowed supply chain managers to make better decisions and respond more quickly to disruptions, demonstrating how simulation modeling can be used to test the effectiveness of different risk mitigation strategies in supply chain management.

**Keywords:** supply chain management, risk management, risk mitigation strategies.

## INVESTMENT IN RESEARCH AND DEVELOPMENT IN AN ASIAN EMERGING ECONOMY: AN OVERVIEW AND POLICY IMPLICATIONS

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**Abstract.** The Fourth industrial revolution is taking place strongly and affecting the production systems of countries worldwide. Investment in research and development (R&D) is seen as a pivotal strategy to promote economic growth and improve the competitiveness of the economies. This paper aims to analyze the investment in R&D in Vietnam, an emerging country that has successfully maintained robust economic growth in recent years. The study result shows that R&D investment in this economy has been still quite limited compared to the other countries in Asia. The low value of R&D investment would lead to a low level of technology in domestic production systems. Therefore, this evidence concludes a huge challenge for promoting high economic growth in the coming period. Finally, the paper provides some policy implications to promote investment in research and development in Vietnam in the coming period.

**Keywords:** R&D, innovation, technology development, knowledge-based economy.

## THE FUTURE OF SUSTAINABLE BUSINESS: THE CASE FOR A "GREEN ECONOMY" OF ENTERPRISES IN BULGARIA

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**Abstract.** The world is in constant motion and businesses are adapting in the midst of the fourth industrial revolution. Sustainable development is a complex multifaceted concept, but its idea is one, namely, it must be ensured that economic growth allows maintaining a model that creates fair results for all humanity. This means that it is necessary to modernise the economy in order to move towards sustainable consumption and production patterns, to correct the broken balance and to lay a sustainable foundation through the way of production, consumption, energy, and conservation. The transition to low-carbon, climate-resilient operations and sustainable enterprise development requires significant funding and investment, as well as a significant shift in the way the private sector is invested. The future of enterprises lies solely in the creation of environmentally friendly products and services increasing their sustainable development. This allows the introduction of "green innovations" and the improvement of the country's ecological condition. Recently, in the scientific literature, the consequences of the activities of the enterprises, as well as the ways of dealing with the problems and the opportunities for a "green economy" have been discussed more and more often. In the present report, several main tasks are set: to make a literature review of the topic, to establish the development of enterprises towards the transition to a green economy. The main methods used in the development are content analysis, method of analysis and synthesis, statistical data and reports. In the scientific development, several main results were achieved - an in-depth analysis of the literary sources on the subject, the current state of the enterprises switching to a "green economy" in Bulgaria, a model for switching to a "green economy" was also proposed.

**Keywords:** green economy, enterprises, sustainable development, economy, growth.

## DIGITALIZATION IN THE FISCAL SYSTEM IN ROMANIA

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**Abstract.** In the last years, the digitalisation of the fiscal system in Romania is representing a priority and has increased significantly. In this regard, the fiscal authorities have been implementing a series of measures to increase efficiency, bring more transparency and prevent tax evasion. Starting with January 2020, the electronic bill has become mandatory for all taxpayers and in September 2020, has been launched e-Invoice, the national system for issuing and receiving electronic invoices through an online platform. In 2021, The National Authority for Fiscal Administration (ANAF) has launched an electronic system for accounting reporting (SPV - Sistemul de raportare contabilă electronică) that allows real time of the accounting reports of the companies through a public online platform. Moreover, ANAF provides to the taxpayers an online web interface for fiscal declarations and for payment of taxes and fees online – [www.ghiseul.ro](http://www.ghiseul.ro). Since 2019, the fiscal authorities in Romania have launched a lot of projects that use blockchain technology for preventing fiscal evasion. For example, they have launched a pilot project using blockchain to use and register transactions with excise duties on petroleum products. The following paper aims to present the actual context in fiscal digitalization in Romania based on the research carried out so far by reviewing the specialized literature as well as consulting the information on digital payments at the level of Romania and the European Union. This paper represents an initial part of a study to demonstrate that there is a direct correlation between the degrees of digitalisation in the fiscal system and the volume of tax collection. The study will propose measures to provide support in the digitalisation of services, the increase of tax collection and mitigations measures for the possible informational and logistical risks that may occur in technological implementation. This research will bring a significant contribution to the existing specialized literature regarding fiscal digitalisation in Romania and will offer a util perspective for the development of the fiscal system.

**Keywords:** fiscal digitalisation, tax collection, technology, digital payments, electronic systems.

## THE TYPE-2 Q-RUNG ORTHOPAIR COCOSO METHOD FOR WORKPLACE DESIGN PROBLEMS ON THE METAVERSE

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**Abstract.** The Metaverse, with its different layers, is the result of an effort to transform the virtual world into permanent online experiences with virtual and augmented reality devices as an alternative to traditional system. In this sense, the Metaverse presents a new approach for remote working systems. With this new approach, software offices can also design their workplaces in the Metaverse. This study presents a novel multi-criteria decision-making approach for the workplace design problem in the Metaverse, considering various problem-specific criteria such as functionality, personalization, user experience, communication, size and scale of the virtual space. The type-2 q-rung orthopair fuzzy set-based CoCoSo approach was used to solve the problem. Type-2 fuzzy numbers and q-rung orthopair fuzzy sets were preferred due to the uncertainty conditions of the investigated problem and potential problems that experts may encounter in metaverse studies. While Type-2 fuzzy numbers are frequently used approaches to consider greater levels of uncertainty, q-rung orthopair fuzzy sets, as an extension of intuitionistic fuzzy sets, consider membership and non-membership values at the qth level. The evaluations of decision-makers in a software office were taken into account for the implementation of the method, and experiments were conducted for alternative workplace designs. The results were discussed using scenario analysis.

**Keywords:** Q-rung orthopair fuzzy sets, Type-2 fuzzy sets, Metaverse, CoCoSo method.



## TOWARDS SUSTAINABLE CONSUMPTION: CONSUMER BEHAVIOUR AND MARKET SEGMENTATION IN THE SECOND-HAND CLOTHING INDUSTRY

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**Abstract.** In this study, we utilize bibliometric analysis as a quantitative and systematic approach to evaluate the scholarly landscape and analyze existing literature, focusing on the consumer behavior of second-hand clothing buyers in the context of sustainability. We observe a scarcity of published papers on this subject, as evidenced by the limited number of papers in both the Web of Science (WoS) database (41 papers) and Scopus (38 papers). Through co-occurrence analysis, we emphasize the significance of researching consumer behavior in sustainable fashion and identify research gaps related to the absence of market segmentation analysis based on consumer behavior and demographic information in the second-hand clothing market. To address these gaps, our research aims to identify the key drivers influencing consumers to purchase second-hand clothing products and examine the profile of customers who engage in such purchases, with a specific focus on Romania. We collect data on eight variables, including preferred purchasing locations, motivations for choosing second-hand clothing, age, income, and environmental background. Using two-step clustering and one-way ANOVA, we identify distinct consumer segments that share similar characteristics. These segments exhibit variations in age, income, purchasing frequency, and reasons for choosing second-hand clothing. By addressing sustainability concerns and providing practical strategic options, our study aims to assist businesses operating in the second-hand clothing market. Our findings align with prior research on the diverse segments of consumers with distinct attitudes and behaviors toward second-hand consumption.

**Keywords:** consumer behavior, second-hand clothing, market segmentation, sustainability, strategic options.

## ADAPTING TO THE NEW NORMAL: A PESTLE ANALYSIS OF THE POST-COVID E-COMMERCE LANDSCAPE

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**Abstract.** E-commerce represents an essential part of modern business, with a significant growth in recent years. The COVID-19 pandemic has led to a surge in online shopping and a rapid shift towards e-commerce, creating a new normal in the retail industry. To succeed in this changing landscape, it is important for organizations to understand the PESTLE factors that influence e-commerce. This empirical research applies a mixed-methods approach, using both qualitative and quantitative methods to identify the PESTLE factors that affects e-commerce landscape in post COVID times. Based on the literature synthesis, a questionnaire is developed and applied to 309 Romanian companies that use electronic commerce. The results suggest that the pandemic has intensified the adoption of e-commerce, with businesses focusing on expanding their online presence and leveraging new technologies to enhance the customer experience. The findings of the study contribute to understanding the PESTLE factors that influence e-commerce and can provide valuable insights for policymakers, e-commerce businesses, and other stakeholders seeking to make informed decisions that facilitate the development of e-commerce.

**Keywords:** e-commerce, PESTLE analysis, internet, retail.

## THE NEW RECRUITMENT MODEL IN THE CIVIL SERVICE

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**Abstract.** In this paper I present the new competency-based recruitment framework for the civil service which aims to eliminate some of the serious problems faced by central and local public administration, namely: politicisation, bureaucracy, clientelism, poor correlation of recruitment with human resource planning and job descriptions, lack of clarity and transparency regarding public posts and the desire to achieve transparent recruitment. This new recruitment framework aims to implement an integrated human resource and financial management system based on competence and performance and to continuously match staffing needs with appropriate competencies and develop them accordingly. The national competition is therefore based on digital processes, i.e. an IT system for submitting applications and conducting the competition test. This IT system is implemented through the E-ANFP project – "Strengthening the institutional capacity of the ANFP to ensure an efficient management of the civil service and civil servants through the implementation of innovative tools SMIS Code 36675 (September 2012-December 2015), which created the premises for the organizational operational digitalization of the ANFP. The competition for filling vacant civil service positions at central and territorial level has two stages: (a) the recruitment stage is carried out through a national competition organised by the National Civil Servants Agency and consists of a test of the general knowledge and skills required to hold a public office. Persons who pass the national competition become eligible for participation in competitions for public office in the central and local public administration, they do not acquire the status of civil servant. Passing the national competition confers the right to participate in the competition for a post for a maximum period of 3 years from the date of passing the national competition. b) the selection stage, which consists of verifying the specialist knowledge and specific skills required to occupy a vacant public office, carried out by means of a competition for posts organised by each public institution, in which only those who have passed the national competition may participate, and the National Civil Servants Agency is responsible for coordinating this process.

**Keywords:** civil service, digitalization, human resource, reform.

## THE IMPACT OF RISK MANAGEMENT ON THE SUSTAINABILITY OF THE INSURANCE BUSINESS

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**Abstract.** Insurance companies are considered one of the most important components of the economy, the dual role that insures all institutions and companies from risks, in addition to the investment they make, in light of the collapse of a bank that finances small and medium-sized companies. Technology companies, Silicon Value Bank, and the need for attention in risk management have increased in all companies financial and operational risks of all kinds, which requires attention to many requirements and preventive measures for sound and sustainable risk management, this study aimed to identify those risks that affect the sustainability of the business Companies, from financial and operational risks, and reduce risks in order to maximize the role of insurance companies in addressing the risks of collapse in economic institutions, and increase economic growth and sustainability. Where the main research question was in the impact of risk management on insurance companies, where the most important studies on the subject will be extracted so that we can through them strengthen the theoretical foundations. The long-term viability of companies in the insurance companies at risk or the companies that insure them is one of the topics that were researched. Finally, the research critically evaluates alternative approaches that can be used in the future to protect more sites at risk, unsustainability and closure while maintaining the method of risk management in a sustainable way to manage the risks, to reach growth and sustainability.

**Keywords:** sustainability, risk management, insurance companies.

## **MINITRACK: TRANSFORMING THE FUTURE OF LABOR: MAPPING THE ROUTE TO A DIGITALLY TRANSFORMED WORKFORCE**

### **Chairs:**

- **Mihaela Roberta STANEF-PUICĂ, Bucharest University of Economic Studies, Bucharest**
- **Sorin NASTASIA, Southern Illinois University Edwardsville, United States of America**

After the 2016 start of US-China trade war, the economic competition faced a new challenge, the shorthand for the technological bargain between the world's two biggest economies: American brains supply and Chinese brawn. The quest for economic supremacy between Occident and Orient, which emerged in a new dimension after China opened its economy in 1989, entered in a new era with the battle for digital economic supremacy. China has the largest online-payments market. Its equipment is being exported across the world. It has the fastest supercomputer. It is building the world's most lavish quantum-computing research centre. Its forthcoming satellite-navigation system will compete with America's GPS. Silicon Valley and Texas digital cluster don't secure American digital supremacy anymore. Within this framework, we welcome all papers that want to analyse the plausible impacts of digital competition on the future of world economic development.

The main topics covered by the hereby call for papers are related to:

- Economic policies for digital development
- Global economic competition on digital markets
- Energy and supply chain security aspects
- "Designed by Apple in California. Assembled in China" economic issues
- Governments economic stimulus on digital frame of economy
- The Big Four of digital economy
- Information technologies and share services
- Reshaping the world economy
- Digitalization and the labour market
- Business communication through digital technologies



**Mihaela Roberta STANEF-PUICĂ** Studied Economics at Faculty of Theoretical and Applied Economic, Bucharest University of Economic Studies. Vice-dean of the Faculty Theoretical and Applied Economic Studies, since 2015, now she is in charge with the research component of the Faculty. Her research interests cover regional development and labour market problems. With an experience in academia but also in research for about 15 years,

Roberta Stanef-Puică carries out both teaching and research activities in areas of expertise such as: sustainable development, urban and rural development gaps, human resources, labour market, demography, education and public policies. Roberta Stanef-Puică is also a consultant for the National Commission for Strategy and Prognosis and had a big contribution in more than a few of their projects regarding private-public partnerships in several different domains, such as labour market and green energy.

**Sorin NASTASIA** is an Associate Professor in the Department of Applied Communication Studies at Southern Illinois University Edwardsville and the director of the International Studies degree program within the College of Arts and Sciences. He earned his Ph.D. in Communication and Public Discourse at the University of North Dakota in 2010, an M.A. in Communication and Public Relations from the National University for Political Studies and Public Administration in Romania in 2003, an M.A. in International Relations from the Academy of Economic Studies in Romania in 1999, as well as an M.A. in American Cultural Studies in 1996 and a B.A. in Romanian and English Languages and Literatures in 1995 from the University of Bucharest in Romania. While at the University of North Dakota, he worked in public relations and graphic design for the Center for Community Engagement and the Housing Office, and in his native Romania he was an international relations counselor for the Ministry of Culture and a public relations counselor for the Ministry of Education. At Southern Illinois University Edwardsville, Dr. Nastasia teaches undergraduate courses including Public Relations Campaigns, Public Relations Case Studies, Public Relations Visual Communication, International Public Relations, Technology Applications in Public



Relations, Introduction to Public Relations, Persuasion and Social Influence, Communication Theories, Interpersonal Communication Skills, and Public Speaking, as well as graduate courses including Seminar in Public Relations and Seminar in Intercultural Communication. Dr. Nastasia has so far organized two study abroad courses giving students opportunities to learn first-hand in international settings, one to France and Romania in summer 2012, and one to Germany and Hungary in summer 2014. Dr. Nastasia is a critical-cultural scholar seeking to understand international public relations practices and international crisis communication cases as well as of media and public portrayals of underprivileged and disadvantaged populations. For his research, Dr. Nastasia has won four Top Paper Awards at annual conferences of the National Communication Association. Dr. Nastasia has published research in the edited volumes *Case Studies in Crisis Communication: International Perspectives on Hits and Misses* at Routledge, *Communication and PR from a Cross-Cultural Standpoint* at Peter Lang, *The Walk of Shame* at Nova Publishing, and *The Palgrave International Handbook on Women and Journalism* at Palgrave MacMillan. His work also appeared in the *PR News Media Training Guidebook*, the *Sage Encyclopedia of Social Media and Politics*, and the journals *TelevIZion* and *The Romanian Journal of Communication and Public Relations*. He is working on a co-authored book on children's perceptions of the Japan 2011 disasters. Dr. Nastasia currently serves at department level as Director of Graduate Studies, Director of Technology and website editor, and as a faculty advisor for the PRSSA chapter at SIUE, and at university level he is the president-elect of the Faculty Senate.



# icESS

## ONLINE SHOPPING AND CONSUMER BEHAVIOR

**Cezara-Georgiana RADU**

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**Abstract.** Online shopping has developed a lot over time. Technology has become an indispensable resource in people's everyday lives. Consumers have come to use various websites or applications to buy the products they want for many reasons, such as saving time or avoiding crowded stores. This paper aims to study how the consumer's behavior works when he chooses to shop online. The consumer's preferences in terms of online purchases will be analyzed and the factors that lead to those choices. Also, the literature review will be studied and correlations will be made based on the data obtained for a better understanding of consumer behavior when buying products online

**Keywords:** consumer behavior, online shopping, technology, apps.



## AI – THE NEW PLAYER IN DIGITAL ECONOMY

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**Abstract.** The current economic environment is strongly defined by digitalization and its focus on helping businesses, organizations, and governments to achieve their sustainability goals. Lately, alongside digitalization, the implementation of the newest technologies has been followed by the introduction of AI in the business models and strategies, which allows business environment to enhance even more in the digital economy. Therefore, the current paper aims to offer an overview on how the introduction and the usage of the AI technologies have impacted the economic environment and how open the enterprises were to implement them in their activities by reviewing the scientific literature and analyzing the available data to this date. While researching, the author will also plan to identify if the newest technologies have helped businesses to gain more competitive advantages and to be more efficient in their activities by approaching business processes more digitally, and if the return on investments is a profitable transition cost in this current economic paradigm.

**Keywords:** AI, digitalization, digital economy, technology, sustainability.

## DIGITALIZATION WITHIN PROCURE-TO-PAY

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**Abstract.** Recent decades have brought a digital influence not only in the manufacturing and operations and logistics areas of enterprises, but in financial sector as well. Financial teams have gradually migrated from traditional paper-based processes to modern technologies like Optical Character Recognition and workflow improving the efficiency. This has proven not competitive enough considering the fast pace of change in recent years and this paper presents newer technologies that digitalization is bringing through methods that can push finance sector into a new era of innovation through Robotics Process Automations, Artificial Intelligence, cloud and blockchain. This paper will explore how to address the current challenges that financial departments are facing in their daily operations and how to adjust their business processes and build a digital roadmap for strategic transformation and adopt newer digital solutions. Moving from automations like reading characters on invoices to implementing web-based supplier portals and ecommerce networks, analytics and business intelligence tools and cloud-based services can eliminate the need for manual indexing improving even more the procure-to-pay efficiency. These newer technologies provide not only better accuracy, but also greater transparency, helping organizations to meet the newer regulatory requirements. The objective is to raise awareness within the financial sector on how the digital component can bring benefits to the enterprises improving the overall Key Performance Indicators and ensuring an optimal performance within the procure-to-pay function.

**Keywords:** digitalization, efficiency, robotics process automation, analytics, cloud, performance, procure-to-pay.

## THE RELATIONSHIP BETWEEN PUBLIC INVESTMENT IN EDUCATION AND THE PERFORMANCE OF THE EDUCATIONAL SYSTEM CASE STUDY

Milian NEGUTOIU

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**Abstract.** Certainly, most researchers in the economic field and beyond agree that the performance of a country's educational system directly depends on the ability of governments to invest in this field. The direct relationship between public investment and educational performance is not contested, but, on the other hand, regarding the effective measurement of the impact of public spending dedicated to the educational system on the performance of this system, there are still many controversies. Currently, there is no unanimously accepted point of view on how the effects of these public investments should be measured, nor on when these investments reflect on the education system. In this context, the main research question that this study tries to answer is whether public spending on education affects the performance of the education system as measured by the PISA tests. To answer this question, the article analyzes the relationship between budgetary expenditure allocated to education as a percentage of GDP and the results obtained by students in the PISA tests in the case of Romania, Denmark and Poland. The three countries were selected based on relevant criteria related to demographic data, the educational system, or applied educational strategies and policies. As expected, the study demonstrates that a direct causal relationship can be identified between public investment and educational performance, but the extent to which budgetary expenditure allocated to education affects the results and level of preparation of students as measured by the PISA tests differs from country to country. In the countryside.

**Keywords:** investment, education.

## DIGITAL ASSETS BOOM: ECOSYSTEM, REGULATION AND COMPLIANCE, CBDCS

**Elena Roxana DEAK**

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**Abstract.** Although digital currencies are an invention of the information age, the problem they aim to solve is as old as human society itself: the transfer of value over time and space. The issue of virtual currencies (or cryptocurrencies, digital assets, digital securities, tokenization of assets) and distributed ledger technology (commonly referred to as the "blockchain") has a notable effervescence at international level. The overall objective of the paper is to identify and analyse factors that influence digital assets, and the challenges on the international financial infrastructure of the regulatory framework in Europe with MICA and DLT Pilot regime, along with the central bank digital currencies (CBDC). The proposed research methodology combines general methods of scientific research (empirical methods of research, including comparison, measurement, as well as abstraction, analysis and synthesis, induction and deduction or modeling) and technical analysis of evolution graphs. The results of the paper include an analysis of the ecosystem of the digital assets, assessing the role of regulation and compliance, and also the potential of blockchain technology to transform business models in finance. Looking at the current developments in the broad spectrum of digital currencies, and in particular of the CBDCs, we are aiming to review some consequences of the issuance of a CBDC for digital payment technologies, architecture and platforms, privacy, confidence, financial and price stability, as well as from a legal, political and monetary policy point of view.

**Keywords:** digital asset, cryptocurrency, CBDC, blockchain.

## SHAPING THE FUTURE: AN INTRODUCTION OF CHINA'S DIGITAL AMBITIONS

**Zhang SIHAN**

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**Abstract.** This paper meticulously scrutinize the vital role of governmental policies in the development and trajectory of China's digital economy. Emphasis is placed on two prominent initiatives, Made in China 2025 and the Digital Silk Road, which have been integral to the evolution of China's digital landscape. This paper initiates with a thorough overview of the digital economy, its key components, and China's current standing within the global context. Subsequently, a detailed examination of the various government policies that have spurred the growth and expansion of China's digital economy is undertaken, highlighting their implications on the country's overall technological advancements. The Made in China 2025 initiative and the Digital Silk Road program are thoroughly dissected, offering a comprehensive analysis of their respective objectives, strengths, limitations, and ramifications on both China's domestic industries and its international positioning. This in-depth exploration elucidates the strategies employed by the Chinese government to foster innovation and bolster the nation's global competitiveness in the digital domain. In addition, the paper conducts a comparative analysis of China's digital economy vis-à-vis other nations, delving into the similarities and disparities in government policies across countries. Drawing from the insights gleaned from the analysis, the paper puts forth a set of cogent recommendations for policymakers and enterprises seeking to engage with China's burgeoning digital economy. Furthermore, it expounds on potential future developments in the industry and how government policies may continue to evolve in response to the ever-changing digital landscape. In summary, this article offers a comprehensive examination of China's digital ambitions, and provides valuable insights into China's domestic digital landscape and its position within the global digital economy.

**Keywords:** China's digital economy, government policies, Made in China 2025, Digital Silk Road.

## ONE BELT - ONE ROAD

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**Abstract.** Economic development is always taking on new forms. From colonization to economic grip, to the moment of excessive globalization, economies are constantly having to grow in order to survive. Among the most vital elements for macroeconomic development is the infrastructure used by economic agents to develop your own businesses. As a result, it is only natural for this infrastructure to be targeted at those areas that are not fully exploited and to attract the attention of investors who can generate added value, which is in fact the essence of globalization and the engine of capitalism. Recent global movements have captured such a plan developed by one of the main international economic players, namely China. Being a culture oriented towards long-term investments, they conceived the project recognized as Belt and Road or One Belt – One Road through which they want to form a common infrastructure system with most countries in Europe and from which all other nations can benefit. Being an achievable plan in the very long term, there are a lot of factors that need to be taken into account, such as the financial capacity of a country, monetary stability, quality of life, fiscal stability, but also factors related to the national social policies of the countries that are targeted in this process. There is no clear outline of the determinants that would lead to the exact implementation of this project, and the scale of the process is of such a size that the number of countries to be non-beneficiaries or non-contributors cannot currently be projected. This paper focuses on identifying strictly the needs for which this project was designed, the promises that the initiative offers, as well as the needs it is supposed to meet.

**Keywords:** infrastructure, policy, investments, PPP, roads.

## ARTIFICIAL INTELLIGENCE IN EDUCATION: A SYSTEMATIC REVIEW

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**Abstract.** This systematic review summarises the collection of recent scientific findings on the disruptive impact of artificial intelligence on the educational sector. Due to the fact that the integration of AI in education has rapidly expanded over the last three years, this paper draws from a sample of 17 outputs from the post-pandemic era. Even though previous studies have shown that AI can generate positive outcomes for both teachers and students, there is a lack of knowledge about how AI is used in the educational process. Hence, this research article aims to investigate not only the benefits and risks emerging from the implementation of AI technologies in education but also the educational level at which AI instruments are mostly integrated into teaching and learning and the characteristics of AI-based models currently used. While few studies have been found on this critical topic, the current references offer up-to-date information on various dimensions of AI systems in education (knowledge, instruments, activities, and consequences). Findings reveal that AI tools have greatly improved students' conceptual understanding related to artificial intelligence, computational thinking, machine learning systems, robotics, and computer science, as well as other skills such as creativity, literacy, collaborative research, and emotion control. Finally, future directions for exploring AI in education are presented.

**Keywords:** artificial intelligence, AI tools, education, educational technology, human-machine.

## CONFERENCE MANAGEMENT

### **Alina Mihaela DIMA** **Conference Manager**



Alina Mihaela Dima is a full Professor at the Bucharest University of Economic Studies, Faculty of Business Administration in foreign languages and Vice-Rector with Research, Development, and Innovation since March 2020. In the period 2011-2020, she was the Director of the Department for Business Administration in foreign languages (UNESCO Chair) at the Bucharest University of Economic Studies. Her main research fields of interest are: International Business, Competition Policy,

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## Vanesa Mădălina VARGAS Conference Assistant Manager



Vanesa Mădălina Vargas, PhD is an assistant professor at the Faculty of Business Administration in Foreign Languages, where she teaches Entrepreneurship, the European Business Environment and Business Simulations. Her field of research is focused on E-Commerce, and her doctoral thesis was centered on the use of personal data in e-business and consumer protection. She was the office manager of the Higher Education and Research in Management of

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## **Bogdan-Paul SAFTIUC** **Conference Assistant Manager**



Bogdan-Paul Saftiuc holds a Bachelor's degree in Marketing and a Master's degree in Business Administration. He is currently pursuing a Business Intelligence Master's program at the Bucharest University of Economic Studies (ASE), and is simultaneously a doctoral student at the Business Administration doctoral school. His doctoral thesis is focused on the impact of digital transformation on leadership and organizational culture. Given these interests and areas of study, he has a keen passion for process optimization through technology. His work experience includes Information Technology, where he has engaged in web development and graphic design, and in academia, being involved in most processes related to the organizing of international scientific conferences, as well as research. Overall, his career illustrates a combination of marketing, business administration, and a deep interest in the intersection of education and technology. His connection to these various fields allow him to apply a multidisciplinary approach to his studies and work.