

# VI International Science Conference SER 2023

**December 12<sup>th</sup> – 13<sup>th</sup>, 2023**  
**Igalo (Herceg Novi), Montenegro**

## "NEW TRENDS AND BEST PRACTICES IN SOCIOECONOMIC RESEARCH"



# Conference program

**Organized by:**

**Economic Laboratory for Transition Research,  
Podgorica, Montenegro**

**Adriatic University Bar,  
Faculty for Mediterranean Business Studies Tivat,  
Montenegro**

**Center for Sociological Research Szczecin, Poland**

**University "Mediterranean, Podgorica, Montenegro**

**NiuSradio, Szczecin, Poland**

**Doctoral School of the University of Szczecin,  
Poland**

**UNESCO Chair for Social Sustainability,  
University of Szczecin, Poland**



**Publisher:** *Economic Laboratory for Transition Research*, Podgorica, Montenegro; *Center for Sociological Research Szczecin*, Poland; *Adriatic University Bar, Faculty of Mediterranean Business studies Tivat*, Montenegro; and *University Mediterranean, Podgorica*, Montenegro

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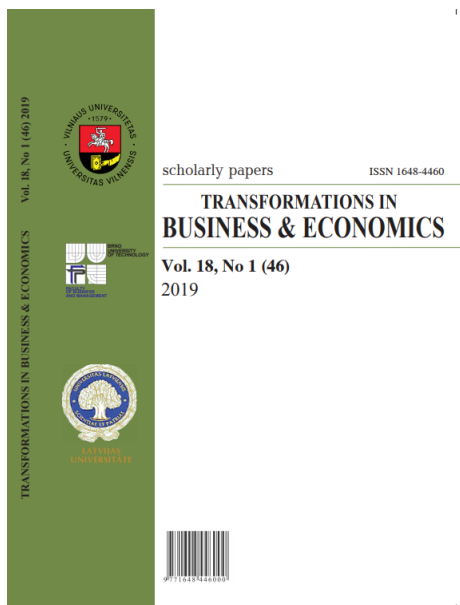
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**Printing:** 100 Copies / **Printed:** “3M Makarije” , Podgorica

CIP - Каталогизација у публикацији  
Национална библиотека Црне Горе, Цетиње  
ISBN 978-9940-673-18-5

COBISS.CG-ID 35499792





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## Foreword

We would like to thank all the contributors, discussants and participants of the IV International Scientific Conference SER 2023, entitled “*New Trends and Best Practices in Socioeconomic Research*”, successfully organized and held in Igalo (December 12<sup>th</sup>-14<sup>th</sup>, 2023), which contributed to the same success and has a high scientific quality.

Special thanks to the organizers:

- Adriatic University Bar, Tivat, Montenegro,
- University of Mediterranean, Podgorica, Montenegro,
- Center for Sociological Research, Szczecin, Poland,
- Doctoral School of the University of Szczecin, Poland,
- Economic Laboratory for Transition Research, Podgorica, Montenegro,
- NiuSradio, Szczecin, Poland (<https://niusradio.pl>), and
- UNESCO Chair for Social Sustainability, University of Szczecin, Poland.

We had 92 authors from 23 countries (Austria, Australia, Bosnia and Herzegovina, Bulgaria, Canada, Czech Republic, Croatia, Finland, France, Germany, Greece, Hungary, Italy, Lithuania, Montenegro, Poland, Saudi Arabia, Serbia, Slovakia, Slovenia, South Africa, Switzerland, Thailand, and Ukraine).

Conference participants submitted 74 scientific abstracts, which were reviewed by the International review board (Prof. *Dalia STREMIKIENE*, Chair, Prof. *Veselin DRASKOVIC*, Prof. *Yuriy BILAN*, Prof. *Radislav JOVOVIC*, Prof. *Mimo DRASKOVIC*, and Assist. Prof. *Milica DELIBASIC*).

I hope that the conference participants, in dynamic, interesting and original reports and discussions, will succeed in moving the boundaries of knowledge about the current theme of this conference. I believe that many of the old questions, problems and dilemmas will get some new arguments, information and evidence.

Chair of Scientific Committee



*Veselin DRASKOVIC*, Professor

***Tentative topics*** for panels and sessions:

- Institutional framework for sustainable development
- Key preconditions for socioeconomic development of transitional economies
- Labor market changes and their regulation by means of social policies
- SMEs and entrepreneurship development under changing economic and social conditions
- Recent changes at European financial markets and in accounting
- Banking and insurance: current state and possible reforms
- Latest trends of international economic relations' development
- Economic education in the context of life-long learning
- Theory and practice of mass media in society
- Agribusiness in the frameworks of rural territories' development policies
- Latest trends in sociological research

***Special panels:***

- Theory and practice of mass media in society (on-line)
- Editorial standards and academic publishing best practices (on-line)
- Environment, Energy, and Society for the Twenty-First Century in frame of the program "HORIZON-MSCA-2022-SE-01" under the GA 101129820 (on-line)

Panels' split and schedule is subject to change, depending on the number of actual participants. TBA in more detail once the registration is closed and final list of reports is approved by the reviewers.



# CONFERENCE PROGRAM

**DAY ONE:**

**Friday 12th December 2023**

<b>09:00-10:00</b>	REGISTRATION of the participants
10:00-10:10	<p><b>OPENING THE CONFERENCE (Hotel „Palmon Bay“, Igalo)</b></p> <p><b>Radislav JOVOVIC</b>, Professor, Vice rector University of Mediterranean Podgorica, Montenegro</p>
<p><b>PLENARY SESSION :</b></p> <p>Introductory Papers – Keynote Speeches</p> <p>Head: <b>Yuriy BILAN</b>, Professor</p>	
10:10-10:30	<p>THE PHENOMENON OF THE “PRESS GUILLOTINE”</p> <p><u>Keynote Speaker:</u> Academician <b>Veselin DRASKOVIC</b>, Professor, University of Montenegro, Maritime Faculty Kotor, Montenegro</p>
10:30-10:50	<p>BARRIERS TO INVESTMENT IN RES IN THE SME SECTOR</p> <p><b>Yuriy BILAN</b>, Prof. dr. hab. Centre of Sociological Research, Poland <b>dr. Katarzyna CHUDY-LASKOWSKA</b> Department of Quantitative Methods, Rzeszow University of Technology, Poland</p>
10:50-11:10	<p>THE INFLUENCE OF THE EFFECTS OF CLIMATE WARMING ON THE NECESSITY OF CHANGES IN LOGISTICS MANAGEMENT ON A GLOBAL AND MICRO SCALE</p> <p><u>Keynote Speaker:</u> <b>Janusz GRABARA</b>, Professor Faculty of Management, Czestochowa University of Technology, Czestochowa, Poland</p>
11:10-11:30	<p>SUSTAINABILITY OF AGRICULTURE FROM THE LENS OF CLIMATE CHANGE</p> <p><u>Keynote Speaker:</u> <b>Dalia STREIMIKIENE</b>, Professor, Lithuanian Centre for Social Sciences, Institute of Economics and Rural Development, Lithuania</p>
11:30-11:50	<p>FINTECH'S UNPRECEDENTED RISE IN THE DIGITAL ECONOMY</p> <p><u>Keynote Speaker:</u> <b>Radislav JOVOVIC</b>, Professor, University of Mediterranean Podgorica, Montenegro</p>
11:50-12:10	<p>THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE DEVELOPMENT OF MODERN MASS MEDIA</p> <p><u>Keynote Speaker:</u> <b>Mimo DRASKOVIC</b>, Professor, University of Montenegro, Maritime Faculty Kotor, Montenegro</p>
<b>12:10 -12:30</b>	<b>Sweet, tea, coffee, seasonal fruits</b>

<b>PLENARY SESSION – EXTENSION 1:</b> <b>Introductory Papers – Keynote Speeches</b> Head: <i>Milica DELIBASIC</i> , Assistant Professor	
12:30-12:50	<p>STUDENTS' MIGRATION AND COUNTRIES' RESILIENCE: LINKS AND DETERMINANTS FOR BRAIN GAIN POLICY DEVELOPMENT</p> <p><u>Keynote Speaker:</u> <i>Halyna MISHCHUK</i>, Professor</p> <p>Pan-European University, Faculty of Economics and Entrepreneurship, Bratislava, Slovakia</p> <p>Assoc. prof. <i>Monika GRABOWSKA</i></p> <p>Wroclaw University of Economics, Poland</p>
12:50-13:10	<p>THE EFFECTS OF STRUCTURAL CHANGE ON THE AVERAGE SALARY: A DECOMPOSITION APPROACH</p> <p><u>Keynote Speaker:</u> <i>Tomas BALEZENTIS</i>, Professor</p> <p>Vilnius Gediminas Technical University, Vilnius, Lithuania</p>
13:10-13:30	<p>ENSURING QUALITY IN DIGITALIZED SUPPLY CHAINS: THE ROLE OF SOFTWARE QUALITY STANDARDS AND ISO/IEC 25010</p> <p><u>Keynote Speaker:</u> <i>Borut JEREB</i>, Professor &amp; <i>Milena KAJBA</i>, assistant, University of Maribor, Faculty of logistics, Slovenia</p>
13:30-13:50	<p>MANAGEMENT OF CRITICAL INFRASTRUCTURE AS PART OF THE COUNTRY'S ECONOMY</p> <p><u>Keynote Speaker:</u> <i>Oksana V. PORTNA</i>, Professor</p> <p>Department of Management and Administration, V.N. Karazin Kharkiv National University, Ukraine</p> <p><i>Serhi V. MAHDYSIUK</i></p> <p>Director of Housing and Communal Services and Fuel and Energy Complex of Kharkiv Regional State Administration, Ukraine</p>
13:50-14:10	<p>INCREASING THE EFFICIENCY OF COMMUNICATIONS WITH CUSTOMERS IN TRADE IN THE DIGITAL ECONOMY</p> <p><u>Keynote Speaker:</u> <i>Pavlo HRYNKO</i>, Professor</p> <p>Department of Management, Business and Professional Communications, Education and Research Institute «Karazin Banking Institute»; V. N. Karazin Kharkiv National University, Kharkiv, Ukraine</p>
14:10-15:00	L u n c h

<b>PLENARY SESSION – EXTENSION 2:</b> <b>Introductory Papers – Keynote Speeches</b> Head: <i>Mimo DRASKOVIC</i> , Professor
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15:00-15:20	<p>A FEW OBSERVATIONS ON DATA SCIENCE</p> <p><u>Keynote Speaker:</u> <i>Sanja BAUK</i>, Professor Estonian Maritime Academy, Tallinn University of Technology, Estonia</p>
15:20-15:40	<p>THE INFLUENCE OF THE MEDIA ON THE INFORMATION CONTENT OF ACCOUNTING OF COMPANIES PROFIT: THE EXPERIENCE OF UKRAINE AND MONTENEGRO</p> <p><u>Keynote Speaker:</u> <i>Natalia IERSHOVA</i>, Professor Department of Accounting and Finance Educational and Scientific Institute of Economics, Management and International Business; National Technical University «Kharkiv Polytechnic Institute», Kharkiv, Ukraine</p>
15:40-16:00	<p>THAILAND MANGO FARMS MANAGERS' PERCEPTIONS: ORGANIZATIONAL CULTURE AS A DRIVER OF ENVIRONMENTAL SUSTAINABILITY PRACTICES</p> <p><u>Keynote Speaker:</u> Professor <i>Sebastian KOT</i><sup>1,2</sup>, <i>Chaiyawit MUANGMEE</i><sup>3</sup> &amp; <i>Bilal KHALID</i><sup>4</sup></p> <p><sup>1</sup> Faculty of Management, Czestochowa University of Technology, Czestochowa, Poland  <sup>2</sup> College of Business and Economics, University of Johannesburg, South Africa  <sup>3</sup> Faculty of Management Sciences, Bansomdejchaopraya Rajabhat University, Bangkok, Thailand  <sup>4</sup> KMITL Business School, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand</p>
16:00-16:20	<p>EFFECTS OF DIGITAL TRANSFORMATION ON THE MEDIA CONTENT OF BANKING INFORMATION</p> <p><u>Keynote Speaker:</u> <i>Alla GRINKO</i>, Professor Department of Management, Business and Professional Communications, Education and Research Institute «Karazin Banking Institute»; V. N. Karazin Kharkiv National University, Kharkiv, Ukraine</p>
16:20-16:40	<p><b>Sweet, tea, coffee, seasonal fruits</b></p>
<p><b>PLENARY SESSION – EXTENSION3:</b></p> <p><b>Introductory Papers – Keynote Speeches</b></p> <p>Head: <i>Katarzyna CHUDY-LASKOWSKA</i>, dr.</p>	
16:40-17:00	<p>GREEN HUMAN CAPITAL: EVOLUTION OF THE CONCEPT</p> <p><u>Keynote Speaker:</u> <i>Tetyana PIMONENKO</i>, Professor &amp; <i>Oleksii LYULYOV</i>, Professor Department of Marketing, Sumy State University, Ukraine</p>
17:00-17:20	<p>SOCIAL RESPONSIBILITY AND INDUSTRY 4.0: LINKING BETWEEN CATEGORIES</p> <p><u>Keynote Speaker:</u> <i>Olena CHYGRYN</i>, Professor &amp; <i>Anastasia ILLIASHENKO</i>, PhD stud. Department of Marketing, Sumy State University, Ukraine</p>

17:20 -17:40	<p>COMPANY PROFILE ON JOB WEBSITES AS A TOOL FOR MONITORING SOCIAL RESPONSIBILITY IN LABOUR RELATIONS</p> <p><u>Keynote Speaker:</u> <b>Natalia SAMOLIUK</b>, Assoc. Prof.</p> <p>Department of Human Resources and Entrepreneurship, National University of Water and Environmental Engineering, Ukraine</p> <p><b>Bartosz MENTEL</b></p> <p>Pomeranian Medical University Szczecin, Poland</p>
	<p>PUBLIC MANAGEMENT OF ENTREPRENEURSHIP DEVELOPMENT UNDER THE CONDITIONS OF WAR IN UKRAINE</p> <p><u>Keynote Speaker:</u> <b>Larysa PERSHKO</b>, Professor</p> <p>Department of Human Resources and Entrepreneurship, National University of Water and Environmental Engineering, Ukraine</p> <p><b>Tomasz PISULA</b>, Ph.D.</p> <p>Department of Quantitative Methods, Rzeszow University of Technology, Poland</p>

**DAY  
TWO:**

**Saturday 13th December 2023**

	<p><b>SESSION 1</b></p> <p>Head : <b>Radislav JOVOVIC</b>, Professor</p>
09:00- 19:10	<p>WATER FOOTPRINT RELATED TO THE FOOD LOSS IN LITHUANIAN AGRICULTURE: PERSPECTIVE OF THE ANIMAL FARMING</p> <p><b>Ovidija EICAITE, Erika RIBASAUSKIENE &amp; Tomas BALEZENTIS</b></p> <p>Lithuanian Centre for Social Sciences, Institute of Economics and Rural Development, Lithuania</p>
09:10- 09:20	<p>AN ANALYSIS OF GREEN MARKETING INITIATIVES IMPLEMENTED BY LEADING AUTOMOBILE MANUFACTURERS IN THE EU</p> <p><b>Kelaniyage Shihan Dilruk FERNANDO</b></p> <p>Department of Marketing, Institute of Management, Faculty of Economics, Finance, and Management, University of Szczecin, Poland</p>
09:20- 09:30	<p>ASSESSMENT OF THE BANK PERFORMANCE IN THE BALTIC STATES: A MULTI-CRITERIA METHODOLOGY</p> <p><b>Karolina KRISCIUKAITYTE &amp; Tomas BALEZENTIS</b>, Professor</p> <p>Vilnius University, Lithuania</p>
09:30- 09:40	<p>ENVIRONMENTAL ASPECT OF NON-FINANCIAL ESG REPORTING FOR COMPANIES LISTED ON THE STOCK EXCHANGE</p> <p><b>Katarzyna WIDERA</b>, Assoc prof.</p> <p>Faculty of Economics and Management, Opole University of Technology, Poland</p>
	<p>THE IMPORTANCE OF SOCIAL CAPITAL FOR IMPROVING THE COMPETITIVENESS OF THE MONTENEGRO ECONOMY</p>

09:40-09:50	<p><b>Niksa GRGUREVIC</b>, Associate Professor</p> <p>Faculty of Management Herceg Novi, Montenegro; University of Business and Management Engineering Banja Luka, Faculty of Economics, Bosnia and Herzegovina</p>
10:00-11:30	<p><b>Sweet, tea, coffee, seasonal fruits</b></p>
	<p><b>SESSION 2</b></p> <p>Head: <b>Sebastian KOT</b>, Professor</p>
11:30 – 11:40	<p>DIGITALIZATION AND DIGITAL COMPETENCIES OF STUDENTS – CHALLENGES AND OPPORTUNITIES IN RESPONSIBLE MANAGEMENT EDUCATION</p> <p><b>Desislava SERAFIMOVA</b>, Associate Professor</p> <p>Department of Management and administration, University of Economics, Varna, Bulgaria</p>
11:40 – 11:50	<p>STRUCTURAL CHANGE AND ENERGY-RELATED GHG EMISSION IN THE EU AGRICULTURE</p> <p><b>Bo PENG, Tomas BALEZENTIS</b>, Professor &amp; <b>Dalia STREIMIKIENE</b>, Professor</p> <p>Lithuanian Centre for Social Sciences, Institute of Economics and Rural Development, Lithuania</p>
11:50 – 12:00	<p>EXPLORING THE ROLE OF ENVIRONMENTAL REGULATION ON ENERGY SECURITY: CONTEXTUAL FINDINGS FOR SUSTAINABLE DEVELOPMENT IN EUROPE</p> <p><b>Grzegorz MENTEL</b>, Associate Professor &amp; Ph.D. <b>Beata SZETELA</b></p> <p>Department of Quantitative Methods, Rzeszow University of Technology, Poland</p>
12:00 – 12:10	<p>LIMITS OF (IN)DEPENDENT JOURNALISM</p> <p><b>Milica DELIBASIC</b>, Assistant Professor</p> <p>University Mediterranean, Faculty of Business Studies, Podgorica, Montenegro, Faculty for Metiterranean Business Studies Tivat, Montenegro</p>
11:10 – 11:20	<p>GREEN INVESTMENTS: ENERGY MANAGEMENT MODEL</p> <p><b>Marcin RABE</b>, dr</p> <p>Institute of Management, University of Szczecin, Poland</p> <p><b>Svitlana BILAN</b>, dr</p> <p>Centre of Sociological Research, Poland</p>
12:20 – 12:30	<p>ASSESSMENT OF CORPORATE SOCIAL RESPONSIBILITY IN THE ENERGY SECTOR</p> <p><b>Mariam KASRADZE &amp; Dalia STREIMIKIENE</b></p> <p>Vilnius University, Kaunas Faculty, Lithuania</p>
	<p><b>SESSION 3 :</b></p> <p>Head: <b>Svitlana BILAN</b>, dr</p>

12:30 – 12:40	<p>EUROPEAN FINANCIAL MARKET RESILIENCE IN THE FACE OF CATASTROPHIC EVENTS</p> <p><b><i>Guru Ashish SINGH</i></b></p> <p>Institute of Economics, University of Szczecin, Szczecin, Poland</p>
12:40 – 11:50	<p>CHANIGING COMPETITION IN THE DIGITAL AGE,</p> <p><b><i>Nebojsa JOVOVIC</i></b>, Dr</p> <p>Montenegrin agency for competition protection, Progorica, Montenegro</p>
12:50 -13:00	<p>SUSTAINABILITY ANALYSIS OF EU AGRICULTURE BY APPLYING A GREEN PRODUCTIVITY APPROACH</p> <p><b><i>Justas STREIMIKIS</i></b>, Dr</p> <p>Lithuanian Centre for Social Sciences, Institute of Economics and Rural Development, Lithuania</p>
13:00 -13:10	<p>ENERGY SECURITY INDICATORS FOR SUSTAINABLE ENERGY DEVELOPMENT: APPLICATION TO ELECTRICITY SECTOR IN THE CONTEXT OF STATE ECONOMIC DECISIONS</p> <p><b><i>Tomas KARPAVICIUS</i></b></p> <p>Lithuanian Centre for Social Sciences, Institute of Economics and Rural Development, Lithuania</p>
13:10 -13:20	<p>TOWARD SUSTAINABLE ENERGY DEVELOPMENT THROUGH THE LOW-CARBON ENERGY TRANSITION</p> <p><b><i>Mahyar Kamali SARAJI</i></b></p> <p>Vilnius University, Lithuania</p>
13:20 -13:30	<p>IMPACT OF DIGITAL MEDIA ON GREEN GROWTH IN EU ECONOMIES: A FOCUS ON LABOR EFFICIENCY</p> <p><b><i>Xiang WEIYI</i></b></p> <p>Doctoral School, Faculty of Economics, Finance and Management, University of Szczecin, Szczecin, Poland</p>
13:30 -13:40	<p>THE INFLUENCE OF FACTORS ON THE MANAGEMENT OF THE COMPANY IN THE CONDITIONS OF THE DEVELOPING MARKET</p> <p><b><i>Andrii A. NIKIFOROV</i></b></p> <p>Department of Management and Administration, V.N. Karazin Kharkiv National University, Kharkiv, Ukraine</p>
13:40 -13:50	<p>REBUILDING THE BUSINESS MODEL OF BLACK SOLDIER FLY (BSF) BIOCONVERSION AS FOOD WASTE INTEGRATED SOLUTION: CASE STUDY OF LOCAL START-UP REXIC</p> <p><b><i>Bahalwan APRIYANSYAH</i></b>, MBA</p> <p>Marketing Department, University of Szczecin, Szczecin, Poland</p>
13:50 -14:00	<p>ASSESSMENT OF FOREST MANAGEMENT AND SUSTAINABILITY: A CASE OF BALTIC COUNTRIES</p> <p><b><i>Asta MIKALAUSKIENĖ &amp; Gabija STANISLOVAITYTĖ</i></b></p>

	Vilnius University, Lithuania
14:00-15:30	<b>Lunch</b>
	<b>SESSION 4 :</b> Head: <i>Halyna MISHCHUK</i> , Professor
15:30-15:40	INDICATORS OF LOW CARBON ECONOMY IN THE FORESTRY SECTOR <i>Gabija STANISLOVAITYTĖ &amp; Asta MIKALAUSKIENĖ</i> Vilnius University, Lithuania
15:40-15:50	ENERGY INEQUALITY IN LITHUANIA <i>Lina VOLODCKIENE &amp; Dalia STREIMIKIENE</i> Lithuanian Energy Institute, Kaunas, Lithuania
15:50-16:00	SUSTAINABILITY AND DIGITAL TRANSFORMATION AT BANKING AND FINANCIAL INSTITUTIONS: CONTEMPORARY TRENDS AT THE NORDICS <i>Joanna KEDZIORA</i> , Helsinki, Finland
16:00-16:10	IMPACT OF FINACIAL TECHNOOGIES ON BANKEING <i>Miroslav JOVOVIC</i> , MSc Central Bank of Montenegro, Podgorica, Montenegro
16:10-16:20	THE PORT OF BAR AS A GENERATOR OF THE ECONOMIC DEVELOPMENT OF MONTENEGRO <i>Dalibor PELEVIC</i> , PhD student University of Montenegro, Maritime Faculty of Kotor, Montenegro
16:20-16:30	ECONOMIC IMPACT OF LANGUAGE VIOLENCE ON CHINESE SOCIAL MEDIA PLATFORMS <i>Yichao WAN</i> , PhD student Institute of Economics and Finance, University of Szczecin, Szczecin, Poland,
16:30-16:40	SOLUTIONS FOR SUSTAINABLE AND ECONOMIC AGRICULTURE: STAKEHOLDER VIEWS <i>Ahmad BATHAEI</i> Lithuanian Centre for Social Sciences, Institute of Economics and Rural Development, Lithuania
16:40-16:50	NEW TRENDS IN PHYSICAL TRAINING OF ATHLETES <i>Milan TONCIC</i> , Professor Switzerland
18:00 – 22:00	<b>Cocktail</b>





## **THE PHENOMENON OF THE "PRESS GUILLOTINE"**

### **ABSTRACT**

*The article analyzes the phenomenon of the "press guillotine", which is referred to in the literature as "the killing of newspapers". It is apparently about a civilizational paradox, which has multiple explanations and arguments - technological, cultural, scientific, institutional, and psychological. However, this phenomenon fits into the known, forecasted, and observed civilizational dynamics and corresponding civilizational principles. "Guillotine of the press" as a term represents a direct phenomenological, technological, communication, innovation, and civilizational antagonism between the old and the new. It does not take place according to the principle of formationally determined exclusivity of the "either this or that" type, but according to the civilizational polyvalent and competitive pattern of choices of the "and - and" type. Pluralism and freedom of choice are manifested precisely through the replacement of the "either this or that" type of choice with the choice of "and - and", which Toynbee noticed a long time ago. The "press guillotine" does not negate freedom of choice, that is, the civilizational principle of pluralism of choice. It manifests itself through the substitution of elections, which is imposed by a new form of competition from the electronic media, which threatens to become a monopoly. This is more about the "meeting of civilizations" (mentioned by Toynbee) than their "clash" (mentioned by Huntington). Of course, the meeting can be both conflict and cooperation... I do not believe that it is about the "end of history" of the press (Fukuyama's expression), but about the universalization of media, communication, and technological flows, which implies changes in media structures and formats, that cause changes in the limit of circulation, importance, influence, etc. He concludes that total universalism and monopolism are not possible in a world full of diversity, but also nuanced similarities. The subject of the work is to show that printing will survive, but the question is to what extent. The goal of the work is to prove that the main condition for the survival of the press is its quality. It starts from the main hypothesis that there will probably always be a contradiction between "being written" (i.e. printed) and/or "being digitally recorded", as well as a shift in media paradigms, and an auxiliary hypothesis that media identity is not possible (as well as civilizational, institutional and/or any other). In addition to the usual methods of social sciences, the descriptive method is dominantly used in the work. He concludes that the pluralism of the press is inevitable.*

**KEY WORDS:** media, press, press guillotine, civilizational change.

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## **BARRIERS TO INVESTMENT IN RES IN THE SME SECTOR**

### **ABSTRACT**

*Renewable energy is an alternative to traditional primary non-renewable energy carriers (fossil fuels). The use of renewable energy helps mitigate the negative effects of greenhouse gas emissions and reduce global warming. Poland (like most EU countries) is considered a promising market for investments in renewable energy, but it encounters a number of barriers in the process of achieving the goals related to their implementation, preventing or hindering their use, negatively affecting the development of this sector. They are analyzed both at the EU level and in individual Member States. Their identification makes it possible to reduce or eliminate mistakes and bad decisions that prevent the development of this sector. For the purposes of achieving the objectives of the article, i.e. identifying barriers to investing in renewable energy, research was conducted in a group of 1,050 entrepreneurs who did not use any renewable energy technology but were considering investing. The analysis shows that the greatest barrier to making such a decision are primarily high investment outlays in relation to the assumed ones ( $\bar{x} = 7,17$ ;  $Me = 8$ ). The second significant barrier is the lack of appropriate support systems for investments in renewable energy sources ( $\bar{x} = 6,36$ ;  $Me = 7$ ). In third place, a group of entrepreneurs indicated complicated administrative and legal procedures at the permit stage ( $\bar{x} = 6,20$ ;  $Me = 6$ ). The respondents indicated that the least problematic aspects were too low installation efficiency compared to expectations ( $\bar{x} = 4,35$ ;  $Me = 5$ ) and low availability of installation contractors ( $\bar{x} = 3,92$ ;  $Me = 5$ ). It was also checked what pro-ecological activities entrepreneurs use. The activities concerned the reduction of electricity consumption and thermal energy consumption. The research shows that respondents most often use energy-saving lighting, segregate waste, reduce water consumption and use automatic time switches.*

**KEY WORDS:** sustainable development, renewable energy, investment limitations, pro-ecological activity.

**Funding:** The research leading to these results has received funding from the project titled "Cluster for innovative energy" in the frame of the program "HORIZON-MSCA-2022-SE-01" under the Grant agreement number 101129820



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## **THAILAND MANGO FARMS MANAGERS' PERCEPTIONS: ORGANIZATIONAL CULTURE AS A DRIVER OF ENVIRONMENTAL SUSTAINABILITY PRACTICES**

### **ABSTRACT**

*This research investigated the perceptions of mango farms managers towards environmental sustainability practices through the impact of culture, adoption of information technology and employee training through a comparative case study of 450 Mango Producers in Thailand. The survey also examined how farmers' perceptions could guide public policy incentives. AMOS-Structural Equation Modeling is used as the framework by which the constructs are represented within the model. Data was collection was from September 10, 2021, and June 24, 2021. The findings show that employee training, culture, and information technology adoption all have a positive impact on environmental management practices. Furthermore, the results also showed that using culture as a mediator, both the introduction of information systems and the training of workers affected sustainable practices. We concluded that improvements in environmental practices in Thai mango farms are derived from cultural strategies as an axis for developing valuable knowledge and educating employees in public policies.*

**KEYWORDS:** Changing Climate Adaptation, Employee Training, Culture, Information Technology, Environmental Sustainability



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## **THE INFLUENCE OF THE MEDIA ON THE INFORMATION CONTENT OF ACCOUNTING OF COMPANIES PROFIT: THE EXPERIENCE OF UKRAINE AND MONTENEGRO**

### **ABSTRACT**

*We directly evaluate the influence of the media on the information content of accounting of companies profit. The media can play a major role as a governance mechanism since it collects, accumulates, disseminates and amplifies information. The media has an incentive to maintain a good reputation by providing accurate and credible information, particularly in a context of strong competition. The media has been posited as a relevant corporate governance mechanism, serving as an essential channel through which information is disseminated to investors. My results indicate that disclosing information through financial media coverage in newspaper articles positively affects profits informativeness. Consistent with this conjecture, I find that publishing media news reports which have a positively tone has a positive effect on the informativeness of accounting profits. More specifically, the media affects the financial reporting quality of firms, consequently, information asymmetries between managers and shareholders will be resolved by 'arm's length' public disclosure. Fair disclosure is the basis for effective decision making and increasing the efficiency of corporate investment. Negative information disclosed by the media can act as a legitimacy mechanism, affecting the reputation of dominant owners and managers, since the news leads investors to form opinions about the performance of the company and those who control the decision-making process. These results are consistent with the alignment of interests between internal and external agents, sparked by the reduction in informational asymmetries caused by the publication of news. In a Ukrainian context and Montenegrin context, the media play a complementary role in the disclosure of accounting information, improving the alignment effect of dominant owners' voting rights stakes and limiting dominant owner ability to obtain private benefits.*

**KEY WORDS:** *media, profits informativeness, information environment, information asymmetry, fair disclosure, reputation of dominant owners and managers*



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## **CLIMATE CHANGE MITIGATION AND ENERGY POVERTY**

### **ABSTRACT**

*The paper analyses linkages between climate change mitigation policies and energy poverty. Indicators framework to assess interlinked poverty energy, energy efficiency, use of renewable energy sources and climate change mitigation indicators is proposed. The developed indicators framework was applied for comparative assessment of low carbon energy transition justice in EU member states. Performed analysis showed that GHG emission reduction expressed by key indicators such as GHG/capita, GHG/energy, GHG/GDP, GHG reduction comparing with base year 1990 in some EU member states like Greece, Bulgaria, provides negative trends in energy poverty indicators such as arrears on utility, bills, high share of energy expenditure in income, inability to keep home warm etc. The biggest problems of low carbon energy transition justice are available in new EU Member States. In old EU Member States strict climate change mitigation policies do not have negative impact on energy poverty indicators.*

**KEYWORDS:** *climate change mitigation, energy poverty, low carbon energy transition; European Union*



## **A FEW OBSERVATIONS ON DATA SCIENCE**

### **ABSTRACT**

*Data science is a relatively new discipline in the scientific world. It appeared with the commercialization of computers at the end of the eighties of the last century. It is close to statistics and computer science, and requires a knowledge of the field to which the analysis of the data refers, whether it is governance, business, health care, education, etc. The aim is to make sense of large databases in a simple and understandable way, usually through text, sound, or visuals. Data science is about data collected by cyber-physical systems through embedded sensors that can communicate, mostly wirelessly, through certain protocols with local networks and the Internet as a global network. This data is stored on servers located in the cloud. In other words, it is stored away from the computer on which the data is collected, processed, and displayed. These large amounts of data, extracted and processed as required, are in the order of 150 zettabytes, where a zettabyte equals  $10^{21}$  bytes. Due to the exponential growth in the amount of new data being generated constantly, it is expected that the amount of data generated will exceed 180 zettabytes by 2025. It is difficult to say what is the lower limit of the big data on which data science is based, so the boundary between statistics and data science that has emerged from it is somewhat blurred. It is difficult to say where the limits to the growth of big data lie, as the power of the computers that enable big data to be collected, stored, processed, and present continues to increase. While descriptive and inferential statistics are based on well-structured mathematical premises and procedures, data science extends this scope to machine learning, (convolutional) neural networks, deep learning, genetics algorithms, etc. These computing techniques are a black box to most users because what happens between the input to the computer system and the output is not comprehensible for human beings. It can only be understood in the realm of mathematical concepts. True, some methods of inferential statistics are not easy to understand as well. As an example, we can take multiple linear regression, which would be difficult (if not impossible) to implement over many variables without the help of a computer. Consequently, we can come to the point that statistics and data science have more similarities than differences, but let's not forget that data science is built on statistics. When it comes to ethics in research, there is a significant difference. To collect data for statistical analysis, we need(ed) respondents' consent, whereas the data science method does not imply such requirement. We can easily access all the data that is available as open source. Why some data are readily*

*available is a separate question that would require additional analysis. This also applies to the quality of the data on which data science is based. Scientific rigor, replicability, and generalizability are also questionable when conclusions are drawn based on data collection over a relatively short period of (real) time. As a result, the journey of searching for the joint advancement of statistics, data science, computers, and ethics will continue.*

**KEY WORDS:** *statistics, data science, scientific rigor, replicability, ethics.*





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## **GREEN HUMAN CAPITAL: EVOLUTION OF THE CONCEPT**

### **ABSTRACT**

*The shift of countries towards sustainable development is prompting a growing recognition among organizations and societies of the imperative to incorporate environmental sustainability into workforce development. This paradigm shift entails an heightened awareness of the intrinsic connection between human capital development, environmental responsibility, and the pursuit of sustainable, environmentally friendly organizational practices. To achieve the aim of the paper, the study employs a bibliometric analysis using tools such as Google Books Ngram Viewer, Google Trends, Scopus, Web of Science, and VOSviewer. Drawing data from the Scopus databases, the analysis filters a total of 20,345 papers, revealing three primary scientific clusters of research in the domain of green human capital. The first cluster concentrates on examining the relationship between green human capital and the effectiveness of achieving sustainable development goals. The second cluster explores the interdependence of a company's green brand and its green human capital. The third cluster acts as an intermediary, combining research on green human capital and corporate social responsibility. By systematically combining deduction, and utilizing Google Trends, the study substantiates a close relationship between a company's performance and green human capital. This relationship is characterized by a two-way, subject-object nature. On one hand, the growing value of the company's performance provides the country with additional opportunities to attract green human capital. On the other hand, green human capital contributes to the enhancement of company's brand as environmentally responsible. Future research endeavours should seek empirical confirmation of these identified relationships.*

**KEY WORDS:** *bibliometric, human capital, stakeholder, sustainable development.*



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## **DETERMINISTIC PARAMETRIC PRODUCTION FRONTIER FOR THE EU AGRICULTURE**

### **ABSTRACT**

*The paper focuses on the performance of agriculture in the European Union. The country-level data are used to establish the deterministic parametric frontier. The linear programming is used to fit the translog production function. The output elasticities and production efficiency is recovered based on the estimates. The results allow identifying the relative importance of inputs in terms of the output generation across time and space due to the flexibility of the functional form. The results are also compared to the case of the restricted frontier.*

**KEY WORDS:** *agriculture, elasticities, production efficiency, EU*



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## **FINTECH'S UNPRECEDENTED RISE IN THE DIGITAL ECONOMY**

### **ABSTRACT**

*This paper explores the evolving role of financial technology (FinTech) in the digital economy. FinTech enhances financial inclusion through digital payment systems, fosters innovation with new financial products, and disrupts traditional business models, exemplified by the rise of neo-banks. The paper addresses challenges such as cybersecurity and evolving regulations. The COVID-19 pandemic has accelerated FinTech adoption, highlighting its crucial role in providing accessible and secure digital financial services. As FinTech continues to shape the financial industry, balancing innovation with consumer protection remains paramount for its sustained success in the digital economy. The historical shift from physical to digital commerce is contextualized, illustrating how advancements in technology have created a parallel digital reality. The digital world, once distinct, is now an integral part of the global economy, paralleling the physical world's significance. As FinTech transforms the financial industry and shapes the digital economy, the paper emphasizes the need to carefully address challenges and risks for its sustained success in driving financial inclusion, innovation, and competition.*

**Key words:** *digital economy, digital financial services, financial industry, global economy.*



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**THE INFLUENCE OF THE EFFECTS OF CLIMATE WARMING  
ON THE NECESSITY OF CHANGES IN LOGISTICS MANAGEMENT  
ON A GLOBAL AND MICRO SCALE**

**ABSTRACT**

*The increasingly perceptible and accelerating climate changes generate various effects on a micro and macro scale, which results in the need to introduce new "rules of the game" in many areas of the economy, with particular emphasis on the management of logistic processes, as they constitute a specific bloodstream of economic processes. Starting from the area of obtaining raw materials, through delivering them in the expected time, production processes and proper distribution. All the listed elements should be organized so that any turbulence becomes almost imperceptible. The analysis of past events shows how fragile the logistic procedures are. The aim of the article is to indicate or propose new logistics management indicators that are more resistant to constantly changing external conditions.*

**KEYWORDS:** logistic management, climate changes, changing external conditions.



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## **ENSURING QUALITY IN DIGITALIZED SUPPLY CHAINS: THE ROLE OF SOFTWARE QUALITY STANDARDS AND ISO/IEC 25010**

### **ABSTRACT**

*The concept of “quality” is subjective and varies among individuals, fields, and circumstances. In a business context, quality can refer to various aspects such as work, production, service, product, software, people, process, or system. Quality management principles, outlined in ISO 9000 standards, include customer focus, leadership, engagement of people, process approach, improvement, evidence-based decision-making, and relationship management. Digitalisation provides insights for increased efficiency and economic growth, and technologies enable better planning, design, and management of the flow of goods, products, and services in the company. The digitalisation of supply chains is crucial for resilience and pivotal in enabling sustainable and environmentally friendly supply chains. Leveraging information and communication technologies (ICT) resources for supply chains, companies transition their physical operations into digital domains, optimising resource efficiency and promoting increased productivity. This comprehensive approach involves both physical and digital activities, allowing for reduced resource consumption, increased network visibility, and real-time feedback mechanisms. Additionally, it encompasses various specialised tools for tailored production and collaboration with suppliers at every network stage. ICT is crucial in modern supply chain management (SCM), and software solutions can significantly enhance operational efficiency. Improved coordination is often achieved by implementing a unified software platform that integrates, processes, and transmits information from various ICT systems across the entire supply chain. There is a diverse range of software offerings for SCM that encompass services such as material requirements planning (MRP), warehouse management systems (WMS), enterprise resource planning (ERP), and workforce management solutions (WfMs). The scope of these services extends (among others) from facilitating logistics-related operations, inventory management, planning, forecasting, sales, cash flow, and procurement. Software solutions also enable tracking shipments at every stage of the supply chain and decision-making based on real-time*

*data. SCM methods are facilitated through ERP software, which monitors and records business processes, providing various departments with insights into productivity for each transaction conducted within the company. It becomes clear that software quality plays a crucial role in supply chains, ensuring that software products meet user expectations and bring value through the digitalisation of business processes. Therefore, software quality is essential to ensure that digitalised business processes meet user expectations and deliver value. It is also vital for any project; poorly constructed code can lead to a range of issues, including errors, system crashes, security vulnerabilities, software malfunctions, and operational bottlenecks, which can pose significant challenges in the future. Moreover, suboptimal software quality can result in increased costs, extended development times, and a higher likelihood of project failure. In this context, software quality standards and frameworks play a crucial role, as they represent a collection of best practices, guidelines, and principles to ensure the reliability, usability, maintainability, and security of software products and processes. Adhering to these standards and frameworks becomes essential, as it facilitates delivering high-quality software that meets the expectations of the company, stakeholders, customers, and end-users. The article emphasises the relationship between software quality, supply chains, and ISO/IEC 25000 standards. The ISO/IEC 25010 standard, part of the Software Quality Requirements and Evaluation (SquaRE) series, presents a robust framework for comprehensive assessment and management of software quality, covering key characteristics such as functionality, reliability, usability, efficiency, maintainability, and portability. ISO/IEC 25000 is an international standard developed by ISO and IEC for assessing and managing software quality. It establishes models, characteristics, and requirements for software quality, serving as a valuable tool for quality assessment. Following SquaRE principles increases overall software quality, leading to greater customer satisfaction and successful software implementations. Organisations rely on the ISO/IEC 25000 series, which provide comprehensive software quality management guidelines. The core standard, ISO/IEC 25010, defines a quality model covering functionality, reliability, usability, efficiency, maintainability, and portability. Adherence to these standards enhances transparency, reliability, and interoperability in digitalised supply chains, contributing to effective communication, improved decision-making, risk management, customer satisfaction, and continuous improvement. In the future, it is evident that collaboration between software quality and supply chain systems will continue and deepen, where the use of the ISO/IEC 25010 standard is expected to become more widespread, promoting greater transparency, reliability, and interoperability. Integrating new technologies, such as artificial intelligence, blockchain, and digital twins, can further enhance the digitalisation of supply chains, requiring even more robust software quality practices.*

**KEYWORDS:** digitalisation, software quality, supply chain, software quality standards, ISO/IEC 25010

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## **STUDENTS' MIGRATION AND COUNTRIES' RESILIENCE: LINKS AND DETERMINANTS FOR BRAIN GAIN POLICY DEVELOPMENT**

### **ABSTRACT**

*Students' migration has been seen now as one of the core brain gain constituents within the analysis of intellectual migration. According to the OECD classification talented migrants include highly educated workers, foreign entrepreneurs, university students, and start-up founders. To find the links between students' migration and countries' resilience the correlation analysis has been performed using the statistical data for OECD countries in 2023. As a result, it is justified that the components of a country's resilience (measured by the Global Resilience Index) have positive direct links with the immigration of university students. The links are especially obvious with economic resilience and resilience of the supply chain (correlation coefficient values are 0.7 and 0.8 respectively). The economic impact of the links obtained is important because international students form the country's workforce, being employed after graduation abroad. So, analysis of the links is twofold: it allows finding the pull factors for talented youth (the overall resilience of the country is important, including economic sustainability). At the same time, we can assume that the stability of economic surroundings can be influenced to a great extent by migration trends if they are managed following the aim of attracting intellectual migrants. With the increase in dangers of various content and influence in today's world, the concept of resilience becomes one of the key ones, and in the migration decisions of students with their higher competitiveness and aspirations to apply their human potential, the country's resilience can be an important incentive. Such conclusions are important for the improvement of brain gain policy in terms of the development of the environment for the attraction and retention of talents. Particularly, the proposed approach to measure the links between student migration and country resilience can be used to improve the institutional environment of a country. It will be useful to increase the perception of safety, well-being, and reliability of living in the country by the local population, and will serve as a factor for attracting the talented with corresponding long-term economic benefits.*

**KEYWORDS:** *brain gain, migration policy, resilience, students' migration.*

**Funded by the EU NextGenerationEU through the Recovery and Resilience Plan for Slovakia under project No. 09I03-03-V01-00013**





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## **PUBLIC MANAGEMENT OF ENTREPRENEURSHIP DEVELOPMENT UNDER THE CONDITIONS OF WAR IN UKRAINE**

**Abstract.** *The economic recovery based on entrepreneurial activity support is one of the most challenging tasks for implementation under the conditions of war. At the same time, the proper public management of entrepreneurial development is required as it is the most reliable way for income gain and socio-economic sustainability. In this regard, the most obvious threats to entrepreneurial activity in Ukraine are caused by population decrease, particularly, due to emigration, instability of the business environment (economic, political, direct losses of capital due to war destruction), decrease in population incomes and purchasing capacity, difficulties in managing relocating business in the new local communities. Considering these circumstances, the efficiency of the post-war recovery linked with business development is impacted by appropriate up-to-date tools of public administration. Some important achievements are typical for the Ukraine case, like the support of relocated businesses with the engagement of local authorities in issues of facilities seeking, special funding programs for business owners to start (or re-start) their activities in new territories, electronic means of business support, like state information portal Diia.gov.ua. The majority of entrepreneurial issues, including support in restoring documents, are available for relocated entrepreneurs. However, the perspective of long-term war requires the implementation of more positive practices of entrepreneurship development. One of the most important but not well-developed in Ukraine is veterans' business development. Nowadays the number of veterans is increasing steadily and the best practices of their post-war adaption are important to be used in Ukraine. The positive examples of veteran business public management can be implemented using the developed practice of the USA, Canada and other countries with developed tools of including the veteran businesses in public supply chains, tax benefits use and other positive practices. The development of these measures should be the important direction among the current public management activities aimed at the entrepreneurial activity support.*

**KEYWORDS:** *business environment, entrepreneurship, public management.*

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## **THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE DEVELOPMENT OF MODERN MASS MEDIA**

### **ABSTRACT**

*This paper explores the multifaceted impact of AI on mass media, encompassing automated journalism, personalized content recommendations, deepfake challenges, and the evolving nature of audience engagement. It starts from hypothesis that the infusion of artificial intelligence into modern mass media significantly transforms content creation, distribution, and audience engagement, reshaping the industry's landscape. As AI algorithms increasingly influence editorial decisions and audience interactions, this study aims to dissect the implications for media ethics, quality journalism, and the societal discourse surrounding information dissemination.*

**KEYWORDS:** *Artificial Intelligence (AI), mass media, media ethics, modern journalism*



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## **MANAGEMENT OF CRITICAL INFRASTRUCTURE AS PART OF THE COUNTRY'S ECONOMY**

### **ABSTRACT**

*In modern conditions of increasing impact of negative socio-economic challenges and factors in both the national and global security system, the importance of the reliable functioning of the critical infrastructure of the state increases. Critical infrastructure in any country ensures the safety and livelihoods of the population and the state, performing not only a protective function, but also economic and social functions. Critical infrastructure facilities, sectors and services account for a significant portion of the national economy. At the state level, much attention is paid to the issues of effective management of critical infrastructure. An important aspect is complete and optimal financing, uninterrupted functioning of critical infrastructure facilities, which allows for increased safety. As well as active interaction between industry, state and society, pooling of resources, optimization of processes.*

**Key words:** *critical infrastructure, management, security, national economy*



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## **INCREASING THE EFFICIENCY OF COMMUNICATIONS WITH CUSTOMERS IN TRADE IN THE DIGITAL ECONOMY**

### **ABSTRACT**

*The goal of IT solutions in retail is to promote revenue growth and customer loyalty. This can be achieved by increasing the efficiency of communication with customers and reducing marketing costs. Interaction with the buyer is a “sore” issue for stores. And if online companies have learned to track what products a site visitor was interested in in order to select the most relevant offers for him and return him to the site with a discount offer, then in a shopping center sometimes there is not even a salesperson next to the buyer who could quickly help and answer questions about product. Or a buyer, having seen an advertisement, comes to the store, but cannot find the product he needs. As a result, it turns out that trading companies invest money in marketing, but cannot provide quality service in their stores and thus lose part of their revenue. Online e-commerce systems allow retail companies to collect a large amount of heterogeneous data about user behavior and preferences. At the same time, large retailers can use both their own resources to deploy e-commerce systems and big data analytics, and use cloud technologies to store their decisions and data collected when working with various stakeholders. The trend of outsourcing not only data storage, but also the deployment of information systems that provide business logic for an online retailer, has emerged in the context of increasing competition and lack of sufficient economic growth. Digital tools today help reduce the cost of attracting customers to stores and automate business processes in sales areas:*

- *The Digital Signage system combines video screens, interactive showcases and other digital outdoor advertising on the network with the ability to manage content from the center. The company saves on printing costs and transmits information to customers faster.*
- *Smart counters with Touch & Learn technology can display information on the screen near the product after the customer has taken it from the shelf.*
- *Video analysis technologies in retail show whether store visitors notice the content on the screen (determine the direction of gaze, gender, approximate age, estimate the number of people in line). An active position in the implementation*

*of digital transformation processes of the designated retail representatives allowed these companies, judging by the main indicators of their activities, to achieve significant competitive advantages in the market niches they occupy, strengthen their positions, and expand their market share.*

**KEY WORDS:** *trade, communication with customers, digital economy, video analysis, efficiency.*



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## **SUBSIDIES: GENERAL PRINCIPLES OF ASSESSING THE ENVIRONMENTAL IMPACT**

### **ABSTRACT**

*The methodologies for assessing the environmental impacts of subsidies typically involve two procedures: (a) quantifying the size of subsidies and (b) identifying and quantifying (where possible) the impacts on the environment. Environmental impacts refer to changes in the state of the environment due to anthropogenic activities, such as the use of resources or activities causing pollution. Identifying the environmental impacts of subsidies is often challenging, as many subsidies exhibit both positive and negative effects on the environment, and the scenario without the subsidy is not always clear. To determine whether a subsidy is environmentally harmful and to measure its environmental impact, a counterfactual is required. This counterfactual should be defined by assuming the absence of any other intervention by public authorities. The general principles for assessing environmental harm are as follows: Each measure, intervention, or other form of a subsidy needs to be addressed separately. For a subsidy with technologically and economically feasible alternatives with low environmental impact, the assessment of environmental impact should be against a 'no intervention' scenario, considering the environmental effect in absolute terms. The impact of a subsidy is not assessed in comparison to the impact of another existing or envisaged activity that a subsidy may be replacing. A subsidy that is associated with significant negative impacts but also with significant positive environmental impacts should be considered as an environmentally harmful. Subsidies could have environmental impacts of varying magnitudes. Limitations to the assessment should be clearly and transparently signalled, with evidence (e.g., data, estimates, scientific findings) provided to substantiate conclusions.*

**KEYWORDS:** *subsidies, environmental impact, counterfactual, environmental harm assessment.*



## **EFFECTS OF DIGITAL TRANSFORMATION ON THE MEDIA CONTENT OF BANKING INFORMATION**

### **ABSTRACT**

*Today, businesses use information technologies to optimize costs, increase profits, make processes more efficient, and find new ways to monetize their resources. For example, financial companies (banks, insurance companies, collection agencies) are expanding the capabilities of their contact centers in order to reduce their maintenance costs, improve the quality of service and the level of customer loyalty, including through more personalized communication. It is obvious that digital transformation is not only about increasing customer loyalty through good service and a personalized approach. This is also a significant reduction in service costs, as well as a reduction in the burden on personnel, which can be achieved due to the automation and robotization of business processes. Thus, employees' working time is freed up to work more effectively with customers, study their behavior, help solve non-standard issues, develop new products, etc. So, for example, modern IT technologies provided by service integrators allow customers of bank contact centers to:*

- quickly pass remote identification of a person using biometric data (fingerprints, voice, face);*
- receive interesting information without the operator's participation using a voice application;*
- solve problems with the help of a chat bot;*
- receive personalized up-to-date offers (based on big data analysis);*
- receive prompt, high-quality operator consultation and much more.*

*A few years ago, customers had to go to the office for a loan or statement, and for a standard consultation or service activation, they had to call the operator. Now all this can be done in minutes online in the application on the smartphone, through the voice application, using the chatbot in the messenger or in the Internet bank in the browser. Moving further along the path of digital transformation, contact centers are expanding their functionality: the waiting time for connecting with an operator is zero, while the high level of quality of the provided service is monitored by a special system that analyzes in real time the words spoken by the operator and the*

*client and the general emotional background. Thus, interaction with the bank becomes even more convenient for customers due to "seamless" communication technologies: a single system processes and stores customer data, and the contact center operator has instant access to them, sees the entire history of communication with the customer through various channels: by phone, mail, social networks, chat or SMS. This allows you to serve customers with the highest quality, manage their loyalty, proactively respond to negatives and successfully sell additional services.*

**KEY WORDS:** *media, digital transformation, information, banking services, IT-technologies*





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## **SOCIAL RESPONSIBILITY AND INDUSTRY 4.0: LINKING BETWEEN CATEGORIES**

### **ABSTRACT**

*The development of Industry 4.0 is a crucial priority in the economic sector, as it promises exponential productivity growth, efficient time use and cost optimization. Simultaneously, the implementation of the principles of sustainable development determines the need to ensure social responsibility, which is one of the key determinants of the development of the business sector. The article aims to analyze the relationships between social responsibility and Industry 4.0 using bibliometric analysis. The authors used bibliometric analysis methods to determine vectors of perspective development of social responsibility and Industry 4.0. The paper's central hypothesis is studying the increasing tendency to analyze socially responsible strategies in the condition of Industry 4.0 by scientists. A bibliometric analysis of the spread of the concept of "social responsibility" and "Industry 4.0" in scientific articles indexed by the Scopus science base was performed to investigate the clusters of scientific publications. The authors reviewed over 45600 papers from the Scopus base. The period for the analysis was chosen from 2005 to 2023. Scopus analytical tools allow reviewing more than 45,000 articles from the bibliometric database and drawing conclusions based on various selection criteria: authors, type of documents, financial sponsors, countries, subject area, etc. On the cross-country level, the following countries represent the investigated area: the United States, China, the United Kingdom, etc. The analysis of citations using the VOS viewer tool revealed the three most significant clusters of research groups that significantly impact the development of social responsibility and Industry 4.0. Identifying regularities in developing scientific approaches to social responsibility in the conditions of Industry 4.0 made it possible to describe the main retrospective and evolutionary trends in developing this theory.*

**KEY WORDS:** *sustainable development, strategy, social responsibility, industry 4.0, bibliometric analysis.*

**The research was funded by the grant from the Ministry of Education and Science of Ukraine (№ 0122U000788 and № 0123U101920).**



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## **THE IMPORTANCE OF SOCIAL CAPITAL FOR IMPROVING THE COMPETITIVENESS OF THE MONTENEGRO ECONOMY**

### **ABSTRACT**

*A large number of authors have written and are still writing about the importance of social capital for the productivity and competitiveness of organizations as well as the overall national economy. Education and skills are fundamental components of human capital. The knowledge economy must be preceded by adequate support from the state in ensuring the protection of social freedoms, a good educational system, a quality institutional environment, and guaranteed rules for conducting business. Today, quality functioning of developed economies is not possible without active institutional pluralism as a combination of state and market regulation (at the economic level), i.e. the rule of law, political democracy, sociocultural capital and all other social subsystems (at the social level). The subject of research in this paper is the analysis of social capital as a potentially least used development resource in Montenegro. The goal of the research is to point out the necessity of reform and further improvement of the education system and alignment with the needs of the labor market, thereby influencing the increase in the competitiveness of the economy. It is necessary that the education system in our country ensures the strengthening of the knowledge and skills of people, especially young people. In today's knowledge economy and global market, the intangible assets of a company (and economy), i.e. intellectual property (as a narrower part of intellectual capital) is what makes it successful and competitive.*

**KEY WORDS:** *education, social capital, competitiveness, skills, knowledge economy.*



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## **ENVIRONMENTAL ASPECT OF NON-FINANCIAL ESG REPORTING FOR COMPANIES LISTED ON THE STOCK EXCHANGE**

### **ABSTRACT**

*Responsibility for the impact on the environment is one of the aspects of building the value of every organization. The development and implementation of the ESG (Environmental Social corporate Governance) strategy by the company is a real step towards caring for sustainable development. Analyzing an organization's carbon footprint is becoming an obligation. Its calculation results from legal conditions related to Poland's adoption of EU Directive 2014/95/EU on non-financial information. By amending the Accounting Act, it was implemented into the legal order at the beginning of 2017. In November 2022, the European Parliament adopted the CSRD (Corporate Sustainability Reporting Directive). According to its provisions, from 2024, more and more companies will be obliged to report environmental aspects in the so-called non-financial ESG reports. Currently, this obligation rested only on Public Interest Entities (as defined in the Act on Statutory Auditors). In 2025, reports for 2024 will be obligatory for listed companies with more than 500 employees and alternatively meeting the condition of PLN 85 million of total balance sheet assets at the end of the financial year or PLN 170 million of net revenues from the sale of goods and products for the year rotary. The aim of the article is to analyze two CO<sub>2</sub> emission accounting indicators: carbon intensity and carbon footprint related to the company's financial data for companies listed on the WSE and subject to this obligation from 2024.*

**KEYWORDS:** *carbon footprint, ESG, finance, sustainable development*

**Funding:** The research leading to these results has received funding from the project titled "Cluster for innovative energy" in the frame of the program "HORIZON-MSCA-2022-SE-01" under the Grant agreement number 101129820



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## **GREEN INVESTMENTS: ENERGY MANAGEMENT MODEL**

### **ABSTRACT**

*The introduction of sustainable development and environmental protection has become a priority for many countries, including those in the European Union (EU). The European Commission has set a goal of climate neutrality by 2050 for member countries, which is included in the so-called European Green Deal. As part of this goal, the EU has developed a package of measures, known as "fit for 55," to put the Union on the road to climate neutrality by 2050. In addition, the geopolitical situation in Europe as well as the problems resulting from the COVID-19 pandemic have led to new strategic policies in the EU called the Green Deal Industrial Plan. This plan is about increasing industrial competitiveness based on investment in low-carbon technologies, reindustrialization and increasing raw material security. Therefore, the aim of the study was to create a model for the management and financing of local energy resources (major electricity), based on local generation potential, energy storage capacity and system balancing capabilities based on mechanisms for active management of energy supply and demand. Current models of management and financing of local energy resources are not suitable for new EU strategic plans. The study is innovative in nature, taking into account the current development priorities of the European Union and the need to align local energy management models with these priorities. The study also enriches knowledge in the field of electricity management having great significance for the development of various fields (e.g., engineering and social sciences) and scientific disciplines (e.g., management and quality sciences, economics and finance, security sciences, political and administrative sciences environmental engineering, mining and energy, automation, electronics and electrical engineering, civil engineering and transportation). The study was carried out using a variety of research methods, enabling an in-depth understanding and analysis of issues related to the management and financing of local energy resources in the context of European Union priorities. Currently, there is no energy management model in the world that takes into account such a broad socio-*

*economic-environmental context, which makes this solution pioneering and can contribute to the development of new energy optimization methods.*

**KEYWORDS:** *sustainability, green economy, fit for 55, energy management model*

**Funding:** The research leading to these results has received funding from the project titled "Cluster for innovative energy" in the frame of the program "HORIZON-MSCA-2022-SE-01" under the Grant agreement number 101129820



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## **EXPLORING THE ROLE OF ENVIRONMENTAL REGULATION ON ENERGY SECURITY: CONTEXTUAL FINDINGS FOR SUSTAINABLE DEVELOPMENT IN EUROPE**

### **ABSTRACT**

*In the last years, with the reduction of energy resources and the emergence of problems such as unreasonable use, the issue of energy security has gradually received increased attention. As an important tool to protect the energy environment and promote economic transformation, it is important to investigate the relationship between environmental regulation and energy security to ensure energy security. Here, we measure the level of energy security by European region based on panel data, empirically analyze the direct and spillover effects and spatial heterogeneity of environmental regulation on energy security, and also explore the non-linear characteristics of environmental regulation on energy security driven by fiscal decentralization and marketization. The results show that there are regional differences and spatial dependence in European energy security, indicating that environmental regulation contributes to the level of energy security, but the effect of environmental regulation varies across regions and the positive impact of environmental regulation is enhanced when the degree of fiscal decentralization and marketization crosses a specific threshold. Environmental regulation is an important means to promote the green economy. Therefore, this research offers a certain marginal contribution in this topic. First of all, an energy security evaluation index system covering the four dimensions of energy supply, energy use, and energy economy, as well as the energy environment, is constructed to strive for a more comprehensive grasp of the energy security situation of all regions in Europe. Second, the impact of environmental regulation on energy security is explored, which enriches the research content on the impact of energy security. Finally, the spatial heterogeneity and non-linear characteristics of the environmental regulation impact on energy security are verified, which provides some reference for the governments or European Commission to formulate correct energy policies.*

**KEY WORDS:** *sustainable development, energy security, environmental regulation, spatial analysis.*

**Funding:** The research leading to these results has received funding from the project titled "Cluster for innovative energy" in the frame of the program "HORIZON-MSCA-2022-SE-01" under the Grant agreement number 101129820





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## **DIGITALIZATION AND DIGITAL COMPETENCIES OF STUDENTS – CHALLENGES AND OPPORTUNITIES IN RESPONSIBLE MANAGEMENT EDUCATION**

### **ABSTRACT**

*The paper explores opportunities for innovation in universities' business-training models to improve students' digital literacy and competencies for responsible business management in conditions of digital transformation. The need to enhance the educational models of universities is considered in the context of increasing international efforts to achieve sustainable development. Some ethical dilemmas that digital transformation creates in the labor market and in the higher education sector are considered. The results from the survey among Business and Management students from Bulgarian universities are analyzed. Their perceptions and evaluations of the effectiveness of the training offered by business schools and its role in increasing their digital literacy and competencies are discussed. A competency-oriented approach and research-based educational models are recommended to integrate modern digital technologies into the academic environment more successfully while adhering to the principles of responsible management education.*

**KEYWORDS:** *digitalization, digital literacy, digital competencies, Responsible Management Education, sustainable development.*

**The paper is supported by the grant of the Bulgarian National Science Fund (Project no. KP-06-H45/1).**



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## **COMPANY PROFILE ON JOB WEBSITES AS A TOOL FOR MONITORING SOCIAL RESPONSIBILITY IN LABOUR RELATIONS**

### **ABSTRACT**

*A corporate social responsibility (CSR) is an important element in the regulation of social and labour relations. In particular, it contributes to the formation of a positive image of the employer in the labour market, and thus to the attraction and retention of qualified specialists, growth of their loyalty and increase of work efficiency. Although ratings of socially responsible companies are being formed in Ukraine, and the practice of preparing non-financial reports is becoming more widespread, not every job seeker knows where to find them. In addition, such sources of information are not always useful for the job seeker, as they may lack specific information on a corporate responsibility in the labour sphere. A tool that can help fill these gaps is the company's social responsibility profile in labour relations on job websites. If the profile is filled in correctly, a job seeker will be able to evaluate a vacancy with due regard to corporate social responsibility in labour relations. The methodological basis for the information content of such a profile may be the ILO Decent Work concept. According to this approach, the profile should include blocks that reflect indicators of decent work assessment: decent pay; legalisation of employment and labour relations; stability and confidence in job security; equal opportunities and treatment in the work process; safe working conditions; working and rest time; social protection; social dialogue. To ensure openness and accessibility of information on CSR in labour relations for all company stakeholders, the profiles should be integrated into the information systems of the State Employment Centre and the National Mediation and Conciliation Service. We believe that such profiles will encourage companies to improve their labour relations in order to create a positive image of the company and, as a result, increase the opportunities for retaining and attracting qualified personnel.*

**KEY WORDS:** *corporate social responsibility, company profile, labour relations, employer, employee.*

## **LIMITS OF (IN)DEPENDENT JOURNALISM**

### **ABSTRACT**

*This paper explains selected relationship between economic frames of journalism and possibility of its independence, and explores the relationship between the importance of information and economic dependence of journalists. We start with two hypotheses: first, that economic frameworks reduce (but not abolish) its professional independence, and second, that relationship between the importance of information and economic dependence of journalists is paradoxical, and that its dynamics do not change in a desirable civilizational-democratic direction. The degree of journalism (in)dependence (media) depends primarily on the economic and political framework. It disables journalists to act in accordance with their own views, beliefs, professional and moral principles. The issue of journalism (and media) (in)dependence causes many dilemmas and polemics. It is essentially related to the ownership and control of the media, which directly affects the freedom of speech. This imperils the interests of the majority population and the society development. Similary to "old" media, journalism exists in three spheres of reality: economic (circulation, advertising, salaries, market and management), legal (law and institutional conditions created by the government, freedom of speech and censorship) and corporate (education, code of honor, professionalism, creativity, business). All these spheres are dominated by economic interests, which are objectively suppressing all other values (morality, honor, truth, quality, and professionalism), that should be imperative characteristic of journalism. The loudest voices of the threats to independent journalism, those who shout "freedom of speech" are so-called "independent" journalists, who are well paid by nomenclature and business structures. Their apologetic "freedom of speech" is often free of the social responsibility, as it is dependent on the obligations to purchasers of various media formats (articles, reports, interviews, etc..). Interpreting the economic aspects of (in)dependent journalism, we have distanced from the unilateral approach that their economic dependence reduces to a professional addiction. On the contrary, in this paper we prove the hypothesis that the economic framework of journalism actually reduces (but not eliminates) the possibility of its professional independence, which affects the paradoxical relationship between the importance of information and economic dependence of journalists, with dynamics that are slowly changing into a desirable civilizational-democratic direction. Generally speaking, we believe that dialogue is the best "recipe" for ex-*

*pansion of independent journalism. Regardless of differences between publicistics and journalism, there are magazines like "Media Dialogues", which successfully balance, bringing journalism closer to the publicistics and thus directly affect and contribute to the real increase of the independent journalism.*

**KEYWORDS:** *Independent Journalism, Interests, Information, Economisc.*





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## **ASSESSMENT OF CORPORATE SOCIAL RESPONSIBILITY IN THE ENERGY SECTOR**

### **ABSTRACT**

*In recent years, a significant global increase in awareness and concerns regarding sustainability has placed a greater responsibility on companies to address corporate social responsibility and climate change challenges. As a result, there is a growing demand for sustainability reports, driven by shareholders' increasing interest in sustainable investments. The energy sector is the main source of greenhouse gas emissions; therefore, corporate social responsibility initiatives and environmental, social, and governance (ESG) reporting play a crucial role in the sustainable development of the energy sector. The paper aims to develop a corporate social responsibility index in the energy sector. The main tasks of this paper are a literature review on corporate social responsibility assessment and the development of a new index for corporate social responsibility assessment in the energy sector based on sustainable development priorities in the energy sector. The empirical testing of the developed index was applied to energy companies operating in Lithuania and being members of Global Compact or GRI initiatives.*

**KEYWORDS:** *corporate social responsibility, energy sector, assessment, index.*

**SUSTAINABILITY AND DIGITAL TRANSFORMATION  
AT BANKING AND FINANCIAL INSTITUTIONS:  
CONTEMPORARY TRENDS AT THE NORDICS**

**ABSTRACT**

*During the past decade, banking and financial institutions in the Nordic region (Denmark, Finland, Iceland, Norway, and Sweden) have been undergoing dynamic digital transformations (DT). DT, often used interchangeably with terms such as digitalisation and digitisation, can be defined as “a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies” (Mikalef and Parmiggiani, 2022). In consequence, numerous enterprises of the financial technology industry (FinTech) have been introducing plethora of modern solutions, bringing value for users at financial digital ecosystems, in such areas as data analytics, user experience (UX), cybersecurity, blockchain, Internet of Things (IoT), artificial intelligence (AI), and process automation (Kedziora, 2022). Together with disruptive DTs at Nordic banks and financial organisations, we have been observing large sectoral and societal movements towards sustainability and cooperative value co-creation. However, many of these initiatives have not succeeded, as we have been noticing some inconsistencies and challenges with the adoption of sustainable practices, as well as continuous assessment of sustainability of individual firms, market, state, and all levels of society (Lamarque and Migliorelli, 2022 p.269). Hence, in November 2022, the European Commission has initiated the Corporate Sustainability Reporting Directive (CSRD), aiming for the improved transparency in the organisational reporting on environmental, governance, and social affairs (European Parliament, 2022). CSRD is supposed to establish objective standards by which nearly 50,000 EU organisations will now be responsible for conducting detailed reporting on their sustainability policies, as well as its impact on the entire value chains of their business portfolios. Such initiatives have potential of further promoting sustainability and DT of the Nordic banking and financial institutions, and should be closely followed and facilitated by authorities, industry, and academia, since as stated by Tainer (2006): “People sustain what they value, which can only be derived from what they know”.*

**KEY WORDS:** *sustainability, digital, transformation, banking, financial, institution, Nordics*

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## **AN ANALYSIS OF GREEN MARKETING INITIATIVES IMPLEMENTED BY LEADING AUTOMOBILE MANUFACTURERS IN THE EU**

### **ABSTRACT**

*The European economy is currently undergoing a transitional phase, shifting from conventional production and consumption to a sustainability-oriented production and consumption system. However, establishing a modern, resource-efficient, and competitive economy while aiming to achieve the target of no net emissions of greenhouse gases by 2050 poses a significant challenge. To meet this critical EU target, both producers and consumers need to alter their existing practices and behaviors in production and consumption. Hence, the EU Green Deal is poised to serve as the foundation for a paradigm shift in the entire EU economy.*

*As part of this broader context, EU regulations on CO<sub>2</sub> emissions for new cars have become a hot topic for study and discussion. A recent study reveals that EU-based automobile manufacturers are striving to adopt innovative technologies for their applications to meet the EU regulatory emission standards. Simultaneously, they are implementing green marketing initiatives to empower potential customers. The qualitative study focuses on analyzing internet-based promotional materials related to new personal car models from major players in the EU automobile market. It investigates how these companies have embraced green marketing initiatives to promote their applications to potential customers. This study holds significance for marketers and other stakeholders interested in green marketing initiatives.*

**KEYWORDS:** *Green Marketing Initiatives, EU Green Deal, EU Automobile Industry*





**ASSESSMENT OF THE BANK PERFORMANCE IN THE BALTIC  
STATES: A MULTI-CRITERIA METHODOLOGY**

**ABSTRACT**

*The assessment of the banking performance needs to take into account multiple indicators describing facets of sustainability. The multi-criteria methods are applied in order to aggregate the data about banks in the Baltic States over the last decade. The period covered was specific with zero interest rates and, thus, makes the case interesting as the banks were operating under unusual conditions. The two perspectives were followed, namely the attraction of the clients and profit generation. The two-level aggregation was needed as the results from several methods were further combined. The analysis of the banking performance suggests that there may be discrepancy in the ranking of the banks depending on the approach taken (customer attraction vs. profit generation). This finding suggests that the assumptions regarding the bank behaviour are important when constructing multi-criteria models. Practically, this shows that different banks may operate within different stages of their development when different objectives are important. Thus, expanding the base of clients may appear as more important objective than profitability gains and vice versa.*

**KEYWORDS:** *banking performance; multi-criteria analysis; client attraction; profit generation.*



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## **ENERGY INEQUALITY IN LITHUANIA**

### **ABSTRACT**

*Energy inequality has become an increasingly growing research topic due to its social, economic, and environmental impacts. Energy inequality refers to the difference in individual access to energy. As all basic human needs, such as food, water, and shelter, are directly linked to an individual's access to energy, limited access to energy directly impacts satisfying all basic human needs. Based on a comprehensive literature review and analysis of available energy poverty and inequality indicators, the new energy inequality indicators framework was developed by addressing the main social, economic, and environmental implications of energy inequality on the country level. The indicators system was applied to Lithuania. The trends of energy inequality indicators were compared with other closely linked indicators, such as energy poverty. Similar trends were noticed for developing energy inequality and energy poverty indicators in Lithuania. A Lithuanian case study found the highest negative social impact of energy inequality.*

**KEYWORDS:** *energy inequality, indicators, case study, Lithuania*



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## **WATER FOOTPRINT RELATED TO THE FOOD LOSS IN LITHUANIAN AGRICULTURE: PERSPECTIVE OF THE ANIMAL FARMING**

### **ABSTRACT**

*Reducing food loss and waste is an important challenge for the sustainable development of the world. The present research focuses on the Lithuanian primary production sector and decomposes the changes in the water footprint associated with the animal farming. The index decomposition analysis is applied to assess the contributions of the explanatory terms towards the total change in the water use due to the food loss. The rates of the food loss are derived from the agricultural balances and the earlier research related to Lithuanian agriculture. The results of the study are important in devising policies for addressing both food loss and water efficiency in the agricultural sector. The measures for the food loss prevention may be taken to reduce the associated food loss. Additionally, the factors of the food loss and the production structure may result in the changes in the overall rate of the food loss in the agricultural sector. Tracking the food loss and its determinants helps to identify the most effective pathways to reduce the resource waste. Further research may seek to obtain the improved data on the food loss coefficients and include them into the index decomposition analysis.*

**KEYWORDS:** *food loss; index decomposition analysis; animal farming; Lithuania*



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## **SUSTAINABILITY ANALYSIS OF EU AGRICULTURE BY APPLYING A GREEN PRODUCTIVITY APPROACH**

### **ABSTRACT**

*Sustainability analysis in agriculture by applying green productivity analysis. Green productivity analysis for simultaneously enhancing productivity and environmental performance for sustainable development of the agriculture sector. For green productivity analysis in this paper, the total productivity was assessed with environmental function, which also measures undesirable outputs. Undesirable outputs in green agricultural productivity are wastewater, land degradation, greenhouse gas (GHG) emission, air pollution, etc., which are dangerous for the environment. Linear programming, i.e., Data envelopment analysis (DEA), is applied to define the production frontier and assesses the contribution of various inputs to productivity considering the past performance data of the agricultural sector of EU member states. Sustainability analysis of agriculture based on green productivity using DEA models allows policy-makers to promote sustainable agriculture by assessing undesirable outputs linked to environmental pollution.*

**KEYWORDS:** *sustainability, green productivity, agriculture, EU member states*



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## **SUSTAINABILITY OF AGRICULTURE FROM THE LENS OF CLIMATE CHANGE**

### **ABSTRACT**

*Climate change is one of the most important issues for agricultural sustainability, and changes in farming practices will be necessary both to reduce GHG emissions and to adapt to a changing climate. Therefore, it is important to create a sustainability assessment framework from a climate change perspective, including mitigation and adaptation. The main indicators of sustainable agriculture linked to climate change were selected based on a comprehensive literature review. For comprehensive literature reviews, the following methods were applied: Search, Appraisal, Synthesis, and Analysis (SALSA) and Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) and PSALSAR (Protocol, Search, Appraisal, Synthesis, Analysis, and Report) methods. The indicators framework for sustainability assessment of agriculture from the lens of climate change was developed. The empirical testing of the developed model was applied to EU Member States. The empirical analysis and MCDM tools allowed to identify the most advanced countries in the decarbonization and adaptation of the agriculture sector: Croatia, Greece, and Slovakia. The policy recommendations were developed based on research results.*

**KEYWORDS:** *sustainability, climate change agriculture, assessment, framework, EU member states.*



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## **SOLUTIONS FOR SUSTAINABLE AND ECONOMIC AGRICULTURE: STAKEHOLDER VIEWS**

### **ABSTRACT**

*In the context of the increasingly pressing global issues of climate change and population expansion, it is critical for agriculture to achieve economic sustainability. This study explores the various obstacles to economically sustainable agriculture and highlights the critical role that stakeholders play in developing workable solutions. Ecological resilience and financial profitability must be balanced in economic sustainable agriculture. Increasing transportation costs, obstacles to effective supply chain management, and the need to close the gap between sustainable farming methods and consumer demand are some of the major issues. Aware of the intricate relationships that exist between these variables, stakeholders become essential in navigating this challenging environment. Farmers, consumers, businesses, and legislators are just a few of the stakeholders that are essential in guiding the agriculture industry toward sustainability. This study sheds light on their opinions regarding the best fixes. The findings suggest that reducing transportation costs by streamlining logistics, employing targeted advertising to generate demand for sustainable goods, and giving education top priority to equip farmers with environmentally friendly methods are critical. A comprehensive and financially sustainable future for agriculture can be achieved by coordinating these solutions with stakeholder interests, which will promote resilience in the face of changing global challenges.*

**KEYWORDS:** Sustainable Agriculture, Economic Agriculture, Stakeholders, Transportation Cost, Education



**ENERGY SECURITY INDICATORS FOR SUSTAINABLE ENERGY  
DEVELOPMENT: APPLICATION TO ELECTRICITY SECTOR  
IN THE CONTEXT OF STATE ECONOMIC DECISIONS**

**ABSTRACT**

*This study focuses on analyzing how various indicators of energy security are influenced by the economic policies implemented by governments, specifically within the context of the electricity sector. Through a comprehensive review of scholarly literature and a detailed analysis of relevant data, the research successfully identifies a set of 65 indicators that are crucial for understanding energy security in this domain. The findings emphasize the significant role that public economic policies play in shaping key aspects of energy security, such as the stability of energy supply, its reliability and its affordability for consumers. The research discusses in depth how governmental decision-making, particularly in areas like investing in renewable energy sources, implementing strategies for enhancing energy efficiency and the regulatory frameworks for electricity pricing, significantly influences the overall energy security of the electricity sector. Moreover, the study ventures into the theoretical aspects concerning the definition, evaluation and various dimensions of energy security. It brings to light the possible conflicts that might arise between the objectives of economic growth and the attainment of energy security, underscoring the necessity for a judicious and balanced approach in the formulation of economic policies. Furthermore, the paper argues strongly that the economic decisions made at the state level are crucial in defining and shaping the contours of energy security within the electricity sector. It emphasizes the urgent need for a comprehensive understanding of how these decisions impact energy security, suggesting that more informed and strategic policy-making can significantly enhance the sector's stability and resilience. The study thus contributes to a deeper understanding of the interconnectedness between governmental economic policies and energy security, highlighting the importance of strategic planning and decision-making in ensuring sustainable and secure energy futures.*

**KEYWORDS:** *energy policy; energy security; sustainable development.*



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## ASSESSMENT OF FOREST MANAGEMENT AND SUSTAINABILITY: A CASE OF BALTIC COUNTRIES

### ABSTRACT

*This study puts a focus on the evaluation of forest management and sustainability practices in the Baltic countries – Estonia, Latvia and Lithuania. As these countries have a great deal of forest areas, understanding management strategies and ways to specifically apply these is crucial for both local and global environmental conservation attempts. This research evaluates current forest management practices in the Baltic countries, assesses the alignment with outlined sustainability goals and distinguishes opportunities for improving the proposed standards. A complex balance between economic exploitation, environmental conservation, and societal benefits within the context of the Baltic forests is also explored in this study to the best extent. The assessment of this study uses a multi-faceted approach, combining both qualitative analysis of management policies and forest data. This paper thoroughly considers indicators such as a biodiversity protection, carbon sequestration, and socio-economic impacts to provide a comprehensive evaluation of the sustainability of forest management practices. Preliminary findings indicate interesting variations in forest management approaches among the Baltic countries, while simultaneously showcasing relevant differences reflecting the diverse ecological and socio-economic contexts within the countries. The study identifies best practices and challenges in achieving sustainable forest management.*

**KEYWORDS:** *forest management, Baltic countries, sustainability, carbon sequestration, socio-economic impacts*





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## **INDICATORS OF LOW CARBON ECONOMY IN THE FORESTRY SECTOR**

### **ABSTRACT**

*The increasing concern, about climate change makes the transition to a low carbon economy more important. This project focuses on defining and evaluating indicators that track the shift to a low carbon economy within the forestry industry. The forestry industry plays a role in climate mitigation so it is crucial to find ways to reduce carbon emissions without harming its economic viability. This study aims to create a framework for monitoring progress by identifying and analysing indicators that reflect the adoption of low carbon practices in the forestry sector and understanding how these activities contribute to reducing carbon emissions. To achieve this the study employs an approach that combines reviewing existing literature with analysing forestry policies. The research assesses metrics such as carbon sequestration, use of energy and overall reduction, in carbon footprint. Initial findings highlight metrics that demonstrate how the forestry industry is transitioning towards a low carbon economy. These metrics take into account both sustainability goals and economic factors recognizing their interconnectedness.*

**KEYWORDS:** *low carbon economy, carbon sequestration, renewable energy, forestry sector*



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## **STRUCTURAL CHANGE AND ENERGY-RELATED GHG EMISSION IN THE EU AGRICULTURE**

### **ABSTRACT**

*The importance of the different agricultural producing countries varies over time. The EU encourages the free flow of inputs and produce. Therefore, one may analyse this group of countries as both a single entity and individual countries with their agricultural sectors. The need for creation of the zero-carbon economy is imminent given the climate change that threatens the agricultural sector and economy in general. The agricultural sector uses inputs that create direct and indirect GHG emission. In this research, we consider the direct GHG emission that occurs due to the combustion of the energy resources in agriculture. The EU-level GHG intensity is then defined as the ratio of the total GHG output over the total GHG emission. The changes in the GHG intensity can be related to the structural shifts as the countries increase or decrease in the relative contribution to the total agricultural output. Besides, the energy intensity may vary as the energy requirements per the output unit may change. The energy-mix may shift to or from the renewables which affects the penetration of the renewables. The use of the fossil fuels may also be related to cleaner or less clean energy sources. Thus, the carbon factor is also considered for the fossil fuels. The aforementioned setting gives an index decomposition identity with the four factors representing the structural and intensity variables. The index decomposition analysis can then be facilitated to assess the effects of the four factors. The case of the European Union is considered based on the aggregate data from the Eurostat.*

**KEYWORDS:** *GHG emission; agriculture; index decomposition analysis*



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## **TOWARD SUSTAINABLE ENERGY DEVELOPMENT THROUGH THE LOW-CARBON ENERGY TRANSITION**

### **ABSTRACT**

*Low-carbon energy sources have become a global priority due to the pressing need to mitigate climate change. However, transitioning towards a low-carbon energy future has not been without its challenges. The purpose of this study was to identify these challenges by reviewing the literature. Subsequently, a novel intuitionistic fuzzy cognitive map method was used to map the interactions of the identified challenges and analyze a case study's performance under three scenarios. The TOPSIS method was then employed to determine the best scenario based on performance analysis. The findings revealed that the most significant challenge was "investment," followed by "short-termism" and "reformation," out of the seventeen challenges identified. Additionally, the "duet" scenario was deemed the most effective, and the study provided comprehensive conclusions and recommendations for policy implementation based on the results obtained.*

**KEYWORDS:** *Renewable energy, Low-carbon, Energy transition, Green energy, Paris Agreement*



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## **EUROPEAN FINANCIAL MARKET RESILIENCE IN THE FACE OF CATASTROPHIC EVENTS**

### **ABSTRACT**

*This research delves into the intricate interplay between catastrophic events, such as the Russia-Ukraine war, natural disasters, economic depressions, etc. illuminating the repercussions of these events in an era characterized by unprecedented global economic interconnectedness. Employing an event study methodology, this study meticulously scrutinizes historical price fluctuations within European market indices, unveiling a comprehensive portrait of the dynamics at play. The findings unveil a nuanced pattern of market reactions, revealing substantial spillover effects primarily emanating from "positive" and "neutral" political events, alongside "negative" economic events. Furthermore, the study also establishes compelling evidence of synchronized market trends in response to catastrophic events, shedding light on the interconnected nature of global financial systems. This research has vital contributions with regard to latest trends and conditions that can be observed in the European financial markets. The methodology of event study reveals important results that can be used by policymakers to correct any market anomaly.*

**KEYWORDS:** *catastrophic events, Russia-Ukraine war, European financial market, event study*



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## **IMPACT OF DIGITAL MEDIA ON GREEN GROWTH IN EU ECONOMIES: A FOCUS ON LABOR EFFICIENCY**

### **ABSTRACT**

*The digital transition, recognized for its multifaceted impact on economic growth, functions interactively on labour efficiency and global market dynamics. This research aims to provide an understanding of how digital media contributes to sustainable economic development in the EU context. The paper investigates the role of digital media in driving green growth in 11 selected European Union (EU) economies, emphasizing its influence on labour efficiency. Employing a blend of qualitative analysis and two-stage least squares (2SLS) regression, this research centres on the role of information and communication technology (ICT) in enhancing labour efficiency as a pathway to green growth. The methodology is designed to capture the complex interplay between digital media usage and sustainable economic indicators, offering a comprehensive view of the potential of digital media as a tool for ecological and economic progress. The results reveal a significant, positive correlation between digital media and green growth, affirming its vital role in sustainable development. Particularly noteworthy is the impact of digital media on labour productivity. This finding is pivotal, suggesting that investing in ICT utilization and digital media related training can be instrumental in achieving green growth goal.*

**KEYWORDS:** *Economic Growth, Green Growth, Econometric Methods, Statistical Methods, Digital Media*



**REBUILDING THE BUSINESS MODEL OF BLACK SOLDIER FLY (BSF)  
BIOCONVERSION AS FOOD WASTE INTEGRATED SOLUTION:  
CASE STUDY OF LOCAL START-UP REXIC**

**ABSTRACT**

*Food waste is not necessarily simply organic waste that has no value or benefit. From a business standpoint, there is room for innovation in food waste processing. Rexic is, a local start-up that was founded to address the problem of food waste in the Surabaya area. Rexic uses Bioconversion technology maggot as a food waste decomposer called as Black Soldier Fly (BSF). Rexic's concerns are commercial challenges such as a lack of evaluation, and the goal is to re-define the business. This research aims to help Rexic and generally for SMEs which elaborate with socioeconomic business model development explore activities and values in its business flow and rebuild the business model. The Value Chain and Business Model Canvas theories are used to analyze this situation. Focus group discussions (FGD) and interviews with Rexic stakeholders were used to obtain data for this study. According to the findings of this study, the value chain flow contains four major stakeholders with additional value sources. Rexic processes garbage from suppliers of organic waste with added value selling organic waste into a fresh maggot, a blend of chicken feed, and organic fertilizer goods. Some distributors purchase and distribute Rexic's products, while consumers in the poultry farming and agriculture sectors get value through cost efficiency. In Addition, This study demonstrates a value chain evaluation that if Rexic wishes to generate added value, it must leverage current resources. Finally, the deficiency components in the Value Chain were combined with BMC, and the results were acquired in the form of 14 alternative implementation strategy points to make recommendations on a more effective implementation strategy Key Partners, Key Activities, Key Resources, Value Propositions, Customer Relationships, Customer Segments, Cost Structures, and Revenue Streams.*

**KEYWORDS:** *Maggot, Black Soldier Fly, Value Chain Analysis, Business Model Canvas (BMC), Alternative Strategy Implementation*



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## CHANIGING COMPETITION IN THE DIGITAL AGE

### ABSTRACT

*This paper explores how financial technologies (FinTech) disrupts competition in the financial services industry. Despite the historically strict regulations in this sector, technological innovations, especially FinTech, challenge traditional norms. The study investigates how FinTech transforms competition dynamics in financial services, emphasizing the industry's shift towards digitalization and the entry of FinTech startups. The financial services industry, once considered conservative, now faces increased competition, prompting traditional players to revamp their business models. FinTech's integration of technology and finance has introduced innovative solutions, reshaping the competitive landscape. The study argues that despite unique challenges posed by digitalization, existing competition enforcement principles remain adaptable to the evolving financial services sector. Starting with an explanation of FinTech, the paper outlines basic competition policy concepts. The main focus is on FinTech's impact on competition, considering the industry's specific characteristics. The research concludes by summarizing key findings, highlighting the need for flexible competition rules in the dynamic digital era of financial services.*

**Key words:** *competition, financial technologies, finance, financial services, digital economy.*



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## **STRATEGIC PRIORITIES OF SPATIAL AND ECONOMIC DEVELOPMENT OF UKRAINIAN REGIONS**

### **ABSTRACT**

*The aim of the research is to identify and diagnose the strategic priorities of spatial and economic development of the regions of Ukraine. Analyzing, systematizing and generalizing the scientific works of many scholars, an approach to the diagnosis of spatial features of the processes of planning and design of territorial development is proposed. After analyzing the distribution of funding for Action Plans of Development Strategies of Ukrainian regions for years 2021–2023 by the envisaged projects, the research highlighted the priorities of focusing strategies for the development of Ukrainian regions. Most regions of Ukraine are characterized by strategies of exclusive and selective focusing; a balanced distribution of funding between the components of spatial and economic development has not been identified in any region. Based on the data on the distribution of funding sources for Action Plans of Development Strategies of Ukrainian regions for years 2021–2023 (state budget, local budget, other funds), the reactive and proactive models of spatial and economic development policy implementation are specified. The first of them provides for the improvement of conditions for spatial and economic development in the vast majority through government subventions and targeted government programs, the second – aimed at attracting funds from domestic and foreign investors and the implementation of development projects. The research also assesses the qualitative parameters of Action Plans of Development Strategies of Ukrainian regions by calculating the levels of their aggressiveness and development. The tools proposed by the authors to highlight the strategic priorities of spatial and economic development of the regions can be used by authorities at various levels in the preparation of program and strategic documents for both short-term and long-term perspective.*

**KEYWORDS:** *spatial and economic development, aggressiveness index, development index, reactive and proactive development policy.*





**THE EFFECTS OF STRUCTURAL CHANGE ON THE AVERAGE  
SALARY: A DECOMPOSITION APPROACH**

**ABSTRACT**

*The economy comprises several sectors with the primary sector, manufacturing, and services being the crudest classification. The economy develops with different progress across its sectors as they are related to different factor endowments, foreign trade intensities, competitiveness, tax and institutional environments, among other factors. Therefore, economy-wide development may occur due to sector-specific development and structural changes. The structural changes occur when the input or output distribution is altered. One of the most important indicators of economic development is the average salary. The average salary may be driven by various factors, including sector-specific growth and shifts in the structure of the economy. The salaries can be measured in per hour or monthly terms. The changes in the work hours per month also affect the monthly salary. Therefore, it is important to involve such factors as the sector-specific hourly rate, hours worked, and economic structure when assessing the changes in the monthly salary within a certain economy. The employees are distributed across the economic sectors and this distribution can be used to measure the sectoral shares in the total economy when assessing the dynamics in the average salary. The index decomposition analysis can be applied when factorizing the changes in the average salary. The factorization requires the use of the techniques that attribute the changes in the average salary to those in the explanatory terms discussed above. For this, we suggest using the logarithmic mean Divisia index or Shapley value. Each of these techniques allows for perfect decomposition, which means that the residual term does not appear during the decomposition. The proposed framework can be applied for different levels of aggregation or even in a nested manner when different levels of aggregation are present in a single model.*

**KEYWORDS:** *economy; sectors; salary; decomposition.*



## **THE PORT OF BAR AS A GENERATOR OF THE ECONOMIC DEVELOPMENT OF MONTENEGRO**

### **ABSTRACT**

*The subject of this paper is an overview of the importance of the Port of Bar, both for the economic development of the Municipality of Bar and for the economic development of Montenegro. According to the research of the Chamber of Commerce of Montenegro from 2019, the Port of Bar and the economic sector based in Bar, which bases its business on the flow of goods and passengers through the Port of Bar, had a twice as large share in the revenues generated in the Municipality of Bar as economic entities in the tourism and hospitality business. The potentials are significantly higher, bearing in mind that in 2016, after 51 years, the regular ferry line Bar-Bari was cancelled and that 90% of goods from the immediate environment bypass the logistics route via Montenegro and the port of Bar. This paper aims to present the importance of the infrastructural connection of Montenegro with the region and the formation of the transport corridor Bar-Belgrade-Budapest as a prerequisite for the evaluation of the transit traffic potential of Montenegro. The main hypothesis of this paper is that the completion of the Bar-Belgrade highway and the reconstruction of the railway on the same route as the construction of the high-speed road to Sarajevo will create the basic prerequisites for the redirection of regional goods flows to the logistics route via Bar, which will employ Montenegrin capital infrastructure facilities and a complete logistic economy that currently employs around 2,500 people. The methods that will be used are analysis, synthesis, induction, deduction, generalisation, and concretization, as well as the method of comparison. The results of this paper showed that at the moment, the potential for increasing business is about 25 times greater than what we have today, taking into account the goods located in Serbia, Hungary, and Bosnia and Herzegovina, which bypass the Port of Bar due to poor infrastructure connections. Through infrastructural connections with the region as well as the development of infrastructure and a superstructure in the Port of Bar itself, the Port of Bar can be a generator of economic development in Montenegro.*

**Keywords:** Port of Bar, Bar, Montenegro, economic development, infrastructure connection

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## **ECONOMIC IMPACT OF LANGUAGE VIOLENCE ON CHINESE SOCIAL MEDIA PLATFORMS**

### **ABSTRACT**

*This article mainly analyzes the impact of language violence on Chinese anonymous social media platforms on the economic benefits of the platform. It mainly uses literature analysis, questionnaire survey, and statistical analysis methods to study the generation and spread of language violence in social media comments. The research time span is from January 2021 to December 2021. This paper classifies and checks various forms of language violence according to the nature of the content, mainly including text violence, image-based violence, and emoji-based violence. It is worth noting that this study delves into the economic impact of language violence, considering factors such as user engagement, viral spread of content, and the role of influencers and celebrities in the dissemination of such content. It highlights the economic consequences of language violence on user behavior, advertising, and platform reputation. The research results emphasize the key role of social media in shaping public opinion and social media user interactions. Suggestions are made for media operators, celebrities, and users, focusing on improving media literacy, responsible content management, and promoting civilized digital discourse.*

**KEY WORDS:** *social media; language violence; economic impact*

## **IMPACT OF FINACIAL TECHNOOGIES ON BANKEING**

### **ABSTRACT**

*This scientific paper traces the evolution of banking from its Renaissance roots in 1472 to the contemporary era of digital transformation and consumer-centricity. The foundational capabilities of accessing capital, cultivating relationships, and utilizing diverse information, established during the inception of banking, persist as enduring constants amid centuries of change. The study explores the impact of six seminal developments converging in the modern age, posing a transformative moment in banking history. In the context of the digital revolution, the paper emphasizes that the ongoing changes extend beyond a shift to the digital realm, representing a vital transformation in the way financial institutions operate and engage with customers. Digital transformation encompasses organizational, managerial, and operational changes, with a pivotal shift towards customer-centricity. The analysis introduces a CGI study, "Understanding Financial Consumers in the Digital Age," which delves into the expectations and behaviours of today's digital banking consumers. The research highlights consumers' expectations for personalized, multi-channel services and a growing interest in digital banking. The top consumer desires include rewards for business, anytime-anywhere access, personalized attention, wealth-building advice, and guidance on spending and saving. Additionally, consumers express a need for access to independent experts, instant borrowing options, and the ability to make payments using any device. These findings underscore the imperative for traditional banks to adapt to meet modern client demands, fostering growth and competitiveness in the dynamic banking industry.*

**KEY WORDS:** *banking, institutions, digital age, digital transformation.*



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## **THE INFLUENCE OF FACTORS ON THE MANAGEMENT OF THE COMPANY IN THE CONDITIONS OF THE DEVELOPING MARKET**

### **ABSTRACT**

*In countries with underdeveloped economies and developing economies, business processes differ slightly or may differ from general norms and practices. This is influenced by a number of factors, but the main one is the lack of a dense presence of international companies and, as a result, an almost complete lack of competition in some sectors and branches of the economy. It would seem that such a situation in the market gives certain advantages to companies that are present in such markets (profitability on some groups of goods and (or) services may be higher, compared to similar conditions in developed markets), but at the same time it is necessary to understand that in the conditions of such markets, the consumer capacity of the population is significantly lower than in developed countries. So, when planning expansion to a developing market, the company needs to conduct a clear analysis of the group of goods and (or) services with which it will be present on the market and the pricing policy of this presence. You should also pay attention to the impact of paradoxes and effects on demand in similar conditions and the processes of market transformation from a developing to a developed one, understanding that in certain economic or social conditions such transformations can be too fast.*

**KEYWORDS:** market, demand, compadoxes

