



LITHUANIA
BUSINESS
COLLEGE



16TH INTERNATIONAL SCIENTIFIC CONFERENCE

***ON SUSTAINABLE REGIONAL DEVELOPMENT:
CHALLENGES AND SOLUTIONS FOR THE FUTURE 2025***

Klaipeda, Lithuania, 3-4nd October 2025

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Abstract Book

Editors

Jurgita Martinkiene – Szergej Vinogradov

Budapest Metropolitan University
Budapest, 2025

Editors

Assoc. prof. dr. Jurgita Martinkiene
(Lithuania Business College, Klaipeda, Lithuania)
Assoc. prof. dr. Szergej Vinogradov
(Budapest Metropolitan University, Budapest, Hungary)

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CHALLENGES AND SOLUTIONS FOR THE FUTURE 2025

Klaipeda, Lithuania, October 3-4, 2025

Co-organized by:

Lithuania Business College, Klaipeda, Lithuania
Klaipeda City Municipality, Lithuania
Klaipeda Chamber of Commerce and Crafts, Lithuania
Budapest Metropolitan University, Budapest, Hungary
Hungarian University of Agriculture and Life Sciences, Gödöllő, Hungary
Warszawska Szkoła Zarządzania-Szkoła Wyższa, Poland
Turība University, Latvia
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Ivan Franko National University of Lviv, Ukraine
Lviv University of Business and Law, Ukraine
University of Tetova, North Macedonia
Alexander Dubček University of Trenčín, Slovak Republic
Easter European Development Agency, Slovak Republic
European Institute of Further Education, Slovak Republic

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WELCOME MESSAGE FROM THE CONFERENCE CO-CHAIRS

Dear Conference Participant,

On behalf of the Organizing Committee we are delighted to welcome you to Klaipeda, Lithuania at the 16th International Scientific–Methodical–Practical Conference “*Sustainable Regional Development: Challenges And Solutions For The Future – 2025*”.

The conference aims to provide a platform for experts, professionals, researchers and students to share the updated information and stimulate the communication with each other. Collaboration is another keyword as the conference is organized in collaboration between Lithuania Business College (Lithuania) and Budapest Metropolitan University (Hungary).

The conference program comprises of presentations from distinguished researches in the field of sustainable regional development and important contributions that provide new insights into Business, Management, Law, Economics, Technology and other areas of sciences.

The conference has 6 topics, there are:

- *Business Sustainability Management: Leading the Sustainability Transition.*
- *Investing in Tomorrow: Integrating ESG into Financial Decisions.*
- *Data-Driven Sustainability: Artificial Intelligence (AI), Cybersecurity, Digitalization Processes.*
- *Personal Data protection and Legal Regulation of Environmental Protection.*
- *Eco-Tourism and Conservation: Strategies and Practices for Promoting Eco-Friendly Tourism.*
- *The principle of Sustainability: Transforming Law and Governance.*

We would like to thank all of the authors of submitted papers and the attendees for their contributions and participation.

We would like to extend our deepest appreciation to the exceptional work rendered by all-conference teamwork. We also thank all the experts who have dedicated their time to review abstracts and assist with organizational tasks.

We look forward to seeing your paper submission and meeting you in 2027 in Klaipeda again.

Prof. Habil. Dr. Yuriy Bilan
University of Debrecen, Hungary
Conference Co-Chair

Prof. Habil. Dr. Valentinas Navickas
Lithuania Business College, Lithuania
Conference Co-Chair

ABOUT LITHUANIA BUSINESS COLLEGE (LBC)

Lithuania Business College (LBC) is a modern, open to society and independent higher education institution founded in 1994 that prepares professionals in social and physical sciences who are focused on the Lithuanian and European labour market. LBC entails promising career opportunities, international exchange and leisure time typical for students.

Mission. Lithuania Business College is determined to prepare creative, qualified professionals, to establish conditions for a lifelong learning by granting a professional bachelor's degree and to carry out the applied research that is necessary for a regional development.

Vision. Lithuania Business College is an innovative, transparent, socially active and liable higher education institution, internationally recognized, versatile to the developments in the labor market and prepared to meet the needs of society.

Lithuania Business College integrates the latest IT technologies into the study process and due to this, it creates versatile and engaging means of studying. One of the main aims of the college is the improvement of study quality. Interactive lessons and various methods of engaging are being used in the process of the studying. The college has been equipped with laboratories of CISCO, construction materials and criminology together with a simulation courtroom and leadership and tourism laboratories.

It is the purpose of Lithuania Business College to ensure that students not only acquire as much work experience as possible, which is required in professional activities, but also the newest theoretical knowledge. The college has established a wide network of cooperation with various businesses and social partners therefore it provides students with internships and future placement opportunities. The college also has a practical training firm "Biurometa", which simulates the activities of real companies, which trade with one another through "Simulith" center in Lithuania and in the EUROPEAN network within the world. In order to prepare students for the labor market, the college has also established a career center which is providing career support for the students and graduates.

In Lithuania Business College lecture teachers who are professionals and practitioners in their own fields. In LBC lecture lawyers, legal experts, specialists of banks, finance and audit department managers, marketing and sales department managers, programming specialists, web developers, business owners, athletes, event organizers, forwarding agents of logistics etc.

Lithuania Business College maintains close relations with social partners in order to ensure high quality, modern, labor market-oriented studies. Among College social partners there are following organizations: SE Klaipeda State Seaport Authority, Klaipeda County Police Headquarters, UAB/Ltd "Klaipėda" hotel - Amberton, UAB/Ltd "Baltic clouds", PE European Consumer Center, UAB/Ltd Marine staff - General Crewing, Association "Klaipeda region", UAB/Ltd Idėjų balansas (ideas balance), UAB/Ltd Litlafas, Klaipeda Tourism and Culture Information Center, UAB/Ltd „Balco LTD“, UAB/Ltd „Vlantana“, UAB/Ltd „Nesė Group“, BI Klaipeda City Social Support Centre, Chamber of Notaries, District court of Palanga city, District court of Skuodas region, UAB/Ltd "MK laivyba" and other organizations.

Lithuania Business College actively engages in international study and science programmes, expands the network of international partners, and has the lead among Lithuania Universities (non-university higher education institutions) in the participation of teachers and students in international mobility programs. The College maintains strong cooperation relations with Estonia, Sweden, the Czech Republic, Denmark, Turkey and higher education institutions of other countries, has its own representative for Asian countries in India, cooperates with other foreign businesses, non-governmental sectors, and education organizations. Under Erasmus + exchange programme students are given the opportunity to study and practice abroad. Lithuania Business

College has partners from more than 50 foreign countries. Students can take advantage of other European countries' experience in their study programme field subjects. Every semester 20 students from Turkey, Spain, Portugal etc. come to study at LBC. LBC students gain new skills and experience in international communication.

In Lithuania Business College students are particularly encouraged to be initiative, active, enterprising and internationally minded. The College has an active students' union, economists and lawyers clubs, legal clinic, students are constantly encouraged to take part in extracurricular activities, students are actively involved in organization and participation of the college internal and external events.

Lithuania Business College carries out applied research necessary for regional development and scientific development works, regional problems are discussed in the annual international conferences "Regional issues: economy, management, technologies", in which representatives of businesses, associations and higher education institutions participate. Regional problems are discussed also in the systematic scientific-research journal "Vadyba/Journal of Management" published twice per year by the University in international databases CEEOL, EBSCO and Index Copernicus.

Lithuania Business College is a socially active and public-spirited higher education institution. The College together with the Order of Malta every year organizes a mass event in Klaipeda city - Gerosios zvaigzdes begimas (The Run of the Good Star). The main goal of the event is to raise money for the single elderly people who cannot take care of themselves. Lithuania Business College also patronizes the pupils of the children's home "Smiltele". At Christmas time the pupils are visited by the students of the College. The students entertain them with performances and gifts.

There are many study programmes available at LBC – here you can choose from 12 different study programmes and 21 specializations.

About 1 000 students are currently studying at LBC, there are open departments and centers in Klaipeda and Vilnius.

The College has a license for its activity issued by The Ministry of Education and Science of the Republic of Lithuania. Diplomas issued by the College are recognized not only in Lithuania but also in all EU. The qualification of graduates is indicated by a professional bachelor's degree.

ABOUT BUDAPEST METROPOLITAN UNIVERSITY (METU)

Budapest Metropolitan University (METU) is the largest private university in Hungary, founded in 2000 with state accreditation. Since its inception, METU has built a strong reputation in applied sciences, particularly in the fields of communication, business, media, tourism, art, and design. The university's motto, "*Inspired by Creativity*," reflects its commitment to combining academic rigour with creative thinking, innovation, and practical skills.

In a landmark move toward internationalization and educational innovation, METU entered into an exclusive long-term partnership with Arizona State University (ASU) in 2024. This makes METU the first and only Hungarian institution to carry the *Powered by Arizona State University* designation.

METU began as the Budapest College of Communication and Business in 2000, enrolling its first students in 2001 in the disciplines of Communication and Business Communication. Key expansions followed, including the integration of the Heller Farkas College of Tourism in 2009 and the establishment of the Institute of Visual Arts, which broadened METU's portfolio to include photography, graphics, media design, and film & media studies. The university's physical infrastructure also expanded: the Rózsa Street campus opened in 2010 for art, tourism, and catering students, while the Rottenbiller Campus was inaugurated later for media arts students.

METU is organized into several institutes covering four broad programme fields: Communication, Business, Tourism, and Art/Creative Design.

Major programmes include:

- Bachelor's (BA/BSc): Communication and Media Studies; Business Administration and Management; Commerce and Marketing; International Business Economics; Tourism and Catering; Animation; Graphic Design; Film and Media Studies; Environmental Design; Photography.
- Master's (MA/MSc): Management and Leadership; Tourism Management; Communication and Media Studies; Media Design; Art & Design Management, among others.

In addition, METU offers a Professional Foundation Semester for business preparation, language exam centres, and continuing education courses.

Student numbers have grown substantially over time, and METU now enrolls more than 7,000 students. Today, it delivers over 20 programs across its fields. The university maintains a robust international presence, partnering with more than 50 institutions on three continents, engaging in mobility initiatives, and offering an extensive portfolio of English-language degree programs for international students.

METU emphasises hands-on education. Students benefit from small class sizes, studios, labs, design and media workshops, and professional partnerships. For example, the Department of Architecture & Design works closely with design firms, while the Visual Communication Department engages in externally oriented projects. The university's philosophy is to blend theory with practice—encouraging creative thinking, craftsmanship, and responsiveness to real-world challenges such as sustainable design, digital media, and tourism innovation.

In recent years, METU has expanded its programme offerings, renovated campus buildings,

and enhanced creative facilities. Its strengths in art, media, design, and architecture have grown considerably. Increasing attention is being given to sustainability, interdisciplinary collaboration, and digital transformation, ensuring that students are prepared for global challenges in creative industries, media, tourism, and business innovation.

The university also invests in strengthening its research output and partnerships, particularly in visual communication, media studies, design practice, and applied business research. Its programmes align well with conference themes in creative media, cultural studies, tourism, business communication, visual arts, and sustainable design.

Students and faculty at METU are known for their agility and responsiveness. The institution provides an environment conducive to experimentation and collaboration, making it ideal for pilot projects, joint research, and international exchange. Strong links with industry and creative partners further ensure that research has a tangible, practical impact—ranging from design firms to media houses, tourism boards, and cultural institutions.



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CONFERENCE PROGRAMME

3rd-4th October 2025, Hotel VICTORIA, 5th Floor, S. Šimkaus Str. 2, LT-92128 Klaipėda, Lithuania

Join the Conference via the Link – <https://meet.google.com/oxg-jwfx-svx>

Friday, 3rd October

8:30-9:30	Arrival and Registration – 5th Floor
9:30-10:00	The Opening Ceremony of the XVIth International Scientific Conference: <i>Viktoras Krolis, Director of Klaipėda Chamber of Commerce, Industry and Crafts, Lithuania</i> <i>Vytautas Butkus, Deputy Mayor of Klaipėda District Municipality, Lithuania</i> <i>Dr. Lina Girdauskienė, President of Conference of Directors of Lithuanian Higher Education Institutions (LKDK), Lithuania</i> <i>Assoc. prof. dr. Jurgita Martinkienė, Director of Lithuania Business College, Lithuania</i> <i>Assoc. prof. dr. Volodymyr Pylypenko, Honorary Consul of the Republic of Lithuania, Ukraine</i> <i>Prof. dr. Tamás Gergely Kucsera, Rector of Budapest Metropolitan University, Hungary</i> <i>Prof. dr. hab. Adam P. Balcerzak, University of Warmia and Mazury in Olsztyn, Department of Market and Consumption, Poland</i> <i>Dr.h.c. mult. Mgr. JUDr., PhD., MBA, LLM, Honor. Prof. mult., Jozef Zaťko, European Institute of Further Education, President EIDV, Slovak Republic</i>
10:00	Beginning of the Plenary Section <i>Moderators:</i> <i>Prof. Habil. dr. Yuriy Bilan, University of Debrecen (Hungary) – Co-Chair</i> <i>Prof. Habil. dr. Valentinas Navickas, Lithuania Business College (Lithuania) – Co-Chair</i>
10:00-10:20	Simonas Gentvilas <i>Member of the Parliament of the Republic of Lithuania</i> Lithuania Case: Green Deal
10:20-10:40	Aistė Kubiliūtė <i>Environmental Coordinator at Port of Klaipėda Authority, Lithuania</i> Klaipėda Port: Green Transformation and Its Impact on the City and Region
10:40-11:00	Prof. dr. Pat Obi <i>Purdue University Northwest, United States of America</i> Digital Assets and Equities: Portfolio Diversification for Sustainable Development
11:00-11:05	Virtual Greeting to the „Žemaitija 2035 Forum“ (Plungė, Lithuania)
11:05-11:25	Prof. dr. Paulo Alexandre da Silva Pereira <i>Mykolas Romeris University, Lithuania</i> The Cost of Nature Capital Loss. How Unsustainable This Is
11:25-11:50	Coffee Breaks (5th Floor)
11:50-12:10	Rūta Ežerskienė <i>CEO and Chair of Management Board, Citadele Bank, Lithuania</i> CEO Suit: Between AI and Humanity
12:10-12:30	Povilas Petručionis <i>Finance Broker, Lithuania</i> Green Bonds and Sustainable Finance in Baltic Region
12:30-13:00	Round Table Discussion
13:00-13:45	Lunch Break (Restaurant Baltas Žirgas, Hotel VICTORIA, 1st Floor)
14:00-17:55	Parallel Sections (I, II and III, 5th Floor)
18:00-18:15	Closing Ceremony
19:30-22:00	Social Event: Laimon Urbik Trio and Rasa Serra Concert (Restaurant Baltas Žirgas, Hotel VICTORIA, 1st Floor)

SECTION 1. (5th Floor)

Join the Conference via the Link – <https://meet.google.com/oxg-jwfx-svx>

Business Sustainability Management: Leading the Sustainability Transition

Investing in Tomorrow: Integrating ESG into Financial Decisions

Eco-Tourism and Conservation: Strategies and Practices for Promoting Eco-Friendly Tourism.

Moderators:

Assoc. prof. dr. Robert Jeyakumar Nathan, Multimedia University (Malaysia)

Assoc. prof. dr. Kristina Puleikienė, Lithuania Business College (Lithuania)

Assoc. prof. dr. Šarūnas Banevičius, Klaipėda University (Lithuania)

14:00-14:20	Prof. dr. Eng. Waldemar Gajda, Assoc. prof. Habil. dr. Hanna Górską-Warsewicz, Assist. prof. dr. Kinga Podleśna <i>Warsaw Management School, Warsaw University of Life Sciences, Poland</i> <i>AI-Based Innovation Management: a Bibliometric Analysis</i>
14:20-14:40	Assist. prof. dr. Tibor László Csegődi <i>Hungarian University of Agriculture and Life Sciences, Hungary</i> <i>Examination of the Social, Income and Housing Quality Components of Energy Poverty Based on Eurostat Data</i>
14:40-15:00	Prof. dr. Rasa Žilienė, Jr. Researcher Jelena Skarbalė <i>Klaipėda University, Lithuania</i> <i>Lithuanian Consumers' Perspectives on Sustainability in Wine Production</i>
15:00-15:20	Assoc. prof. dr. Līgita Āzena <i>College of Business Administration, Latvia</i> <i>Merchandising as a Strategic Marketing Instrument for Attracting Consumer Attention in a Saturated Market Environment</i>
15:20-15:40	Assoc. prof. dr. Zsuzsanna Tóth-Naár, Assist. prof. dr. István Vilmos Kovács, Prof. dr. Tamás Gergely Kucsera, Assoc. prof. dr. Szergej Vinogradov <i>Budapest Metropolitan University, Hungary</i> <i>From Tradition to Innovation: METU's myBRAND Portfolio-Based Model</i>
15:40-16:00	Assoc. prof. dr. Šarūnas Banevičius, Assoc. prof. Putinas Bielskis <i>Lithuania Business College, Lithuania</i> <i>The Phenomenon of Health Tourism Organizational Cooperation in Nordic Countries</i>
16:00-16:20	Lect. Līga Roķe-Reimate, Assoc. prof. dr. Anita Lasmane, PhD student Lāsma Balceraitė, Lect. Alisa Lāce, Lect. Iveta Broliša <i>College of Business Administration, Latvia</i> <i>Mindfulness and Financial Behaviour in College Students: the Mediating Role of Financial Self-Efficacy Across Genders</i>
16:20-16:40	PhD student Džeina Kleina-Šnipke, Prof. dr. Kārlis Krēsliņš <i>Ventspils University of Applied Sciences, Latvia</i> <i>NEET Youth and the United Nations Sustainable Development Goals: A Case Study of Latvia</i>
16:40-17:00	PhD student Soekmawati, Assoc. prof. dr. Robert Jeyakumar Nathan, Assoc. prof. dr. Simona Grigaliūnienė <i>Multimedia University, Malaysia, Lithuania Business College, Lithuania</i> <i>Household Food Donations in Malaysia: an Integrated Norm Activation and Planned Behavior Approach</i>
17:00-17:20	PhD student Oleksandra Ovchynnykova, Prof. Habil. dr. Valentinas Navickas <i>Klaipėda University, Lithuania Business College, Lithuania</i> <i>Blue Economy: Labour Automation as a Driver of Regional Sustainability</i>
17:20-17:40	PhD student Džeina Kleina-Šnipke, Prof. dr. Kārlis Krēsliņš <i>Ventspils University of Applied Sciences, Latvia</i> <i>Employee Engagement Across Borders: A Gallup-Based Analysis of Global Workforce</i>
17:40-17:50	Assoc. prof. dr. Jurgita Martinkienė <i>Lithuania Business College, Lithuania</i> <i>Integrating Digital Management Competencies into Resilient Business</i>

SECTION 2. (5th Floor)

**Data-Driven Sustainability: Artificial Intelligence (AI), Cybersecurity, Digitalization Processes.
Personal Data Protection and Legal Regulation of Environmental Protection.
The Principle of Sustainability: Transforming Law and Governance.**

Moderators:

**Prof. dr. Jānis Grasis, Riga Stradins University (Latvia)
Dr. Simona Briedienė, Lithuania Business College (Lithuania)**

14:00-14:20	Prof. dr. Jānis Grasis, Assoc. prof. Renata Šliažienė <i>Riga Stradins University, Latvia</i> <i>Artificial Intelligence and Law: Mutual Influence and Future</i>
14:20-14:40	Prof. dr. Anatoliy Melnyk, Assoc. prof. dr. Viktor Voloshyn, Prof. dr. Taras Rak <i>IT STEP University, Ukraine</i> <i>Interuniversity Research and Innovation Center: a Platform for International Collaboration in Developing Advanced Solutions in Information Technologies</i>
14:40-15:00	Senior Lecturer dr. Roushdat Elaheebocus, Assoc. prof. dr. Simona Grigaliūnienė <i>Mauritius University, Mauritius, Lithuania Business College, Lithuania</i> <i>Engaging University Students in Sustainable Health Behaviours Through Virtual Reality Exergaming: Comparative Insights from Mauritius and Lithuania</i>
15:00-15:20	Prof. dr. Taras Rak, Dr. Olga Smotr <i>IT STEP University, Ukraine</i> <i>Strategies for Integrating Artificial Intelligence into the Training of Civil Protection Specialists</i>
15:20-15:40	Prof. dr. Kateryna Holovko <i>Publishing House „Juridica“, Limited Liability Company, Ukraine</i> <i>The International Competition for Scholarly and Educational Publications on Law, Security, and European Integration „Juridica“ as a Model for International Competitions of Scholarly and Educational Books for Universities Promoting the Development of Global Book Publishing</i>
15:40-16:00	Assoc. prof. dr. Vilma Liaudanskė <i>St. Ignatius Loyola College, Lithuania</i> <i>Digitalization and Artificial Intelligence in Early Childhood Education Institutions: a Key to a Sustainable Future</i>
16:00-16:20	Assoc. prof. dr. Egidijus Nedzinskas, Assoc. prof. Renata Šliažienė <i>Lithuania Business College, Lithuania</i> <i>New Challenges of Corruption in the Context of Digital Transformation</i>
16:20-16:40	Assoc. prof. Jovita Einikienė <i>Lithuania Business College, Lithuania</i> <i>Reforms in the Field of Justice and their Impact on the Right to Court</i>
16:40-17:00	PhD student Ľuboš Kazán, Prof. dr. Maroš Korenko, Lukáš Hanko, Assoc. prof. dr. Kristina Puleikienė <i>Slovak University of Agriculture in Nitra, Slovak Republic, Lithuania Business College, Lithuania</i> <i>Enhancing Data-Driven Sustainability Through Digital Quality Management In Automotive Manufacturing</i>
17:00-17:20	PhD student Lea Hakszer, Assoc. prof. dr. Rastislav Mikuš, Assoc. prof. dr. Simona Grigaliūnienė <i>Slovak University of Agriculture in Nitra, Slovak Republic, Lithuania Business College, Lithuania</i> <i>Practical Surface Wear Evaluation Using 3D Scanning and Open-Source Tools for Applied Research</i>
17:20-17:40	Assoc. prof. dr. Genovaitė Avižonienė, Lect. Patricija Kemtė, Alesia Kozlinskaja <i>Lithuania Business College, Lithuania</i> <i>Attitudes of Lithuanian Business College Students and Lecturers Towards the Application of Artificial Intelligence (AI) in the Study Process</i>
17:40-17:50	Assoc. prof. dr. Kristina Puleikienė, Eglė Brezgytė, Assoc. prof. dr. Šarūnas Banevičius <i>Lithuania Business College, Lithuania</i> <i>Evaluation of the Key Collaboration Skills of a Sustainable Alliance Manager in Green Environmental Transformation</i>
17:50-18:00	Prof. dr. Angelė Lileikienė, Eglė Brezgytė <i>Lithuania Business College, Lithuania</i> <i>Assessment of Innovation Support and Technology Transfer in HEI</i>

SECTION 3. (5th Floor)
MULTIDISCIPLINARY (Online)

Join the Conference via the Link – <https://meet.google.com/ice-skxz-vbg>

Moderators: **Prof. dr. Angelė Lileikienė**, Lithuania Business College (Lithuania)

Assoc. prof. dr. Mantas Švažas, Vytautas Magnus University (Lithuania)

14:00-14:15	Prof. dr. Asta Valackienė, Renata Karpavičė <i>Lithuania Business College, Mykolas Romeris University, Lithuania</i> <i>Can Small Business Stay Cyber Secure While Relying on Personal Mobile Devices?</i>
14:15-14:30	Prof. dr. Asta Valackienė, Kateryna Svichkar, Yauheni Tsurhanau <i>Mykolas Romeris University, Lithuania</i> <i>How Social Media Can Help Us to Increase Brand Awareness: What is the Experiences?</i>
14:30-14:45	Prof. dr. İlhan Tarımer, Assoc. prof. dr. Simona Grigaliūnienė, Zubair Tahir <i>Mugla Sıtkı Kocman University, Turkey, Lithuania Business College, Lithuania</i> <i>Developing a Decision Support Interface Software for Property Valorization System</i>
14:45-15:00	Prof. dr. Larysa Antoniuk, Assoc. prof. dr. Yuliia Strilchuk, Assoc. prof. dr. Mariia Sandul, Assoc. prof. dr. Vladyslav Lavreniuk <i>Kyiv National Economic University named after Vadym Hetman, Ukraine</i> <i>Financial Ecosystem in a War-Affected Economy: The Case of Ukraine</i>
15:00-15:15	Prof. dr. Natalia Iershova <i>V. N. Karazin Kharkiv National University, Ukraine</i> <i>Accounting Philosophy as a Strategic Direction of The Discourse of Sustainable Business Management</i>
15:15-15:30	Prof. dr. Mihaela Simionescu <i>University of Bucharest, Romanian Academy, Romania</i> <i>From Traditional to Modern Approach: Leadership Through Sustainable Development</i>
15:30-15:45	Prof. dr. Faton Shabani <i>University of Tetova, Nord Macedonia</i> <i>Ratio Between Written Premiums and Claims Paid by Insurance Companies in the Republic of North Macedonia</i>
15:45-16:00	Assoc. prof. dr. Jana Španková, Assist. prof. dr. Katarína Kráľová, Assist. prof. dr. Ing. Jana Sochuľáková <i>Alexander Dubček University of Trenčín, Slovak Republic</i> <i>The Impact of Artificial Intelligence on the Transformation of the Labor Market: Challenges, Opportunities, and Perspectives</i>
16:00-16:15	Assoc. prof. dr. Olha Abramova, Assoc. prof. dr. Yuliia Peniak <i>V. N. Karazin Kharkiv National University, Ukraine</i> <i>ESG in E-Commerce: Responsible Marketing or Sustainable Development Strategy?</i>
16:15-16:30	Assoc. prof. dr. Roman Galych <i>V. N. Karazin Kharkiv National University, Ukraine</i> <i>Regarding the New Concept of Social Partnership in Labor Relations in Ukraine on the Path to EU Accession</i>
16:30-16:45	Assoc. prof. dr. Marcel Kordoš <i>Alexander Dubček University of Trenčín, Slovak Republic</i> <i>Circular Economy within the Smart City Policy Concept – Implications in EU and Slovakia</i>
16:45-17:00	Karyna Anapriuk, Prof. dr. Larysa Antoniuk <i>Kyiv National Economic University named after Vadym Hetman, Ukraine</i> <i>Sustainable Development of Space Economy: Conceptual Frameworks and Emerging Challenges</i>
17:00-17:15	PhD student Francesca Capolini <i>Roma Tre University, Italy</i> <i>The Role of ESG Disclosure in Driving Performance in the Energy Transition</i>
17:15-17:30	PhD student Kristína Kozová, PhD student Simona Kosáková, Prof. dr. Martin Šrámk <i>Alexander Dubček University of Trenčín, Slovak Republic</i> <i>The Silent Weight of Benefits: Generational and Gender Dimensions of Workplace Satisfaction</i>
17:30-17:45	PhD student Toader (Mitrache) Roxana Bianca <i>The Bucharest University of Economic Studies, Romania</i> <i>Data-Driven Sustainability: Artificial Intelligence (AI), Cybersecurity, Digitalization Processes</i>
17:45-17:55	Prof. dr. Angelė Lileikienė, Assoc. prof. dr. Jurgita Martinkienė, Lect. Justinas Jonušas <i>Lithuania Business College, Lithuania</i> <i>Business Models, Enabling Evaluation the Company's Financial Condition</i>

October 4th

Cultural Program

08:00 Meeting at the Lithuania Business College parking lot (Turgaus St. 21, Klaipėda) and Departure to Rumšiškės.

10:30 Excursion to the Lithuanian Ethnography Museum, Rumšiškės.

13:00 Lunch

14:00 Bread Baking Workshop

18:00–22:00 Return trip to Vilnius and Klaipėda

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Interuniversity Research and Innovation Center: a Platform for International Collaboration in Developing Advanced Solutions in Information Technologies

In the context of rapid technological development, the creation of interuniversity platforms has become a strategic response to the fragmentation of research activities in the field of information technologies. This research proposes the establishment of an Interuniversity Research and Innovation Center (IRIC) as a new platform for international collaboration in research, design, and study. The creation of IRIC aims to unite the scientific and project-based activities of researchers from multiple universities across different countries, thereby integrating academic expertise, applied research, and industrial cooperation.

The research first introduces the current role of research and innovation centers in advancing digital technologies, cybersecurity, artificial intelligence, and digital transformation. Then, it highlights the specific achievements and practices of IT STEP University's Research and Innovation Center, which provides the foundation for scaling up towards an interuniversity format. The proposed model emphasizes joint participation in international projects funded by the European Union (Horizon Europe, COST, Erasmus+, Digital Europe), collaborative publishing, startup incubation, hackathons, and shared infrastructures for advanced research.

The methodological framework of the IRIC focuses on project-oriented collaboration, hybrid educational programs, integration of applied and fundamental research, and the establishment of thematic research groups across universities. It also foresees the creation of joint digital infrastructures for research data exchange and AI-assisted knowledge management.

The expected outcomes include: 1) strengthening the competitiveness of partner universities in international research consortia; 2) accelerating the development of advanced digital solutions in IT, AI, cybersecurity and other directions formed by the universities within the Center; 3) expanding the opportunities for young researchers and students through international mobility, internships, and startup incubation; 4) improving technology transfer and commercialization of research results; and 5) enhancing the visibility of participating institutions in the global academic and industrial ecosystems.

Thus, the proposed Interuniversity Research and Innovation Center is positioned as a key driver for interdisciplinary and cross-border collaboration, responding to global challenges in digital transformation and ensuring that universities from different countries can co-create innovative and socially impactful solutions.

Keywords: *Interuniversity Research, Innovation Center (IRIC, International Collaboration, Solutions in Information Technologies.*

JEL classification: O32, O33, I23, L86.

The Role of KPIS in the Process of Improvement and Production Management

This study focuses on the analysis of the importance of key performance indicators (KPIs) in production management and their impact on the process of improving the organization. The aim of the study was to identify indicators of the highest operational value, assess the effectiveness of the implemented improvement measures and indicate further directions of development. The analysis was carried out on the example of a company that manufactures upholstered furniture. Particular attention was paid to indicators such as OEE, lead time, product defect rate and material efficiency. The results of the study showed significant improvements in key operational parameters, confirming that systematic KPI management is an effective tool to support continuous improvement in production. Potential areas for further development of the organization were also identified, including digitization, process automation, development of innovation, and building an organizational culture based on continuous improvement. The conducted analyses confirm that properly selected and effectively managed KPIs can significantly contribute to the increase in efficiency and competitiveness of manufacturing enterprises

Keywords: KPIs, Key Performance Indicators, Production Management.

JEL classification: L23, M11, O32, D24.

Asta Valackienė^{1,2}, Renata Karpavičė²

Lithuania Business College¹, Mykolas Romeris University²

Can Small Business Stay Cyber Secure While Relying on Personal Mobile Devices?

The use of personal mobile devices by SMEs is a widespread practice (Bring Your Own Device – BYOD), but it raises increasingly pressing cyber security issues. This article examines the impact of the use of personal mobile devices on business cyber security. Particular attention was paid to the preparedness of small enterprises to ensure cyber security when different personal mobile devices are used in the working environment. The purpose of this study is to answer the question: how the use of personal mobile devices affects the cyber security of small businesses and how mistakes can be avoided in order to create a unified model for SMEs to manage cyber security risks. The study included a descriptive research design, statistical analysis, multiple case studies (analysis of cyber security practices in the United Kingdom, the United States, and Australia); analysis of various strategies and standards; modeling and expert assessment (semi-structured interviews). The uniqueness of our model lies in the combination of integrated strategies and recommendations for managing various cyber security risk factors and enabling SMEs to manage risk using a holistic approach.

This article contributes to the theory and practice of cyber security management by empirically identifying the factors that determine the implementation of cyber security strategies in small businesses when personal mobile devices are used, and applying the most appropriate measures to prevent cyber-attacks in small businesses analyzing the internal and external relationships of business cyber security and the factors that determine them.

Keywords: cyber security, small business, personal mobile devices.

JEL classification: L26, M15, O33.

How Social Media Can help us to Increase Brand Awareness: What is the Experience?

The role of Internet marketing is a key factor in the recognition, success and commercial success of any company in the 21st digitalized century. It is this factor that provides companies with the opportunity to reach a huge audience in social networks, especially the younger generation. The motivation for discussing of this topic was the interest in how companies guess the interests of customers and how they make us buy or use something? Even though social media marketing is quite well known, it still remains unclear which social media internet marketing model is best to use for maximum audience reach and engagement. We can analyze the problem of the research: What models, methods and techniques should a brand use to increase its brand awareness on social networks? According to statistics, in 2023, the number of social media users was 4.76 billion, while in 2024, this number had already reached 5.04 billion, and as of April this year, the number of social media users stands at 5.31 billion. Based on our research, about 60% of respondents admitted that they are often influenced by such marketing companies and are willing to try a new brand if they find content that interests them. According to survey, the best platforms for social media promotion are Instagram and TikTok for the younger generation, and Facebook for the older generation. This provides clear guidance for marketers when choosing a direction and platform for promotion. The survey also showed that customers value honesty, individual approach (two-way communication), and real reviews from other customers. This is a big clue for brands about which channels they need to develop so that people are more focused on their brand.

Keywords: *social media, social networks, companies brand awareness.*

JEL Classification: M31, M15.

Angelė Lileikienė, Eglė Brezgytė
Lithuania Business College

Assessment of Innovation Support and Technology Transfer in HEI

The main objective of project is to evaluate Innovation support and technology transfer in individual higher education institutions, analysis. The purpose of higher education institutions is to include innovation support as one of the main operational priorities in order to promote the development of regions, strengthening relations with the business sector and making applicable decisions for industry and society.

When evaluating innovativeness and the integrality of the circular economy in the study process in higher education institutions, objectively evaluate these processes with the activity strategy of the higher education institution, which forms the basis for the transfer of technologies, in order to achieve the development of the circular economy in society, and to increase competitiveness. It is also important to strengthen the interdisciplinary research of the circular economy, to encourage business start-ups, not only in business, but also among students, by creating entrepreneurship student support units in higher education institutions, such as sustainability innovation laboratories, business incubators, and developing a network of mentors.

Keywords: *innovation, innovation support, technology transfer, HEI.*

JEL Classification: P34, Q55.

Change Management in a Waste Management Center: Readiness for Change Phase

Smooth readiness for change in organizations is essential for effective change management to ensure the successful implementation of new processes and technologies. Good readiness for the implementation of changes can mitigate potential risks, avoid resistance and operational disruptions, and ensure that employees are properly prepared for change. Inadequate readiness for change costs the organization more time, financial, human, and other resources. How to ensure that significant changes in organizations are properly readynessed, implemented properly, and managed effectively is a difficult problem for every organization to solve. The research goal formulated to solve the problem is to create a Cyclical Model of Readiness for Change and verify it in a waste management center. A tool was created using theoretical scientific literature analysis and practical research methods - a Cyclical Model of readiness for change, designed to prepare employees for significant changes. A quantitative study (60 respondents) was conducted using a questionnaire. The research used the created tool for change readiness - a six-step a Cyclical Model of readiness for change. The selected steps are arranged in a logical sequence to ensure smooth problem identification, introduction to the change program, determination of readiness for change, monitoring of the process progress, communication, motivation and elimination of discrepancies at each step according to the change readiness report. The change readiness report is necessary and necessary throughout the process to compare the actual implementation stages, deadlines and resource utilization with the initial change program. The conclusions obtained provide key recommendations for changing the problematic situation in the organization. By analyzing previous experience and applying the acquired new knowledge and skills, managers can accurately identify areas for improvement in the organization, improve processes, avoid employee resistance, promote best practices and foster a culture of continuous improvement. The success of the ongoing changes in this organization will depend not only on the proper identification of problems in the readiness for change, employee encouragement and timely introduction to the program of changes planned in the organization, but also on monitoring and adjusting the progress of the readiness for change. By following this research practice, it is possible to improve the readiness for change phase to the required selected level and increase the likelihood of successful and well-implemented changes in the organization. Therefore, the readiness for change phase is essential for the successful implementation of changes, as it helps to reduce operational risks, employee resistance to change, ensure appropriate employee development, and improve communication at the individual and team levels. A properly the readiness for change phase creates better conditions for faster, smoother, and more successful implementation of significant changes. By following the practice of applying the developed model, it is possible to improve the readiness for change phase and increase the likelihood of successful and well-implemented changes in the organization.

Keywords: change management, readiness for change, the cyclical model of readiness for change.

JEL Classification: M12, D23, Q53.

Business Models, Enabling Evaluation the Companys Financial Condition

There is a lot of change going on in today's business because the business environment itself is very dynamic. This is influenced by the fact that the environment is not balanced, global, constantly changing, proactive. Therefore, it is very important to assess the state of the business by applying modern financial management methods, such as models for hard-to-realize assets, assessment and stabilization of financial condition, and assessment of financial riskiness, which is analyzed in the presented article. With great technological advancements around the world, Fintech plays a huge role in solving various problems. Today, business is influenced by various factors, which must be considered as a changed environment, which is global, unpredictable, volatile, proactive. In this context, attention is drawn to the change of study programs. Technology-based financial innovation that enables new business models, operational programs, processes and products. Financial technologies include internet, mobile, biometric, blockchain, artificial intelligence, automation, robotics, and more. These technologies are used to make investment decisions or provide financial advice to clients and more . Fintech today is defined as companies that promote new technologies to create new and better services and at lower prices and creating greater opportunities . Fintech is largely about creating models, performing financial analysis, making optimal financial management decisions.

Keywords: *financial stability, financial riskiness, hard-to-realize assets, profitability, solvency, financial stability models.*

Jel Classification: E22, F65.

NEET Youth and the United Nations Sustainable Development Goals: A Case Study of Latvia

The youth not in education, employment, or training (hereinafter – NEET youth), who are economically inactive inhabitants aged 15 to 29, is one of the socio-economic challenges affecting the European region, including Latvia. As Latvian society continues aging and the proportion of the working-age population steadily declines, as well as Latvia has reached the lowest natural population growth rates among European countries in 2024, it becomes increasingly critical to ensure the effective utilization of the nation's available human resources and growth of human capital. This includes the integration of young people both into the labor market and the education system. A key component of this strategy is the purposeful and systematic reduction of the proportion of NEET youth. The study analyzes the indicators of NEET youth in Latvia, priorities in planning documents, and their relationship with the United Nations Sustainable Development Goals (SDGs), which include reducing poverty, improving access to education, and promoting quality employment. Data analysis reveals the links between NEET status and poverty, material and social deprivation, including deep material and social deprivation, inaccessibility to education and risks of social exclusion in Latvia. It is concluded that measures to reduce the proportion of NEET youth at the national level would contribute to the achievement of the SDGs. Based on Latvia's planning documents, it is intended to ensure high-quality education and promote social and economic inclusion in all segments of society, reducing poverty and inequality, which can be achieved by offering young people opportunities for involvement in educational system and the labor market. The collected research publications confirm that reach of NEET status is influenced by such factors as individual characteristics, work experience, health, experience in education, addictions, social stratum, family, and aspects of the environment. Based on this finding, the implementation of individually tailored support measures is essential to address the specific needs of NEET youth, considering the factors that have contributed to their entry into this status. Therefore, researchers in future should focus more on understanding of individual support approaches to promote the inclusion of NEET youth in the labor market and educational system.

Keywords: NEET youth, NEET youth in Latvia, employment, sustainable development goals.

Jel Classification: J13, J21, I32, O15.

The Impact of Artificial Intelligence on the Transformation of the Labor Market: Challenges, Opportunities, and Perspectives

Artificial intelligence (AI) is emerging as one of the most influential forces transforming the contemporary labor market. This study explores how AI is reshaping employment structures, job roles, and skill requirements. Based on a systematic literature review conducted using the PRISMA methodology and bibliometric analysis of sources from the Web of Science database, key trends and challenges were identified for the period 2020–2025. The findings indicate that AI contributes significantly to the automation of routine tasks, leading to the decline of certain job categories, particularly in administration, manufacturing, and logistics. At the same time, new professions are emerging in fields such as data analytics, algorithm development, digital marketing, and cybersecurity. There is a growing demand for highly skilled professionals capable of working with advanced technologies and adapting to rapidly evolving work environments. The study also addresses issues related to wage disparities, social inequality, ethical dilemmas associated with AI-driven decision-making, and the necessity of lifelong learning. A central conclusion is that while AI has the potential to enhance productivity and drive innovation, it also requires proactive engagement from employers, educational institutions, and policymakers to mitigate its adverse effects on vulnerable segments of the workforce.

Keywords: *Artificial Intelligence, Labor Market Transformation, Employment, Skills, Inequality, Lifelong Learning.*

Jel Classification: O33, J24, J31, J21.

Jovita Einikienė
Lithuania Business College

Reforms in the Field of Justice and their Impact on the Right to Court

Over the past decade, Lithuanian courts have undergone a number of significant administrative reforms, first by merging the district courts of Lithuania's largest city, then by consolidating the district courts operating within a single county, merging all specialized district-level administrative courts in Lithuania into a single Regional Administrative Court, and the latest reform involved the abolition of some district court chambers (branches in certain municipalities). Essentially, the objectives of all reforms in the courts are to reduce internal court administration costs, improving the quality of their work by enabling judges and court staff to specialise and have a similar workload, and ensuring that individuals can reasonably expect the same standard of service in all courts.

As is well known, according to the Constitution of the Republic of Lithuania, only courts in Lithuania administer justice, which in a legal and democratic state ensures the highest guarantee of protection of human rights and legitimate interests. It is therefore very important that the right of individuals to a court is not denied during reforms or management transformations in the courts or the court system.

The right of individuals to a court is understood not only as the right to a court in general, enabling individuals to defend their potentially violated rights and interests in court, but also as ensuring a judicial process of appropriate quality for individuals. Most of the information on the

content of a fair trial can be found in the case law of the Constitutional Court of the Republic of Lithuania and the European Court of Human Rights. The right to a fair trial is a procedural right to justice, the content of which depends on the regulation of the process of defended violated rights and their protection in court under the branch of law being analyzed. Nevertheless, certain aspects are necessary and characteristic of the protection of any right through judicial proceedings, without which we cannot speak of guarantees of a fair trial for individuals: for example, the right to an independent and impartial trial, the right to be informed about the court proceedings, the right to submit explanations to the court on issues arising during the proceedings, the right to appeal, the right to be represented and to receive legal assistance, etc.

The reforms that have taken place in the courts have mainly affected the internal administration of the courts, i.e., the equalization of the workload between different courts (judges), the introduction of specializations and the provision of opportunities for specialization, the optimization of human and financial resources, document management systems, archives, IT systems. However, it cannot be denied that the ongoing transformations and the pursuit of sustainability in the field of management also affect the individual's right to a court, primarily the individual's access to justice. In order to balance the workload, ensure the possibility of specialization and a more professional examination of certain categories of disputes, and the transparency of the case distribution system, cases may inevitably be assigned to a judge (court, division) operating in a more distant territory. Accordingly, the court hearing in this case may also take place in a court remote from the applicant. This potential threat to a person's right to a fair trial is partially eliminated by the provision in all procedural laws for the use of information technology during court proceedings and the organization of remote court hearings, but these innovations may not be acceptable or even accessible to all groups of people. Courts deal with emerging challenges in different ways, depending on the legal regulation of the process, the specifics of case distribution in courts, or other circumstances.

The case study data will illustrate how many people have requested a contact court hearing closer to their place of residence since the reform began, how many people came to the nearest court divisions and/or participated in court hearings with the help of court staff, and that the majority of participants in the proceedings participated in court hearings with the help of IT tools.

In summary, public sector reforms and ongoing management reforms in the courts affect a person's right to a court and its implementation, which is why, when implementing reforms in the field of justice, it is necessary to first carry out an ex ante assessment of the change in the quality of ensuring a person's right to a court. The sustainability of management sought by each reform cannot be opposed to the purpose of the courts – to administer justice and ensure the quality of the right of individuals to a fair trial. Therefore, research is needed in this area to evaluate the results of the reform over a longer period of time so as not to negate the fundamental constitutional nature of the courts – to administer justice and ensure the right and opportunity of individuals to access justice of an appropriate quality.

Keywords: *Judicial reform, right to court, access to justice, fair trial, Lithuania, public sector reform.*

Jel Classification: K41, K10, K40, H83.

Francesca Capolini

Department of Business Studies, Roma Tre University, Italy

The Role of ESG Disclosure in Driving Performance in the Energy Transition

The energy transition challenges firms to rethink their strategies and embrace sustainability. In this context, ESG disclosure has emerged as a key tool for aligning corporate practices with climate goals and investor expectations. This study critically reviews empirical literature on the link between ESG reporting and financial performance, with a focus on the energy sector. It examines common variables and methodological approaches used to assess the impact of sustainability factors—such as emissions reduction, renewable energy use and governance practices—on financial indicators. The analysis highlights how ESG transparency can support long-term value creation and competitiveness.

Keywords: *sustainability reporting, financial performance, ESG.*

Jel Classification: M14, G30, Q56, Q40.

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

Faton Shabani

Faculty of Law, University of Tetova

The Ratio Between Premiums and Claims Paid by Insurance Companies in the Republic of North Macedonia

Insurance is a way to share the financial burden of unexpected events by pooling money from many entities. The theory argues that the primary function of insurance is often said to be to act as a risk transfer mechanism, while a number of secondary economic functions strongly follow it: stimulation through security, availability of financing, business promotion, business continuity, reduction of tax burden, source of investment, reduction of losses, promotion of savings and invisible profits. The legal framework of insurance in the Republic of North Macedonia does not consist of a single law, but the regulatory provisions are contained in four main laws: the Law on Obligations (2001), the Law on Insurance Supervision (2002), the Law on Compulsory Traffic Insurance (2005), and the Law on Companies (2004). Regulations, orders, instructions and directives are there with the aim of implementing individual insurance as effectively as possible in practice. Insurance as a legal and economic mechanism is manifested through a financial agreement (commonly known as policy) between an individual (or entity) and an insurance company, where the individual pays a selected premium in exchange for protection against specific financial losses or risks, while the insurer agrees to compensate the insured through the insured amount for losses or damages covered according to the terms and within the contracted period. As such, the premium and the claim coverage are the main components of the insurance transaction that have a strong interdependence. Therefore, choosing the right balance between premium and claim coverage is the main challenge that depends on the needs, budget and level of potential risk. In order to conduct the research and achieve the objectives set regarding the flow and fluctuations between premiums and claims paid on a national level in North Macedonia, the author uses a number of scientific methods, including: analytical, synthetic, normative, interpretative, statistical, historical and comparative methods. Market overview and data provided by the Insurance Supervision Agency and the National Bank of North Macedonia regarding active

insurance companies operating in the domestic market, processed in this research and presented through charts show a positive trend of increasing the volume of insurance contracts. However, the number of contracts is not automatically correlated with the value of premiums and the number of claims coverage. Furthermore, these data confirm that the non-life insurance business is generally the dominant sector, and here compulsory auto insurance plays a crucial role. In addition, a significant discrepancy is also observed in the ratio between premiums and claims paid, with the premium advantage exceeding double compared to claims paid in recent years. This is due to the diversity of the nature and subject of the contracts based on the risks intended to be covered by the insurance contract.

Keywords: *insurance, financial agreement, losses, risks, damages, statistical method, increasing, premium, coverage.*

Jel Classification: G22, G28, D81, K22.

Genovaitė Avizonienė, Patricija Kemtė, Alesia Kozlinskaja

Lithuania Business College

Attitudes of Lithuanian Business College Students and Lecturers Towards the Application of Artificial Intelligence (AI) in the Study Process

The rapid development of artificial intelligence (AI) has become one of the defining phenomena of the 21st century, deeply affecting all spheres of life, including education. Higher education institutions across the world are facing both unprecedented opportunities and serious challenges associated with the application of AI in the study process. While AI tools can enhance the quality of teaching and learning, they simultaneously raise concerns regarding ethics, academic integrity, and the cultivation of independent and critical thinking skills. In Lithuania, as in many other European countries, universities and colleges are in the process of adapting to these changes. However, institutional policies remain underdeveloped, and stakeholders often lack clear guidelines on how to responsibly use AI in studies. The Lithuanian Business College (LBC) provides a relevant case study for examining these issues, as it represents a practice-oriented institution where both students and lecturers are directly confronted with the potential and risks of AI integration. The aim of the research is to reveal how students and lecturers at LBC perceive the possibilities, benefits, and risks of AI application in the study process. The objectives of the study are to: 1. identify students' attitudes towards the use of AI in their studies, 2. examine lecturers' perspectives on AI in teaching and learning, 3. analyze shared concerns and perceived risks, and 4. provide recommendations for institutional policy and practice. The research employed a quantitative survey method. Two separate questionnaires were developed for students and lecturers. A total of 133 students from different study programs and 27 lecturers representing a variety of academic disciplines participated. The questionnaires covered dimensions such as awareness and knowledge of AI tools, practical experiences with AI in learning or teaching, perceived usefulness of AI for specific academic tasks, ethical concerns, and expectations for institutional guidelines. Participation was voluntary and anonymous, ensuring honest responses. The collected data enabled both statistical analysis of frequencies and qualitative interpretation of tendencies. The findings demonstrate that students predominantly view AI as a supportive instrument for independent work, assignment preparation, and knowledge consolidation. They emphasize its ability to generate ideas, structure texts, and provide immediate feedback. At the same time, students acknowledge that AI may encourage academic dishonesty by making it easier to complete assignments without genuine effort. Uncertainty remains regarding what constitutes

acceptable AI use within the academic environment. Lecturers, in contrast, highlight the potential of AI to improve the quality of teaching by automating routine tasks, facilitating personalized learning, and enriching study materials. However, they also express concern that excessive reliance on AI could erode students' critical thinking and creativity. Lecturers underline the importance of establishing control mechanisms and appropriate assessment strategies. Both students and lecturers stress the absence of clear institutional guidelines regulating AI use, which create confusion and inconsistent practices. The results are consistent with international research, which indicates that students are generally enthusiastic about using AI, while lecturers adopt a more cautious position. Students perceive AI as a natural extension of their digital environment, while lecturers prioritize the preservation of academic values and independent intellectual development. The lack of institutional guidelines represents a critical gap. Without formal rules and policies, both groups operate in a gray area, which may lead to misunderstandings, conflicts, and potential misuse of AI. A key insight is that AI should be seen not as a replacement for traditional education, but as a complementary tool that must be carefully integrated. Balancing innovation with the safeguarding of ethical and pedagogical standards is essential.

Based on the findings, the study offers several recommendations: 1. Develop clear institutional policies that define acceptable and unacceptable AI use, 2. Promote digital literacy and responsible AI use among students, 3. Provide training for lecturers on integrating AI into teaching practices, 4. Create assessment strategies that encourage independent thinking and originality, 5. Foster ethical awareness by including topics such as digital ethics and academic integrity in curricula, and, 6. Continuously monitor the impact of AI integration, adjusting policies as technologies evolve.

The study carried out at the Lithuanian Business College provides empirical insights into the attitudes of students and lecturers towards AI. Both groups recognize its significant potential to enhance learning and teaching, yet they also express concerns about academic dishonesty, loss of critical thinking, and the lack of institutional regulation. The research concludes that a coherent institutional framework is required to maximize the benefits of AI while minimizing risks. By establishing clear policies, supporting digital literacy, and promoting ethical awareness, higher education institutions can ensure the responsible and effective application of AI in the study process. Ultimately, the future of AI in education depends not only on technological progress but also on the ability of academic communities to engage critically, creatively, and responsibly with these tools.

Keywords: artificial intelligence, study process, students' attitudes, lecturers' attitudes, higher education.

Jel Classification: I23, I21, O33, M15.

New Challenges of Corruption in the Context of Digital Transformation

The role of law enforcement institutions in the fight against corruption is important and indisputable. However, legal mechanisms for combating corruption are not enough. Increasingly, the question of increasing the integrity and transparency of law enforcement institutions themselves is also being raised. Today, new manifestations of corruption are becoming especially important when rapidly developing innovative digital technologies are used and new types of corruption appear. There are gaps in the existing system that hinder the fight against corruption. Therefore, it is necessary to raise the issue of strengthening the effectiveness of supervision and control of this criminal activity - from changes in legal regulation to strengthening institutional resources.

The purpose of the study is to reveal the role of law enforcement institutions and conduct an analysis of case law in combating the latest manifestations of corruption that arise with the use of innovative digital technologies.

The following research methods were applied: methods of analysis of scientific literature and legal acts, data collection, systematization and generalization.

The article presents statistical data on corruption-related criminal acts, their composition, using data collection and systematization methods. In the Lithuanian Courts Information System, in the public search system for court decisions and legal acts *e.teismai.lt*, available criminal case rulings of the last 2020-2025 were found, which allowed us to analyse the composition of corruption-related criminal acts in the practice of Lithuanian courts (Supreme Court of Lithuania, Klaipėda and Kaunas Regional Courts). Cases were selected that allowed us to reveal corruption-related criminal acts under Articles 225-228 of the Criminal Code of the Republic of Lithuania, the characteristics of crimes, and the role of civil servants in these cases. Corruption control and prevention are carried out by law enforcement and judicial authorities. Essential corruption prevention measures include the following actions: from risk analysis and management of the corruption phenomenon, anti-corruption assessment of legal acts or their drafts, determination of the level of resistance to corruption prevention planning. Corruption is also characteristic of law enforcement institutions themselves, when law enforcement officers commit crimes in order to obtain personal benefit, disregard ethical standards, moral obligations, principles of honesty, and transparency. In the fight against law enforcement corruption, anti-corruption programs have been developed to create an anti-corruption culture, increase employee responsibility and accountability. An analysis of case law conducted in 2020-2025 showed that criminal acts of a corrupt nature are committed by civil servants holding different positions. Law enforcement officers themselves are also prosecuted in cases of bribery under Article 225 of the Criminal Code of the Republic of Lithuania, trading in influence under Article 226 of the Criminal Code of the Republic of Lithuania, bribery under Article 227 of the Criminal Code of the Republic of Lithuania, and abuse under Article 228 of the Criminal Code of the Republic of Lithuania. When making decisions in corruption cases, courts take into account whether bribery is committed only with direct intent, whether the necessary elements of a criminal offense are present, and whether the intermediaries being bribed are aware of the danger of the actions being taken and want to act in this way.

After conducting an analysis of the fight against corruption by law enforcement institutions, it was concluded that corruption is multifaceted, harms the rule of law and its security. The rule of law promotes the equality of all citizens before the law by ensuring that no one, including leaders or other individuals, is above the law, which functions with accountability, transparency of state institutions under government, and independence of the judiciary.

Keywords: Corruption, Digital transformation, Innovative technologies, Law enforcement institutions.

JEL classification: K42, K14, H83, O33.

Developing a Decision Support Interface Software for Property Valorization System

The real estate industry frequently faces challenges in achieving accurate property valuations, a crucial factor in property transactions. Evaluating commercial real estate tenants is crucial for various stakeholders in the real estate industry, such as property owners, investors, lenders, and property managers. Due to the challenges, this study aims to present a novel Decision Support (DS) software developed to address those challenges by integrating both front-end and back-end systems for seamless, data-driven property assessments. DSS can play a critical role in ensuring accurate property valuations—a key aspect of real estate transactions that often relies on outdated or static data. While the front-end side offers an intuitive interface for users to input property data and receive near-instant results, the back-end side is powered by advanced machine learning algorithms to process this information efficiently. This dual system can ensure that users not only receive accurate valuations but also benefit from a seamless and intuitive user experience. In this paper, we outline the development process, the technologies which we have used, and the evaluation methods which was applied to ensure that the DSS is reliable and effective. The Decision Support System's software for property valuation was developed through comprehensive and multi-stage processes. This system not only enhances the accuracy of valuations but also streamlines the overall decision-making process. The DSS addresses several key challenges in property valuation, including fluctuating market conditions and the complexities of data interpretation. Its scalable design and the continuous learning capabilities of its AI models ensure that the system remains relevant and accurate as market dynamics change. The development of the Decision Support Software (DSS) for property valuation represents a significant step forward in real estate technology. The software's ability to provide accurate, real-time valuations, combined with its user-friendly interface and detailed market insights, positions it as a valuable tool for real estate professionals, investors, and regulators alike.

Keywords: *Property valuation, Decision support system (DSS), Machine learning, AI Models, Real estate, Market trends.*

JEL classification: C61, R32, Q18.

Larysa Antoniuk, Yuliia Strilchuk, Mariia Sandul, Vladyslav Lavreniuk
Kyiv National Economic University named after Vadym Hetman, Ukraine

Financial Ecosystem in a War-Affected Economy: The Case of Ukraine

The objective of this research project is to conduct a systematic review of the financial ecosystem of Ukraine and its transformation during a wartime. The full-scale invasion of Ukraine in 2022 created unprecedented disruptions for the country's financial ecosystem, reshaping its stability mechanisms, development pathways, and prospects for international integration. This paper examines the peculiarities of Ukraine's financial ecosystem in wartime conditions, focusing on the interplay between smart governance, institutional resilience, digital innovation, external financial support, and the constraints of the monetary trilemma. The study highlights how the National Bank of Ukraine prioritized exchange rate stability and monetary independence while limiting capital mobility, thereby ensuring macro-financial stability in the face of extraordinary shocks. Despite severe GDP contraction, high inflation, and capital outflows, Ukraine's financial ecosystem demonstrated significant adaptability, supported by pre-war reforms, accelerated digitalization, and inflows of international assistance. Attention has been paid to harmonisation of financial regulations with the EU directives. Particular attention is paid to the role of fintech, cashless payment systems, and state-led digital platforms in maintaining continuity of financial services under wartime conditions. Possibilities of sustainable finance instruments have been explored. Furthermore, the interdependence of supply chain sustainability, resilience, and the competitiveness of Ukrainian businesses is explored, as financial ecosystem stability remains a prerequisite for preserving trade flows, integrating into global value chains, and building long-term competitiveness in conditions of conflict. The findings provide insights into resilience strategies of financial ecosystems in conflict-affected economies and offer implications for post-war recovery, integration into the European financial space, and sustainable transformation in the longer term.

Keywords: *Ukraine, financial ecosystem, sustainability, sustainable finance, banking system, competitiveness, wartime.*

JEL classification: G20, E52, O16, F52, O33.

Līga Roķe-Reimate, Anita Lasmane, Lāmsa Balceraitė, Alisa Lāce, Iveta Broliša
College of Business Administration, Latvia

Mindfulness and Financial Behaviour in College Students: the Mediating Role of Financial Self-Efficacy Across Genders

Students represent a pivotal segment of society. Their financial behaviours can impact their academic performance, psychological well-being, and long-term socioeconomic stability. Financial behaviour reflects individuals' responsibility in managing money through actions like planning, borrowing, or choosing financial products, and is influenced by their financial knowledge and skills, which promote sound decision-making (OECD, 2023; Andarsari & Ningtyas, 2019). Understanding the psychological factors that are predictive of financial behaviours is essential for developing effective financial education and intervention programs.

Mindfulness is one of the factors being explored in relation to financial literacy (Stone, 2011; Rydzik, 2016), and its aspects are important for sustainable attitudes and behaviors (Jansen et al., 2024) as well as for sustainable development in accounting education (Efferin & Soeherman,

2024). Mindfulness enhances self-regulation and decision-making (Baer, 2008; Garad, 2024), promotes prudent financial decisions (Smith et al., 2016), and mitigates financial vulnerability (Bayuk et al., 2022). Additionally, a concept of financial mindfulness has been proposed - a tendency to be aware of one's current objective financial state while possessing an acceptance of that state (Garbinsky et al., 2024). Hence, the role of mindfulness in promoting responsible financial behavior remains a topic to be explored further (Riaz et al., 2022; Garbinsky et al., 2024).

While previous research shows that mindfulness positively influences financial well-being, the attention has moved from investigating whether mindfulness promotes financial behaviour and well-being to examining how its transformation occurs (Wu et al., 2023). One mechanism through which mindfulness may influence financial behaviour is financial self-efficacy - an individual's confidence in their ability to manage financial responsibilities (Farrel et al., 2016; Afeera et al., 2024). Gender is a significant individual factor explored in studies on financial literacy, including financial stress and financial behavior, in connection with psychological, social, and economic aspects (Nguyen Vu & Scott, 2017; Iram et al., 2024). Respectively, gender may potentially affect the extent to which self-efficacy translates into actual financial behavior.

Thus far, the interplay between mindfulness, financial self-efficacy, and financial behavior has not been explored in Latvia in specific populations such as higher education students, who frequently face challenges in managing their finances effectively and may benefit from psychological resources like mindfulness and self-efficacy. This study investigates whether the relationship between mindfulness, a trait linked to self-regulation and focused awareness, and financial behavior in college students is mediated by financial self-efficacy and whether this pathway differs between genders. In our study in 2024, a survey was administered to a sample of undergraduate students of College of Business Administration in Latvia (N = 708; 584 females). As students at a tuition-based institution, all study participants need to cover their education costs, making financial decision-making and financial behaviour particularly relevant in this context. To assess financial behaviour, we used the OECD-INFE Financial Behavior Scale (OECD, 2022), which captures key aspects of responsible financial practices. Financial self-efficacy was measured with a 5 item self-efficacy scale (Loke & Choi, 2015), and mindfulness was assessed using the Cognitive and Affective Mindfulness Scale – Revised (Feldman et al., 2006). To explore potential gender differences, a separate mediation analyses for male and female students was conducted, assessing the indirect influence of mindfulness on financial behaviour through financial self-efficacy.

Results revealed that for male students, financial self-efficacy fully mediated the relationship: mindfulness predicted higher self-efficacy, which in turn led to higher scores in financial behavior, while the direct path from mindfulness to behavior was non-significant. For female students, both direct and indirect pathways were significant, suggesting that mindfulness independently contributes to financial behavior and also enhances it through increased financial self-efficacy. These findings offer valuable insights into the psychological mechanisms underlying sustainable financial behaviour among college students and have practical implications for financial education. While promoting mindfulness can support better financial behavior across genders, men may particularly benefit from mindfulness-based approaches that explicitly target confidence in financial management which translates mindfulness into responsible money management. Prospectively, for women, fostering mindfulness can directly enhance their financial behaviour as well as their sense of capability in dealing with personal finances. These results highlight the role of mindfulness and self-efficacy in the behavioural aspects of financial literacy and underscore the value of considering gender-specific mechanisms.

Keywords: financial behaviour, mindfulness, financial self-efficacy, students, gender differences, higher education.

JEL classification: G53, D14, J16, I23, D91.

Merchandising as a Strategic Marketing Instrument for Attracting Consumer Attention in a Saturated Market Environment

The traditional assumption that a high-quality product can attract consumer attention solely through its presence on a store shelf has become insufficient in today's competitive environment. The contemporary consumer goods and services market is characterized by a high degree of saturation, compelling businesses to seek increasingly innovative solutions to effectively capture consumer attention and influence purchase decisions in favor of their products.

Given that approximately 60–70% of consumers make their final purchase decision before entering the point of sale, the strategic goal of businesses is to influence this decision at an early stage. This means it is essential to ensure product visibility and appeal through indirect means, avoiding aggressive advertising campaigns or intrusive sales communication, including staff intervention or forced brand exposure.

Findings from various studies and practical experience indicate that one of the most significant factors influencing consumer decision-making in retail environments is the strategy of product placement. A clear and functional arrangement of the product assortment not only facilitates consumer navigation but also stimulates unplanned or impulsive purchases, which, according to several sources, can account for up to 50% of a store's revenue.

This approach is currently systematized within the marketing discipline known as merchandising (from the English word *merchandise*). Merchandising refers to a set of activities aimed at presenting products in the retail space in a way that maximizes consumption. Like other marketing activities, merchandising is subject to constant change, influenced by both internal factors (such as company strategy and assortment structure) and external ones (including technology, innovation, demographic shifts, and consumer behavior trends).

The development of technology and the emergence of new consumer generations necessitate the adoption of increasingly modern merchandising approaches based on digital capabilities, data analytics, and personalized customer experiences. The implementation of innovative merchandising solutions enhances business competitiveness and can become a key advantage in a dynamic market context.

In light of the above, it can be forecasted that merchandising as a strategic marketing tool will continue to evolve—particularly in digital environments (e.g., e-commerce)—providing businesses with new opportunities to improve sales performance and strengthen customer loyalty.

Research Aim - To compile and analyze various theoretical perspectives on the role of merchandising in attracting consumer attention and influencing purchase decisions, with a specific focus on innovation and the application of emerging technologies in this field, as well as to assess their importance in shaping marketing strategies under contemporary competitive conditions.

Keywords: *merchandising, retail, consumer behavior, innovation, technology, marketing strategy.*

JEL classification: M3, O3.

Enhancing Data-Driven Sustainability Through Digital Quality Management in Automotive Manufacturing

The transformation to sustainable manufacturing requires more than isolated environmental initiatives; it is also necessary to integrate smart, data-driven systems that both improve operational efficiency and minimize waste. With increasing global competition and stricter environmental regulations, industrial companies are increasingly turning to digital transformation as a way to balance quality management with sustainability goals. This study examines how the digitization of quality management processes—through the deployment of modern tools such as CAQ (Computer-Aided Quality) systems, digital platforms can directly lead to environmental and operational sustainability in the automotive industry. The research is based on data collected at an automotive component manufacturing company that transitioned from a paper-based documentation system to a fully digital quality management workflow. The analysis compares process performance indicators before and after digitization, focusing on error rate development and response speed to problems. The results show consistent improvement in all areas monitored, with digital tools not only speeding up problem identification and resolution but also enabling more detailed traceability of production across the entire value chain. In addition to operational benefits, the transition to a paperless and fully traceable environment has also brought clear environmental advantages. The reduction of waste caused by errors, the optimization of raw material usage, and the reduced energy intensity of repair processes have supported the fulfillment of the company's environmental commitments. In addition, the availability of real-time data has enabled the development of predictive and preventive strategies, gradually reducing the environmental footprint of production. The article presents a reference module that links digital quality management tools with sustainability indicators and shows how continuous data collection, advanced analytics, and feedback can serve as inputs for continuous process optimization. The findings underscore the strategic role of digitalization in achieving operational excellence and fulfilling business goals. The study concludes with practical recommendations for organizations that want to integrate traceability metrics into their quality management systems and ensure long-term competitiveness in the face of growing pressure for efficient and environmentally friendly management.

Keywords: digital quality management, CAQ systems, sustainability, Industry 4.0.

JEL classification: M11, L62, Q55, O33, Q56.

Practical Surface Wear Evaluation Using 3D Scanning and Open-Source Tools for Applied Research

This article focuses on a practical approach to evaluating surface wear using 3D scanning and available open-source software for data processing and evaluation, with the aim of creating an affordable and flexible methodology for applied research. The working hypothesis is that a combination of 3D scanning, open-source analysis, and regression modeling can offer a reliable and cost-effective alternative to commercial measurement systems. Wear is a key factor in evaluating the lifecycle and reliability of components in various industrial sectors. Repeatable quantification of wear is a key to optimizing materials and processes. For experimental testing, two types of samples were used – cylindrical specimens and mill hammers, representing components typically used in agricultural machinery and feed-processing equipment. The samples were made with 3D printing on a Zortrax M300 Plus printer, and the material was PET-G, a commercially available thermoplastic suitable for industrial prototyping, chosen as the model material. The samples were tested for abrasive wear under controlled conditions, with testing devices which allowed the regulation of operating parameters. This setup ensured high repeatability and minimized the influence of secondary factors. A high precision EinScan HX 3D scanner was used to quantify the change in volume and surface structure of samples, which allowed geometric deviations to be captured in detailed resolution. The data obtained was processed using open-source analytical tools, which enabled the creation of different maps and the evaluation of shape changes. The measurement results were processed in a spreadsheet software to create a regression model of wear, which allows the prediction of the rate of material degradation based on test input parameters such as the duration of time, contact pressure, and type of abrasive media. The article methodology provides an effective tool for researchers and technicians even with limited budgets, while the use of open software solutions and commonly available technologies significantly reduces costs and increases the availability of precise measurements. Due to its modularity, the methodology can be adapted to different materials and testing conditions, which extends its application beyond the academic sphere – for example, in rapid prototyping, production control, or the development of new surface treatments. The results support the initial hypothesis that has been proved.

Keywords: *surface wear, 3D scanning, open-source tools, regression model, abrasive testing, Zortrax M300 Plus.*

JEL classification: L64, O33, C55, L69, Q16.

Sustainable Development of Space Economy: Conceptual Frameworks and Emerging Challenges

The article analyzes the evolution of space economy concepts and their role in ensuring sustainability in the global innovation environment. The space economy is defined as a multidimensional category that goes beyond the rocket and aerospace industry, encompassing satellite technologies, space-based services, digital applications, and new business models. The study traces the historical transition from government-led programs and strategic projects to the rise of private companies, start-ups, and public-private partnerships that shaped the “New Space Economy”.

A particular focus is placed on the European context, where the space sector has developed under the influence of financial, climate, migration, and pandemic crises. These challenges stimulated the need for institutional reforms and policy innovation. Within the European Union, space is increasingly regarded as a strategic domain that supports technological sovereignty, socio-economic resilience, and competitiveness, while also contributing to the Sustainable Development Goals. The NewSpace paradigm in Europe is characterized by openness, inclusiveness, and entrepreneurial activity, yet it also faces market fragmentation, regulatory complexity, and limited access to venture capital.

The formation of the space economy reflects a shift in the logic of economic activity: from viewing space as a tool to serve Earth’s needs toward creating autonomous economic systems in orbit and beyond. The conceptual distinction between “space-for-Earth” and “space-for-space” highlights new opportunities for technological platforms and markets operating outside the planet.

The article concludes that the future of the space economy will depend on the ability of institutions to balance innovation, competitiveness, and sustainability. Sustainability becomes the central axis of this transformation, ensuring ecological responsibility, efficient resource use, and social inclusiveness. Thus, the space economy is positioned not only as a technological driver but also as a systemic factor of global sustainable development.

Keywords: *Space economy, Sustainable development, NewSpace paradigm, Innovation ecosystems, European Union space policy.*

JEL classification: O31, O32, L93, Q56, O38.

The Silent Weight of Benefits: Generational and Gender Dimensions of Workplace Satisfaction

The study focuses on examining differences in respondents' attitudes toward satisfaction with employee benefits based on their generational affiliation and gender. The aim was to explore the relationship between generational affiliation, gender, and respondents' attitudes toward satisfaction with employee benefits provided by their employers. The research was conducted in the form of a quantitative questionnaire, involving 203 employed respondents belonging to Generations X, Y, and Z. The data were analyzed using statistical methods, with the Chi-square test and Cramer's V applied to verify the statistical significance of the differences. The results showed that generational affiliation has a statistically significant influence on attitudes toward benefits – Generation Y expressed the highest level of satisfaction, while Generation X was considerably more critical. In the case of gender, statistical significance was close to the conventional threshold; however, the identified differences (higher satisfaction among men compared to women) were evaluated as analytically relevant. The findings suggest that both generational and gender factors may influence the perception of benefits and should therefore be taken into account when designing effective and inclusive employee benefit policies. The study also offers recommendations for further research, which should reflect a broader sectoral context and combine quantitative and qualitative approaches.

Keywords: employee benefits, job satisfaction, generational differences, gender differences, employee motivation.

JEL classification: J32, J28, J16, M12, J21.

Jānis Grasis¹, Renata Šliažienė²
Rīga Stradiņš University¹, Lithuania Business College²

Artificial Intelligence and Law: Mutual Influence and Future

The aim of the paper is to research the mutual influence between artificial intelligence (hereinafter – AI) and the law. The research deployed descriptive, analytical, and deductive-inductive research methods. Using these methods, legal acts, policy planning documents, and different reports were reviewed and analysed, and subsequently conclusions and recommendations were made.

In an era of AI, we face increasing public pressure to become more efficient, to automate processes, as well as almost daily news of the fact that certain professions will soon be replaced by AI. According to a study performed by Goldman Sachs in 2023, the AI will have the greatest impact on administrative staff, lawyers, architects, and engineers. The currently available AI tools are indeed capable of producing a seemingly persuasive legal text, enriched with references to legal norms and even case law, with great dexterity and skill. This could certainly give users the confidence that the prepared content is correct and that the exact same would be offered by a lawyer. However, as the studies compiled by the authors show, comparing the performance of AI models in the performance of various legal tasks, the responses and solutions offered by the models involved are in many cases erroneous and/or involve 'hallucinations'.

According to the authors, the tools of AI in their current state of development could be most useful to lawyers to carry out the following activities (subject to the following principles of confidentiality).

1) easy text processing for day-to-day activities that include preparing text (such as writing contract clauses and emails), processing, including editing, structuring, and translating;

2) the collection, compilation, and simplification of information, including the search for general or specialised information such as case law, legal doctrine, and other sources of information, the drawing up of summaries of the information contained in the sources identified, comparative tables, the deconstruction or conversion into simplified language of complex and technical information and concepts;

3) handling documents and data that include document analysis, such as the ability to quickly navigate a legislative act or document with which a lawyer has not previously had contact, as well as, in the case of in-depth company research (Due diligence), the preparation or processing of complex documents or parts thereof;

4) in-depth research and analysis, including the search for specific information in lawyers' predefined legal sources (e.g., legal literature only) or the analysis of large-scale data.

According to the authors, the benefits of using AI solutions should include:

1) time savings – by automating technical tasks previously performed manually;

2) faster detection of sources of information: the AI tool enables more efficient identification and selection of potentially suitable sources of information across a wide range of data;

3) rapid preparation of standard contracts or parts thereof, including in complex documents - AI tools are trained on extensive databases of legal documents and thus have access to and well-managed appropriate legal content, especially in English;

4) reduced risk of errors and improved content quality: AII tools help to avoid human errors resulting from routine or repetitive tasks, ensures consistency and improves quality in final content;

5) overcome the language barrier – the MI tool provides quick translation of information into an easily understandable language, creating content in unmanaged languages.

AI is not currently a competitor of lawyers but can, at the same time, make a significant contribution to improving the efficiency of the lawyer's work, in particular in the case of repetitive works of a technical nature. With the development of the technologies, AI will become the real assistant for lawyers in the future.

Keywords: *artificial intelligence, law, future.*

JEL classification: K40, K19, O33, L84, K41.

Integrating Digital Management Competencies into Resilient Business

The relevance of the article highlights that in the modern digital era, managerial competencies are becoming increasingly important for sustainable businesses aiming to remain competitive and effective. The development of digital technologies is transforming traditional business processes, requiring new skills from managers and employees, and promoting continuous learning. Sustainable companies that are able to properly integrate digital managerial competencies can manage information flows more effectively, make data-driven decisions, and optimize business processes. In recent years, more attention has been given to digital competencies as a necessity not only for managers but also for employees in various fields. Managers with developed digital competencies better understand the opportunities offered by technology, manage change more effectively, and foster innovation in resilient businesses. Moreover, digital transformation is becoming an inseparable part of business strategy, making the ability to integrate digital managerial competencies a crucial factor for the success of companies.

The study of digital managerial competencies has been extensively analyzed, and the insights of authors have shaped the development of management theory since D. Goleman (1995) introduced the concept of emotional intelligence, which became a key part of managerial competencies, especially in the context of digital leadership. D. Ulrich (1997) highlighted the importance of managerial competencies in human resource management, emphasizing the role of technology in developing competencies. R. Boyatzis (2002) defined competencies as a complex set of skills and attributes that determine managers' success in a digital environment. N. Petkeviciute, E. Kaminskyte (2013) explored the theoretical foundations of managerial competencies and their relevance to innovation management. A. Balvocius, A. Lozdiene, A. Zandaris (2016) were among the first to describe the impact of digital competencies on management processes. S. Carretero, R. Vuorikar, Y. Punie (2017) created the European Digital Competence Framework (DigComp), which helped standardize the assessment of digital competencies. B. Wirtz (2019) described how digital managerial competencies are shaping new business models. D. Ready, C. Cohen, D. Kiron, B. Pring (2020) presented principles of digital leadership. P. Leonardi, T. Neeley (2022) examined key management skills for the digital age. A. Vogler (2023) analyzed the latest management strategies in the digital environment.

The problem identified in the article is that in today's business world, digital technologies have become an inseparable part of management. They help organize work more effectively, make decisions, and manage company processes. However, not all companies have sufficiently developed and integrated digital managerial competencies into their innovation activities, which may hinder business growth and the implementation of innovations.

Keywords: digital managerial competencies, sustainable business, resilient business.

JEL classification: M12, M15, O33, M14, O32.

Circular Economy within the Smart City Policy Concept – Implications in EU and Slovakia

The integration of Smart City principles and the circular economy paradigm presents urban centers with a strategic opportunity to effectively address pressing environmental challenges, including high waste production, low recycling rates, and inadequate waste processing infrastructure. Smart waste management can be defined as a system that utilizes technology to optimize the waste collection process, thereby reducing costs and promoting environmental sustainability. These systems are equipped with the Internet of Things (IoT), a monitoring technology that senses and collects data in real time, thereby facilitating the optimization of waste collection. The present study analyzes the elements of the Smart City concept in the field of waste and circular economy, as well as the use of digitalization, particularly artificial intelligence, in environmental technologies. The study will examine how automated waste recycling can contribute to creating a more sustainable environment, how cloud technology supports data management and the integration of new services, and how machine learning and the Internet of Things are used in waste management to monitor and collect waste using smart waste bins equipped with sensors and communication technologies in the EU and Slovakia. The objective of the paper is threefold: first, to determine planned implementations; second, to identify benefits, limitations, and problem areas; and third, to present opportunities for improving the socioeconomic quality of life. These goals are pursued through a comparative analysis of best practices in the EU and Slovakia. By comparing practical experiences and successful projects in Slovakia and other European Union countries, specific recommendations will be identified for more effective integration of Smart City principles into smart waste management in Slovakia. An analysis of examples from other EU countries indicates that cities in the EU are implementing advanced solutions such as the integration of digital platforms, IoT sensors for waste monitoring, smart waste collection platforms, and waste-to-energy technologies to reduce waste volumes and produce renewable energy. In order to enhance the positive synergy between smart technologies and the circular economy in Slovakia, it is imperative to implement smart sensors in containers and utilize software solutions for route planning. The integration of sensor data into software systems facilitates dynamic route planning for waste collection. Digital platforms can promote the circular economy by facilitating the recycling and reuse of waste. Smart technologies can support modern waste incinerators that convert waste into energy. In this context, the Smart Cities concept in waste management has been shown to bring innovative solutions that combine modern technologies, efficiency, and sustainability. Automated waste recycling has been demonstrated to contribute to the creation of a more sustainable environment.

Keywords: *circular economy, smart cities, waste management, digitalization, sustainability, IoT.*

JEL classification: Q53, Q55, O33, R11, Q56.

Customer Relationship Management in Practice: Analysis of Crm System Effectiveness in the Context of Customer Loyalty

The aim of this study is to analyze the impact of a customer relationship management (CRM) system on customer loyalty and sales growth. Modern companies are increasingly implementing advanced CRM solutions that enable effective management of customer interactions, personalization of offers and automation of sales processes. The survey conducted among employees showed the widespread use of the CRM system in everyday work and its positive assessment in terms of intuitiveness and ease of use. The key functionality turned out to be the history of interactions with the customer, which emphasizes the importance of data analysis in building relationships. The results indicate that CRM contributes to some extent to improving operational efficiency, but the need for its further optimization has been recognized – especially in terms of data quality and integration with other tools. Opinions on the system's impact on customer loyalty are divided; many respondents do not see its direct impact, which suggests the need for better use of CRM in pro-customer activities. The conclusions of the study emphasize the need to develop CRM systems, especially through the implementation of automation and solutions based on artificial intelligence, which can translate into increased work efficiency and increased loyalty and sales value. In addition, it was noted that the CRM system is currently not perceived as an important tool in the process of acquiring new customers, which indicates a potential direction for its further adaptation to the needs of sales departments.

Keywords: Customer Relationship Management, customer relationship management, customer loyalty.

JEL classification: M30, M12.

Mihaela Simionescu
University of Bucharest

From Traditional to Modern Approach: Leadership Through Sustainable Development

The successful integration of AI into a company, particularly for human resources and recruiting, depends on innovative leadership. An empirical study based on latest data from 2021 shows that managers in larger EU enterprises were more inclined to embrace AI technologies, leading to a higher rate of adoption compared to smaller firms. The data also revealed that while there were no major differences in AI use across the EU as a whole, some countries demonstrated a notable commitment to AI adoption.

Keywords: leadership; AI; enterprises; human resources management.

JEL classification: M12, O33, M54, M14, Q01.

The Impact of Different Concepts of Motivating Employees on their Commitment at Work

The aim of this study was to analyze the impact of different concepts of motivating employees on their commitment to work. The research focused on the assessment of the effectiveness of selected motivation systems and techniques in relation to demographic variables such as age, level of education, place of residence and professional experience. The survey was conducted in two ways: in the form of a survey addressed to employees and people entering the labour market, and in the form of an interview, which was replaced by a survey with open-ended questions due to the low level of responsiveness of employers. The results showed that many companies lack transparent and well-known incentive systems, which has a negative impact on the level of employee engagement. Although salary remains the most important motivating factor, the importance of non-wage benefits is growing, especially among younger generations of employees. Generations Y and Z have higher expectations in terms of the quality of the work environment, development opportunities and work-life balance. The atmosphere in the workplace, management style and organizational culture are becoming as important as financial aspects. The impact of globalization processes was also noticed, which contribute to the penetration of international standards in human resources management and strengthen the need for flexible adaptation of incentive systems to the diverse expectations of employees. The results of the survey can be a valuable source of knowledge for employers and HR professionals, supporting them in creating effective and consistent motivation strategies that foster long-term employee engagement.

Keywords: Employee Motivation, Work Commitment, Motivation Systems, Non-Wage Benefits.

JEL classification: J24, J28, M12.

Accounting Philosophy as a Strategic Direction of the Discourse of Sustainable Business Management

The concept of sustainable development opens up new perspectives for accounting and analysis. We have understood the fact that the accounting philosophy for managing sustainable business development is designed to provide broad benefits to all stakeholders. Sustainable accounting is an effective tool for increasing transparency, accountability and legitimacy of the organization through an emphasis on auditing and reporting. In the context of the “old paradigm”, accounting mainly formed information for a certain circle of stakeholders (for example, investors, owners). Accounting concepts and practices did not consider the question of how accounting can widely contribute to other stakeholders. The innovative tasks and goal are to form non-financial information. Such information is information about the social and environmental performance of the company. In this case, the meaning of the company’s performance indicators becomes much broader. Of course, the progressive development of accounting is more characteristic of public companies or multinational companies. This assumption is due to the high potential and capabilities of large companies to implement the concept of sustainable development. But small and medium-sized enterprises make up the lion's share of the economy of every country in the world. Therefore, one cannot dismiss the motivation for managing the sustainable development of small and medium-sized companies. Changing the system of thinking, according to which the achievement of sustainable development goals will be realized when implementing the strategy will lead to an improvement in the overall efficiency of small and medium-sized businesses.

Research results demonstrate that the main function of accounting is to support management decision-making to increase the efficiency of sustainable development in companies. Efficiency is viewed through the prism of the triple bottom line. In this case, the company's economic activity must achieve a sufficient level of profit, but also pay attention to the interests of the social community and the environment. Therefore, the role of management accounting is also gaining a new history. The evolution of the use of management accounting tools and methods to ensure the company's sustainable development strategy is the reality of today. Innovative methods of environmental management accounting are used by professionals for proactive, long-term decision-making in the field of sustainable development. The integration of these tools depends on internal organizational factors. Such factors are the environmental responsibility of management, proactive commitment of management to the principles of sustainable development.

Our results have a practical contribution. The achievement is to help managers understand the context, potential and problems associated with the application of accounting tools in the decision-making process to ensure sustainable development. And also to communicate that sustainability accounting helps in communicating to external stakeholders about the company's environmental efforts.

Keywords: accounting philosophy, sustainable business management, environmental accounting, stakeholder theory, triple bottom line.

JEL classification: M41, M14, Q56, M11, O44.

Blue Economy: Labour Automation as a Driver of Regional Sustainability

In the context of structural transformations in European regions, the Blue Economy is increasingly recognized as a potential driver of sustainable growth. The combination of global challenges — including the COVID-19 pandemic, the war in Ukraine that disrupted supply chains and destabilized commodity markets, rapid digitalization, and the adoption of artificial intelligence tools — has profoundly altered employment patterns, production structures, and regional resilience, intensifying the debate on balancing labour productivity with the need to preserve jobs. A key challenge in studying these processes at the regional level is the shortage of statistical data, which complicates a direct assessment of the impact of structural shifts on the socio-economic development of coastal areas where the Blue Economy is a significant component.

A preliminary smart specialization analysis, conducted using aggregated data on employment and gross value added (GVA) in the Blue Economy for EU coastal countries over the period 2009–2022, revealed that countries with sustained growth in this sector in terms of value creation and job generation are characterized by low labour intensity and a diversified sectoral structure. In contrast, countries dominated by the coastal tourism sector, combined with high labour intensity, tend to face stagnation or decline in their Blue Economy.

An in-depth analysis using quantile regression with country and year fixed effects demonstrated substantial heterogeneity in the impact of individual Blue Economy sectors on the development of coastal regions. The effect is sector-specific and depends on the initial development level, as defined by the quantile distribution of indicators. In the case of employment, higher quantiles ($\tau = 0.75$) correspond to the most developed coastal economies and exhibit a stable positive effect, particularly in the marine living resources and marine transport sectors. Lower quantiles ($\tau = 0.25$) display weaker or delayed effects over time. For unemployment, a higher quantile indicates a higher unemployment rate, and here the Blue Economy generally contributes to its reduction, with the most pronounced effect observed in the middle quantiles, while in countries with chronically high unemployment the impact is limited. Regarding regional GVA, the strongest positive effect of the Blue Economy is recorded in the upper quantile, reflecting the benefits of scale and developed infrastructure.

Sectoral analysis shows that marine living resources and marine transport generally strengthen employment, reduce unemployment, and support regional GVA growth. Marine non-living resources show a positive effect mainly in more developed countries. In contrast, shipbuilding and repair, along with port activities sector, are often linked to declining employment levels despite increases in value added. This pattern reflects the impact of automation and the associated displacement of labour. Coastal tourism produces mixed results: in advanced regions, it has a moderately positive effect, while in regions with high unemployment its impact is weak or negative, consistent with earlier findings on stagnation in economies with a high share of labour-intensive tourism sectors.

These results demonstrate that automation in the Blue Economy is not merely a technological trend, but one of the key factors of regional resilience. In sectors where it is combined with diversification and innovation, automation can enhance economic growth while maintaining or even increasing employment. In capital-intensive sectors without accompanying labour reskilling policies, however, it may deepen structural unemployment. This confirms that, in the context of “Blue Economy: Labour Automation as a Driver of Regional Sustainability,” targeted policies are needed to balance productivity gains with social integration, mitigate the risks of structural unemployment, and sustain the long-term growth of coastal regions.

Keywords: Blue Economy, Regional sustainability, Sectoral resilience, Labour automation.

JEL classification: R11; O33; J21.

ESG in E-Commerce: Responsible Marketing or Sustainable Development Strategy?

The rapid expansion of e-commerce in both global and Ukrainian markets has reshaped trade models, consumer interactions, and supply chains. Alongside technological growth, new challenges emerge related to environmental, social, and governance (ESG) principles. In the context of climate change, digital transformation, and growing social expectations, ESG in digital trade becomes not only a measure of business transparency, but also a potential driver of sustainable development. However, this raises a key question: is ESG in e-commerce a genuine long-term development strategy, or merely a form of responsible marketing designed to build reputation without systemic change?

This paper explores the dual nature of ESG implementation in digital trade, with special focus on its social dimension. It examines how social responsibility and digital inclusion can be embedded into e-commerce strategies, ensuring equal access to digital services, ethical treatment of workers in supply chains, and transparency in product information. Two contrasting perspectives are analyzed: (1) ESG as a tool of “responsible marketing” — aimed at attracting socially and environmentally conscious consumers without deep transformation; and (2) ESG as a catalyst for sustainable development — integrating environmental safeguards, fair labor practices, inclusive digital infrastructure, and ethical data use into business models.

The study reviews international best practices, EU regulatory frameworks (including the Corporate Sustainability Reporting Directive – CSRD and the EU Taxonomy), and their implications for Ukrainian e-commerce in the context of European integration. Particular attention is paid to the alignment of ESG initiatives with the UN Sustainable Development Goals (SDGs), especially SDG 8 (Decent Work and Economic Growth), SDG 10 (Reduced Inequalities), and SDG 12 (Responsible Consumption and Production). The role of digital tools (such as big data analytics, AI-driven personalization, and sustainable logistics platforms) is analyzed in terms of their capacity to foster both operational efficiency and measurable social impact.

By highlighting the interplay between digital trade and sustainable development, the paper proposes a framework for Ukrainian e-commerce stakeholders to move beyond declarative ESG commitments toward comprehensive strategies that combine profitability with social and environmental responsibility. The conclusion emphasizes that the future of competitive digital markets depends on synergy between innovation and genuine sustainability, where ESG principles act not as slogans, but as integrated elements of business resilience, ethical conduct, and inclusive growth.

Keywords: *e-commerce, ESG principles, sustainable development, responsible marketing, digital trade, social responsibility, digital inclusion.*

JEL classification: L81, M14, M31, Q56, F64.

Engaging University Students in Sustainable Health Behaviours Through Virtual Reality Exergaming: Comparative Insights from Mauritius and Lithuania

Physical inactivity remains a growing concern among university students, particularly in increasingly digital and sedentary academic environments. Globally, a significant percentage of students, particularly girls, are not meeting recommended levels of physical activity, potentially impacting their current and future health. Specifically, studies indicate that over 80% of adolescents worldwide are insufficiently physically active. This lack of physical activity is a growing concern, with implications for both individual well-being and public health systems. Exergaming, which combines technology with physical exercise, has recently become very popular. It is used in physical education, health promotion and rehabilitation. Although research has shown promising results regarding the benefits of exergaming, it is still unclear what the results will be for different populations. Exergaming combines physical exercise with gaming and is often referred to as active video gaming. Innovations in digital gaming technology have made it possible for players to substitute body movements for conventional button presses in seated games. The evolution of video games has moved away from motion sensing controllers to optical sensors that allow for more realistic full-body movements. The analysis of exergames is crucial to optimize their benefits in the context of health and education. Virtual Reality (VR) exergaming has emerged as a promising, technology-driven approach to engage young adults in physical activity through immersive, interactive experiences. This study comparatively explores the perceived impact of VR exergaming in promoting sustainable health behaviors among university students in two countries: Mauritius and Lithuania. Students participated in short VR-based fitness sessions using a rhythm-action game and subsequently reflected on their experiences through structured questionnaires. The study examined perceptions of enjoyment, ease of use, motivational appeal, and the potential for sustained engagement with VR as a medium for physical activity. Across both contexts, students expressed positive reactions toward VR, noting its novelty, accessibility, and potential to fit into busy academic lives. The findings highlight VR's relevance, with its applications aligning with sustainable development goals by offering inclusive, engaging tools for healthier living in a digital age.

Keywords: *Virtual Reality, exergaming, sustainable development, health.*

JEL classification: C88, C91, Q01.

Regarding the New Concept of Social Partnership in Labor Relations in Ukraine on the Path to EU Accession

The formation of relations in the labor sphere has been taking place as long as humanity has existed. Labor has always been a means of satisfying human needs, a way of creating material values, and, importantly, a subject of attention of various sciences - economics, social sciences, history, and, of course, legal sciences. The last sphere, by the way, determines the inalienability of a person's right to work, and later, over the course of history, the right to proper protection of such a right. The evolution of labor relations in Ukraine is in the plane of several historical periods, each of which has its own characteristics - Kievan Rus, the influence of Austria-Hungary, Poland, Lithuania, Turkey, Zaporizhian Sich, being part of the Russian Empire and the communist era, the modern period of independence and the aspiration to the EU. Each of the stages is reflected in the modern paradigm of labor relations in Ukraine, in particular, their features, legal regulation, relations between employees and employers, employers and the state, and the real or formal ability of all participants in these relations to protect their labor rights. Serfdom of ukrainians in the Russian Empire and the totalitarian communist regime did not play the best role in the peculiarities of labor relations in the modern period, and the transformation and formation of the paradigm of a democratic, social state with a market economy continues to this day. Therefore, it is extremely important to study the experience of others and, if possible, implement it in Ukraine.

The states of the Western world have had a path and a history that has significant differences. Therefore, the legal model itself is significantly different from ours. This applies to labor relations, and in particular to the institution of social partnership in this area, where proper social dialogue, best practices of relations between participants, prevail.

Therefore, we set the following goals using methods of scientific knowledge, in particular, historical and logical, comparative law, induction, deduction, analysis and synthesis, modeling: 1) to investigate the institution of social partnership in the labor sphere, the peculiarities of the formation of relations and approaches and dynamics of changes in the legal regulation of labor relations, the development of social partnership in the EU, in particular in Germany, which is distinguished by strong democracy and a social component. Attention is required to analyze: 2) what exactly, which historical processes, how they influenced, what decisions and on what basis were made, how the regulation and protection of labor rights developed, including the International Labor Organization (ILO), and finally 3) what modern effective mechanisms for regulating social and labor relations have been formed, in particular after 1960, when the modern concept of social partnership was approved in Scandinavia, Austria, and Germany. 4) Formation of the future concept of social partnership and social dialogue in labor relations in Ukraine (at the local and state levels).

This issue is especially relevant, since there is a need for a significant revision and formation of the concept of social partnership in Ukraine, on the path to European integration, especially in conditions of war - this is what we set as the task of our research. And this is possible, among other things, in the case of partial correction and non-repetition of historical mistakes. That is why the subject of extreme attention is the study of the evolution of labor relations in the Western world, especially in terms of social partnership and the formation of its own paradigm. It seems that the implementation of this problem requires further fruitful work by all stakeholders, in particular, regarding:

- careful study of the experience of individual EU states;
- development of theoretical and methodological foundations of social partnership in Ukraine, taking into account comparative legal analysis of foreign experience;
- development of our own concept of social partnership, including recommendations and proposals for implementation in Ukraine;
- discussion of conceptual principles in the professional public and government community in order to implement the necessary changes.

Access to the foreign materials will facilitate an in-depth study of the problem before us. Studying the works of foreign colleagues, unique legal documents, including trade union reports, and separate documentation on labor in various sectors of the economy, at the state level or individual enterprises, in different historical periods provides an opportunity to comprehensively master trends and approaches.

In our opinion, further expert work on the study of this problem is the perception of the adaptation of the social partnership model for the purpose of Ukraine's integration into the EU.

Keywords: *social partnership in labor relations; social dialogue in labor relations; concept of social partnership; EU Accession.*

JEL classification: J53, J52, K31, F55, J83.

Data-Driven Sustainability: Artificial Intelligence (AI), Cybersecurity, Digitalization Processes

The article explores the transformational role of Artificial Intelligence (AI) as well as the fact that the digitalization processes are not only a tech instrument but also a essential engine to promote sustainability. Implementing these implies both risks and major challenges.

The article analyzes the effect of in-depth AI transformation, cyber security as well as digitalization in order to support sustainability objectives. Through an detailed analysis we explain how AI allows marketing strategy personalization in order to stimulate consumer environmental behaviors and how it can help companies to optimize resource allocation. For example, predictive tools based on AI can provide an accurate demand forecast, reducing overproduction and resource waste. A concrete example is the French producer Danone who through using algorithmic learning reduced the forecasting error by 20% and by 30% sales losses. Moreover, AI contributes to a sustainable marketing approach, redefining the profiling of digital advertising campaigns to reduce non relevant impressions that otherwise would waste energy to process data.

In parallel, digitalization transforms the supply chain, changing from a sequential model to an integrated and transparent ecosystem. Technologies like Internet of Things (IoT) associate digital identities to goods, facilitating real time monitoring while blockchain guarantees access in a decentralized and not questionable way to customer transactions. This complex transparency optimizes efficiency, increases resilience and consolidates also customer trust. According to the Label Insight (2016) study, up to 94% of consumers claim brand loyalty towards a brand that offers full transparency over its supply chain.

To the same extent, adopting these technologies involves many challenges. The article underlines the negative environmental impact as well, such as the high carbon footprint of AI models that requires massive energy resources. The electronics waste problem is a consequence of the high demand on hardware. On top of this, there is still the ongoing risk of sharing data based on algorithms that use uncomplete set of data that could lead to inaccurate weather forecast as well as unbalanced decision process.

In this context, cyber security becomes a fundamental component of sustainability because consumer data projection is very important to maintain trust.

Security breaches can generate data leaks that would negatively impact brand reputation and diminish client's loyalty. Following compliance policies like GDPR that stipulates transparency, capture explicit consent to the processing and data minimization is not only a legal obligation but also a fundamental ethical practice to consolidate a long term relationship with the audience.

To sum up, the article reinforces the need to adopt a strategic and responsible approach to capitalize the full potential of digital technologies. A decision process about leveraging AI capabilities that takes into account integrating ethics, data governance principles and environmental impacts is critical for an authentic and sustainable digital future.

Keywords: *sustainable marketing, digitalization, artificial intelligence, cybersecurity, data governance, digital ethics, resource optimization, consumer behavior, greenwashing.*

JEL classification: O33, Q56, K24, M31, L81.

Strategies for Integrating Artificial Intelligence into the Training of Civil Protection Specialists

This paper explores strategic approaches to integrating artificial intelligence (AI) into the training of civil protection specialists. In response to the growing complexity of natural and man-made threats, AI offers transformative potential in personalizing education, simulating crisis scenarios, and enhancing decision-making. The authors propose adaptive learning models based on trend analysis and emphasize the importance of ethical implementation, cybersecurity, and teacher training. The study concludes that AI can reshape pedagogy in security-oriented fields, provided that risks are mitigated through scientifically grounded strategies and continuous policy adaptation.

In an era marked by the rapid escalation of natural disasters, man-made accidents, and geopolitical conflicts, the training of civil protection (CP) specialists is becoming increasingly complex. Traditional educational paradigms often fail to address the dynamic nature of these threats, necessitating innovative approaches – such as the integration of artificial intelligence into the educational process. AI holds transformative potential for simulating crisis scenarios, personalizing learning paths, and enhancing decision-making under uncertainty. However, its implementation raises critical questions regarding strategy, impact, and security. This paper explores strategic approaches to integrating AI into the training of CP specialists and offers scientifically grounded recommendations for its ethical and effective application in education.

Effective AI integration requires a multifaceted strategy that aligns technological capabilities with the specific needs of civil protection. A key approach involves developing adaptive learning models that leverage trend analysis to tailor educational trajectories. For instance, AI can analyze external factors such as climate change, urbanization, and digitalization to prioritize the competencies essential for CP specialists – such as risk assessment, emergency forecasting, and unmanned aerial vehicle (UAV) operation. This underscores the need for conceptual and mathematical models that encompass strategic trends in civil protection, competence profiles of specialists, and probabilities of emergency scenarios, thereby optimizing personalized learning paths for each student.

The significance of this issue is reflected in the growing interest, funding, and legislative support at the highest governmental levels across leading nations. For example, the U.S. Department of Homeland Security (DHS) outlines measures for managing AI in civil protection, including risk assessment and workforce training. Hybrid strategies, such as AI-driven simulations (e.g., rescue robotics workshops) combined with human oversight are receiving considerable attention. Similarly, the European Civil Protection Knowledge Network promotes the use of AI in hazard data analysis and virtual training environments, emphasizing the importance of diverse datasets to avoid gaps in real-world applicability. At the regional level, policymakers in Albania, Kosovo, and North Macedonia stress the importance of international cooperation and capacity building, recommending alignment with global funding for phased AI deployment. These strategies highlight the value of foresight analysis, SWOT assessments, and scenario modeling to dynamically adapt training programs and ensure preparedness for multifaceted threats.

AI integration is profoundly reshaping education in security-oriented fields, offering both opportunities and challenges. It enables personalized learning by automating routine tasks and facilitating realistic simulations that accelerate skill acquisition in areas such as crisis prediction and resource management – potentially reducing economic losses from emergencies. However, the use of AI in education also presents risks. While it enhances training, it may lead to data breaches, algorithmic bias, and diminished critical thinking among students. For example, reliance on generative AI tools can foster dependency on automation, potentially undermining independent decision-making

in high-risk scenarios. Moreover, AI introduces new cybersecurity vulnerabilities, requiring educational institutions to address threats such as model attacks and data leaks.

Overall, AI is driving a shift toward interdisciplinary, data-driven pedagogy, but safeguards are essential to mitigate its adverse effects on student autonomy and system reliability. To harness AI's benefits while minimizing its risks, implementation must be guided by scientifically sound principles – particularly those concerning data confidentiality and ethical use. A crucial component is continuous professional development for educators, incorporating AI literacy into curricula to foster ethical competencies. Pilot programs can serve as a testing ground to evaluate effectiveness prior to full-scale deployment. As global challenges evolve, ongoing research and adaptive policies will be vital to sustaining AI-enhanced educational ecosystems.

Keywords: *artificial intelligence, civil protection, adaptive learning, crisis management, cybersecurity, sustainable training.*

JEL classification: O33, I23, H56, K24, M53.

Tibor László Csegődi

Hungarian University of Agriculture and Life Sciences

Examination of the Social, Income and Housing Quality Components of Energy Poverty Based on Eurostat Data

Energy poverty characterized by a household's inability to afford adequate energy services for a decent standard of living, extends beyond mere income deprivation, encompassing factors such as poor housing conditions, high energy prices, and inefficient energy consumption. Consequently, understanding and addressing energy poverty requires a holistic approach. Energy poverty is also shaped by factors such as the energy efficiency of dwellings, the cost of energy, and individual energy consumption behaviours. Early scholarly contributions, notably Brenda Boardman's seminal work, established the foundational understanding of energy poverty as a condition where households are unable to afford adequate energy services to maintain a healthy and comfortable living environment. Building on Boardman's work, subsequent research has further refined these factors, integrating aspects like energy efficiency, housing quality, and the broader socio-economic context to provide a more nuanced understanding of energy poverty dynamics. The complexity behind the concept of energy poverty has led to varied measurement approaches globally, with no single, universally accepted standard for assessing energy poverty, leading to challenges in international comparability and policy implementation. Recognizing these complexities, the European Union has moved towards a more comprehensive understanding, seeking to integrate various dimensions into a cohesive Framework. The European Union's approach often incorporates metrics such as the inability to keep homes adequately warm, the presence of leaking roofs or damp walls, and high housing cost overburden rates to capture the lived experiences of energy-poor households.

This research employs a methodology centred on four basic indicators extracted from Eurostat data, enabling a comprehensive examination of energy poverty's social, income, and housing quality components. Specifically, the selected indicators—percentage of total population living in a dwelling with structural defects, percentage of households unable to keep home adequately warm, and housing cost overburden rate—offer a robust framework for assessing the multifaceted nature of energy poverty across EU member states. The general trend indicates a slight improvement in the level of energy poverty across EU countries, albeit with persistent variations between the best and worst performers. While some policy measures may be effective

broadly, others require refinement to address specific national or regional challenges. Furthermore, an increased focus on energy efficiency policies and renewable energy sources has been identified as a key driver for alleviating energy poverty, particularly in the long-term. This underscores the critical need for agile and adaptable policy responses that can swiftly address emergent challenges while fostering long-term resilience in energy systems.

Keywords: *energy poverty, poor housing conditions, household income, home maintenance costs, energy efficiency.*

JEL classification: Q48, I32, I38, R31, R28.

**Zsuzsanna Tóth-Naár, István Vilmos Kovács, Tamás Gergely Kucsra,
Szergej Vinogradov**

Budapest Metropolitan University

From Tradition to Innovation: METU's myBRAND Portfolio-Based Model

In today's rapidly evolving higher education landscape, institutions must move beyond traditional lecture-based teaching to prepare graduates for the challenges of the 21st-century labor market. Budapest Metropolitan University (METU) has responded by pioneering a portfolio-based educational model known as myBRAND. This competency-driven, student-centered approach redefines the learning experience by placing students' personal and professional development at the core of the curriculum. myBRAND aims to foster graduates who are self-aware, responsible for their own growth, and capable of presenting their achievements with confidence.

At the heart of myBRAND lies the STAR model – Situation, Task, Action, Result – a framework widely used in competency-based education and career development. By embedding STAR across the curriculum, METU ensures that students not only acquire theoretical knowledge but also apply it in real-world contexts, reflect critically on their performance, and articulate measurable outcomes. This structured reflection process is closely linked to career readiness, as it trains students to express their competencies in evidence-based, employer-relevant language.

The transformation required a systemic redesign of teaching and assessment practices. Faculty were trained in project- and problem-based learning, interdisciplinary design, and digital pedagogy. In parallel, METU conducted focus group discussions with students to better understand their perceptions and expectations, and surveyed faculty using a curated list of myBRAND elements to identify which components they found most meaningful and aligned with their teaching practices.

Preliminary findings suggest that students exposed to the myBRAND framework show increased engagement, confidence in job interviews, and greater ownership over their learning paths. The presentation will share key design principles, implementation strategies, and insights from student and faculty feedback, offering a transferable model for institutions seeking to modernize education in line with global trends.

Keywords: *myBRAND, STAR model, Portfolio-based learning, Competency development, Educational transformation, Student agency.*

JEL classification: I23, I25, O32, J24, M53.

Household Food Donations in Malaysia: An Integrated Norm Activation and Planned Behavior Approach

Food insecurity and food waste represent two sides of a global paradox—Hunger Amidst Abundance. In Malaysia, households contribute significantly to food waste, with over 8.3 million tonnes discarded annually, including large quantities of edible food goes to waste. This study investigates the determinants influencing Malaysian households' intention to donate food surpluses to food banks, integrating the Norm Activation Model (NAM) and the Theory of Planned Behaviour (TPB) to develop a comprehensive framework to scrutinize this phenomenon. Using survey data from 312 households in Malaysia, the study examines the roles of perceived behavioural control, personal and subjective norms, awareness of consequences, and attitudes toward food waste reduction and food donation. Structural equation modelling via SmartPLS reveals that perceived behavioural control, personal norm, and awareness of consequences significantly influence donation intention. Notably, personal norm mediates the relationship between awareness of consequences and donation intention, suggesting that moral obligation activated by environmental awareness drives prosocial behaviour among households. While attitudes toward food waste reduction and food donation are positively correlated, they do not directly influence donation intention, indicating a disconnect between favourable attitudes and actual behavioural intent. This gap highlights the need to explore external barriers that may hinder households from acting on their intentions. The findings underscore the importance of fostering moral norms and environmental awareness to enhance food donation behaviour. They also call for policy interventions and cross-sector collaboration to address logistical and psychological barriers. Future research may incorporate external determinants and observed behaviours to enrich understanding and improve food redistribution practices. This study contributes to the literature on sustainable food management and offers practical insights for policymakers, NGOs, and food banks aiming to mobilize household-level food donations behaviour.

Keywords: *Food Recovery, Food Redistribution, Donation Intention, Food Surplus, Households.*

JEL classification: Q22, Q180, Q13.

Lithuanian Consumers' Perspectives on Sustainability in Wine Production

In order to ensure long-term stability and viability, it is advisable for every economic sector to embrace sustainable practices, and the wine industry is no exception. Sustainable vine and wine management encompasses a range of crucial elements aimed at enhancing vine and wine quality, promoting consumer health, and safeguarding the environment in the long run.

The success of a sustainable wine industry generally depends on several factors: governmental policies and financial support, the willingness of wine producers to adapt their operations towards sustainability, and the support of modern wine enthusiasts who are willing to pay a premium for sustainable products.

The main aim of chosen research - to assess the perspectives of Lithuanian wine enthusiasts toward wine produced according to sustainable principles, acknowledging that this category encompasses organic, biodynamic, natural, sustainable and fair-trade wine (Capitello & Sirieix, 2019; Baiano, 2021) production.

To determine the attitude of modern Lithuanian wine consumers towards sustainably produced wine, we conducted research by using theoretical (secondary data collection, systematization, analysis, comparison, and generalization to examine differences between conventional and sustainable vine and wine management algorithms, and identify the profile of modern consumers who prefer sustainable wine) and quantitative (a standardized online questionnaire to investigate the attitude of Lithuanian wine consumers toward wines produced under sustainable principles) methodology.

The findings revealed an increasing interest among Lithuanian wine enthusiasts in sustainable vineyard management, wine production, and distribution. Certain countries exhibit varying degrees of sustainability. The first and the most important steps in LT were taken since 2000s, when specific thematic associations and specialized wine shops, promoting wine culture and knowledge, began to be established in the country.

However, despite this growing awareness, the key factors influencing Lithuanian wine consumers' wine choices tend to be more traditional and unrelated to sustainable winemaking principles. These include the country of origin, grape variety, and recommendations from friends or (and) wine experts. Lithuanian wine consumers exhibit a growing interest in sustainability, however, their wine purchasing habits remain unaffected by whether the wine is produced under sustainable principles.

Keywords: *Sustainability, wine industry, sustainable vitiviniculture, modern consumer, Lithuanian wine consumer.*

JEL classification: M11, M14, O13, O44, Q13.

Regional Partnership in the Context of Health Development

The concept of health tourism has gained increasing importance in recent years, yet its fragmented structure and the diversity of services within it pose significant challenges for sustainable development. The sector encompasses medical tourism, wellness tourism, and therapeutic services, all of which aim to improve, restore, or maintain health. These services include medical treatment, dental care, rehabilitation, nursing, and medical spa procedures, often combined with leisure and tourism activities. However, despite its potential, the health tourism industry struggles with coordination among stakeholders, inconsistent service quality, and limited integration of regional resources. Therefore, the *main research problem* lies in understanding how cooperation and partnership mechanisms can be effectively established and managed to overcome fragmentation, ensure consistent service delivery, and strengthen competitiveness in the health tourism market. This study will investigate the role of strategic partnerships, organizational structures, and collaboration frameworks as tools for improving efficiency, innovation, and regional development in health tourism.

Within this framework, health tourism is often seen as a holistic approach to health, focusing on physical, psychological, and spiritual well-being. Exploring the organization of partnerships in this field requires first identifying their purpose, which typically involves setting strategic objectives. Effective partnerships demand careful consideration of several aspects: identifying trustworthy partners; defining responsibilities for planning, organizing, leading, and controlling; establishing both formal and informal agreements; ensuring smooth communication and open access to information; and fostering cultural compatibility among partners. The creation, implementation, and evaluation of joint strategies should be guided by equality, mutual benefits, and accountability.

At the regional development level, three core principles are crucial: sustainability, balance, and social orientation. Sustainability ensures that resources are preserved and reproduced over the long term. Balance refers to maintaining fair distribution of resources and potential across different regions. Social orientation emphasizes evaluating regional development outcomes primarily in terms of their effects on the quality of life and well-being of the population.

Partnerships are considered a vital instrument for overcoming individual limitations of organizations by pooling resources and knowledge. They expand access to human, financial, technical, and intellectual resources, thereby improving efficiency, creativity, and the sustainability of outcomes. In health tourism, partnerships also encourage the creation of integrated solutions, which is essential given the complexity of delivering diverse health-related services. Strong local and regional cooperation between providers is particularly important for shaping destinations that can deliver comprehensive and high-quality experiences. Destination management organizations and collaborative networks play a central role in ensuring that services are not only accessible but also consistently meet international standards.

For the health tourism sector, strategic partnerships bring multiple advantages: enhanced information exchange, easier adoption of technological innovations, greater operational productivity, opportunities for developing new business models, improved investment attraction, and reduced costs. At the same time, successful collaboration requires transparency, trust, and effective communication among partners. Without these elements, partnerships risk becoming unstable and ineffective. Strategic planning is therefore indispensable for building resilient and mutually beneficial collaborations.

Overall, collaboration in health tourism helps small organizations overcome structural weaknesses while maintaining independence, increases financial and technological capacity, enhances visibility in the global market, and supports the development of competitive service packages tailored to the needs of demanding clients. Ultimately, no single actor — whether business, government, or academia — can achieve the required quality and competitiveness alone. The most effective outcomes arise from networks, clusters, and joint initiatives, which generate synergies that enhance both individual performance and collective growth. The stronger and more productive the organizations within a cluster, the greater the efficiency of the entire group, contributing not only to the health tourism industry but also to broader regional and national development.

Keywords: *health tourism; organizational partnership; development perspective.*

JEL classification: I18, Z32, R11, L31, M14.

Vilma Liaudanskė
St. Ignatius Loyola College

Digitalization and Artificial Intelligence in Early Childhood Education Institutions: A Key to a Sustainable Future

In today's society, the rapid development of technologies and digitalization creates new challenges and opportunities not only for the business sector but also for the field of education. Early childhood education is a particularly important stage of education where children's fundamental cognitive competences, social skills, creativity, and moral values are formed. The integration of digitalization and artificial intelligence (AI) tools into early childhood education can contribute to the achievement of sustainable development goals—both by fostering innovation and by reducing various opportunity gaps.

The aim of the study presented in this report is to determine how digitalization and AI can become an effective and ethical key to a sustainable future when applied in early childhood education institutions. The research tasks include discussing the potential benefits, drawbacks, and challenges of using digitalization and AI in early childhood education, as well as identifying the conditions necessary for these technologies to become an effective and ethical key to fostering future citizens. The preparation of the report involved scientific literature and document content analysis, systematic review, and meta-analysis methods.

The author conducted a scoping and systematic review of scientific literature, focusing on studies about the use of AI in early childhood education (children aged approximately 3–7), the impact of technological tools, teachers' attitudes, and safety and ethical aspects. The review incorporates international studies as well as documents related to the Lithuanian context, infrastructure, and education policy.

The findings reveal that AI-based tools enable the individualization of education by adapting activities to children's abilities and learning pace. Digital tools promote creativity, problem solving, early technological literacy, and inclusive education for children with special needs. Learning analytics can help educators identify children's strengths and weaknesses in a timely manner. However, studies conducted in Lithuania (Mecelienė, Neimantė, 2022) show that while educators acknowledge the benefits of AI, they emphasize a lack of resources and competencies. Research by Baziukė, Girdzijauskienė, and Norvilienė (2021) revealed that out of 244 digital tools on the national list, only 4 use AI, and most of the tools are one-directional and provide no

feedback. Additional challenges include limited infrastructure, insufficient funding, ethical and privacy issues, and the risk of excessive screen time for children.

In the Lithuanian context, studies by Vytautas Magnus University (e.g., Norkutė, 2020) highlight that early childhood education institutions in Lithuania are already introducing innovations, but their integration often encounters a lack of teacher preparedness and methodological support. National-level documents (Ministry of Education, Science and Sport of the Republic of Lithuania, National Education Agency) emphasize the need to strengthen teachers' digital competences and implement innovative educational tools. Nevertheless, the actual integration of technologies is progressing more slowly than outlined in policy guidelines.

In conclusion, digitalization and AI can become an effective tool in early childhood education that contributes to building a sustainable future through individualized learning, inclusion, and innovative educational content. However, the Lithuanian case shows that this potential is currently being realized only fragmentarily. A systematic program to strengthen teachers' competences, investment in infrastructure, adherence to ethical standards, and the development of age-appropriate tools are essential. Only in this way can AI and digitalization in early childhood education institutions truly become a "key to a sustainable future."

Keywords: *artificial intelligence, digitalization, early childhood education, early learning, sustainable development, educational innovation, teacher competences, education policy.*

JEL classification: I21, I25, O33, Q01, M15.

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