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Transforming Global Challenges into Opportunities

The impact of AI, sustainability, digital transformation on the future of business, economics and society

BOOK OF ABSTRACTS

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35 Years of Zalatriatlon Club. An Analysis of Club Members and the Club's Economic Activities

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Background and introduction: The Zalaegerszeg Triathlon Club, alias Zalatriatlon, has been a cornerstone of regional sports development in Zala County for 35 years, fostering community engagement and promoting healthy lifestyles. Through its various events and initiatives, the club has significantly contributed to the local athletic and social fabric of Zalaegerszeg and Zala County.

Objective: The point of the present study is to evaluate the growth and impact of Zalatriatlon on the local community. Key objectives include assessing the club's role in enhancing local tourism, stimulating economic activity through triathlon, duathlon, running, and swimming events, and especially, promoting community well-being.

Methodology: A mixed-methods approach will be employed, combining quantitative data analysis of the clubs' books with qualitative in-depth interviews from stakeholders, including club members, volunteers, coaches, local businesses, and government officials. Surveys will also be conducted to gauge extreme sporting accomplishments.

Results: Our research is in progress. However, preliminary findings suggest that the Zalatriatlon has positively influenced the club's economic growth, with increased participation in events correlating with an increasing number of participants in the end-of-the year Mountain Marathon Man, the charity run for Premature Babies, and the Zala Sprint Triathlon event. The club has also facilitated partnerships between local businesses and the local municipality, enhancing regional visibility.

Conclusions: The story of Zalatriatlon exemplifies how sports organizations can drive regional development and determine the well-being of local residents. By fostering community involvement and supporting local businesses, the club has demonstrated its value beyond athletic competition, serving as a model for similar initiatives in other regions.

Limitations and future research directions: The present study might not fully capture the long-term economic effects. Future research could aim to explore the sustainability of the club's economic contributions over time and investigate the potential for replicating its model in other regions to enhance local development through sports.

Keywords: Zalatriatlon, triathlon, interviews, healthy lifestyle, sports accomplishmenst, development

A Comparative Analysis of Senior Management and their HR Decisions in an Unstaffed and Staffed Hungarian Hotel

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Background and introduction: The topic was inspired by the author's passion for tourism, a combination of her previous and current studies. The theoretical background is provided by the decisions made by top management in HR, the importance of the existence and lack of internal and external interactions as part of tourism, and the evolution of organisational culture and its change due to the impact of technology. The research was motivated by an interest in the impact of staff on decisions, org culture and guest experience.

Objective: The aim of this thesis is to compare the management and operations of an unstaffed and a staffed Hungarian hotel through a comparative analysis of top management decisions, HR decisions and organisational culture. The paper examines staff and guest expectations and experiences and satisfaction, while identifying differences between partially or fully automated and traditionally organized hotel service.

Methodology: In addition to the literature review, the study is based on direct experiences (interviews, questionnaires and online reviews) of external (guests) and internal (management and staff) stakeholders of a hotel in Hungary, both staffed and unstaffed.

Results: The results include a focus on the essence and differences in organisational culture (not only in companies with people) and a comparative assessment of the two institutions based on the main stakeholders. Technological innovation is creating a specific hybrid service infrastructure where human intelligence meets machine solutions, creating optimally more favourable conditions and opportunities for hotel service and its guest experience.

Conclusions: Any form of contact with staff can be defined as an experience in tourism, but in the 21st century, hybrid service, the experience of technology, which is increasingly emerging in more and more areas and can replace people, can also provide a guest experience, as the use of the latest tools provides useful technical knowledge as well as autonomy and freedom. On the service side, automation means easier and more cost-effective organisation of operations, but also a very different working culture.

Limitations and future research directions: It is certainly worth extending the research to other sites, both traditional and automated, to ensure that the experience of one example can be generalised. Consideration should also be given to extending the methodology of the primary studies, i.e. qualitative analysis to interpret and evaluate the data collected. The author hopes that the profession will take note of the message of the paper that an important component of organisational success is the organisational culture.

Keywords: hotel management, personnel, technology, corporate culture, guest’s experiences

A Cross-Cultural Comparison between Ghana and Nigeria: Work-Life Balance among Public Sector Employees

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Background and introduction: Work-life balance (WLB) has emerged as a critical determinant of employee well-being, job satisfaction, and organizational performance, particularly within high-demand sectors such as healthcare. Yet, its conceptualization and operationalization in emerging economies remain underexplored. This study presents a cross-cultural comparative analysis of WLB practices among healthcare professionals, with a focus on female nurses and physicians in public health institutions across Ghana and Nigeria.

Objective: The study aims to identify common challenges and differences in WLB practices between Ghana and Nigeria, examining how cultural norms, gender roles, and institutional frameworks influence employees' experiences. By analyzing both countries' public sector environments, the research seeks to uncover key factors that contribute to WLB difficulties and propose recommendations for policy improvements that could enhance work-life integration for employees in developing nations.

Methodology: Given constraints on primary qualitative data collection, the study employs a rigorous secondary data analysis methodology. Data sources include government policy documents, national healthcare workforce surveys, peer-reviewed literature, and organizational reports published between 2010 and 2024. The analysis centres on key WLB initiatives: flexible work arrangements, parental leave entitlements, and dependent care support mechanisms.

Results: Findings reveal that while both countries have adopted WLB-related policies, the effectiveness of these measures is shaped by socio-cultural norms, gendered expectations, and institutional capacities. Ghana demonstrates more formalized policy structures, whereas Nigeria exhibits greater regional variability in implementation. The study underscores the imperative for context-sensitive, gender-responsive strategies to enhance WLB outcomes, mitigate burnout, and strengthen workforce retention.

Conclusions: This research contributes to the nascent but expanding scholarship on WLB in African public healthcare systems and provides actionable insights for policymakers and health sector leaders committed to fostering equitable and supportive work environments

Limitations and future research directions: The limitations of this study include reliance on self-reported data, which may introduce bias, and a focus on public sector employees in Ghana and Nigeria, which limits generalizability to other sectors within the Sub-sahara African regions. Additionally, the cross-sectional design restricts the ability to assess long-term trends.

Keywords: leadership, Human Resource Management

A Qualitative Study on the Main Reasons and Consequences of Abandoning Mandatory Joint Audit: Evidence from Kuwait and Denmark

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Background and introduction: In the aftermath of the global financial crisis, the European Union introduced mandatory joint auditing as a key recommendation aimed at rebuilding public trust in the auditing profession. Denmark discontinued mandatory joint auditing for all companies in 2005, while Kuwait did the same in 2016, maintaining it only for the banking sector. In a joint audit setting, two independent audit firms examine an entity's financial accounts, culminating in a single report that both firms sign.

Objective: This study aims to examine the main reasons and consequences of abandoning mandatory joint auditing and switching to voluntary joint auditing in both Kuwait and Denmark.

Methodology: To meet the study objectives, we examined the literature concerning the abandonment of mandatory joint auditing in Kuwait and Denmark. Furthermore, we carried out 11 online interviews, 9 of which took place in Kuwait and 3 in Denmark, involving the Big Four audit firms and chief financial officers (CFOs). The duration of each interview ranged from 35 to 45 minutes.

Results: Interviewees agreed that increased expenses and coordination challenges between audited enterprises and the two audit firms influenced the decision to eliminate mandated joint audits. However, most agreed that removing obligatory joint auditing delayed financial reporting and increased audit market concentration without affecting audit quality. Most interviewees stressed the importance of joint auditing for banks and large enterprises.

Conclusions: This study offers valuable insights for investors, policymakers, and companies interested in joint audit regimes by exploring the key reasons and consequences of abandoning mandatory joint audits, as viewed by Big Four auditors and chief financial officers (CFOs). It also emphasizes the importance of reevaluating the potential role of mandatory joint auditing within the banking sector and large corporations.

Limitations and future research directions: Only 11 interviews were used in this study, which may have limited the data's generalizability because of the small sample size. By using questionnaires and conducting more interviews, future research may think about reproducing this study. Future studies could also look at how the Danish banking industry, which no longer requires joint audits, differs from Kuwaiti banking, which still does, in terms of report delays, market concentration, audit quality, and audit fees.

Keywords: mandatory joint audit, interviews, Kuwait, Denmark

A Tentative Model of Dataflow in Business Reporting Processes

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Background and introduction: In an increasingly complex and data-driven business environment, organizations depend on structured reporting to support decision-making across all levels. Existing reporting practices vary widely in format, frequency, and purpose, often lacking consistency or alignment with decision-maker needs. Motivated by the need to improve clarity and utility in corporate reporting, this research explores how different types of reports are structured and used across organizational contexts.

Objective: This paper proposes a tentative model of dataflow in business reporting, examining how report types differ by function, frequency, structure, and hierarchy level. It integrates insights from philosophy to highlight the role of clarity, skepticism, and uncertainty in reporting, aiming to enhance decision-making in complex organizational environments.

Methodology: We utilized a qualitative research design, analyzing reporting practices across engineering and business domains in multinational organizations. Data were collected from industry case studies, academic literature, and metadata analysis. Reports were categorized by type, frequency, structure, and decision-making context to develop a conceptual model.

Results: The study identified distinct reporting patterns across organizational levels, showing a strong correlation between data age and decision hierarchy. Higher-level managers rely on aggregated, older data, while frontline staff use real-time inputs. Reports different in structure and frequency, highlighting the need for tailored, purpose-driven reporting systems to support effective decision-making.

Conclusions: The research reveals that reporting practices vary significantly by organizational level and purpose, with higher-level decisions relying on aggregated data and lower levels on real-time data. The proposed model highlights the importance of clarity, structure in business reporting. Findings support more adaptive, transparent, and context-aware reporting systems for improved decision-making.

Limitations and future research directions: The study is limited by its qualitative scope and reliance on secondary data, which may not capture all industry-specific nuances. Future research should include empirical validation through interviews or surveys and expand to sector-specific reporting practices. Exploring AI-driven reporting tools and real-time data integration offers promising directions.

Keywords: decision-making, business reporting, reporting practices, operative management

Active Ageing Index and the Social and Economic Role of Ageing Entrepreneurship in Sustainable Rural Development

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Background and introduction: The active economic participation of older people has great social and economic potential, while also having a positive impact at individual level. Encouraging them to become entrepreneurs can be both a response to the demographic crisis caused by youth emigration, the problem of economic disempowerment - which is leading to the increasing marginalisation of rural areas - and the strengthening of community-based enterprises as the basis for a more sustainable and inclusive economic vision.

Objective: According to the concept underlying the Active Ageing Index (AAI), active ageing is not only about participation in the labour market, but also about voluntary activities, social relations, independent living and health maintenance. The aim of this research is to investigate the impact of supporting older people to become entrepreneurs on strengthening AAI and on macro- and micro-level development, especially in rural areas facing ageing and depopulation.

Methodology: In this research I will present the Active Ageing Index based on reports from 2012, 2016 and 2018, with a focus on the cluster including Hungary. Based on article analyses and interviews with experts involved in its preparation, I will present the WellOSyst 2024 programme and SilverLab plan for Székesfehérvár, which calculated the city's Active Ageing Index and developed an action plan to increase the AAI by 2 percentage points in 2 years.

Results: Drawing on data and interviews, I will show the potential to increase the value of AAI by encouraging older people to become entrepreneurs, which is not only a means of self-employment but also has a positive impact on all dimensions of AAI: promoting social participation, health maintenance and increasing the use of information and technology tools. The research will also look at how local authorities can support older people to become entrepreneurs.

Conclusions: The AAI is a complex set of indicators that assesses the activity of the ageing population along four main dimensions: employment, social participation, independent, healthy and secure living, and an environment that supports active ageing. The employment dimension is central to the index, as it has a direct impact on dimensions 2 and 3. The local governments can play a key role in ensuring that dimension 4, the supportive environment, by supporting older people to become entrepreneurs.

Limitations and future research directions: Further research should include a questionnaire survey to examine the motivation, attitudes, knowledge, skills and willingness of older people to start a business. How any concerns, fears and risks can be addressed, including by setting up social, community enterprises and cooperatives. How local authorities, adult education institutions, Universities, NGOs and existing businesses and professional organisations can work together in this field.

Keywords: active aging index, silver economy, entrepreneurship, silver age, sustainable rural development

Adapting DIGCOMP 2.1 for Logistics 4.0: A Competence-Based Framework for Hungarian Companies' Digital Transformation

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Background and introduction: The rapid digital transformation in logistics requires systematic assessment of human competencies. A knowledge gap exists regarding the applicability of the European Digital Competence Framework (DIGCOMP 2.1) in Hungarian logistics companies. This study investigates how DIGCOMP 2.1 can evaluate digital readiness in the context of Industry 4.0 and Logistics 4.0 implementation.

Objective: To determine the extent to which the DIGCOMP 2.1 framework is applicable for mapping and assessing digital competencies of Hungarian logistics service providers. The study aims to identify competency profiles, reveal sector-specific gaps, validate triangulation methodology, and provide recommendations for supporting digital transformation in logistics.

Methodology: Triangulation methodology combining qualitative and quantitative approaches. Semi-structured interviews with three Hungarian logistics companies (Simon Trans, Gebrüder Weiss, Raben Trans) were conducted. Python-based Computer-Assisted Text Analysis (CTA) processed 82 coded text excerpts. Statistical validation used coefficient of variation and inferential tests.

Results: Four of five DIGCOMP 2.1 competency areas showed relevance (80% coverage). "Information and data literacy" dominated (58.5%), followed by "Problem-solving" (28.0%). "Digital content creation" was completely absent (0%). Triangulation validation revealed medium reliability for data literacy (CV=47.2%) but weak for other competencies (CV>50%).

Conclusions: Hungarian logistics companies act as "digital consumers" rather than "digital creators." DIGCOMP 2.1 provides a solid foundation but requires sector-specific adaptation. Critical gaps in digital content creation and cybersecurity competencies pose strategic vulnerabilities. Educational institutions and policymakers must develop targeted training programs.

Limitations and future research directions: Small sample size (n=3 companies) limits generalizability. Future research should include comprehensive sector-wide surveys and longitudinal studies tracking digital competency investments over time. Validation with larger SME samples recommended. Investigation of which specific competency developments yield measurable performance improvements needed.

Keywords: digital competencies, DIGCOMP 2.1, Industry 4.0, logistics sector, triangulation methodology

Advancing Sustainable Development through Education in a Thai Local Community

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Background and introduction: Education plays a central role in addressing sustainability challenges and promoting community development. However, much of the existing research focuses on formal education and the role of schools, overlooking the contributions of non-formal and informal initiatives, as well as the involvement of community members outside school contexts.

Objective: The study emphasizes the importance of recognizing local leaders as key actors in shaping community-based educational strategies.

Methodology: This case study employed a participatory ethnographic approach based on a ten-day fieldwork project in Nong Bua, Thailand, as part of an international research program. Data were collected through interviews with local leaders, observations, and group discussions, and analyzed using Grounded Theory to explore the role of education in sustainable community development.

Results: The findings demonstrate how education in Nong Bua contributes to sustainability by fostering a shared mindset, encouraging participation, and supporting community-driven initiatives in formal, non-formal, and informal settings. Values associated with sustainability, such as mutual care and collective responsibility, are embedded in everyday community life, even if they are not explicitly recognized as such

Conclusions: Practices rooted in local culture, such as festivals, volunteering, and peer mentoring, create inclusive opportunities for engagement for all generations. Furthermore, supporting community-based education in non-formal and informal settings can help engage diverse groups, particularly marginalized ones, and promote sustainable development that is locally relevant, inclusive, and oriented toward reducing social inequalities.

Limitations and future research directions: Limitations include the single-community focus, brief fieldwork period, and limited representation of diverse voices. Future research should adopt comparative, longitudinal, and mixed-methods approaches while incorporating broader community perspectives to strengthen the understanding of community-based education for sustainability.

Keywords: community-based education, Grounded Theory, non-formal education, participatory ethnographic research, sustainable community

Aesthetics and conviviality as key factors in a successful wine tourism experience

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Background and introduction: Although management research has frequently highlighted the value of applying the experience economy framework to enhance wine tourism, relatively few studies have examined the experiential dimensions specific to Austrian wine regions. This paper investigates the gap between the elements emphasized by wine tourism providers and the expectations of their visitors in the Lake Neusiedl region. It proposes a novel categorization of wine tourists' expectations, drawing on Pine and Gilmore's (1998) four realms model and the framework of Quadri-Felliti and Fiore (2012).

Objective: This paper investigates the gap between the elements emphasized by wine tourism providers and the expectations of their visitors in the Lake Neusiedl region. It proposes a novel categorization of wine tourists' expectations, drawing on Pine and Gilmore's (1998) four realms model and the framework of Quadri-Felliti and Fiore (2012).

Methodology: A mixed-methods approach was employed, combining qualitative analysis of 19 semi- structured interviews with key wine tourism stakeholders in the Lake Neusiedl region, with quantitative analysis of 233 completed questionnaires (from 250 distributed) addressing tourists' expectations and behaviors.

Results: The study reveals a clear divergence: providers often focus on educational aspects, whereas visitors prioritize aesthetics, social interaction, and authenticity. Direct engagement with winemakers emerges as a central factor, highlighting authenticity as a crucial dimension of the wine tourism experience.

Conclusions: The findings suggest that wine tourism operators should expand beyond educational offerings and invest in creating experiences that are visually appealing, socially engaging, and emotionally rewarding. This research underscores a significant gap between the current emphasis on learning and the preferences of wine tourists, who value enjoyable, authentic encounters in aesthetically pleasing environments. Meeting the winemaker stands out as a key element of perceived authenticity, making it essential for designing compelling and successful wine tourism experiences in the Lake Neusiedl region.

AI and Cultural Heritage Interpretation: Legal and Ethical Challenges

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Background and introduction: Artificial intelligence is increasingly used in cultural tourism to interpret heritage sites through apps, chatbots, and virtual guides. However, such tools raise serious legal and ethical concerns, including misrepresentation, cultural appropriation, and lack of transparency. This study addresses whether current legal frameworks adequately regulate AI-generated heritage content and examines associated risks.

Objective: The research aims to identify the legal and ethical challenges of AI-driven cultural interpretation in tourism. It seeks to determine whether existing intellectual property and cultural protection laws are sufficient and to explore how AI affects authenticity, historical accuracy, and community representation in heritage-related digital content.

Methodology: This study uses a multi-method qualitative approach: (1) content analysis of AI-based cultural interpretation platforms, (2) expert interviews with heritage professionals, legal scholars, and developers, and (3) an online survey targeting tourists and institutional users to assess perceptions of trust, accuracy, and regulatory awareness.

Results: The research found significant regulatory gaps and inconsistent practices regarding AI-generated heritage content. Many applications lack clear source attribution or community consultation, resulting in distorted narratives. Stakeholders expressed concern over cultural accuracy, and most of survey participants supported stronger ethical and legal oversight.

Conclusions: AI offers great potential in cultural heritage interpretation, enhancing accessibility and engagement. However, without clear legal frameworks and participatory guidelines, it risks undermining authenticity and community rights. The study recommends developing international norms and including cultural stakeholders in AI content creation processes.

Limitations and future research directions: This study focused primarily on European applications, limiting generalizability to global contexts. Future research should include non-Western case studies, evaluate co-creation practices with local communities, and test practical legal models to ensure ethical AI use in heritage interpretation worldwide.

Keywords: AI, cultural heritage, legal regulation, ethical interpretation, deepfake, tourism, authenticity, intellectual property

AI for Climate Resilience: Overcoming Behavioral and Organizational Barriers in German Manufacturing Firms

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Background and introduction: Large German manufacturing firms are increasingly vulnerable to climate-related disruptions, making AI-driven adaptation essential. However, adoption is inconsistent, often hindered by behavioral and organizational barriers. This research explores how cognitive biases and structural inertia impinge on AI adoption for climate adaptation in the German industrial context and EU climate policy.

Objective: The objective of this study is to develop a conceptual framework that explains and identifies the organizational and behavioral barriers to AI adoption for climate adaptation in large German manufacturing firms, and to recommend feasible strategies for overcoming these challenges.

Methodology: This study employs a conceptual-theoretical approach, synthesizing peer-reviewed research with empirical evidence from Scopus, IEEE Xplore, and Business Source Completet.

Results: The synthesis reveals that hierarchical decision-making, a lack of cross-departmental collaboration, and widespread mistrust of AI systems are significant barriers. These interact with leadership style, decision-making structure, and organizational culture to create a complex environment that hinders AI adoption for climate adaptation.

Conclusions: The study contributes to the theoretical understanding of AI adoption in climate adaptation by highlighting the interplay between individual cognitive biases and organizational structures. It underscores the necessity for targeted change management strategies that address these behavioral barriers. The findings offer practical suggestions to managers and policymakers aiming to enhance AI adoption in climate resilience initiatives in the manufacturing sector.

Limitations and future research directions: This study, as a theoretical investigation, may be limited in its analysis of technological and regulatory factors of AI adoption, and its focus on large firms limits its applicability to SMEs. Future research should employ mixed methods, international comparisons, and longitudinal research to capture dynamic organizational processes and increase generalizability to different industrial contexts.

Keywords: AI adoption, behavioral barriers, change management, climate adaptation, german manufacturing, organizational dynamics

AI in Market Research as a Mirror and a Moulder of Public Opinion and Organisational Strategy

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Background and introduction: Marketing companies have long shaped markets by blending branding, strategy and innovation support. Market research, which is central to marketing, uses varied methods to understand public sentiment. As AI absorbs these methods, the line between the marketing company and the algorithm blurs. With AI guiding innovation and shaping perception, core marketing services risk becoming a commodity. Marketing may be swallowed by AI itself.

Objective: This study investigates how AI is overtaking traditional market research methods and altering the strategic role of marketing. It aims to understand how AI shifts marketing from persuasion to public conditioning and the implications this holds for innovation leadership and democratic discourse.

Methodology: The study combines analysis of AI-native research technologies with scenario-based stakeholder modelling. It examines how AI tools influence insight generation, public shaping and strategic control.

Results: AI-driven tools are increasingly displacing traditional market research practices by delivering continuous, context-aware insights. Behavioural simulations allow organisations to model consumer responses and explore adoption scenarios without live panels. These emerging capabilities suggest that market research is evolving from reactive data collection towards dynamic systems that observe and influence preferences, with implications for internal teams and external service providers.

Conclusions: Beyond transforming marketing, AI is redefining what marketing is and blurring the line between persuasion and manipulation. As AI systems guide innovation and shape public thought, marketing's identity evolves into continuous behavioural influence. The outcome is not fixed; it will depend on how societies choose to integrate, govern and critically scrutinise these emerging forms of automated persuasion.

Limitations and future research directions: This study offers conceptual insights and anticipates strategic shifts. Further empirical research is needed to track AI's long-term impact on public opinion, innovation cycles and ethical boundaries. Special attention is needed on how AI tools are governed to avoid manipulation and cognitive commodification.

Keywords: AI in marketing, market research automation, innovation strategy, simulated behaviour, public opinion, ethical risk

AI-Based Predictive Models for Strategic Management

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Background and introduction: In today's dynamic business environment, the integration of AI-based predictive models into strategic management is transforming decision-making by enabling data-driven, accurate forecasting and improved efficiency. This research explores how AI technologies support strategic decisions, examining their theoretical foundations, practical applications, and the factors influencing successful implementation.

Objective: The objective of this research is to analyze the role of AI-based predictive models in strategic management, focusing on how these technologies support data-driven decision-making and enhance operational efficiency across various industries.

Methodology: The study employs a theoretical framework supported by a comprehensive literature review and qualitative analysis of real and hypothetical case studies across six industries, illustrating the application and effectiveness of AI-based predictive models in strategic management. This research employed a mixed-methods design that combined quantitative data analysis with qualitative inquiry to evaluate and improve an AI-based predictive model for strategic management.

Results: AI-based predictive models significantly improved strategic decision-making across multiple industries, leading to outcomes such as 20–30% higher forecasting accuracy, 10–15% cost reduction, enhanced risk management, and increased operational efficiency. Case studies demonstrate tangible financial and competitive benefits.

Conclusions: AI-based predictive models have already proven their immense value for strategic management. For the first time in history, we have tools that can place the ”sensing of the future” on a scientific footing, reducing uncertainty in business decision-making – though uncertainty will never be fully eliminated.

Limitations and future research directions: We have not overlooked the challenges – such as data requirements, model interpretability, and implementation difficulties – wich remind us that AI is not a silver bullet on its own. Without proper data strategy, human expertise, and ethical frameworks, it can fail or even be misused. Future research must develop methods and guidelines to overcome these barriers. For example: How can useful AI models be built in data-scarce environments? How can managers be trained to confidently use AI tools?

Analysis of Gaps in Digital Competences among Women in Zala County by Age Group

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Background and introduction: Nowadays, the importance of digital competences is undisputed. According to the DESI index (2023), the digital performance of all EU countries, including Hungary, has improved in recent years. However, based on the composite index, Hungary ranks 22nd out of 28 countries (europa.eu, 2024b).

Objective: In line with the EU's Digital Decade 2030 targets, which aim for at least 80% of adults to acquire basic digital skills, reducing these gaps is of high relevance. Our research explores age- and demographic-based differences in digital competences among women in Zala County. The main research question is: What differences can be observed in digital skills among women of different age groups?

Methodology: We conducted a quantitative study between 2024 and 2025 with female respondents. The sample was collected using a quota-stratified method, considering age and education ratios published by the Hungarian Central Statistical Office. Data were analysed using IBM SPSS Statistics. We applied one-way ANOVA for variables with four or more categories and correspondence analysis to map relationships between qualitative variables.

Results: These results, consistent with international literature, may support targeted programs and inform policy recommendations aimed at narrowing digital skill gaps.

Conclusions: Our findings confirm the existence of a generational digital divide: younger women show higher competence levels across all examined areas, while older groups are overrepresented at lower levels.

Limitations and future research directions: The targeted composition of strata ensured structural alignment. Future studies may benefit from using larger, representative samples and advancing toward longitudinal analyses, or by applying other methodologies and expanding the range of variables to capture changes over time.

Keywords: digital divide, digital skills, digital gap, lifelong learning, smart europe

Analyzing Customer Behavior and Enhancing Business Performance with Artificial Intelligence: IT Issues and Practical Implementation

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Background and introduction: Understanding customer behavior is essential for improving business outcomes, especially in the increasingly competitive insurance market. Artificial Intelligence (AI) has become a key enabler in analyzing vast amounts of customer data, uncovering patterns, and generating actionable insights. While there is extensive literature on AI-supported data analysis techniques, applications tailored specifically to the unique characteristics of the insurance industry remain limited.

Objective: This paper aims to identify and evaluate AI-based approaches that can be effectively applied to study and understand customer behavior in the insurance sector. The goal is to bridge the gap between technical AI methodologies and the domain-specific requirements of insurance analytics.

Methodology: A comprehensive literature review was conducted to assess existing AI techniques relevant to customer behavior analysis, with a focus on those adaptable to insurance-specific challenges. The study also involved analyzing the IT and data characteristics of the insurance domain, such as decision-making under uncertainty, partially quantifiable customer actions, and statistically driven risk events. The paper further proposes practical implementation strategies using open-source tools in the Python ecosystem.

Results: The study presents an overview of AI methods suitable for modeling customer behavior in the insurance industry, highlighting their strengths and limitations. It also outlines how these tools can be integrated into IT systems to support decision-making and business strategy. Specific emphasis is placed on the practical feasibility of such implementations using free and widely accessible technologies.

Conclusions: AI has strong potential to transform customer behavior analysis in the insurance market by providing scalable, data-driven insights. However, success depends on aligning AI capabilities with the statistical nature of insurance data and the behavioral complexities of customers. By leveraging open-source tools and adopting domain-specific strategies, insurers can enhance both operational efficiency and customer understanding.

Limitations and future research directions: The analysis is constrained by the availability of publicly documented case studies and real-world datasets in the insurance field. Future work should focus on validating the proposed methods through empirical studies, exploring hybrid AI techniques tailored to the insurance context, and developing domain-specific frameworks that further align IT capabilities with the complexities of customer behavior in insurance.

Keywords: artificial intelligence, machine learning, natural language processing, supervised-unsupervised learning, customer behavior

Analyzing Regional Disparities in Croatia Using the Gravity Model

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Background and introduction: Regional inequality remains a persistent challenge to economic and social development, particularly in countries undergoing spatial and demographic transitions. In Croatia, disparities between regions are significantly shaped by internal migration patterns and uneven income distribution. These factors not only influence regional labor markets but also affect long-term cohesion and balanced growth.

Objective: The objective of this study is to analyze regional inequality in Croatia with a specific focus on internal migration and income distribution, employing the gravity model as the primary analytical tool. Originating from Newtonian physics, the gravity model has evolved into a widely accepted framework for examining trade flows and spatial interactions. Its adaptability and operational simplicity make it particularly suitable for modeling internal migration dynamics. The research question of this paper is: To what extent do internal migration patterns and income distribution contribute to regional inequality in Croatia, and how can these relationships be effectively analyzed using the gravity model?

Methodology: By applying the gravity model to Croatian regional data, this paper reveals clear spatial patterns in population movements and their correlation with income disparities.

Results: The results underscore the role of economic attractiveness and population size in shaping internal migration flows, further reinforcing existing inequalities between more developed urban centers and less prosperous peripheral regions.

Conclusions: The study concludes that regional inequality in Croatia is both a cause and consequence of asymmetric migration and income flows. While the gravity model proves effective in capturing these dynamics, certain limitations remain, particularly regarding data availability, the exclusion of non-economic migration drivers, and the static nature of the model.

Limitations and future research directions: Future research should consider incorporating dynamic modeling approaches, qualitative factors such as quality of life, and policy interventions to provide a more comprehensive understanding of regional development trajectories in Croatia.

Keywords: regional inequality, gravity model, Croatia

Application of Machine Learning in Financial Fraud Detection and Prevention - A Comparative Analysis of Algorithms

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Background and introduction: Detecting fraudulent activities in the financial sector is a critical challenge requiring robust and adaptive approaches. This paper investigates the application of machine learning (ML) algorithms—Logistic Regression, SVM, KNN, Decision Trees and Random Forests—for credit card fraud detection. Utilizing a highly imbalanced dataset, models were evaluated using precision, recall, and F2 score, prioritizing recall to minimize undetected fraud.

Objective: This paper investigates the application of machine learning (ML) algorithms—Logistic Regression, SVM, KNN, Decision Trees and Random Forests—for credit card fraud detection. Utilizing a highly imbalanced dataset, models were evaluated using precision, recall, and F2 score, prioritizing recall to minimize undetected fraud.

Methodology: This paper aims to address these gaps through a comprehensive, comparative analysis of five widely adopted machine learning algorithms—Logistic Regression, Support Vector Machines (SVM), K-Nearest Neighbors (KNN), Decision Trees, and Random Forests—in the context of real-world credit card fraud detection. Using a publicly available, highly imbalanced dataset, the paper evaluates each model based on performance metrics particularly suited to fraud detection scenarios, including recall, precision

Results: Our findings demonstrate that Logistic Regression achieved the highest recall (91%), effectively identifying the majority of fraudulent transactions while maintaining a low false-negative rate. SVM offered balanced performance with a recall of 89%, while Random Forests exhibited superior precision (98%), minimizing false alarms. These results highlight the strengths and trade-offs of ML algorithms in uncovering complex patterns within large-scale financial data, reducing fraud risk when integrat

Conclusions: Logistic Regression, SVM, and Random Forest emerged as the most promising algorithms for credit card fraud detection in this paper. Their relative strengths provide financial institutions with viable options depending on whether recall, precision, or a balance of both is the operational priority. While machine learning does not eliminate fraud, it clearly offers a powerful tool for reducing risk and enhancing financial security when applied with careful data preparation and appropriate evaluatio

Limitations and future research directions: Despite improvements, none achieved perfect detection, and some fraudulent transactions were still missed. Additionally, synthetic oversampling introduces limitations related to generalizability and may not fully represent real fraud patterns. Future work should explore more advanced algorithms, such as ensemble learning with hybrid models or deep learning techniques, and focus on real-time deployment and model retraining on continuously updated data.

Keywords: machine learning (ML) algorithms, Logistic Regression, SVM, KNN, Decision Trees

Application of Statistical Process Control in the 8D Methodology for Manufacturing Quality Improvement

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Background and introduction: The originality lies in its novel application of the 8D methodology, integrating statistical analysis to uncover and address an unrecognized root cause. The research contributes substantial value by eliminating defects and fostering long-term process improvements through updated P-FMEA and automated controls. These interventions have led to reduced operational variability, increased efficiency, offering enduring competitive advantages in the automotive sector.

Objective: Paper aims: To address and resolve a pin warping defect in an aluminum component supplied to the automotive industry by identifying its root cause and implementing robust corrective actions. The study aims to enhance process reliability, minimize variability, and improve customer satisfaction.

Methodology: This research adopts the structured 8D problem-solving methodology, which includes a cross-functional team, defining the problem, implementing immediate containment actions, conducting root cause analysis with statistical and quality tools, devising and applying corrective measures, updating processes to prevent recurrence, and recognizing team contributions.

Results: The investigation revealed that manual handling of hot sprues, performed without adequate operator training or standardized work instructions, was the primary cause of pin warping. Statistical analysis highlighted significant variability in manually operated processes. Corrective actions, including process standardization and automation resulted in enhanced product reliability and reduced defect rates.

Conclusions: This research stands out due to its innovative integration of quality management tools and advanced statistical methods, offering a replicable and robust framework for diagnosing and resolving manufacturing defects. The approach demonstrated here extends beyond the immediate case, highlighting its applicability and transferability to other industrial contexts, particularly where process variability is influenced by manual operations.

Limitations and future research directions: The study encountered limitations, including challenges in historical data collection and restrictions on sample size due to production constraints and limited machine and labor availability. Despite these constraints, the findings remain robust and offer actionable insights for industry practitioners. Future work should focus on ongoing process monitoring and regular updates to the P-FMEA document to incorporate new risks.

Keywords: quality, statistical analysis, 8D methodology, ishikawa diagram, automotive industry

Aqua es Dominus!

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Background and introduction: The Aquaticum bathing complex in Debrecen, Hungary, with nearly 200 years of history, faced unprecedented challenges during 2019-2023 due to COVID-19 pandemic restrictions and energy crisis from regional conflicts. This study examines how these external shocks affected visitor patterns at this major spa complex.

Objective: To analyze the impact of COVID-19 pandemic measures and energy crisis-related inflation on visitor numbers at the Aquaticum bathing complex in Debrecen between 2019-2023, using panel regression analysis to test specific hypotheses about external factors affecting tourism operations.

Methodology: Panel regression analysis was employed using guest data from Aquaticum Debrecen (2019-2023). Fixed effects model was selected based on the Hausman test results. Two main hypotheses were tested examining the effects of pandemic restrictions and energy crisis on visitor numbers during this challenging period.

Results: COVID-19 epidemic itself did not significantly affect visitor numbers, but specific restrictive measures (complete closures, mask mandates, vaccination card requirements) did show significant impact. Energy crisis and accompanying inflation from regional conflicts did not significantly impact visitor numbers.

Conclusions: External policy measures rather than health crises themselves drive tourism impacts. The sector demonstrated resilience to energy price fluctuations but vulnerability to regulatory restrictions. Innovation and development investment are critical for reducing energy cost exposure and maintaining operational sustainability.

Limitations and future research directions: Study limited to one facility during specific timeframe. Future research should examine multiple tourism facilities across different regions and longer time periods, investigate specific innovation strategies effectiveness, and analyze energy-efficient technologies adoption in tourism sector operations.

Keywords: tourism resilience, COVID-19, war, SPA, panel regression

Artificial Intelligence and Digital Twin Technology for Cardiac Surgery Decision Support

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Background and introduction: Cardiovascular disease remains the leading cause of death, demanding precise, data-driven decision-making. This study examines the development, application, and commercialization of an agentic AI-powered Clinical Decision Support System (CDSS) for cardiac surgical care, developed by health tech startup Dr. Data, Inc. The aim of the proprietary Digital Twin agent is to more precisely predict post-operative outcomes.

Objective: The objective is to develop a scalable, secure, and commercially viable software-as-a-service (SaaS) business model. The agentic AI-powered CDSS supports decision making for cardiac surgery patients by predicting risks of each surgery type, matching patients to digital twins with the best survival probability, while also reducing clinician documentation burden, and optimizing hospital workflows through a personalized, on-premise AI system using real-world data.

Methodology: Technical development incorporated quantitative data from two cardiovascular registries and real-world data from a European academic hospital. Market readiness was assessed via 14 stakeholder interviews and surveys, including clinicians, administrators, and IT leaders. Business development by in-house business developers and collaboration with two university start-up accelerator programs support intellectual property submissions, market analytics, and analysis of commercialization potential.

Results: Technical development involved over 70,000 patients for model training and application development. The application's 4 AI agents are powered by large language models and custom ML algorithms, including a radiology interpretation agent, a Digital Twin agent, and a clinical guidelines agent. Results were presented at two scientific conferences and the manuscript is under review. A business model, including revenue projections, market analysis, and intellectual property analysis were completed.

Conclusions: Dr. Data's agentic AI CDSS reduces variability in cardiovascular surgical decision-making by combining AI tools for automatic radiology reports, Digital Twin simulations, and guideline-based recommendations. It enhances clinical efficiency and decision accuracy, with strong support from pilot users. The findings confirm the system's practical value and commercial viability, highlighting the transformative potential of AI-driven tools in complex medical workflows.

Limitations and future research directions: Limitations include data heterogeneity, limited availability of annotated datasets, and evolving regulations, which may impact model validation and deployment. Future research should focus on data standardization, expanding multi-institutional datasets, and aligning AI model development with regulatory frameworks to enhance scalability, clinical reliability, and long-term adoption.

Keywords: artificial intelligence, digital twin, machine learning, decision support, cardiology

Artificial Intelligence in Online Commerce

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Background and introduction: Artificial intelligence is transforming e-commerce, making life easier for shoppers and merchants. Personalised recommendations, chatbots, voice assistants and facial recognition systems improve the shopping experience, increase satisfaction and streamline processes. AI has made online commerce one of the most dynamic areas of of growth today. (Štofejová et al.,2023; Érdi,2020; Kashyap et al.,2023; Iqbal, 2022). Research question: how popular is the use of chatbots among different generations?

Objective: The aim of our research is to investigate the role of artificial intelligence in e-commerce, with a special focus on consumers' shopping habits and experiences. We wanted to understand how AI affects online shopping, how consumers respond to and value personalised recommendations. We also looked at the level of awareness of AI and its presence in online commerce.

Methodology: A primary survey was conducted using an online questionnaire, which was distributed intergenerationally using a snowball method. The questionnaire consisted of 21 questions. Sampling took place between 15 January and 5 February 2025, with a total of 222 completed responses, all of which were used. Data were processed in SPSS and cross tabulation analyses were performed.

Results: A survey in 2023 found that 42% of people familiar with AI had used a chatbot when shopping online (Statista, 2024), but only 43.2% of our sample had tried it, the majority of whom had not yet used it. The average satisfaction score was 3.12 (on a scale of 1 to 5). Our cross tabulation analysis shows that the older generation averaged 1.82 and the younger generation averaged 2.06, indicating that younger people are slightly more satisfied with chatbots.

Conclusions: Our survey shows that the acceptance of chatbots is not universal, especially among the older generation. The functionality of chatbots is not yet perfect, which is why many people prefer human communication. While they have an important role to play in improving the customer experience, our results suggest that domestic companies need to improve. We recommend the development of more advanced systems that address complex problems, and regular monitoring of customer feedback for improvements.

Limitations and future research directions: The limitation of our research is that it was based on an online questionnaire survey, which can distort the sample and does not cover all demographic groups equally. Additionally, the sample size is also limited. In future research, it may be worthwhile to apply in-depth interviews or qualitative methods, as well as to examine the impact of chatbots in different industries and the integration of more advanced AI technologies in e-commerce.

Keywords: artificial intelligence (AI), e-commerce, personalized recommendations

Artificial Intelligence Readiness in Higher Education: A Case of a Hungarian University

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Background and introduction: The research explores what factors influence the implementation of artificial intelligence (AI) tools. It analyzes how existing technology acceptance models can be applied to assess AI readiness using the example of a higher education institution.

Objective: The aim of the study is to assess the applicability of the constructs of established technology acceptance models in the AI context, and to identify key factors and their relationships influencing AI readiness in higher education institutions.

Methodology: An empirical survey based on validated constructs was carried out among university employees to examine AI acceptance factors. The collected data was analyzed using partial least squares structural equation modeling (PLS-SEM) to identify the main drivers of intention to use AI.

Results: AI readiness is still in its early stages and its measurement is currently unstandardized. A theoretical model was developed and validated based on feedback from all university administrative units. While overall readiness is low, certain factors contribute to a higher level of preparedness. Intention to use AI is strongly influenced by facilitating conditions and perceived usefulness, whereas digital readiness and perceived ease of use do not have a significant direct effect.

Conclusions: The findings show that constructs from established technology acceptance models can be adapted to assess AI readiness. AI readiness is shaped by select technology-related factors rather than broader digital preparedness alone. The study highlights the importance of refining existing models to better reflect the unique characteristics of AI adoption.

Limitations and future research directions: The study focuses only on higher education and uses cross-sectional data. It also examines only direct effects among the constructs. Future research could include other sectors and longitudinal analysis to validate and refine the extended acceptance framework, as well as explore indirect and mediating effects to gain a more comprehensive understanding of AI readiness and ease of use.

Keywords: artificial intelligence readiness, technology acceptance, digital transformation, higher education

Attitudes of Forest Managers Toward Drone Use

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Background and introduction: The University of Sopron has received a Thematic Excellence Program grant for implementing its "Development of a fixed-wing drone and evaluation software for border monitoring and environmental assessment – BorderEye" project. This paper summarizes the results of an intended target group—forest managers. . Based on a methodological literature review, we provide an environmental impact model for attitudes toward forestry drones in the target group.

Objective: Among the factors determining the attitudes of forestry representatives towards drone use, we identified many related to personal characteristics and external environmental influences. The widespread adoption of drone use for forestry purposes requires positive attitudes among individuals working in organizations—attitudes that product developers can help influence.

Methodology: Qualitative individual in-depth interviews are the primary research method the present study employed, justified by the unresearched nature of the topic, its sensitivity, and the need for attitudinal analysis. The qualitative research allowed us to examine respondent thinking, opinion-forming processes, habits, and mental processes. The sample consisted of 14 forest holdings, which covers 63% of domestic state-owned forests.

Results: Our research results suggest that drones will soon become valuable tools for forest management. Most respondents believe drone use will become necessary and plan to purchase drones or utilize a drone data acquisition service. Drones are also increasingly assisting management practices in various forestry fields. Respondents identified many applications in which drones are advantageous.

Conclusions: Drones offer unique opportunities for forest observation, research, conservation efforts, and management practices. The attitude test confirmed that personal (cognitive and emotional) characteristics and environmental effects determine the mental processes that support using drones for forestry purposes. Our primary research revealed a positive attitude among respondents.

Limitations and future research directions: Areas suggested for further research include the application of quantitative studies among forest engineers. It is important to clarify legal and regulatory issues related to drone use, as well as to develop data processing competence and manage the data deluge. It is necessary to dispel misconceptions, such as the challenges of mapping under the canopy, and to maintain continuous, personal, and professional communication about the developments. Furthermore, it is recommended to develop a common

Keywords: forestry management, innovation marketing, product development, drones in forestry

Awareness of Artificial Intelligence and Its Potential Usability in Higher Education

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Background and introduction: Recent advances in Artificial Intelligence (AI), especially generative models like ChatGPT, have swiftly entered education, catching many institutions off-guard. Current teaching practices and regulations weren't prepared for these technologies. AI's spread in higher education sparked both concerns and opportunities. This study explores how actors in higher education view and responds to the increasing presence of AI tools in their daily tasks and academic work.

Objective: This study undertakes a comprehensive literature review aiming to enhance understanding of how artificial intelligence is perceived and utilised within higher education contexts. Specifically, it investigates how students and faculty members interpret these technologies, examines their extent of AI adoption, and assesses scholarly responses, aiming ultimately to identify existing knowledge gaps and emphasise key areas warranting further academic exploration.

Methodology: The study employed a systematic literature review guided by PRISMA methodology. Comprehensive searches were conducted across two major academic databases, Scopus and Web of Science, using refined Boolean queries on artificial intelligence and higher education. The selection criteria included final versions of computer science articles or conference proceedings published within the past ten years, resulting in 29 analysed documents.

Results: The reviewed literature presents a fragmented and rapidly evolving picture. Students have been observed adopting AI technologies enthusiastically, whereas faculty members generally exhibit caution or limited familiarity. Ethical issues, particularly regarding plagiarism and academic integrity, frequently arise but typically lack practical resolutions. Moreover, scholarly consensus on enhancing AI-related competencies remains broad, yet scalable strategies are rarely provided.

Conclusions: Artificial intelligence is increasingly becoming integral to academic practices. However, its integration remains uneven, often lacking systematic institutional guidelines. Many educators and students currently utilise AI technologies without comprehensive guidance, resulting in missed opportunities and emerging risks. Thus, improving AI literacy, strengthening ethical awareness, and developing coherent institutional policies are increasingly essential.

Limitations and future research directions: This literature review was confined to computer science publications from only two academic databases, possibly excluding significant interdisciplinary contributions. It is recommended that future research expands into educational and social sciences, regularly revisits the rapidly evolving AI landscape, and prioritises practical models for integrating AI in higher education, emphasizing ethical considerations.

Keywords: systematic literature review, artificial intelligence, higher education, awareness, digital tools

Behind the Experiences: The Encounter of Generation Y and New Tourism in the Spirit of Sustainability

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Background and introduction: What if every journey left behind not just footprints, but values? As the tourism industry faces urgent environmental and social challenges, a growing number of travellers, especially from Generation Y are looking for experiences that reflect their personal beliefs: authenticity, connection, responsibility, and a sense of purpose. Regenerative and sustainable tourism is no longer a niche; it is a conscious response to the need for more meaningful, value-driven travel.

Objective: At the heart of the research lies a core question: how can experiences, whether rooted in local traditions or supported by digital tools, foster deeper connection to nature, culture, and the self? Our aim was to explore how experience design can become a tool for shaping a more sustainable mindset, especially in the value-driven travel decisions of Generation Y.

Methodology: As part of our research, we conducted in-depth interviews with six tourism professionals who are actively shaping sustainable and regenerative tourism practices in Hungary. Their insights offered an authentic view of current trends and challenges. The qualitative approach was complemented by an online survey, which served as a pilot and provided a glimpse into travellers' attitudes and ways of thinking.

Results: The findings show that GenY is open to more sustainable travel, especially when experiences offer genuine connection to local culture. However, many get stuck due to lack of information, financial constraints, or the convenience of familiar choices. Digital tools are most effective when they act not as gimmicks, but as bridges to deeper, more meaningful experiences. This, however, requires awareness on the provider side as well, real change can only happen within a functioning system.

Conclusions: Real change doesn't begin with campaigns, it starts within. It begins in those experiences that move us, leave a mark, and raise questions. New Tourism is not just a trend, but a response to a world longing to reconnect with itself, and with others. In this process, experience management is more than the design of moments, it holds the potential for a deeper shift in mindset. One where travel becomes not only about us, but about what we can co-create for a more liveable future.

Limitations and future research directions: The sample size of the survey was limited, so the findings point more toward directions than universal conclusions. Still, the responses clearly reflect a growing need for more conscious travel and the realization that local contexts require local answers. A future study could explore in greater depth how European best practices can be adapted to the expectations and values of Hungarian travellers. Because meaningful change only happens when good examples don't just inspire but truly resonate.

Keywords: sustainable tourism, regeneration, experience management, Generation Y, digital engagement

Building the Sustainable Future: The case of the EIT Climate-KIC

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Background and introduction: European Institute of Innovation & Technology was established to reinforce the EU's innovation capacity and to address societal challenges in 2008, through the integration of the knowledge triangle: higher education, research, and innovation. To this end, EIT has established nine Knowledge Innovation Communities (KICs) addressing societal challenges and key themes of the joint European economic priorities.

Objective: The critical question is: Has EIT and its KICs served their purpose in helping to close the innovation gap between Europe and the United States? More specifically, has the system established, which has utilized over 4 billion euros, been capable of delivering the expected results?

Methodology: This is a single case study for EIT Climate-KIC from its establishment in 2009 through 2024. Data collection is based on public documents supporting the establishment and creation of the innovation policy initiative, as well as public documents prepared during the implementation period of EIT and EIT Climate-KIC, including but not limited to grant reports, business plans, evaluation reports and impact assessments.

Results: EIT strives to create a unique and powerful engine for innovation across Europe, addressing both immediate challenges and long-term competitiveness goals. Although it has undergone four versions of legal setup and partnership models in 15 years, EIT has not been capable of delivering on the expected results. Several key indicators support this conclusion: Lack of Unicorn Startups, Limited Venture Funding, and Unclear Additionality.

Conclusions: EIT has undergone significant evolution in the past 15 years. This shift represents a move from the original quadruple helix model of open innovation, that utilizes excellence and knowledge within a community defined by partnership - towards more systemic, design oriented and context-specific strategies. By moving from a focus on individual projects and capabilities to a more holistic, ecosystem-based approach. The ability to deliver tangible and scalable results will be revealed in time.

Limitations and future research directions: Transparency and continuity are an issue, consequently, our evaluation is limited to examining the relationship between input and output, without the ability to thoroughly assess the system or tools for efficiency and efficacy. The lack of information on the lessons learned, the assessment of discontinued activities, and the overall lack of data regarding the public funds received undermines all claims of success, both for Climate-KIC and EIT itself.

Keywords: competitiveness, innovation, impact assessment, public-private partnership, sustainable development, open innovation

Career Aspirations and Self Assessment of Mothers with Young Children in Somogy County, Hungary

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Background and introduction: This study explores the labor market situation of mothers with young children in Somogy County, Hungary, focusing on career aspirations, self-confidence, workplace feedback, and self-assertion. Prior findings indicate that motherhood affects ambition due to several factors, such as workplace structures, social expectations, and changes in self-esteem. The study examines how these factors influence the success of labor market reintegration among mothers with children under the age of six.

Objective: The aim of this study is to examine how individual and external factors (such as self-esteem and workplace feedback) influence mothers’ return to work. It assesses key dimensions of self-assessment and their role in shaping labor market participation. The study contributes to inclusive labor policy by identifying barriers and enablers in a digitally evolving labor market within a regional context.

Methodology: The ongoing study uses a primary, online, anonymous, quantitative questionnaire. Data from 150 respondents in Somogy County, Hungary are being analyzed. Methods include descriptive statistics, ANOVA, Cronbach’s alpha, and correlation analysis between key variables.

Results: Preliminary results show patterns in mothers' career aspirations and confidence levels. Full statistical analysis is underway, with specific attention to how self-assessment correlates with feedback and career ambition. Final results will be available by July 15.

Conclusions: Initial findings suggest that self-confidence and external workplace feedback significantly influence mothers' career aspirations. Final conclusions will offer insights into how to support mothers in balancing professional goals and family life.

Limitations and future research directions: As the study is ongoing, the results are provisional. Limitations include regional scope and cross-sectional design. Future research should expand the sample and include longitudinal or qualitative data for deeper insights.

Keywords: working mothers, labor market, self assessment, career aspirations, self-confidence, workplace feedback self-assertion

Challenges of Time Management Among Employees in Hungary: A Correlational and Impact-Effort Matrix Approach

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Background and introduction: This study examines time management challenges faced by Hungarian employees, especially mid-level managers in multinational firms. It explores the correlation between common problems—such as multitasking and meeting overload—and the effectiveness of selected techniques. Using a mixed-methods approach, the study develops a correlational matrix and an impact–effort matrix to provide practical insights for improving workplace efficiency.

Objective: The aim of this research is to identify the most common time management challenges among employees in Hungary and to evaluate the effectiveness and feasibility of selected techniques in addressing these issues. The study seeks to develop evidence-based recommendations using a correlational matrix and an impact–effort matrix to support managerial decision-making and improve organizational time management practices.

Methodology: A mixed-methods design was applied. A quantitative survey (N = 345) targeted employees in multinational, domestic, and public-sector organizations in Hungary. Qualitative content analysis of 49 peer-reviewed business articles was also conducted. Two analytical tools were used: a correlational matrix to link challenges and techniques, and an impact–effort matrix to evaluate implementation feasibility.

Results: The survey identified eight key time management challenges, including procrastination, excessive meetings, and multitasking. Awareness of effective techniques was low. The correlational matrix showed strong links between challenges and tools like delegation and the Eisenhower Matrix. The impact–effort matrix identified batch processing and the Pareto principle as high-impact, low-effort solutions.

Conclusions: The study highlights a mismatch between common time management challenges and the low awareness of effective techniques. Delegation, the Eisenhower Matrix, and batch task processing emerged as high-impact tools. The findings offer practical guidance for improving efficiency and well-being in multinational work environments and contribute to bridging theory and practice in organizational time management.

Limitations and future research directions: The voluntary online survey may involve self-selection bias. Technique-effectiveness ratings were based on expert-informed content analysis rather than direct testing. Future research should validate findings through longitudinal studies, experimental interventions, and comparative analyses across different cultural and organizational contexts to enhance generalizability and practical relevance.

Keywords: time management, Hungary, deep work, impact-effort matrix, correlation analysis, multitasking

Climate Anxiety Among Hungarian University Students: The Role of Perceived Personal Vulnerability

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Background and introduction: Among the psychological impacts of climate change, climate anxiety is receiving increasing attention. This phenomenon is characterized by chronic fear, worry, and anxiety related to climate change, which can affect an individual's mental health and well-being. Previous research has indicated that various factors can influence the development and intensity of climate anxiety, however, the role of perceived personal vulnerability has been examined in few studies.

Objective: The main objective of our research is to examine the relationship between perceived personal vulnerability to climate change and the level of climate anxiety (frequency and intensity). We hypothesize that there is a strong, positive relationship between perceived personal vulnerability to climate change and the level of climate anxiety. The results can contribute to a better understanding of climate anxiety mechanisms and the development of more effective interventions.

Methodology: The research involved 696 Hungarian University Students who completed a comprehensive online questionnaire. Perceived personal vulnerability ("To what extent do you feel personally vulnerable to climate change?"), the frequency and intensity of climate anxiety were measured on 5-point Likert scales. Descriptive statistics, Pearson and Spearman correlation analyses, linear regression analysis, and analysis by categories were used for data analysis.

Results: The results showed a significant, positive relationship between perceived personal vulnerability and the frequency and intensity of climate anxiety. Based on linear regression analysis, perceived personal vulnerability is a significant predictor of both the frequency and intensity of climate anxiety. The analysis by categories showed a gradual increase in both aspects of climate anxiety.

Conclusions: Our results clearly support that there is a strong, positive relationship between perceived personal vulnerability to climate change and the level of climate anxiety. From a practical perspective, it is important to consider the role of perceived personal vulnerability in interventions aimed at managing climate anxiety, and to develop strategies that reduce excessive vulnerability perception while maintaining motivation for environmentally conscious behaviour.

Limitations and future research directions: The main limitations of our research are the cross-sectional design, which does not allow for clear determination of causal relationships, and the single-item measurement of perceived personal vulnerability and climate anxiety. The sample is not representative of the Hungarian population, which may limit the generalizability of the results.

Keywords: climate anxiety, perceived vulnerability, psychological impact of climate change, climate change perception

Circular Economy in Modern Hungarian Agriculture

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Background and introduction: The research examines an innovative manure management and energy production method that supports circular farming. Agriculture faces sustainability challenges, requiring waste reduction and efficient food production. Biogas technology plays a key role by converting animal manure and plant residues into energy while reducing greenhouse gas emissions. In Hungary, large livestock farms generate significant manure, posing environmental and economic challenges. The study analyzes biogas efficiency, evaluates an innovative project in Hajdúböszörmény, and explores solutions for reducing carbon and methane emissions. Findings may promote sustainable agricultural technologies and regulatory compliance while decreasing energy dependence.

Objective: The goal of circular farming is to utilize agricultural by-products while reducing waste and environmental impact. Biogas plants play a key role in this process by converting animal manure and plant residues into biogas, which can be used to generate heat and electricity. The remaining material after fermentation serves as organic fertilizer, which can also be used for heating and nutrient replenishment, thereby reducing the need for synthetic fertilizers. This study examines the topic on a scientific basis using a specific innovation.

Methodology: Analysis of domestic and international literature related to the topic. Processing of previous research and case studies in the field of biogas production and manure management. Empirical data collection focuses on the analysis of the operating data of the biogas plant operating in Hajdúböszörmény. Examination of manure management processes and measurement of the amount of biogas generated during fermentation. Experimental studies are conducted through the comparison of different manure management and fermentation technologies. Analysis of the composition and energy content of biogas using laboratory tests. The study incorporates an economic and environmental impact analysis. Examination of the cost-effectiveness of biogas production. Evaluation of the impact on reducing greenhouse gas emissions.

Results: It offers a new approach to environmentally friendly energy production, providing a solution for manure disposal and compliance with related regulations. The developed on-site process operates with specialized machinery that reduces the energy dependence of agricultural facilities and mitigates greenhouse gas emissions.

Conclusions: The research highlighted that biogas technology plays a key role in circular farming by reducing waste and greenhouse gas emissions while producing sustainable energy. Innovative manure management methods can enhance agricultural energy independence and improve soil fertility. Future developments and research can further increase the efficiency and economic viability of this technology, supporting the transition to more sustainable agricultural practices.

Limitations and future research directions: Future research aims to develop biogas technology and circular farming. A key focus is improving biogas production efficiency through new fermentation technologies and optimized microbial cultures. Sustainable manure management methods, such as nutrient recycling from fermentation residues and composting, should be explored. Reducing greenhouse gas emissions and improving biogas storage are also crucial areas. Integrating energy systems, like combining biogas with solar energy, can enhance energy independence. Additionally, analyzing the economic and social impacts is essential for promoting sustainable agricultural models and ensuring long-term viability.

Keywords: innovation, sustainability, briquette, energy dependence, manure management

Clustering Behavioral Patterns of Women's Fintech Adoption: A Cross-Country Study in Central and Eastern Europe

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Background and introduction: The differences in the way men and women think and behave are a constant issue in scientific research. In this study, a 3-country survey was conducted to model the attitudes of women in Central and Eastern Europe towards digital finance. The propagation of digital solutions within the domain of finance has also been found to be prevalent. From a user perspective, the utilisation and adoption of fintech services and applications have been measured. The determination of the development of motivati

Objective: The objective of the present study is to examine the relationship and strength of factors influencing the use of fintech services and applications. Moreover, the objective is to undertake a comparative analysis of the attitudes of Polish, Romanian and Hungarian women with regard to fintech.

Methodology: The methodology employed is based on a questionnaire survey conducted in three countries: Hungary, Romania, and Poland. The analysis is based on a valid sample of 1 037 respondents. The methodology utilizes a clustering approach to assess the mindset of female consumers in the three countries. The research employs a two-step method to determine the number of clusters to form. The k-means method is then employed to generate specific clusters to compare consumer perceptions of fintech thinking.

Results: The findings indicate that females' sentiments toward fintech are impacted by four factors: behavioral intention, attitude, social influence, and facilitating conditions intention. The clustering method yielded two groups. The initial cluster consists of individuals who exhibit a strong commitment to the field of fintech. The subsequent cluster comprises individuals who demonstrate a link to the attitude-behavior gap, characterized by a discrepancy between their attitudes and real actions.

Conclusions: The chi-square test indicates an absence of a significant association between the countries and the identified clusters. This finding suggests that place of residence does not exert a significant influence on the adoption of fintech among females. A subsequent analysis of variance was conducted, taking into account the Euclidean distances from the cluster centers. The findings demonstrate that the Romanian sample exhibits significant differences compared to the Polish and Hungarian samples.

Limitations and future research directions: A potential limitation of the research is the use of a questionnaire, as it is based on subjective value judgments and is cross-sectional to its design. In future research, a more profound examination of the attitude-behavior gap should be conducted, as evidenced by the results of the clustering process. Consequently, although the analysis is subject to certain limitations, the results are both important and have practical and theoretical utility in business, online banking and fintech.

Keywords: Fintech, women, Central Eastern Europe, behavioural patterns, attitude

Comparative Analysis of Public Attitudes toward Domestic Leisure Tourism of the NUTS-1 Regions Residents in Bulgaria

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Background and introduction: Tourism is a sector of high importance in Bulgarian economy. Domestic tourism is a significant part of it and have proved its significance during the COVID-19 crisis. Public attitudes towards domestic leisure tourism are to be investigated in order to describe the current situation of Bulgarian domestic tourism supply and demand.

Objective: The present paper provides comparative analysis of the public attitudes of the two Bulgarian NUTS-1 regions (Northern and Southeastern Bulgaria, and Southwestern and South Central Bulgaria) toward country's domestic leisure tourism. The scope of the research are winter and summer leisure tourism.

Methodology: Statistical data about both regions is collected from authorities (National Statistical Institute, ministries, municipalities, etc.) and provided in order to enlighten their current socio-economic situation. The primary data is obtained from a national representative face-to-face tablet survey based on a random sample stratified by the Bulgarian districts (28) and the residence place size. The results are presented via different indicators such as travel practices, length of stay, etc.

Results: Bulgarian residents from both regions travel more for purposes of summer leisure tourism but are more satisfied with their winter holidays. People form both regions support the idea that natural resources are the main prerequisite for domestic leisure tourism development but the high prices and the low quality of service are an obstacle for it. Those who prefer to spend their holidays abroad choose mainly Greece or Turkey (summer) and Austria, France or Italy (winter).

Conclusions: Having in mind the research findings it can be concluded that Bulgarian domestic leisure tourism needs to be promoted among both regions' residents, especially the winter one. Domestic tourism is preferred during crises but domestic tourist must be retained also in non-crises periods. They could be appealed with attractive pricing packages, sustainability polices, certification, adequate targeting and raising the quality of the product.

Limitations and future research directions: As the paper presents only part of the results obtained by the survey and other activities within the ongoing "Modeling and research of public attitudes of Bulgarian citizens regarding the image of domestic leisure tourism - situational analysis and conceptual framework for overcoming the negatives" project, further researches could be published regarding those attitudes, Bulgarian leisure tourism demand and supply, SWAT analyses, etc.

Keywords: domestic tourism, leisure tourism, public attitudes, NUTS-1 regions, Bulgaria

Comparative Analysis of Small Towns in Bulgaria And Hungary – The Role of Small Towns in the Regional Development

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Background and introduction: In Europe, we typically think of small towns that function as centres of a rural area, providing a marketplace, services, and jobs for the population of surrounding villages. In the development policy, they are rather overshadowed between villages and regional cities. Commonly, while the need to develop regional centres and villages is often heard, the role of small towns is neglected. At the same time, they play a prominent role in shaping the quality of life in rural areas.

Objective: The paper aims to elaborate a theoretical framework for comparative analysis of small towns in Bulgaria and Hungary. 1) Critical review of theoretical debate on the definition and the nature of small towns in the European context. 2) A thorough examination of the theoretical debate related to the concept and distinct features of small towns in Hungary. 3) A comprehensive analysis of the scholarly discourse that underpins the notions and unique characteristics of small towns in these countries.

Methodology: In order to be able to examine the processes in a common framework for the two countries, we have examined the main indicator construction techniques that are suitable for constructing functional dimensions. Four techniques (rank-based, normalisation-based, structure-based, reference-based) were used to construct the proxy indicators. The construction process involved the development of complex dimensions for typology from a wide range of initial variables through fit and consistency analysis.

Results: The intensive processes of depopulation, and spatial demographic and economic polarization in both countries, have changed the extent, structure, and stability not only of the villages but also of the urban network. As these negative trends have deepened in the last decades, we are witnessing consequently divergent changes in the number, size, and importance of the different urban settlement categories. The techniques introduced in the methodology chapter are suitable for the common assessment.

Conclusions: The intricacy of small towns' definitions shows the importance of contextual factors and the need for integrated classification based on population size, density, and functions, which is a subject of elaboration in the theoretical debate in European research. Small towns have crucial importance in peripheral and rural regions and serve as micro-regional hubs, playing a key role in regional and urban development. Although they are very rarely the subject of comprehensive research.

Limitations and future research directions: Small towns remain very often "hidden" from policymaking and academic research due to a shortage of available and comparative data, diverse institutional frameworks, and ontological complexity. In the second part of the common work the joint research team will prepare a detailed analysis of case studies in both countries.

Keywords: small towns, regional development, Bulgaria, Hungary

Competence Development Through Talent Support Programs in Higher Education: A Systematic Literature Review

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Background and introduction: The rapid transformation of labour market and the growing emphasis on knowledge-based economies have placed new demands on higher education institutions to not only educate but also to foster individual student talents. Although such programs are widespread, little is known about which competencies they develop, how outcomes are measured, and what factors influence them. This review synthesizes international empirical evidence on competence development in higher education talent programs.

Objective: The study aims to systematically review international empirical studies on talent support programs in higher education, focusing on their role in developing students' competencies. It identifies targeted competence areas, assessment methods, and influencing contextual factors.

Methodology: The review follows PRISMA guidelines and uses a structured search strategy across multiple open access databases (2010–2025). Studies are included if they examine higher education students in talent support programs with measurable competence outcomes. An iterative screening process is followed by thematic synthesis and conceptual mapping using tools like VOSviewer.

Results: Preliminary results indicate a wide spectrum of talent support initiatives targeting cognitive, interpersonal, and intrapersonal competence areas. Common outcome domains include creative problem-solving, collaboration, initiative, and reflective thinking. The review will explore how these competences are defined and assessed, and what program formats are most frequently associated with positive outcomes.

Conclusions: The review will offer a comprehensive overview of how talent development programs contribute to student competence building in higher education. By identifying dominant themes and methodological patterns, the study aims to inform institutional practice and future research on talent support systems.

Limitations and future research directions: This review is limited to a defined time period and open access sources, which may exclude relevant but restricted-access studies. While the review follows a structured and reproducible process, its scope inherently narrows the literature base. Future research should explore grey literature and consider empirical validation in regional higher education institutions, especially in Central and Eastern Europe.

Keywords: higher education, talent support, competence development, student development programs, systematic literature review

Conceptual Landscape of Responsible Consumption: Comparison Analysis of Lithuania and Hungary

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Background and introduction: Socially responsible consumption is a more complex construct and includes various stages of consumption, the definition of which can help to establish a broader understanding of the field. This study aims to clarify the model of socially responsible consumption as a multifaceted process, to identify problems and challenges related to responsible consumption.

Objective: This study focuses on the analysis of scientific literature and empirical quantitative survey of Lithuanian and Hungarian consumers. It is aimed at finding out how responsible consumption reflect in customer behaviour and how internal and external factors have impact on consumer behaviour.

Methodology: We applied descriptive statistics, canonical correaltion, k-means clustering, fuzzy c-means clustering (FCM) and factor analysis methods. The element of novelty is that, in addition to statistical and data mining methods, fuzzy c-means was also applied. We decided to use the latter method because the respondents' answers are subjective and imprecise. The survey results are based on 376 questionnaires in Lithuania and 116 in Hungary.

Results: Based on scientific literature analysis and our survey, we found out that a comprehensive framework should encompass three different stages of consumer responsible consumption. The application of fuzzy c-means method revealed that about 20 percent of Hungarian respondents' consumer behavior is determined by internal and external factors to a greater extent than average, while in Lithuania such respondents only make up about 13.5 percent.

Conclusions: This paper aims to improve the understanding of responsible consumption as multifaceted phenomenon based customer behaviour reflection in different stages. We developed a conceptual landscape that integrates the stages of responsible consumption and explains how it expresses in Lithuania and Hungary.The element of novelty is that, in addition to statistical and data mining methods, fuzzy c-means was also applied. We decided to use the latter method because the respondents' answers are subjective

Limitations and future research directions: Findings of this study can serve as a theoretical basis for further research in this field. Ultimately, the study results could have practical implications for organizations and politicians that wish to foster responsible consumption.

Keywords: social responsibility, responsible consumption, consumer behaviour, fuzzy c-means

Copilots in Safety-Critical Engineering: Responsible Use of Large Language Models in Embedded System Development

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Background and introduction: Large Language Models (LLMs) are being explored to assist engineers in the development of safety-critical embedded systems. While these AI models offer significant potential for improving productivity and knowledge access, their use introduces risks such as hallucination, context loss, and misinterpretation, especially when applied to safety-relevant decisions governed by standards like ISO 26262 or IEC 61508. This paper explores how to responsibly integrate LLMs into such workflows.

Objective: The goal of this work is to define structured concepts and design guidelines for safely using LLMs as copilots in the development of safety-critical embedded systems. Specifically, we aim to support engineers working on tasks like requirements engineering, hazard analysis, standards interpretation, and documentation generation, while ensuring human oversight and compliance with safety assurance norms remain central to the process.

Methodology: We analyse representative engineering tasks within the development of safety-critical systems, identifying opportunities and risks associated with LLM use in each. We use the development of an electric steering column lock (ESCL) as a running automotive example. Based on engineering experience, scenario walkthroughs, and task analysis, we develop a usage framework, risk classification model, and mitigation strategies including context injection, output validation, and role partitioning.

Results: We present a conceptual framework for LLM integration in safety-critical engineering. The engineering use cases—ranging from requirements authoring to hazard analysis—are supported with domain-specific prompting strategies and review practices. We define boundaries for acceptable use, illustrate outputs via the ESCL example, and highlight how general-purpose and fine-tuned models differ in terms of reliability, control, and deployment safety.

Conclusions: LLMs can enhance engineering productivity, traceability, and onboarding in safety-critical embedded systems development if used within structured, human-in-the-loop workflows. Our guidance framework enables responsible integration of LLMs as copilots without undermining accountability, assurance, or standard compliance. We advocate for domain-specific validation, reviewable outputs, and careful trust boundaries to maximize benefit while minimizing misuse.

Limitations and future research directions: This study is conceptual and based on expert reasoning and example scenarios. It does not include empirical usability studies, longitudinal team adoption insights, or performance benchmarking of different LLM types. Future work will focus on in-situ evaluation of engineering teams, integration with traceability and certification tools, domain-specific fine-tuning, and educational frameworks for AI-augmented safety engineering.

Keywords: LLM, Copilot, safety-critical system development, AI-assisted development

Corporate Bonds in Hungary

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Background and introduction: In general, a bond is a debt security, which is a credit relationship between the issuer of the bond, the debtor, and the investor, the buyer of the bond. The bond is a money market and capital market instrument, and can be considered a relatively simple and reliable investment method. Bonds can be grouped according to many different criteria. Issuers can be governments, banks, municipalities and companies. In general, governments tend to be the largest issuers, with corporate bond issues coming second. If a company issues a bond, the buyer becomes a creditor of that company and will receive interest on the amount invested. The issuing company will have a long-term liability, which it can use to finance its operations, make investments, improvements and diversify its resource structure. The aim of this study is to examine the evolution of corporate bond issuance in Hungary and to assess the weight of corporate bonds in the financing structure.

Objective: The aim of this study is to examine the evolution of corporate bond issuance in Hungary and to assess the weight of corporate bonds in the financing structure.

Methodology: To estimate the stock of bonds issued, we used public information available on the Budapest Stock Exchange. Information on the role of bonds in the financing structure was obtained from the public accounting reports published by the issuing companies.

Results: Corporate bonds do not play a significant role in the financing of issuing companies. Their role in the financing structure is much smaller than that of loans, despite the fact that the design of corporate bonds offers much greater flexibility in the construction of the main parameters of the security.

Conclusions: Today, companies in Hungary can choose from a wide range of external sources. In addition to the use of internal sources, there are various external sources such as short and long-term loans, borrowings, leasing, factoring, raising funds through securities issues, bond issues, etc. Financing through bond issues can be a reliable and relatively flexible means of external financing for enterprises, but relatively few enterprises use or are able to use this form of financing.

Limitations and future research directions: The research focused on publicly available information on corporate bond issuance. We used the database of the Budapest Stock Exchange on the one hand and the publicly available accounting reports of the companies concerned on the other hand, which are, of course, the limitation of the research. Further research directions could be the investigation of so-called green corporate bonds.

Keywords: finance, corporate bonds, financing structure

Decisions Beyond Data: Narrative reporting practices in decision making

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Background and introduction: Leaders and managers frequently face the need to make highly complex decisions with incomplete or fragmented information. Traditional decision support systems largely emphasize the visualization of data, but often fall short in producing context-sensitive insights that can directly inform decision-making. A constant issue lies in the reliance on raw data without sufficient incorporation of expert perspectives, leading to generalized or misaligned outcomes.

Objective: This paper examines how narrative techniques combined with machine learning can strengthen communication across organizational hierarchies, particularly by improving the transfer of tacit expertise and contextual knowledge.

Methodology: To explore this, a transdisciplinary literature review was conducted using articles published within the last five years from databases such as Scopus, Web of Science, and ScienceDirect.

Results: The review highlights that narrative-driven reporting has been most commonly applied in fields such as accounting and sustainability, where expert interpretation replaces purely numerical summaries with more meaningful analytical explanations. Such approaches can also embed sentiment and personalization, commonly referred to as Narrative Disclosure Tone (NDT).

Conclusions: The review highlights that narrative-driven reporting has been most commonly applied in fields such as accounting and sustainability, where expert interpretation replaces purely numerical summaries with more meaningful analytical explanations. Such approaches can also embed sentiment and personalization, commonly referred to as Narrative Disclosure Tone (NDT).

Keywords: business analytics, decision support system, narrative reporting, machine learning

Decomposing the Lower Risk of Green Mortgages: A Measurement Approach

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Background and introduction: This paper investigates the link between residential energy efficiency and mortgage credit risk through the lens of the "green hypothesis," which posits that loans backed by energy-efficient properties exhibit lower default probabilities than conventional mortgages. We propose a novel methodological framework that isolates the disposable income channel – the pathway through which reduced household energy expenditures increase repayment capacity and lower probability of default. The paper makes t

Objective: The aim of this research is to develop a structured, internationally adaptable model that links building energy efficiency with mortgage credit risk. By isolating the disposable income channel, the study provides financial supervisors and central banks with a methodological framework to assess how lower household energy costs can reduce default probabilities, informing sustainable finance and prudential regulation.

Methodology: The research applies a conceptual matrix design combining household income quintiles with building typologies. Energy cost differentials are modeled to estimate gains in disposable income, which are then mapped to changes in mortgage default probability using a logistic regression framework. Data sources include national income statistics, building energy performance classifications, and mortgage portfolio performance, ensuring international adaptability.

Results: This research advances the understanding of the "green hypothesis" by proposing a methodological framework that links energy efficiency to mortgage default risk via the disposable income channel. Instead of relying on numerical estimates, it emphasizes the conceptual and policy relevance of a matrix model built on income quintiles and housing typologies. The approach provides a structured basis for future empirical testing and offers regulators a scalable tool to align financial supervision with

Conclusions: The study demonstrates that energy efficiency can reduce mortgage default risk through the disposable income channel, offering both theoretical clarity and supervisory relevance. The research provides a novel framework for linking sustainability and financial stability, laying the groundwork for future empirical validation and policy application.

Limitations and future research directions: The study is limited by its conceptual focus on the disposable income channel, without integration of wealth, awareness, and collateral effects. Future research should validate the model with country-level data, extend it to additional channels, and explore cross-country comparability to strengthen evidence for supervisory and policy use.

Keywords: central bank, energy efficiency, housing, income effect, mortgage probability default

Demographic Structure and Employment Trends in the Agricultural Workforce in the Autonomous Province of Vojvodina

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Background and introduction: The demographic structure of the agricultural workforce is a key determinant of rural development and agricultural sustainability. In the Autonomous Province of Vojvodina, which is one of Serbia's most agriculturally developed regions, recent trends reveal a pronounced aging of the workforce, underrepresentation of women and youth, and high rates of informal employment. These demographic trends challenge the region's agricultural productivity, innovation, and socio-economic vitality.

Objective: This paper aims to analyze the demographic characteristics and employment trends of the agricultural population in Vojvodina using both descriptive statistical methods and a binary Probit regression model. The objective is to identify key factors that influence the likelihood of agricultural employment and to provide a comprehensive statistical insight into the structure and dynamics of the agricultural labor force in the region.

Methodology: The research uses official data from the Statistical Office of the Republic of Serbia and applies both descriptive statistical analysis and a binary Probit regression model, conducted using STATA software. The dependent variable indicates employment in agriculture (1 = employed in agriculture; 0 = otherwise), while independent variables include gender, age group, level of education, and type of settlement within Vojvodina.

Results: The analysis shows that agricultural employment in Vojvodina is characterized by a high proportion of older male workers from rural areas, with younger and more educated individuals less likely to engage in this sector. The Probit regression results confirm that being female, living in urban areas, and having secondary or higher education significantly reduce the probability of agricultural employment. On the other hand, older age groups are significantly more likely to work in agriculture.

Conclusions: The findings highlight the need for tailored regional policies in Vojvodina to address labor aging, promote youth participation, and formalize agricultural employment. Specific support programs for young and female farmers, rural education initiatives, and infrastructural improvements are essential to ensure the sustainable development of agriculture in the region.

Limitations and future research directions: Regarding future research, it would be worthwhile to analyze the motivations and obstacles faced by young people working in Vojvodina's agriculture sector, as well as to assess the effectiveness of existing regional development strategies. It would be particularly important to explore why agricultural family traditions fail to attract the younger generation and what economic, social, or technological factors influence their decisions.

Keywords: Vojvodina, demographics, agriculture, probit regression, rural development

Developing More Efficient Transportation for Cities with Lower Population Density

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Background and introduction: Transportation sector contributed to the global man-made CO2 emission by a 25% share in 2024. Without any intervention, that amount will grow to 60% by 2050, according to predictions. Road transportation is responsible for approximately 75% of the sector's emission. Given that more than half of the world's population lives in cities, many people are exposed to the two major problems namely congestion and high pollution in living areas.

Objective: This research aims at evaluating ways of transportation to provide suggestions for policymakers to develop more sustainable system in cities in the countryside. Population density only enables municipalities in Budapest to operate and maintain a dense public transport system 24/7. In the countryside, personal ways of mobility should be involved more, and the research would like to contribute to do so.

Methodology: For the theoretical framework, the authors made a systematic literature review using PRISMA method. A comprehensive analysis on Life Cycle Analysis (LCA), Green House Gas (GHG) emissions, cost analysis and adjustment to personal preferences at the same time are poorly understood. Therefore, assessment and comparison of ways of personal mobility are provided. Using a complex way of thinking, elements of sustainability, namely environmental, economic and social aspects are considered.

Results: We found that the population of cities in the countryside may even be large; however, their huge areas counterbalance it resulting in a low population density. Consequently, in cities outside Budapest, no efficient transportation system can be created and maintained without private ways of mobility. Considering LCA, production and operational costs, as well as GHG emissions, it seems that e-scooters is one of the best alternatives to provide solutions for crowd, pollution and personal needs.

Conclusions: In the future, smart cities cannot be imagined without a better developed, more sustainable transportation system. It is predictable that one of the best ways that considers all the aspects mentioned above seems to be the e-scooter, but developing a (national) network of public-owned (rentable) e-scooters should be developed.

Limitations and future research directions: Among the limitations of the study, we can mention that it remains in the field of theoretical framework and literature review, without pilot projects and practical implications. A large-scale survey on personal preferences, as well as the habits of using local infrastructure including public e-scooters would provide background for more realistic suggestions and implications.

Keywords: sustainable transportation, smart city, micromobility, e-scooter, LCA, GHG emission, congestion, active mobility

Differences Between the Influence of Consumer and Political Behavior in the Relevant Hungarian Literature

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Background and introduction: The study's hypothesis is that, within the context of Hungarian societal conditions, tools of manipulation are applied in the influence of both consumer and political behavior. However, due to the regulations and ethical norms in force in the country, during the influence of consumer behavior, it is not permissible to portray and discredit competing products in a negative light.

Objective: It is a common notion in Hungary that politicians should be marketed during elections the same way as detergent. This presentation and study explore whether this statement has any validity based on relevant Hungarian literature.

Methodology: From a methodological perspective, the study conducts a literature analysis and does not involve primary data collection.

Results: The hypothesis proposed was confirmed during the analysis. A difference between the influence of political and consumer behavior is that, based on domestic and international regulations and ethical norms, it is not permissible to portray a competing product in a negative light in Hungary either.

Conclusions: A difference between the influence of political and consumer behavior is that, based on domestic and international regulations and ethical norms, it is not permissible to portray a competing product in a negative light in Hungary either. Further research into the topic may require additional analysis and primary data collection, which could take place following the conference.

Limitations and future research directions: Further research into the topic may require additional analysis and primary data collection, which could take place following the conference.

Keywords: consumer behavior, political manipulation, character building, Hungary

Digital Competence Survey in Zala County, Graz and Eastern Styria

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Background and introduction: Nowadays Information Technology (IT) is developing at a rapid pace. Existing techniques are being upgraded and new ones are emerging. Big data, Artificial Intelligence (IA), Cloud Computing etc. are becoming part of our lives. This makes it essential to develop digital knowledge and skills, but also to foster a positive attitude towards innovation.

Objective: In our cross-border research “DIGAP” “Intergenerational accessibility in digitalisation among women”, digital competences were measured in 3 target areas: in Zala County, Graz and in the East Styria region among women aged 15 and over.

Methodology: The target sample size was 250-250, stratified by age group, education and place of residence. Our research questions asked whether there were differences in educational attainment between the two regions in the area of digital competences. Data collection took the form of an online questionnaire and a small-scale questionnaire survey with a survey administrator.

Results: The questions of the questionnaire were developed by our research team based on the recommendations of the DigComp 2.2 framework, which is the most preferred one based on the literature review. The data obtained were processed using the SPSS statistical software package.

Conclusions: Our questions also included an assessment of the areas in which the women surveyed felt the need to develop their digital competences... The analysis also included the exploration of correlations and the description of cluster group behaviour. In this paper, we present our partial results with a focus on educational attainment.

Limitations and future research directions: In the future, we also plan to conduct focus group interviews among the target group

Keywords: digital competence, digital literacy, education, cross-border research

Digital Engagement and Visitor Experience in Zoological Parks: A Systematic Literature Review and Conceptual Mapping

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Background and introduction: Zoological parks are evolving into complex educational and experiential environments. Digital technologies and interactive tools are increasingly used to enhance visitor engagement. Yet, academic understanding of their impact is fragmented. To address this gap, the guiding research question of this review is: What is the current state of research on digital and interactive tools used to enhance visitor experience in zoological parks?

Objective: This study aims to synthesize the existing literature on digital engagement strategies in zoological contexts, with a specific focus on their relationship to visitor experience. A secondary objective is to explore the conceptual structure of this research field using bibliometric mapping techniques.

Methodology: A systematic literature review was conducted following PRISMA guidelines, with a search strategy developed around keywords related to zoos, digital media, and visitor experience. The review includes qualitative synthesis of selected publications and a co-word analysis using VOSviewer to identify major research themes and interconnections.

Results: The review highlights key thematic areas emerging from the literature, including visitor perceptions, educational objectives, exhibit design, and animal welfare considerations. Initial mapping shows that digital tools are often discussed indirectly rather than as central drivers of visitor experience, pointing to a gap in integrative research.

Conclusions: This study provides an initial synthesis of a growing interdisciplinary field and lays the groundwork for deeper empirical investigations. It underscores the need to more explicitly examine how digital engagement shapes the cognitive, emotional, and behavioural dimensions of zoo visits.

Limitations and future research directions: Future research should examine specific digital tools and platforms in more detail and assess their measurable impact on visitor learning, engagement, and satisfaction. Comparative and longitudinal studies across different zoological institutions are also recommended.

Keywords: digital technologies, nonbusiness marketing, visitor experience, zoo

Digital Food Rescue and Consumer Typologies: A Q-Methodology Approach

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Background and introduction: Our study explores the diverse subjective perspectives of Generation Z consumers in Hungary toward food rescue applications and their broader food-related behaviors using Q methodology. As food waste becomes a critical environmental and social issue, digital tools like food rescue apps have emerged as innovative solutions. However, adoption depends on complex individual factors including sustainability values, digital habits, and trust in technology.

Objective: The aim of the research was to uncover and categorize the varying viewpoints within Generation Z in Hungary regarding the use of food rescue applications, and to understand how these perspectives relate to broader food practices and concerns.

Methodology: A structured Q-sort procedure with theoretically grounded statements was conducted, revealing four distinct consumer typologies. Each group embodies a unique constellation of values concerning sustainability, digital engagement, trust in food technologies, and openness to novelty.

Results: Findings demonstrate that while sustainability is a shared concern, especially regarding packaging waste, consumer motivations and practices vary significantly. For instance, some participants avoid food rescue apps due to routine-based cooking habits or concerns over reliability, while others embrace them as tools for exploration and ethical consumption.

Conclusions: The study contributes to a nuanced understanding of food-related behavior by highlighting the interplay between individual aspects, (digital) food practices, and ecological values. These insights can inform targeted policy and communication strategies aimed at promoting food rescue technologies and reducing waste.

Limitations and future research directions: Future research could expand to include more diverse demographic groups and longitudinal trends to track changes in attitudes over time. Further exploration into how cultural and social contexts influence these typologies would also be valuable.

Keywords: Q methodology, food rescue apps, food waste, sustainability, consumer behavior, Generation Z

Digital Integration Opportunities of Production Logistics Processes

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Background and introduction: Production systems form a complex system within which logistics processes play a key role alongside manufacturing and technological processes. Nowadays, the aim is to digitalise processes, allowing for various analysis options and even real-time intervention. In the future (and already today), digital transformation of processes will be key for value-creating companies, as it will enable a more flexible and controlled system operation. This requires the integration of different technologies.

Objective: The research explores the possibilities of digitising logistics processes that support production. The boundaries between production and logistics are not clearly defined.

Methodology: The focus of this paper is on investigating digital twin technologies for production systems with an exploration of the literature. The aim is to identify the main difficulties in the field and analyse the causes and effects.

Results: In many cases, support and servicing processes are not explicitly represented in twin models, despite having a significant impact on the efficiency of value creation. There is a lack of research that can actually help companies in their digitalisation efforts. The digital twin of different production systems and processes presents companies with several challenges.

Conclusions: In this study, we present two main problem categories. Finally, we demonstrate a practical approach to getting started with digitally transparent process modelling.

Limitations and future research directions: The research focused on production-supporting logistics processes, but this will need to be supplemented with other processes at a later stage. A crucial task is to outline further steps to support digitisation and define indicators for measuring its progress.

Keywords: digital twin, digitalisation, production logistics

Digitalization Strategies of Companies in Different Cultures: An Empirical Survey of comparing Thai and Hungarian Enterprises

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Background and introduction: Within the framework of ODDEA (Overcoming Digital Divide in Europe and Southeast Asia, a Horizon 2020 (EU) financed research of a consortium of 4 CE European and 3 SE Asian Universities) we have started a comparison of four Thai and four Hungarian medium sized companies on their current practices and their strategic views of digitalization. They were independent start-ups up to enterprises on the Stock Exchange. One of them maintained a franchise business. The size varied between 200 – 8000 empl

Objective: The objective of the research was

1. to measure the current state of digitalization on the main business processes
2. to understand the differences of the driving forces
3. to compare the approach to the topic on the different layers of company management.

Methodology: Based on a newly developed, structured interview guideline (developed as a pilot) we have contacted strategic leaders of the companies and had personal interviews with them of about 60 minutes. We have interviewed 4 Thai firms in February 2025 and 4 Hungarian firms in April-May 2025. The form of the research was frameworked by structured interview guidelines. All of the interviews were recorded, and transferred into txt files, followed by a qualitative analysis and comparison (cross check).

Results: All of the selected companies had an established ERP and were relatively advanced on digitalizing one or more of their main processes. It can be assumed that companies in both cultures have similar problems and similar views toward the future. Cultural and legal difference (such as average age of employees, somewhat less "GDPR"-like restrictions, etc.), are probably advantageous for the Thai companies. As a byproduct, the interviews will help us to start with the elaboration of a teaching cases

Conclusions: The above observations enable us to formulate hypotheses regarding strategy cautiousness and directions of digitalization accordingly. The companies came from the industries of Manufacturing, Sales/Distribution and Service. We are eager to discuss the results with other researchers of the conference.

Limitations and future research directions: We have focused on selected midsize companies. We have excluded small firms (with no ERP system), but also multinational enterprises, where strategies will be engineered by their global company headquarters. Consequently, the results have limited practical usability. Nevertheless, they present interesting benchmarks for researchers and strategic leaders for midsize companies of both regions. To get more precise results, one need to continue the interviews.

Keywords: digitalization, industry 4.0, ERP, business process automation, org. impact, driving forces and motivation, strategy

Disinformation and Disruption: Fake News in the Events Industry

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Background and introduction: In recent years, the number of fake news stories has significantly increased in the world, especially with the widespread use of social media. It has impacted several industries, including the events industry and events tourism. The spread of fake news can contribute to the reduction of attendance, visitor numbers and even damage the reputation of an event, contributing to economic loss.

Objective: This research explores how misinformation shape public perception, how fake news appear in the events sector, and how it affects visitor trust and future attendance in the events industry - including concerts, festivals, sporting events, conferences - and events tourism.

Methodology: First, in a comprehensive literature review, previous academic resources on fake news, the dissemination of fabricated news stories, and its impact on visitors is collected and analysed, to give a well-rounded view on the issue - with a special emphasis on fake news in the events and event tourism industries. It is followed by a qualitative content analysis, which uses case studies and media coverage to identify patterns in the spread and effects of fake news stories in the events industry.

Results: Initial findings suggest fake news stories may lead to lower attendance rates and sometimes public safety concerns as well. The spread of misinformation may also lead to the damaged reputation of events and host destinations, which also contributes to economic loss.

Conclusions: Fake news can be a great risk to the events sector, influencing visitor behaviour and trust. The spread of fake news can significantly impact perceptions of events, services, and destinations, ultimately influencing customer satisfaction and purchase decisions. The study highlights the need for misinformation management by event organisers and the media.

Limitations and future research directions: The study focuses on qualitative content analysis and only deals with a segment of the events and events tourism industry, by focusing on certain case studies. Future research could focus on psychological changes in visitor behaviour, crisis strategies, a cross-country or cross-industry comparison.

Keywords: fake news, event industry, event tourism, tourism

Dynamic Destination Marketing Utilizing AI for Hyper-Personalized and Sustainable Tourist Engagement

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Background and introduction: This study aims to examine the role of artificial intelligence in advancing sustainable destination marketing, focusing on how hyper-personalized AI-driven engagement can contribute to responsible tourism development.

Objective: This study aims to explore the dual role of AI-driven hyper-personalization in dynamic destination marketing, focusing on its potential to enhance tourist engagement while advancing sustainability. this will be done through conducting a systematic literature review and analyzing a case study of Greece, seeking to uncover how AI can simultaneously support and challenge sustainable tourism development.

Methodology: The research adopts a systematic literature review methodology, guided by the SPAR-4-SLR framework. An initial search identified 50 relevant articles, which were systematically screened and analyzed to extract insights on the intersection of AI and sustainable tourism. In addition to the literature review, a case analysis of Greece "the Pythia AI bot" to illustrate real-world applications of AI in dynamic destination marketing.

Results: The review reveals that while AI-driven personalization enhances tourist experiences and promotes sustainability, it also presents critical challenges. Data quality and bias, risks of over-personalization, and data privacy concerns limit its effectiveness. The Greece case study highlights both opportunities for promoting sustainability and risks of commodifying cultural and environmental resources without fostering genuine engagement

Conclusions: The study emphasizes how AI plays a dual role in sustainable destination marketing, posing both significant ethical and practical issues and providing chances for transformative participation. The study offers practical suggestions for stakeholders to strike a balance between innovation and sustainability principles in destination marketing strategies by combining insights from a systematic review and a real-world situation

Limitations and future research directions: This study is limited by its reliance on secondary data and a case analysis, lacking primary empirical validation. Potential biases in selected articles and the use of Pythia AI for the Greece case may affect generalizability. The rapid evolution of AI technology also means findings may become quickly outdated.

Keywords: hyper-personalization, destination marketing, sustainable tourism, tourist engagement, artificial intelligence

Effects of Corporate Governance on Performance of Educational Institutions

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Background and introduction: Educational institutions are faced with competing interests from the myriad of stakeholders including the shareholders, management, customers, suppliers, financiers. Educational institutions must develop strategies in areas such as, financial management. Corporate governance structures relate to systems established to assist in decision making and also monitor the activities in light of the divergent interests.) Good corporate governance system can attract investors to a market or organisation.

Objective: This paper explores how corporate governance structure and ideals such as, leadership, transparency, integrity, accountability, sustainability and effective participation influences the governance of educational institutions. The study reveals that application of corporate governance practices in educational institutions particularly in the developing world still faces myriad of challenges. Therefore, appropriate governance systems should be developed to enable them achieve their objectives.

Methodology: The paper is based on a doctrinal and statutory study. This involves analysing corporate governance theories. The study looked at the models of governance structure in educational institutions. Doctrinal research is basically library-based research involving acquisition of information on a systematic basis, examining and evaluating in order to arrive at a conclusion. The data used were collected through literature study from both printed and online sources.

Results: From the study, it is also evident that effective governance structures are critical in attracting financial resources, creation of competitiveness, building of confidence among the stakeholders and enhancement of institution's reputation. Addressing the ethics and governance of the institutions at the middle and lower levels in the education sector would contribute to the efforts to attract more investors to this important segment of the economy which albeit has been left to the state.

Conclusions: From the study, it is also evident that effective governance structures are critical in attracting financial resources, creation of competitiveness, building of confidence among the stakeholders and enhancement of institution's reputation. Addressing the ethics and governance of the institutions at the middle and lower levels in the education sector would contribute to the efforts to attract more investors to this important segment of the economy which albeit has been left to the state.

Limitations and future research directions: From the reviewed literature,it is evident that corporate governance for institutions in developing countries has not been well researched. There is need to undertake regular board evaluations in order to ensure the members are adequately informed for decision making.. There has been a tendency to duplicate models borrowed from the developed countries in the developing countries resulting in resistance. Need to come up with new models to adopt in corporate governance.

Keywords: corporate governance structure, leadership

Employment Opportunities for People with Intellectual Disabilities in Hungary

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Background and introduction: The issue of employment for people with intellectual disabilities is a very important one, especially for equal opportunities and the economy. In many cases they live their daily lives as dependants or on benefits. Many believe that their employment is only possible in an institutional setting. Research has shown that they are perfectly well integrated into the open labour market. This would require education and social sensitisation of employers.

Objective: The aim of this research is to explore the current state of integration of people with intellectual disabilities in the labour market through different forms of employment. I will examine the different types of work preparation activities available to them. In addition, I will also explore the perceptions of employers in the open labour market, the experiences of those working in sheltered employment and the situation of social employment institutions.

Methodology: The research was carried out using primary and secondary methods. The secondary research covers the analysis of literature on the forms of employment and development opportunities for people with intellectual disabilities, while the primary research aims to explore the employment opportunities for people with intellectual disabilities through in-depth interviews. The research focused on sheltered employment and social employment institutions.

Results: The integration of people with intellectual disabilities into the world of work is in its infancy in our country. There are 40 285 people of working age, of whom only 7344 are employed. One reason for this is that they do not have the right qualifications, as the training available to them prepares them for a profession that is of no use to them. It is therefore important to create training programmes that prepare them with real, usable skills so that they can find work.

Conclusions: Early inclusion, lack of sensitisation and information, low support and lack of professionals all have a negative impact on the lack of inclusion of people with intellectual disabilities in our society. The conclusion of the research is that sheltered workplaces and well-trained professionals are needed to ensure their successful integration into the world of work. This is essential to make progress so that they feel and become useful members of society.

Limitations and future research directions: A further line of research is the study of employers and HR professionals. To investigate how much and what information they have about the employment of people with intellectual disabilities, whether they know what the rehabilitation contribution is about. To prepare a study for them on useful information.

Keywords: labour market, disability, work opportunities, integration, equal opportunities

Energy Price Shocks and Food Price Dynamics during Geopolitical Crises in the European Union

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Background and introduction: The post-COVID period and war in Ukraine led to a record increase in the food price index. Vulnerable consumers and countries face reduced purchasing power due to rising food prices and rising fuel prices. Fertilizer prices are also rising. This can lead to reduced fertilizer use and lower yields. The sharp rise in food prices is due to adverse weather conditions, rising energy and transport costs, as well as rising fertilizer prices and high international demand.

Objective: The article's purpose is identifying key factors that influence food prices and determine the relationship between food prices and energy prices changes during geopolitical crisis periods. Using advanced econometric modelling techniques, the study investigates effects of these factors on food prices. It further examines the time-varying nature of these relationships, offering insights into how external shocks – such as global conflicts or energy crises – reshape the food market landscape.

Methodology: The research implements the analysis of 27 European Union countries for the period 1995−2021 using panel data model. This study is approximated specifically to EU countries because EU countries are highly integrated into global supply chains for food and energy.

Results: Our modeling results show that an increase in gas and oil prices leads to an increase in food prices. Moreover, gas prices have a greater impact on food prices than oil prices. The simulation results also demonstrate that geopolitical threats have a greater impact than geopolitical actions. Geopolitical threats are based on perceptions of potential events, such as rumors of trade embargoes or political instability.

Conclusions: The findings of this study highlight the intricate relationship between food prices, geopolitical risks, and energy uncertainty. The evidence suggests that fluctuations in food prices are not merely dictated by supply and demand but are also heavily influenced by global geopolitical events and energy market volatility. These interdependencies have significant implications for food security, economic stability, and policy planning.

Limitations and future research directions: During the research, the following limitations were identified. Firstly, we should be skeptical about the reliability and applicability of the "geopolitical risk index" when analyzing its impact on the price index. In 2001, the index was 500, but there was no real danger to international supply chains. The terrorist attack in London had nothing to do with food supply chains. As part of further research, we plan to examine the geopolitical implications of changes in energy supply chains.

Keywords: agricultural markets, geopolitical crises, energy uncertainty, food prices, food security

Enerhash for Real-Time Energy Optimization in Renewable Power Grids

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Background and introduction: Integrating renewable energy into the grid presents challenges due to fluctuations in supply. This study explores how Enerhash applies digital technologies and AI-based systems to enable real-time energy optimization, aiming to improve grid stability and the efficient use of surplus renewable energy.

Objective: This research aims to analyze how Enerhash enables real-time energy optimization through AI-based control systems and modular data centers. The study focuses on how these technologies support the flexible integration of intermittent renewable sources, improve energy efficiency, and stabilize power grids in dynamic and decentralized energy markets.

Methodology: The research is based on a qualitative case study of Enerhash, combining semi-structured expert interviews with company executives and the analysis of internal documentation and operational data provided by the company. Special focus was placed on the technical parameters, system response times, and renewable integration models of Enerhash's modular energy infrastructure.

Results: The study found that Enerhash's AI-coordinated systems enable sub-second response times, making them effective tools for stabilizing renewable grids. The modular units efficiently utilize surplus energy and flared gas, reducing environmental impact while improving energy efficiency. Projects in Sweden and the US confirm the scalability and adaptability of the solution under varying grid conditions.

Conclusions: Enerhash demonstrates how AI-based infrastructure can provide real-time flexibility and efficiency in renewable energy systems. The integration of modular data centers with grid management not only supports environmental goals but also offers an economically viable model. This case highlights the role of emerging technologies in transforming traditional energy operations toward a more sustainable future.

Limitations and future research directions: This study is limited to a single case and early-stage project results. Long-term performance data is not yet available. Future research should include comparative analysis of similar AI-based energy systems, assess economic impacts in different regulatory environments, and explore scalability in emerging markets with high renewable energy potential.

Keywords: AI, grid flexibility, real-time optimization, renewable energy, Enerhash, digital energy solutions

Entrepreneurship Education in Higher Education: Comparative Study from Hungary and Poland

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Background and introduction: The role of soft skills in tourism remains an underexplored area, yet it holds both scientific and practical significance. As tourists' expectations evolve, traditional technical competencies may no longer suffice. Soft skills are increasingly essential for tourism professionals, enabling them to understand and respond effectively to shifting consumer behaviours, thereby enhancing customer satisfaction and contributing to the success of tourism service providers.

Objective: This research aims to explore the conceptual foundations and growing relevance of soft skills, particularly within the context of the business and tourism sectors.

Methodology: Employing a systematic literature review (SLR), this study critically analyses, synthesises, and evaluates academic sources on essential soft skills for the employees of service providers in tourism.

Results: The findings include a comprehensive synthesis of relevant literature and a clarification of key concepts such as skills, soft skills, and their application in tourism. The review highlights the increasing emphasis on soft skills as a strategic asset in tourism service delivery.

Conclusions: By establishing a theoretical background for the concepts of skills and soft skills, especially in tourism, this study provides a basis for future empirical research. The SLR has successfully contextualised and defined key terms, supporting the advancement of knowledge in this area.

Limitations and future research directions: Future research should focus on exploring the role of soft skills required in tourism companies for front office employees who have direct interaction with guests. Such studies could identify the key soft skills essential for employees to develop, particularly in relation to building and maintaining strong guest relationships and improving service quality.

Keywords: soft skill, systematic literature review, tourism, business

Essential Soft Skills for Service Providers in Tourism: A Systematic Literature Review

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Background and introduction: The role of soft skills in tourism remains an underexplored area, yet it holds both scientific and practical significance. As tourists' expectations evolve, traditional technical competencies may no longer suffice. Soft skills are increasingly essential for tourism professionals, enabling them to understand and respond effectively to shifting consumer behaviours, thereby enhancing customer satisfaction and contributing to the success of tourism service providers.

Objective: This research aims to explore the conceptual foundations and growing relevance of soft skills, particularly within the context of the business and tourism sectors.

Methodology: Employing a systematic literature review (SLR), this study critically analyses, synthesises, and evaluates academic sources on essential soft skills for the employees of service providers in tourism.

Results: The findings include a comprehensive synthesis of relevant literature and a clarification of key concepts such as skills, soft skills, and their application in tourism. The review highlights the increasing emphasis on soft skills as a strategic asset in tourism service delivery.

Conclusions: By establishing a theoretical background for the concepts of skills and soft skills, especially in tourism, this study provides a basis for future empirical research. The SLR has successfully contextualised and defined key terms, supporting the advancement of knowledge in this area.

Limitations and future research directions: Future research should focus on exploring the role of soft skills required in tourism companies for front office employees who have direct interaction with guests. Such studies could identify the key soft skills essential for employees to develop, particularly in relation to building and maintaining strong guest relationships and improving service quality.

Keywords: soft skill, systematic literature review, tourism, business

Evaluation of Macro-economic Factors and Impact on Economies

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Background and introduction: Macroeconomic indicators such as GDP, inflation, CPI, imports, and exports are essential for assessing the resilience and performance of economies. Understanding how these variables interact helps explain growth differences across nations. This study explores whether structural differences exist between developed and emerging economies, focusing on how price dynamics and trade flows influence GDP and shape macroeconomic stability.

Objective: The study aims to evaluate structural differences in macroeconomic performance across 15 countries, including Kenya and its top trading partners across Africa, Asia, EU, American and the Gulf. Specifically, it investigates the interdependencies among inflation, CPI, imports, and exports, and their effect on GDP. The objective is to determine whether distinct economic structures can be identified and whether countries can be meaningfully grouped based on their macroeconomic and trade profiles.

Methodology: The analysis uses 2023 data from 15 countries spanning Africa, Asia, Europe, the Middle East, and North America. Variables are grouped into GDP (dependent), price indicators (inflation, CPI), and trade indicators (imports, exports). Methods include correlation (relationships), regression (predictors of GDP), factor analysis (underlying dimensions of trade and price), and cluster analysis (grouping countries by macroeconomic similarity).

Results: Emerging economies display higher inflation volatility and unstable trade patterns, while developed economies exhibit greater macroeconomic stability. Regression confirms inflation and trade as significant predictors of GDP. Factor analysis identifies two latent structures: price stability and trade performance. Cluster analysis distinguishes groups of countries aligned with regional and developmental characteristics, highlighting common growth drivers and vulnerabilities.

Conclusions: The study demonstrates that multivariate analysis effectively uncovers structural differences in macroeconomic performance. Inflation and trade are critical drivers of GDP across both developed and emerging economies. The findings highlight distinct policy challenges: developed countries focus on sustaining stable growth, while emerging economies face volatility management. The results provide a useful framework for understanding cross-country economic resilience and performance.

Limitations and future research directions: The study is limited to a 2023 cross-sectional dataset of 15 countries, which restricts generalizability. Some indicators may reflect temporary shocks or data inconsistencies across sources. Future research should expand to multi-year datasets and include additional macroeconomic variables such as interest rates, employment, and exchange rates. Broader coverage will improve robustness and enable deeper analysis of structural economic dynamics.

Keywords: macroeconomics, GDP, inflation, CPI, trade, analytics, multivariate statistics

Evolving Roles: Social Media Communication in the age of AI

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Background and introduction: Artificial Intelligence is no longer just a support tool but a structural element reshaping corporate digital communication. On Social Media, where creativity and speed are decisive, its presence has redefined both workflows and professional roles. The Social Media Manager, fully responsible for content ideation and execution, is now asked to combine traditional skills with new competences that involve prompting, supervising, and integrating outputs from artificial systems.

Objective: This evolution opens up critical questions: how does the boundary between human and machine creativity shift when AI enters everyday practice? How can professionals maintain authenticity and trust from users in a space where automated content is increasingly recognizable? And what new forms of responsibility emerge in relation to transparency and intellectual property? To address these issues, this paper combines two perspectives: a literature review, and an empirical analysis on Meta suite.

Methodology: The paper adopts a qualitative and empirical approach. After a review of the literature on assisted creativity, digital marketing, and the social perception of AI-generated content, the analysis turns to Meta's ecosystem (Facebook, Instagram, Messenger, Meta Business Suite, Ads Manager, and Edits) focusing on the AI-driven features introduced in 2025.

Results: This changing context demands new skills, from prompt engineering to the critical management of AI-generated materials, and a deeper understanding of how to clearly communicate when content has been shaped by algorithms. The line between human-made and AI-generated content continues to blur, and the credibility and authenticity of a brand increasingly depend on the professional's ability to integrate these tools without losing emotional impact or a proper tone of voice.

Conclusions: It invites a critical reflection on human-machine collaboration in digital communication, and on how we might preserve meaning, creativity, and trust in an increasingly hybrid ecosystem.

Limitations and future research directions: This research may be limited by the rapid evolution of AI tools, subjective measures of trust, and the lack of longitudinal data. Future studies should explore cross-sectoral differences, long-term user perceptions, and the impact of disclosure strategies. Investigating AI literacy and co-creation practices will also be key to understanding how professionals can ethically and effectively integrate AI into social media communication.

Keywords: digital communication, artificial intelligence, social media manager, social networks, authenticity

Examining the Seasonality of Cultural Tourism: The Case of Hungarian Urban Destinations

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Background and introduction: Cultural tourism is a key product in Hungary but is highly exposed to seasonality. Urban destinations have invested to reduce this, but the actual impacts remain unclear. This study explores the effectiveness of these developments.

Objective: The aim of the research is to evaluate how urban cultural tourism developments have influenced seasonality and whether they succeeded in stabilizing visitor flows.

Methodology: First, key urban cultural tourism destinations in Hungary were identified. Then, all development elements aimed at reducing seasonality were analysed. Finally, success was evaluated based on visitor traffic indicators using the Gini index.

Results: Despite substantial investments, destinations have achieved limited success in reducing seasonality and increasing visitor volumes. Products and services often fail to match 21st-century consumer trends and expectations.

Conclusions: Urban cultural tourism consumption remains significantly below its potential. Developments often focus on strengthening the high season, which may have counterproductive effects on seasonality.

Limitations and future research directions: The research is based on quantitative visitor traffic data. Further studies should investigate consumer behavior, demand trends, and the effectiveness of year-round tourism product development.

Keywords: tourism, seasonality, cultural tourism, urban destinations

Experiences from Hungary Related to the Employment of Foreign Workers. An Empirical Research

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Background and introduction: There are traditional and novel reasons for employing foreigners in different parts of the world. The employment of foreign guest workers in industry, trade and other areas of economic life is not a new phenomenon, but its large-scale spread can be traced back to the middle of the 20th century. Their number in the world has increased from 105.4 million in 2010 to 168 million in 2022, representing 4.7 percent of the global workforce.

Objective: The research deals with issues of employing foreign workforce In Hungary. The number of foreign workers in Hungary is over 100,000, of which more than 40 percent came not from neighboring countries, but from third countries. The aim of the research was to explore the experiences of Hungarian companies regarding the employment of foreign workforce. The research question was how different companies and institutions use the employment of foreign workers to manage and solve the labor shortage.

Methodology: 195 Hungarian companies participated in the research as respondents. The data collection tool was an online web-survey. The companies were asked to fill out a questionnaire, which asked about the foreign workforce they employed. It explores the methods and means of finding foreign workers, the characteristics of employment, and employment experiences. Respondents were asked to indicate the most characteristic of the pre-formulated answers. Statistical methods were used to evaluate the results.

Results: Foreign workers are present in a wide range of sectors, but are particularly significant in the manufacturing industry, trade and construction. The main reason for the employment of foreigners is the labor shortage. Most foreign workers undertake manual work. They mainly come from further afield (Philippines, India, Indonesia, Thailand, Mongolia). However, foreign workers in senior positions mainly come from the parent companies of international companies.

Conclusions: The significance of the research comes from the fact, that since the mid-2010s, there has been an increasing labor shortage in the Hungarian labor market. Therefore, various organizations are increasingly forced to employ foreign labor. As practical findings, a positive picture emerges regarding the attitude of foreigners towards work.Although the benefits of employing foreigners are often attractive, organizations face a number of difficulties when deciding to employ foreign workforce.

Limitations and future research directions: As limitattion of the research has to be mention that the respondents do not cover all companies operating in Hungary that employ foreign workers. However, the responses from 195 company managers are sufficient to give us information of the situation regarding the employment of foreign workers in Hungary.

Keywords: foreign workers, employment, Hungary, experiences

Explainable AI for Enhanced Decision-Making in Product Development: A systematic literature review

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Background and introduction: The integration of artificial intelligence (AI) in product innovation has the potential to enhance decision-making by providing data-driven insights. However, the lack of transparency in AI decision-making processes often limits its adoption, particularly among cross-functional and non-technical teams. Explainable AI (XAI) has emerged as a critical research area aimed at increasing the interpretability and trustworthiness of AI models.

Objective: This study aims to investigate the current state and state-of-the-art knowledge in the field of explainable AI as a decision support tool within product innovation, with a particular focus on non-technical stakeholders and cross-functional teams. Through the SLR, the research seeks to map the existing body of work, identify key themes, methodologies, and knowledge gaps.

Methodology: A structured research was conducted across three major academic databases: Scopus, ScienceDirect, and Web of Science. The review focused on publications from the last 6 years to capture recent advancements in the field. The initial keyword analysis included over 117 articles, from which relevant studies were selected based on predefined inclusion and exclusion criteria. The final dataset was subjected to analysis to identify emerging trends, gaps, and insights.

Results: The SLR reveals a noticeable increase in interest and research activity surrounding explainable AI, particularly in relation to general decision support systems. A key finding is that, despite its potential value, XAI is still underutilized in product innovation decision-making contexts. Only a small subset of studies addresses how XAI can support interdisciplinary collaboration or enhance the interpretability of design and development recommendations for non-technical users.

Conclusions: The review identifies a critical research gap in applying explainable AI within collaborative product innovation settings. There is a need for more domain-specific investigations that consider the cognitive and communication needs of non-technical stakeholders. Future studies should prioritize different approaches that integrate explainability into the workflows of product innovation teams.

Limitations and future research directions: While the general benefits of XAI are increasingly recognized, the specific application to cross-functional innovation teams remains underdeveloped. Transparency and interpretability are essential for bridging the trust gap between AI systems and human decision-makers, but further research is needed to tailor XAI approaches to the collaborative, dynamic, and interdisciplinary nature of product innovation.

Keywords: explainable AI, product development, decision support system, transparency

Exploring the Intersections of Burnout, Mental Health, and Capitalism

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Background and introduction: The phenomenon of burnout has been identified and analysed since the 1970s, particularly among various professions. Additionally, the relationship between mental health and economic systems, such as neoliberalism, has been explored. As a specific example, in his book, The Burnout Society, Byung-Chul Han explores the connection between burnout and capitalist systems through an existential approach.

Objective: Based on existing literature, the first part of this paper aims to highlight how capitalism contributes to the risk of burnout. The relationship between these two factors is relevant to both market capitalist and political capitalist systems.

Methodology: The second section of the paper expands the scope of the analysis by incorporating quantitative data on a wider range of relevant factors. Specifically, it examines the correlation between mental health and unemployment or income inequality, using statistics for OECD countries.

Results: As a result, this work aims to contribute to the literature analysing the ties between psychological aspects and economic indicators.

Conclusions: Based on the expectations, specific correlations will be outlined.

Limitations and future research directions: Data availability on the level of burnout is limited.

Keywords: burnout, mental health, capitalism

Factors Influencing the Electric Car Purchases in the Visegrad Countries: Comparative Analysis of the Influencing Key Factors

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Background and introduction: The climate protection goals and regulatory mechanisms of the world's leading economic powers are accelerating the transition to new drive technologies, especially towards electric cars. One of the cornerstones of successful product sale is that the value expected and the value perceived by the customer are matched. For understanding the these values, its unavoidable to examine that what kind of factors are influencing the decision making process of the potential e-car buyers in the V4 countries

Objective: The objective of the comparative analysis is

a.) to find all of the relevant public opinion polls, studies, publications in each Visegrad countries
b.) to determine and analyze all of the influencing factors in each Visegrad countries and compering them
c.) to validate the hypothesis that there are no differences in the factors influencing electric car purchases in the V4 countries: "The same influencing factors play a role in the electric car purchasing decisions in the Visegrad countries."

Methodology: The methodology would be the systematic literature review (SLR). The research question is: "What are the key factors affecting consumers' decisions to purchase electric vehicles in Hungary, Poland, the Czech Republic, and Slovakia?" all the relevant academic databases and public opinion research companies publications would be analyzed with keywords -like e-car adoption, consumer behaviour, purchase drivers- published after 2020 that focus on at least one of the target countries.

Results: It can be assumed that the influencing factors in all of the V4 countries would be similar, despite the fact that there are numerous differences (country size, GDP, e-car purchase support policy, PPP) between the V4 countries. The SLR showed that the influencing factors like high EV purchasing price, insufficient network of charging stations etc. in the e-car customer decision making process are almost the same in the V4 countries, only there is a slight difference in the factors order.

Conclusions: As the conclusion, the observations enable us to formulate hypotheses regarding the key influencing factors of electric car purchase decision making process in the Visegrad countries. It also helps us to understand these influencing factors and based on them, all of the stakeholders like car manufacturers and dealers, state decision makers etc. could modify their strategies and actions to promote the transition to electric vehicles.

Limitations and future research directions: I have focused on selected publications and public opinion polls which used almost the same questionnaires to determine the key influencing factors of the electric car purchase in the Visegerad countries. To get more precise and most up to date results, new surveys must be performed in each Visegrad countries to follow up the potential changes in the influencing factors.

Keywords: electromobility, electric car adoption, customer preferences, electric car purchases, Visegrad countries

Family Policy through the Lens of Different Academic Papers

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Background and introduction: The low Total Fertility Rate (TFR) is causing increasing concerns in many countries worldwide, like in Europe and East Asia, and to a lesser extent, the North American continent. However, in recent decades, this trend has also become evident in an increasing number of middle- and low-income countries. Governments are monitoring this process with growing apprehension and are trying to encourage people to have children through various family policy measures.

Objective: The literature effectively reflects the prevailing family policy concepts and their expected impact on demographic processes. Through our literature analysis, we aim to present these trends.

Methodology: We analyze articles downloaded from the Scopus and Web of Science databases using Bibliometrix software and categorize the changing family policy concepts and their effectiveness over time.

Results: Our conclusion is that we can see clearly distinguishable time periods according to which type of family policy tool was thought to be effective.

Conclusions: We have published a bibliometric analysis and periodization of the effectiveness of the family policy toolkit, which fills a gap in the literature so far.

Limitations and future research directions: During the data filtering process, important articles may be omitted and less significant ones may be included in the database.

Keywords: bibliometric analysis, family policy, family cash benefits, family tax allowance, childcare, TFR

Finance without Hierarchy: A Conceptual Exploration of Financial Management in Holarctic and Decentralised Structures

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Background and introduction: As organisations increasingly adopt decentralised governance models such as holacracy, critical questions arise regarding the adaptation of financial strategy within these structures. Holacracy fundamentally challenges the mechanism through which financial decisions are made, prioritised, and governed. In the absence of conventional hierarchical structures, organisations must reconsider how financial authority, accountability, and transparency are structured and managed.

Objective: The study seeks to investigate how financial strategy and decision-making, including areas such as compensation, budgeting, and investment prioritisation, are understood and implemented within decentralised organisational frameworks like holacracy. Drawing on existing academic research, this study seeks to develop a conceptual framework on how financial logic operates in decentralised systems.

Methodology: This study conducts a thematic literature review, integrating interdisciplinary sources across organisational theory, management and finance. Employing bibliometric analysis facilitated by the Biblioshiny interface for R, the study identifies and maps influential contributions within the field. Building on this quantitative mapping, a thematic literature review is conducted through comprehensive synthesis of key discussions and identifications of gaps in the existing research.

Results: The study is expected to uncover key patterns linking decentralised governance with financial management practices. Anticipated themes include role-based approaches to budgeting, peer-informed compensation models, and mechanisms fostering distributed financial accountability. Furthermore, the research intends to advance the academic discourse on holacracy by deepening theoretical understanding and providing insight into its practical implementation.

Conclusions: This paper aims to bridge the conceptual gap between holacratic governance and financial strategy, laying foundation for more integrated theoretical and empirical work. The findings will be relevant for scholars and professionals navigating financial management in non-hierarchical organisational contexts.

Limitations and future research directions: The study is subject to limitations by the current availability and depth of published research within this emerging field. Future research should investigate the adaptation of specific financial models within holacratic or decentralised organisational structures and empirically evaluate their effectiveness in practice.

Keywords: decentralisation, financial management, holacracy, teal organisation

Financial Survival or Decline? The Situation of Bread and Fresh Bakery Products after the COVID-19

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Background and introduction: The food industry is the most important sector of the Hungarian economy, as it is responsible for meeting the physiological needs of society. It stands as the second largest manufacturing sector, with a market share of nearly 13%, and a major contributor to exports. Hungarian bread and pastries have gained international acclaim and their exports are continually increasing.

Objective: Present paper analysis the operational dynamics and financial performance of both family-owned and non-family-owned enterprises engaged in the production of bread and fresh bakery within the Hungarian context. The performance indicators employed in this study are drawn from the extant literature, namely return on assets, return on equity, and operating profit margin. The period under study encompasses the years from 2019 to 2023. The study analyzes the industry's economic recovery from COVID-19.

Methodology: The analysis utilizes data from the OPTEN database, which includes Hungarian companies producing bread and fresh bakery products. A filtration process excluded firms with incomplete records, leaving 233 companies with data covering the full five-year period. The study examines liquidity and performance indicators to compare family and non-family businesses. Regression analysis was conducted using SPSS Statistics 25 to assess trends and relationships within the industry.

Results: The analysis identifies trends and differences between family and non-family firms using financial data. Performance indicators were measured through linear regression with independent and control variables (e.g., foreign/domestic majority ownership). Findings suggest family businesses had a positive impact on several indicators, likely due to their accumulation patterns. The study highlights financial performance disparities, competitiveness, and the impact of COVID-19 on market restructuring.

Conclusions: The findings show that family businesses significantly impact performance, though some negative effects may be partly attributed to their marginalization. Additionally, the effects of COVID-19 were already evident from 2019, with 2019–2021 being the most critical period for performance indicators. While literature debates the duration of the negative impact, this study highlights key trends. The results may offer valuable insights for academia and businesses, aiding informed decision-making.

Limitations and future research directions: The study's limitations include focusing on a single sector and excluding small companies based on turnover or workforce size. The performance indicators employed in the analysis could have been applied to a broader range of sectors, a shortcoming that can be addressed in future research. While the relevance of the examined period is clear, it is essential to view the findings as a foundation for further study rather than a definitive predictor of future economic downturns.

Keywords: food industry, financial performance, family business, COVID-19, performance indicators

From the Invisible Hand to the Invisible Heart: Redefining the Care Economy through the Parent's House Model in International Perspective

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Background and information: Economic thought has historically overlooked care. Adam Smith's notion of the "invisible hand" placed self-interest and market exchange at the centre of economic theory, leaving unpaid caregiving activities outside its scope. Yet, as Nancy Folbre has argued with her concept of the "invisible heart", societies cannot function without care: it is both a moral and economic foundation. Today, the renewal of the care economy is no longer optional but a necessity, driven by demographic crises, migration challenges, and the transformation of family structures worldwide.
As the founder of the Parent's House programme in Hungary, I have dedicated two decades to developing a Hungarian community-based model that connects formal and informal care. The programme supports parents—especially mothers—in balancing childcare and labour market participation. Recognised as a best practice by the EU and recommended by the World Bank, the Parent's House has already been tested as an international pilot in Morocco, Ghana, and the USA, proving its adaptability in diverse cultural contexts.

Objective: The doctoral research seeks to provide the scientific foundation for this model: to examine systematically how community-based parenting support redefines the value of care, strengthens parental wellbeing, and contributes to social and economic sustainability.

Methodology: The research framework draws on Esping-Andersen's typology of welfare regimes. The four selected countries represent contrasting systems: the USA as a liberal regime; Morocco and partly Hungary as conservative–corporatist structures; and Ghana, where informal and community-based care dominates.

Results: Within this spectrum, the Parent's House represents a hybrid model: it operationalises the integration of state, market, and community solutions, and demonstrates their operative implementation in practice.

Conclusions: The novelty of this study lies in its transcultural comparative perspective and in positioning a Hungarian grassroots innovation—the Parent's House model—as a scientifically grounded, hybrid welfare solution within the global care economy. By addressing the invisibility of care in economic history and linking it to contemporary demographic and social challenges, the research aims to generate evidence-based recommendations for more inclusive, resilient, and sustainable care systems.

Keywords: Hungarian model, invisible hand, invisible heart, care economy, Parent's House, hybrid welfare regime, transcultural comparison, scientific foundation, social sustainability

From Well-Trodden Paths to Uncharted Needs Pharma's Response to Rare Diseases

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Background and introduction: Rare diseases, while individually uncommon, comprise over one-third of people suffering from all diseases. Historically sidelined due to limited economic return, they are now prompting a shift in pharmaceutical strategy, catalyzed by lessons from recent health crises such as COVID-19 a battle on steroids against a disease that showcased the power of rapid, adaptive innovation.

Objective: Most large pharma firms now have a significant portion of their pipelines dedicated to rare diseases, with 50–65% or even two-thirds of their R&D portfolios targeting rare conditions. This article analyses how classic and new pharma (traditionally distinct in methods, scale, and pace) can evolve synergistically. It aims to clarify their boundaries and overlaps while exploring how hybrid models could advance rare disease treatment.

Methodology: Using literature review, case analysis, and comparative tables, the study contrasts the reliability and scale of classic pharma with the precision and agility of new pharma. It highlights how regulatory models, development timelines, and innovation dynamics intersect across both.

Results: Preliminary findings show that classic and new pharma differ across key dimensions, such as scientific approach, business models, regulatory behavior, and societal focus. This article will present these differences in a structured, dichotomic format to clarify strengths and tensions. This comparison suggests that, rather than competing, the two models are converging. Their integration forms hybrid strategies that blend reliability with agility, enabling more effective innovation in rare disease.

Conclusions: The interplay between classic and new pharma has the potential to reshape rare disease treatment. Their complementarity enables a more inclusive, urgent, and effective development ecosystem, moving from rigid pathways to adaptive precision.

Limitations and future research directions: Further empirical validation is needed, particularly across low-resource settings. Future work should assess hybrid models, policy levers, and patient-centered impact over time.

Keywords: rare diseases, classic pharma, new pharma, hybrid models, drug development, therapeutic innovation, regulatory strategy

Future Gen Z leaders and building trust

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Background and introduction: In today's highly uncertain and unpredictable environment, one of the most essential leadership capabilities is the ability to manage and cultivate trust. Numerous studies have examined the factors that shape trust and acceptance toward leaders, which are vital for establishing a healthy organizational culture.

Research question: What is the opinion of higher education students, future Generation Z leaders, about the role of trust, and how do they approach building trust?

Objective: Preliminary literature reviews reveal that considerable research has been conducted on leadership and trust, however, the exploration of trust-building strategies to future Generation Z leaders remains a relatively under-researched area at the international level. There is a lack of empirical research focusing on how Generation Z leaders build and maintain trust.

Methodology: This exploratory research was conducted using a quantitative method, an online questionnaire survey among 770 higher education students in Hungary in spring 2025. Data collection was be supported by the university's domestic partner institutions.

Results: The research is currently being processed, therefore the expected results of the research can be presented: Creation of practical recommendations for Higher Education and corporates. Contributing to the advancement of academic research in generational leadership and leadership development.

Conclusions: The research promotes socially impactful, value-based leadership practices that foster trust.

Limitations and future research directions: The research focused only on students attending management courses at Hungarian higher education institutions. In the future, we plan to conduct it among students studying in other programs as well as international students, in order to analyze different professions and cultural specificities.

Keywords: Gen Z leaders, leadership, building trust, higher education

Game Changer: Exploring the Impacts of Sports Development on Sustainable Cities

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Background and introduction: Brownfield redevelopment is central to EU urban policy, with Hungary updating its legislation to prioritise the reuse of brownfields. Between 2010 and 2021, significant state-funded investments in sports reshaped urban areas. This study examines how sports infrastructure—particularly through brownfield rehabilitation—can contribute to sustainable urban and transportation development, drawing on insights from international mega-events such as the Olympics.

Objective: This research examines the impact of sports infrastructure developments on promoting sustainable urban development in Hungary, with a specific focus on brownfield areas. Through a mixed-methods approach, the study assesses environmental, economic, and social impacts, aiming to identify best practices and challenges in aligning sports investments with broader sustainability goals.

Methodology: This study employs a mixed-methods research design. It analyses over 100 sports facility projects across Hungary (2010–2021) using quantitative data analysis, qualitative case studies, and policy document reviews. The research evaluates environmental, economic, and social impacts to assess the role of sports infrastructure in sustainable urban development.

Results: Analysis of over 100 sports infrastructure projects in Hungary indicates that developments on brownfield sites can support sustainable urban goals, including land reuse, improved mobility, and community engagement. Case studies suggest that integrating sports facilities into urban planning contributes to long-term social and environmental benefits.

Conclusions: Sports infrastructure developments can significantly support sustainable urban transformation, especially when implemented on brownfield sites. The research highlights the importance of strategic planning, policy alignment, and community engagement. Findings provide practical insights for urban planners and policymakers aiming to integrate sports projects into broader sustainability frameworks.

Limitations and future research directions: This study's reliance on available project data and qualitative case studies limits generalizability. Quantitative environmental and social impact metrics were limited in scope. Future research should include broader geographic scopes, and detailed impact assessments. Investigating community perspectives and economic outcomes over time could lead to a deeper understanding of sports infrastructure's role in sustainable urban development.

Keywords: sustainability, urban development, sport, well-being

Gender Inequalities in Education and the Labour Market: Structural Barriers and Perceptions

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Background and introduction: Gender equality remains one of the most urgent social challenges of the 21st century. Despite the significant improvements in the employment rates and economic status of women over the decades, significant gender gaps still persist. Gender imbalances in educational systems and the disadvantages associated with childcare remain obstacles to women's access to and success in the labour market. Women students with young children face structural disadvantages in both education and employment.

Objective: This paper explores how women's participation in the educational system affects their ability to enter the workforce. In order to comprehend the implications for women's career prospects, the research also focuses on the gender distribution of scientific recognition and the gender composition of higher education.

Methodology: The study uses secondary data and literature review to examine women's position in education and the labour market. It highlights female startup founders, gender disparities in scientific awards, and women's roles in sustainability. A questionnaire survey explored discrimination in education and work, focusing on perceptions of gender inequality and links between educational background and job market expectations.

Results: The findings indicate significant gender imbalances across academic disciplines, with some fields dominated by either men or women. Female respondents more frequently reported differential treatment by educators and perceived men to be in a more advantageous position in terms of formal and scientific recognition. These results highlight the persistence of gender inequalities and underline the presence of structural issues within the educational system.

Conclusions: The study confirms persistent gender inequalities in education and the labour market, particularly in recognition and career opportunities. Structural barriers remain significant, highlighting the need for targeted policies and further research to address women's unequal experiences and outcomes. Building on the sample under study, the results provide the groundwork for further investigation.

Limitations and future research directions: The size and representativeness of the questionnaire sample have been identified as the main limitations of this study. In order to obtain a deeper understanding of individual experiences and gendered narratives in education and employment, future research should be carried out on a larger and more diverse sample. Additionally, qualitative interviews could be a useful addition.

Keywords: gender equality, equal opportunity, education, labour market, discrimination

generAtIon - Exploring Generational Differences in the Perception and Use of Artificial Intelligence

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Background and introduction: The rapid development of artificial intelligence (AI) is fundamentally transforming everyday life, the economy and society worldwide. Generations have different attitudes towards AI, influenced by their technological socialization, trust, and ethical perspectives. Generation Z tends to be more open and adaptable, while older generations are more cautious (Kaur et al., 2023). Considering generational differences is crucial for the social acceptance of AI implementation (Zhou et al., 2022).

Objective: This study aims to examine the perception and use of artificial intelligence among the Hungarian population, with a particular focus on generational differences. The research will examine the use of AI in work and private life, the frequency of use, issues of responsibility, and its potential impact on the labour market and human development.

Methodology: During the primary research (n=374), quantitative data collection was conducted across different age groups. The study aimed to explore generational attitudes, knowledge, and usage patterns through both online and in-person questionnaires. The sample can be considered representative concerning the proportional distribution of the generations. A standardised questionnaire was used to ensure comparability and objective analysis.

Results: Based on the research findings, it can be concluded that Generation Z and Y in the sample are more familiar with both the advantages and potential drawbacks of AI than older generations. Younger respondents believe that AI can bring rapid progress to humanity, while older individuals are more sceptical. The majority of respondents think that humans should remain responsible for decisions made by AI. Most participants also concerned that AI may threaten jobs and pose a potential risk to humanity.

Conclusions: In conclusion, even if the social perception of AI in Hungary does not reveal substantial generational disparities, notable tendencies can be observed: younger generations tend to perceive artificial intelligence primarily in terms of its opportunities by using it more frequently, whereas older generations are more inclined to focus on its associated risks.

Limitations and future research directions: During the primary data collection, efforts were made to achieve generational representativeness. With the extension of the research, the focus could also be expanded to include demographic differences, educational background, and occupational categories. Furthermore, it would be important to explore the perceived benefits and concerns in more detail, based on qualitative information primarily in order to identify generational features.

Keywords: AI, generation, social innovation

Green Bonds in the European Union: A Systematic Literature Review on Determinants, Impacts, and Methodological Trends (2017–2024)

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Background and introduction: Climate change is one of the most urgent issues humanity faces nowadays. To support the global effort, the Paris Agreement was adopted by 196 parties at the UN Climate Change Conference in 2015. Its goal is to limit the temperature increase to 1.5°C above pre-industrial levels. In response, the European Commission launched the European Green Deal. As part of this, the EU has committed to achieving climate neutrality by 2050, with a strong focus on building a sustainable financial system. One of the cornerstones of this framework is the EU Taxonomy, which provides a clear classification of environmentally sustainable economic activities, aiming to steer capital flows towards green objectives. Green bonds are prominent instruments within the EU's sustainable finance strategy. Their purpose is to channel capital into environmentally beneficial projects. Therefore, understanding their determinants and their impact on both financial and environmental outcomes is essential.

Objective: The aim of this study is to systematically explore the existing literature on green bonds, identifying key research themes and gaps related to their drivers as well as their financial and environmental impacts. The review focuses on the period between 2017 and 2024, covering studies connected to EU countries. It aims to map the most frequently investigated variables, uncover emerging methodological approaches, and identify unanswered research questions. The goal is also to support future empirical research by offering a synthesis of potential indicators and models. In addition, the review considers contributions from social sciences that help contextualize green bond dynamics within broader sustainability and policy frameworks.

Methodology: To achieve the goals of this study, a systematic literature review (SLR) was conducted, incorporating two key methodological tools: PEO (Population, Exposure, Outcome): This framework helped define the scope and structure of the literature search. Population referred to the research context (e.g., green bonds, EU countries), Exposure included sustainability-related concepts, while Outcome focused on the potential determinants and impacts of green bond issuance. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses): This tool was used to guide and document the article selection process, ensuring transparency and reproducibility in identifying relevant studies and excluding those that did not meet the criteria.

Results: The search returned 85 articles from 2017 to 2024. After manual screening, they were classified into three categories: relevant (papers discussing green bonds and their relationship with CO_2 emissions, ESG, or macroeconomic variables within the EU or European countries), contextual (studies addressing these variables or offering methodological or theoretical insights into their relationships), and irrelevant (studies that did not examine green bonds or their connections to macroeconomic variables, or were inaccessible). 17 articles were categorized as relevant, 13 as contextual, and 55 as irrelevant. No relevant studies were published in the first two years of the examined period. The highest number of relevant articles was issued in 2024. Among the relevant and contextual papers, 76.67% used regression. Efficiency analysis, volatility modeling, bibliometric analysis, structural modeling, and event analysis were each used in 3.33% of cases, while descriptive methods appeared in 6.67%.

Conclusions: This review highlights the growing academic interest in green bonds across the EU, especially in relation to CO_2 emissions, ESG performance, and macroeconomic indicators. Although many of the reviewed studies focused on related themes, partly because of the applied keyword structure, there was notable variation in both research objectives and scope. While numerous studies examined green bonds or macroeconomic variables in non-EU contexts, substantially fewer focused specifically on green bond issuance in EU countries and its macroeconomic and environmental implications. Methodologically, regression-based approaches dominated, while structural models and alternative techniques were rarely applied. These findings suggest that although

the variables are increasingly aligned, future research could benefit from more robust and diversified methodological frameworks to better evaluate the financial and environmental effects of green bonds within the EU context.

Limitations and future research directions: This literature review was limited to sources available in the Scopus database. Only peer-reviewed articles written in English and marked as final were included in the analysis. The search was further restricted by a subject area filter and focusing primarily on economics, business, and multidisciplinary publications. Articles published between 2017 and 2024 were considered. Although a wide range of keywords and synonyms were applied in the search query, relevant studies may still have been omitted due to the constraints of the search logic and database indexing. The scope of the review could be expanded in future research by incorporating additional search terms, exploring other academic databases, and including grey literature and non-English sources. These extensions could offer a more comprehensive understanding of the evolving relationship between green bonds, sustainability performance, and macro-financial indicators in the EU context.

Keywords: systematic literature review, green bonds, european union, macroeconomic determinants, CO_2 emissions

Green city Ambitions - Innovative Strategies for Image Building

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Background and introduction: Environmental protection and sustainable development are essential for greener and more competitive cities. Innovation in the field of environmental protection promotes green and sustainable urban development through investments, projects and innovative solutions.

Objective: The aim of the study is to summarize and analyse the possibilities, findings, and results of the concept of green cities as an environmentally friendly, sustainable urban development model. An important aspect is the integration of innovative, green solutions into the development of the city image.

Methodology: The study on the one hand is based on systematic literature review summarizing the results of previous researches on the topic. On the second hand, a good example of a Hungarian city will examined and presented. It gives evidence on how an innovative environmental program and climate strategy can make a city greener and thus more competitive, and what impact it has on building a city's image.

Results: The applicability of the research results can provide guidance for green projects in domestic and international cities.

Conclusions: By complex exploring the impact of various green city functions and solutions on sustainability, the analysis provides a comprehensive picture of how and to what extent green city concepts contribute to building the city image.

Limitations and future research directions: A future research direction could be to assess whether cities have strategic planning documents that specifically promote green cities and solutions, and if so, for what time frame they are designed. The research would allow us to categorize cities based on their green city strategies.

Keywords: environmental protection, green city, sustainability, competitiveness, city image

How AI Transforms Marketing Education and Marketing Jobs - An in-Depth Interview Exploratory Research

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Background and introduction: Artificial intelligence (AI) is revolutionizing marketing, but uncertainty regarding new tools is common among Hungarian professionals. The potential of AI in data analysis, personalization, and automation is immense; however, the extent and manner of domestic adaptation pose specific challenges. This research aims to understand these dynamics in the Hungarian context, exploring the current state and future prospects of AI integration into marketing strategy and research.

Objective: The primary objective of the research is to explore how various Hungarian marketing stakeholders – academics, students, agency professionals, SME marketing managers, and AI solution providers – perceive the role of artificial intelligence in the field of marketing. A further aim is to identify the main challenges, opportunities, ethical considerations related to AI integration, and the necessary skills for future marketers.

Methodology: The study employed a qualitative research methodology in the form of in-depth interviews. Semi-structured interviews were conducted with representatives from five main stakeholder groups. Question modules were based on a predefined research plan, focusing on AI's role in marketing.

Results: The findings highlight the transformative impact of AI on all the stakeholders. Key challenges identified include high costs, lack of expertise, data quality issues, ethical concerns, and difficulties in tool selection. Necessary skills mentioned include analytical and critical thinking, as well as prompt engineering.

Conclusions: Human-AI collaboration, continuous learning, an ethical approach, and practical training are crucial for successful future adaptation of AI for all the mentioned stakeholders. SMEs and the education sector require special attention to increase AI readiness and to have an up-to-date AI knowledge.

Limitations and future research directions: The sample cannot be considered representative of the entire Hungarian marketing profession, but it helps to understand the current situation in a deeper way as it was part of an exploratory research. Future research can give a better understanding through large-scale interviews, quantitative surveys, and specific corporate case studies.

Keywords: artificial intelligence, generative AI, marketing, education

How could the Government Support the Spread of Alternative Energy Projects through Financial Incentives?

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Background and introduction: This paper analyses three renewable energy projects: a 200 kWp photovoltaic system, a 6 kW heat pump, and a 1200 kW wood chip–fired boiler. The study identifies the key risks that must be mitigated for market-oriented investors to implement such projects successfully. Potential policy instruments include pre-determined feed-in tariffs, green pricing schemes for renewable electricity, capital subsidies, grants, and rebates.

Objective: The objective is not to conduct a comparative assessment of the three cases, but rather to examine the financial instruments available to governments that can facilitate and incentivize their realization. Specifically, the paper explores how governments can reduce investment risk by promoting renewable energy projects through targeted financial incentives and by establishing supportive financial frameworks and resource provision.

Methodology: The investigation procedure for all three projects begins with the preparation of an Energetic and Economic Calculation covering a three-year period, which is continuously updated according to the input parameters of each respective year. The second stage consists of conducting an NPV analysis based on the annual data for 2025. In the final step, the potential impacts of different incentive schemes on NPV are assessed using a target value seeking approach.

Results: The government should provide annually varying support in line with changes in external economic impacts, which is specifically tailored to the individual project. The method proposed by the study is a system of adaptive state subsidies. For this reason, in the event of adverse effects, the level of government subsidy should increase, while in years favourable in terms of return, the government could still receive earnings from the projects, as a kind of bonus-malus system.

Conclusions: Based on a Hungarian example, the study proposes the implementation of an adaptive state funding system that can be extended and applied at an international level and can be adjusted to fluctuations in external economic impacts. In summary, this study points out that government has a crucial role in the proliferation of alternative energy projects by ensuring long-term returns for investors.

Limitations and future research directions: Presented project could operate in the Hungarian environment. Futures research directions could be a comparison with the situation in Visegrad four, in addition the analysis of supporting frames of this countries.

Keywords: sustainability, alternative energy, government support, financial incentives

How Nudging Shapes Safe Driving Habits: Evidence from Generation Z Drivers

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Background and introduction: Road traffic accidents remain a leading cause of death in Hungary, indicating that conventional intervention methods (e.g. fines) have not provided sufficient improvements in promoting safe driving habits. The study investigates how nudging - a concept within the field of behavioural economics - can enhance road safety among Hungarian Generation Z drivers.

Objective: The study aims to identify that out of seven nudge types which ones can most effectively influence safe driving behaviour among Generation Z drivers in Hungary, and to explore whether nudges can be personalised, thus supporting more efficient road safety interventions. Ultimately, the aim is to contribute new insights into improving the road safety situation in Hungary.

Methodology: During the research a questionnaire survey was conducted among Hungarian Generation Z drivers, gathering 153 valid responses. The survey included seven nudge approaches, each represented by 3-4 statements, the respondents' agreement with them being assessed on Likert scales. Exploratory factor analysis was applied to identify underlying factors influencing driving habits and non-parametric tests to assess the relationship between the extracted factors and personal traits of respondents.

Results: Three key factors were extracted: comparison of behaviour explaining 25.2%, shaping knowledge 21.0%, and natural consequences 16.6% of the total variance. Furthermore, it was identified that women respond more positively to the natural consequences approach; those who do not own a car respond more positively to comparison of behaviour; and those who do not know whether their car is equipped with diagnostic devices react more positively to natural consequences.

Conclusions: The research supports that carefully constructed and implemented nudges could greatly contribute to creating a safer driving environment in Hungary. A key role may be allocated to policymakers, driving instructors and parents to support the forming of safe driving habits among young drivers. Ultimately, the results of this study may contribute to forming a better understanding of driver behaviour as well as the identification of the most appropriate nudging strategies to enhance driving habits.

Limitations and future research directions: The survey was conducted among university students in Győr in October 2024; therefore, the research is limited by the cross-sectional nature of the data. Furthermore, the survey was based on a non-representative and self-reported sample. Future research therefore should include broader age groups with representative samples. Moreover, with the rise of micromobility, exploring the effect of nudges on scooter users would also offer valuable insights into improving road safety in Hungary.

Keywords: nudging, driving behaviour, road safety, Generation Z, factor analysis

How Organic Farming can Become a Driver of Sustainability, and how its Study Reveals the (Un-)Consistency of Sustainability Indicators and Strategies

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Background and introduction: It is now a triviality that the question of global sustainability will determine the outcome of the 21st century, and all further history of humanity. And besides its utmost importance, this is by far the largest management problem humanity has ever faced. Yet (or as a consequence), not only an adequate global answer to this question, but a global effort or motivation for it is far from reality.

Objective: As a result, research on sustainability management methods, strategies and other sustainability governance techniques should pay increased attention to forerunner economic sectors and trends in social change.

Methodology: By analyzing secondary data, we search for indicators and causes of growth, especially massive growth in the organic farming sector; as well as patterns of its propagation and its connection with other sustainability trends beyond agriculture. We also analyse similarities and differences in organic farming sectors of different regions, in order to understand which factors are crucial, and which are indifferent in shaping a more rapidly extending and economically successful organic agriculture.

Results: In this paper, we study organic farming as such a forerunner, and potential initiator of other parts of sustainability transition in neighbouring sectors, socioeconomic structures and activities. The results are ambiguous; the main strength of organic farming in this role remains being a promoter of sustainability in consumeristic settings. Ambiguities about UN SDG's have been found and described as well.

Conclusions: We draw conclusions as for the main identifiable indicators of future prospects in organic farming, the connection between organic farming prosperity and general sustainability, the most efficient channels of spreading sustainability-oriented thinking to other socioeconomic sectors, etc. The main conclusion is that policymakers have to stress sustainability as a systematic feature much more in the organic industry.

Limitations and future research directions: Sparsity of quality data, the coarse regional and sectorial resolution, as well as the diversity of underlying causalities may hinder drawing the results, but coarse results are already able to be used for certain strategic analysis and planning.

Keywords: organic farming, global sustainability, sustainability transition, sustainable agriculture, sustainability patterns, UN SDG’s

HRM and Sustainable Leadership in Managing the Global Workforce – Survey-Based Insights from a Cross-Cultural Study

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Background and introduction: Managing the global workforce presents new challenges for organizations as digitalization, hybrid work models, and cultural diversity significantly transform leadership roles. Sustainable leadership, intercultural competence, and digital communication are no longer supplementary elements—they have become key components of effective leadership in an international context. The study aims to investigate the mechanisms by which these complex factors affect employee perceptions.

Objective: The primary goal of this research was to examine how employees perceive sustainable leadership behavior, the quality of digital communication, and the role of intercultural competencies in change management. The study also examined how these factors impact perceptions of leadership support and job satisfaction within the context of hybrid work environments and cultural diversity.

Methodology: The study was based on quantitative research using a structured questionnaire. A total of 115 employees working in international settings, either in hybrid or remote work arrangements, completed the survey. Sampling was conducted through a network-based, non-representative method. The instrument employed validated scales to measure dimensions such as sustainable leadership, digital communication, leadership support, intercultural competence, and change management.

Results: A parabolic relationship emerged between sustainable leadership and perceived digital communication quality: moderate levels enhanced communication, while excessive presence reduced effectiveness. Intercultural competence had a statistically significant, positive effect on perceptions of change management. Gender, age, and work arrangement also shaped perceptions of leadership support and satisfaction, with female and younger employees being more responsive to empathetic leadership styles.

Conclusions: The results highlight that trust, empathy, and the quality of interactive communication are the most influential factors shaping perceptions of leadership behavior. In digital environments, overly formal and highly regulated leadership may negatively affect team dynamics, whereas adaptive, culturally sensitive leadership supports more effective change management and fosters stronger employee engagement. Developing such leadership competencies is therefore essential in global work context.

Limitations and future research directions: The main limitations of the study are the non-representative sampling method and the use of self-reported questionnaire data, which may limit the generalizability of the findings. Future research could benefit from incorporating qualitative approaches (e.g., interviews, focus groups) and including leadership self-reflection in the analysis. Longitudinal studies could provide deeper insights into the long-term impact of leadership behavior on organizational culture and employee commitment.

Keywords: sustainable HRM, leadership development, digital work environment, intercultural competencies, global workforce management

Human-Centered AI for Decision Support Systems: Enhancing Usability and Trustworthiness

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Background and introduction: AI is revolutionizing decision-making, yet many AI-based Decision Support Systems (DSS) suffer from limited transparency, causing low user trust and resistance. Human-Centered AI (HCAI) addresses these gaps by emphasizing ethical design, interactivity, and user-oriented features. This study investigates how HCAI can improve DSS usability and acceptance, supporting ethical innovation in decision-making processes.

Objective: The research aims to explore how embedding HCAI principles such as transparency, interpretability, adaptability, and ethical design into AI-based DSS enhances user trust and system usability. The study seeks to develop a conceptual framework and evaluate its impact through empirical methods in high-stakes decision environments like finance and healthcare.

Methodology: A prototype DSS was developed with HCAI principles, including explainable outputs and user feedback loops. It was tested with domain experts using real-world datasets from finance and healthcare. Participants evaluated trust, decision accuracy, usability, and satisfaction. Results were compared with a traditional AI-based DSS to assess the practical value of the HCAI approach.

Results: Users interacting with the HCAI-based DSS reported significantly higher trust and understanding compared to those using traditional systems. Interactive explanations improved user engagement, while transparent logic increased decision confidence. The prototype demonstrated that HCAI features enhance both subjective user experience and objective decision performance.

Conclusions: Integrating human-centered principles into DSS design leads to more trustworthy, transparent, and effective decision-making tools. This approach supports responsible AI use, promotes digital inclusivity, and aligns innovation with societal values. It offers a sustainable path for AI integration in sectors where user trust and ethical alignment are essential.

Limitations and future research directions: This study was limited by scope and sample size, focusing on two application areas. Future work should apply the framework across diverse sectors and cultural contexts, using larger datasets and long-term testing. Further research should also assess regulatory implications and explore how policy can support ethical HCAI adoption globally.

Keywords: decision support systems, human-centered AI, transparency, user trust, ethical AI, explainability, human-computer interaction

Hungarian Films – Do Sociodemographic Characteristics Impact Viewers' Willingness to Watch?

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Background and introduction: Hungarian film production has undergone significant transformation since the regime change. This change was felt not only on the service provider's side but also in terms of consumers. Domestic consumers have become less enthusiastic about Hungarian films over the past decade compared to international, American films. However, the films released last year, such as "Gone running" and "How Could I Live Without You?", can be considered counterexamples to this phenomenon.

Objective: The aim of the research is to explore what sociodemographic characteristics potential Hungarian film consumers have and what impact they have on their openness to consuming domestically produced films.

Methodology: During the secondary research, the state of domestic film production and consumption in Hungary was examined. This formed the basis for the next step, which involved conducting individual and triad in-depth interviews with viewers - across mixed genders and age groups - of the aforementioned films, which have had the highest number of viewers since the regime change.

Results: In addition to the overall film consumption habits of the in-depth interview subjects, their age, education level, and cable television viewing habits have a significant impact on the consumption of Hungarian films. Those who have a cable TV subscription and regularly watch domestically produced content are much more open to Hungarian films as well.

Conclusions: The openness to consuming Hungarian films varies among different domestic social groups. Therefore, there is a need for filmmakers to communicate with consumers effectively via various channels. For example, while one age group with cable television subscriptions is more exposed to actors on domestic TV, another age group with solely streaming service subscriptions are not. Hence, both groups should be reached through a unique use of various platforms.

Limitations and future research directions: The limitation of the research lies in the characteristics of the in-depth interview methodology, which, due to its qualitative nature, does not allow for general conclusions to be drawn from. Furthermore, in the case of triad interviews, the responses of one of the two subjects may have dominated the other. In the future, it would be worthwhile conducting more in-depth interviews with various additional qualitative measures, such as creative groups.

Keywords: Hungarian film consumption, film consumption habits, consumer behavior

Hungarian Healthcare System(s) – Patient Experience and Narratives

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Background and introduction: The Hungarian Bismarck model-based healthcare system has undergone significant changes over the past decades. The relationship between the state-funded and the parallel, privately financed healthcare systems is still evolving, but each year, there is a noticeable increase in household spending on private healthcare services. Patients are often uncertain when choosing a doctor, which further exacerbates the experience of using a service type that typically involves a high degree of vulnerability.

Objective: The aim of the research is to present the operational issues of the currently coexisting, yet in many ways intertwined, Hungarian healthcare systems based on patients' narrative interviews.

Methodology: In the research, narrative in-depth interviews are conducted with patients who had recently used healthcare services. Their experiences during provider selection and throughout the healthcare process are scrutinized. By analyzing these stories, the areas in need of further research and causing difficulties for patients due to the imperfect operation of the healthcare system are summarized.

Results: The complex relationship between the two healthcare systems is clearly demonstrated by the fact that neither the interviewees nor people in their social circles exclusively use only either private or public healthcare services. The reasons behind this are highly complex, but the challenging factors can be grouped into the following dimensions: costs, previous negative experiences, time factor, communication and vulnerability, lack of trust, and medical referrals between the systems.

Conclusions: A negative attitude toward public healthcare is prevalent, which can be overridden by the reputation of doctors or financial considerations. Interviewees revealed that they alternate between the parallel systems based on situational factors, often making emotionally driven decisions. As a result, the individual factors influencing decision-making are difficult to clearly define. Further research is needed to examine the use of specific services in either the public or private sector.

Limitations and future research directions: The limitation of the research lies in the nature of the narrative in-depth interview methodology, which, due to its qualitative nature, does not allow for generalizable conclusions. I consider it necessary to conduct additional narrative in-depth interviews in order to uncover further factors, which could form the basis for future qualitative research.

Keywords: patient experience, healthcare system, service process, private and public healthcare

Hungary's Bilateral Investment and Trade Relations with the Republic of Korea: A Systematic Literature Review

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Background and introduction: The role of Asian partner countries in Hungary's foreign trade and FDI relations has increased thanks to the Opening to the East policy announced in 2012. Among them, the Republic of Korea (otherwise known as South Korea) stands out, which was the largest foreign investor in our country in 2019, 2021 and 2022, and is also among the top ten most important partner countries in terms of imports in our foreign trade. The aim of the research is to map the capital investment and trade relations of these two countries based on the literature published on the subject so far.

Objective: The study seeks to answer the following research question: how do relevant publications published between 2006 and 2024 present the foreign economic relations of Hungary and the Republic of Korea, specifically focusing on trade and foreign direct investment? The aim is to map out what research has been conducted on the topic in the international literature so far and to see what results they have reached, thereby creating a general picture of the development of Hungarian-South Korean bilateral economic relations in the above referred period.

Methodology: The systematic literature review was conducted following the PRISMA principles, which provide an appropriate framework for conducting this type of research. Relevant literature was identified by searching ScienceDirect, Scopus and Google Scholar databases. The PEO framework was used for screening the literature. The PEO framework divides the relevant search terms into three larger units: population (P), exposure (E) and outcome (O). The chosen terms included variants of Hungary, South Korea, relations, foreign direct investment and trade. After the initial search, the results had to be further narrowed down based on certain criteria. For example, the publications should be freely accessible, written in English and between 2006 and 2024, should be related to the fields of Social Sciences, Business and Management, and should also be related to the topic of the research question. In addition, studies that were included in multiple databases had to be filtered out to avoid duplication.

Results: By running the search query composed of the search terms, 45971 publications were found in the ScienceDirect database, 874 in the Scopus database, and 20900 in the Google Scholar database. After applying the above mentioned criteria, a total of 96 relevant literature was screened out from the three databases based on the titles and abstracts of the various publications.

Conclusions: Based on the preliminary results, it can be stated that the topic seems to be quite under-researched in international literature. There seems to be only a few publications that specifically deal with Hungarian-South Korean FDI and trade relations, at least in English, in the examined databases, and along the given search terms. In many cases, information about this relationship can be found in publications that deal with South Korean relations more in the context of the Visegrád Four, the CEE region, or the EU. With a few exceptions, publications that specifically deal with Hungarian-South Korean relations are typically research published in English by Hungarian researchers.

Limitations and future research directions: The results were selected and analyzed based on the screening criteria given above. Focusing on other databases and analyzing studies written in other languages could further refine the results. In addition, the search terms used during the initial screening also limited the applicable results. In future research, it would be worthwhile to further refine the picture by conducting a systematic literature review in Hungarian databases (especially MTMT) and also in South Korean databases.

Keywords: Hungary, South Korea, bilateral relations, foreign direct investment, trade, systematic literature review

Hybrid Insights for Heritage Destinations: Integrating Clustering and GenAI to Reimagine Boston's Tourism Strategy

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Background and introduction: As Boston approaches its 400th anniversary in 2030, there is an urgent need to revamp its tourism strategy to better engage modern, diverse travelers. Traditional marketing emphasizes Boston's history but lacks personalization. This study, conducted in partnership with the Mayor's Office of Tourism, leverages AI-enhanced methods to develop deeper insights into visitor motivations and deliver targeted strategies.

Objective: The study aims to (i) define distinct tourist personas using both clustering analysis and AI-generated interviews, (ii) develop targeted marketing strategies tailored to each persona's motivations and travel behavior, and (iii) demonstrate how Generative AI can enhance destination marketing research and planning through persona simulation and scenario modeling.

Methodology: We used a hybrid approach. Survey data from 200 Northeastern U.S. residents was analyzed using K-means clustering to identify four visitor personas. We then conducted in-depth interviews with AI-simulated versions of each persona, allowing for deeper qualitative insights. These were synthesized into actionable marketing strategies, which were embedded in a five-year interactive simulation tool.

Results: Four distinct personas emerged: The Planners, Nature Lovers, Social Explorers, and Adventurous Learners. AI interviews added depth to each profile, highlighting their motivations and unmet needs. This informed tailored marketing strategies and a scenario-based simulation, helping marketers test and refine persona-driven campaigns over time.

Conclusions: The study demonstrates the power of blending traditional segmentation with Generative AI to derive deeper, more actionable insights into traveler behavior. It offers a practical roadmap for cities like Boston to craft nuanced, persona-specific tourism campaigns that are both inclusive and adaptive. Our research also illustrates how AI can serve not merely as a tool, but as a collaborative agent in destination strategy development.

Limitations and future research directions: The personas were derived from a U.S.-based sample, limiting generalizability across international tourist populations. Future research could extend this methodology to cross-cultural or multi-lingual contexts. Additionally, while GenAI interviews yielded rich data, human validation remains essential for reliability. Longitudinal deployment of the simulation tool could further test campaign effectiveness in real-time.

Keywords: tourism marketing; visitor segmentation; generative AI; hybrid research methodology; personalized experiences

Immigrant Entrepreneurship in the European Union: Dynamics of Success, Persistent Challenges and Evolving Trends (2010-2025)

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Background and introduction: This study compares the tendencies of the immigrant entrepreneurship in the European Union in the last 15 years. The aim is to provide a detailed comparative analysis of tendencies and entrepreneurial activities (SME's), identifying key factors that influence their economic integration and success.

Objective: Focus on understanding the varying levels of labor market integration, regulatory impacts, and innovation outcomes across the EU countries.

Methodology: Literature review (a comprehensive review of existing research) and data collection of quantitative data (gather statistical data from national and international databases, e.g., Eurostat, OECD on immigrant employment rates and entrepreneurial activities).

Results: The European Union has experienced a profound demographic transformation over the past 15 years, largely driven by increased international migration. Historically often perceived as necessity-driven activities concentrated in low-barrier, ethnic-specific sectors, the rising human capital among immigrants, characterized by an increasing share with tertiary education, now correlates with a discernible shift towards more complex, opportunity-driven enterprises. This evolution challenges outdated st

Conclusions: The study underscores the importance of tailored policy measures to improve immigrant integration and entrepreneurial success, recommending enhanced support systems, regulatory reforms, and cultural initiatives to foster inclusive economic growth in each country.

Limitations and future research directions: Data Availability can be limited. The study may not capture broader regional trends or global patterns in immigrant workforce and entrepreneurship. Future research directions could be to conduct through extensive international online survey research to gather insights from those affected by the issue.

Keywords: immigrant workforce, entrepreneurship, labor market integration, European Union, SME's

Impact of Green Logistics Practices on Environmental Sustainability Within Manufacturing Supply Chains in Nairobi County, Kenya

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Background and introduction: This study investigates the impact of green logistics practices on environmental sustainability within manufacturing supply chains in Nairobi County, Kenya. Despite the increasing global emphasis on sustainable development, the adoption of eco-friendly logistics in Kenya's manufacturing sector remains limited. This is largely due to high operational costs, inadequate infrastructure, and low levels of awareness among key stakeholders.

Objective: The main objective of the research is to examine how green logistics contribute to environmental sustainability and to identify the challenges that hinder their implementation.

Methodology: The study adopts a mixed-methods approach, using both statistical data from industry and government sources and qualitative insights from case studies of selected manufacturers in Nairobi.

Results: The results reveal that green logistics practices have a positive effect on environmental sustainability by enhancing resource efficiency and reducing waste and emissions. However, widespread adoption is constrained by financial, infrastructural, and institutional barriers.

Conclusions: The study concludes that collaborative efforts between government agencies and manufacturing firms are crucial to overcoming these challenges and enhancing sustainable supply chain practices.

Limitations and future research directions: One limitation of this research is its focus on Nairobi County alone; future studies should expand to other regions and explore long-term effects of green logistics on industrial sustainability.

Keywords: Green logistics, environmental sustainability, manufacturing, supply chains, Nairobi County

Impact of Sustainable Leadership Practices on Green Innovation: The Mediating Role of Green Organizational Culture

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Background and introduction: This study explores how sustainable leadership practices influence green innovation, with a focus on the mediating effect of green organizational culture. Sustainable leadership is crucial in cultivating an environmentally responsible culture within organizations, as they emphasize sustainability goals and inspire commitment across all levels of the organization.

Objective: How sustainable leadership practices influence green innovation, with a focus on the mediating effect of green organizational culture

Methodology: The study employed simple random sampling to choose SMEs for data collection, resulting in the completion of 477 questionnaires. Confirmatory Factor Analysis (CFA) using AMOS 24 was conducted to assess both reliability and validity, with scale reliability measured by Cronbach's alpha coefficient. The proposed model was then tested using Structural Equation Modeling (SEM).

Results: The findings indicate robust support for the hypotheses examined. Foundational practices significantly contribute to the development of a green organizational culture, with higher-level practices demonstrating even stronger impact. Additionally, key performance drivers play a crucial role in shaping this culture. A green organizational culture positively influences both green product innovation and process capability, highlighting the importance of sustainable leadership practices and a supporti

Conclusions: The study's examination of the indirect effects of foundational practices, higher-level practices, and key performance drivers on both product and process green innovation, mediated by green organizational culture, reveals nuanced insights. While the indirect impact of foundational practices on product green innovation was not statistically significant, higher-level practices and key performance drivers demonstrated significant positive impacts.

Limitations and future research directions: While fostering a green organizational culture may not necessarily be the primary driver of product innovation, it is crucial for enhancing the relationship between organizational practices and green innovation outcomes. The study underscores the necessity of cultivating a green organizational culture to maximize the efficacy of organizational practices for green innovation in both product and process domains.

Keywords: sustainable leadership practices, green organizational culture, green product innovation, green process innovation

Implicit Responses as a Potential Source of Information in Advertising Literacy Research: Case Studies Using Biometric Methods

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Background and introduction: Advertising literacy is a key prerequisite for young people to critically navigate a digital environment that is increasingly saturated with hidden, personalised and emotionally-attuned advertising. However, traditional research approaches, mainly based on questionnaires and verbal responses, provide only partial insights into the actual processing of advertising stimuli.

Objective: This study aims to demonstrate how biometric and behavioural methods can reveal implicit emotional responses to advertising that remain hidden in traditional research, offering a deeper understanding of adolescent advertising literacy.

Methodology: Methodology: The study presents four case studies using a combination of biometric (GSR, facial coding) and behavioural tools to analyse adolescents' unconscious reactions to audiovisual advertisements. The aim is to identify what layers of ad perception remain hidden with traditional methods and what their relevance is for a comprehensive understanding of ad literacy.

Results: Results: The research showed that participants' implicit responses often contrasted with their stated attitudes. For example, we found higher emotional responses to environmental product labeling or gender differences in the processing of affectively tuned ads that would otherwise go unnoticed.

Conclusions: Conclusion: The study confirms that consumer neuroscience has the potential to bring new insights to advertising literacy research and to explore the hidden dimensions of advertising reception, thus significantly complementing traditional research tools.

Limitations and future research directions: Limitations: The study is exploratory in nature and based on small sample sizes, which limits the generalizability of the findings. Biometric methods capture only certain dimensions of emotional responses and require contextual sensitivity in interpretation.

Keywords: advertising literacy, eye-tracking, neuromarketing, visual communication

In Pursuit of Opportunities: Understanding the Drivers of Nurse Workforce Migration Intentions

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Background and introduction: Nurses from source countries have recently become a crucial source of human capital to bridge the gap in human resource needs for healthcare facilities in high-income countries. This demand has heightened the interest of nursing personnel in migrating due to individual, organisational, and national factors.

Objective: This study aimed to examine individual factors such as family income and perceived social benefits to understand how they influence nurses' migration intentions.

Methodology: The study employs a quantitative cross-sectional approach to survey nurses working in public health institutions in Ghana and Hungary.

Results: It is anticipated that the outcome of the study will illuminate the contextual challenges from the individual's perspective that drive nurses' migration intentions to the Global North.

Conclusions: The study fills the gap in existing literature that has not sought to investigate the phenomenon of migration from a socio-psychological perspective. Moreover, it significantly contributes to the literature on health human resources management to aid in implementing strategic measures for the management and retention of health personnel, ensuring access to healthcare among the masses.

Limitations and future research directions: Although the study was conducted in two countries, the data collection period had to be extended due to low response. Making it challenging to do an extensive comparative analysis. Future comparative analysis should be conducted from the organisational level.

Keywords: nurse migration, family income, social benefits, peer influence, social influence theory

Influencers Dug their own Grave – Exploring the "Deinfluencing" Phenomenon

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Background and introduction: In recent years, influencer marketing has become one of the most dominant online marketing strategies, especially on social media platforms, such as Instagram and TikTok. Nevertheless, the emergence of "deinfluencing" – a counter-movement that challenges excessive consumption and manipulative promotion – reflects a deeper transformation in consumer expectations. The present study explores the growing demand among Generation Z users for transparency, authenticity and value-based messaging.

Objective: The objective of this study is to explore the emergence of the deinfluencing trend among students from Széchenyi István University and to assess whether the internationally observed shifts in consumer behaviour are also present in a local context. The study also aims to understand the motivations behind influencer scepticism and explore how these changing attitudes influence purchasing decisions within the digital environment.

Methodology: A qualitative research design was employed utilising focus group interviews with 27 participants, primarily students in engineering programmes at Széchenyi István University. The composition of the groups was determined by the number of participants and their international backgrounds (one group was conducted in English). Each session lasted 35 minutes, during which participants shared their experiences regarding influencer content, purchasing habits and critical perspectives on social media.

Results: Participants showed strong awareness of influencer marketing tactics and often questioned the credibility of sponsored content. Many preferred friends' recommendations or detailed reviews over influencer endorsements. Deinfluencing was seen as a way to resist manipulation and make informed choices. Examples included avoiding products due to overexposure or perceived inauthenticity, signalling a shift towards more selective, critical consumption habits.

Conclusions: The findings reveal that deinfluencing is not a temporary trend but signals deeper changes in the values of Hungarian Generation Z consumers. This group increasingly rejects superficial marketing, showing a strong preference for authenticity, peer trust, and transparency in digital communication. The study highlights the importance for marketers to adapt their strategies to meet the evolving expectations of a more critical, informed, and socially conscious consumer base.

Limitations and future research directions: The study's limitations stem from its non-representative sample, mainly male engineering students, making it unsuitable to generalize to all Gen Z consumers. Future research should include more diverse genders and academic fields. Using a mixed-method and longitudinal design could yield deeper insights into how deinfluencing evolves and reshapes trust and credibility in digital marketing.

Keywords: deinfluencing, Generation Z, social media, consumer behaviour, influencer marketing

Innovation- and Platform based Internationalisation of SMEs in the Central and Eastern European Countries

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Background and introduction: The internationalization of small and medium-sized enterprises (SMEs) in Central and Eastern European (CEE) countries is increasingly shaped by innovation-driven strategies and digital platform integration. This study explores how SMEs leverage technological advancements and digital ecosystems to expand beyond domestic markets, overcoming traditional resource constraints and institutional barriers.

Objective: We focus on the qualitative features of internationalisation. By analysing key drivers such as innovation capabilities, platform-based business models, and supportive policy frameworks, we identify patterns that enable competitive international market entry of the relevant SMEs.

Methodology: Our methodology relies on semistructured interviews with SME-owners/managers of ten firms and detailed company case studies based on the interviews and publicly available data. We carried out a case study level comparison of the interview responses.

Results: The findings highlight that SMEs in CEE countries benefit from digital platforms that reduce transaction costs, facilitate cross-border collaboration, and enhance scalability. Moreover, the role of innovation in product differentiation and process efficiency is crucial in sustaining global competitiveness. Policy implications suggest that fostering digital infrastructure and innovation-friendly environments can accelerate SME internationalization.

Conclusions: The study contributes to the broader discourse on internationalisation of firms and digital transformation by offering insights into the strategic pathways CEE-based SMEs adopt in international markets.

Limitations and future research directions: Limitations include the relatively small sample of Hungarian SMEs, thus further research is aimed at extending the sample and maybe comparing the Hungarian situation with those of other countries of the Central and eastern European region (most probably Slovakia, Czechia, Romania and Poland).

Keywords: small and medium sized enterprises, innovation, internationalisation

Innovation and Sustainability: An Empirical Study on Hungarian Football Clubs

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Background and introduction: The intersection of innovation and sustainability has gained increasing attention in the context of sports management. However, limited empirical research addresses how these concepts manifest in Hungarian football clubs. This study aims to explore the relationship between innovation, sustainability, and economic performance, building on the assumption that clubs embracing these principles can gain a competitive edge. The research is grounded in prior theoretical work and seeks to fill a gap by examining how club management and athletes perceive and implement sustainability and innovation.

Objective: The main objective of the research is to assess how Hungarian football clubs integrate innovation and sustainability into their operations and strategic thinking. It aims to determine whether such integration contributes to improved organizational performance, enhances the motivation of athletes and coaches, and leads to long-term economic benefits for clubs and their communities.

Methodology: The research employed a mixed-methods approach. Qualitative data were collected through in-depth interviews with senior management of five Hungarian football clubs to explore their commitment to sustainable and innovative practices. Quantitative data were gathered via a structured questionnaire distributed to coaches, professional players, and amateur athletes, measuring attitudes and experiences related to innovation and sustainability within their respective clubs.

Results: Findings indicate that clubs where management prioritizes sustainability and innovation report higher levels of internal motivation among players and coaches, alongside more efficient organizational practices. Statistical analysis of the survey data suggests a strong correlation between management commitment to these values and improved team performance, increased stakeholder engagement, and perceived economic resilience.

Conclusions: The study concludes that innovation and sustainability are not only compatible with competitive sports but can also be key drivers of success. Clubs that align strategic management with these values are more likely to experience improved motivation, better economic performance, and stronger community ties. The findings support the idea that sustainability and innovation offer long-term benefits beyond environmental or technological gains.

Limitations and future research directions: The study is limited by its sample size, focusing on five clubs and a specific national context. Further research could expand the sample to include more diverse clubs and regions for broader generalizability. Longitudinal studies are also recommended to assess how innovation and sustainability initiatives impact performance over time. Future work may also explore the role of external stakeholders and funding structures in supporting these strategies.

Keywords: sustainability, innovation, management, sport, organizational performance

Integrating Demand-Responsive Transportation into Smart City Strategies: Implications for Sustainable Urban Mobility in the European Union – A Systematic Literature Review

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Background and introduction: Demand responsive transportation (DRT), smart mobility, and smart cities are relatively new concepts. This study aims to define DRT and its synonyms, while also describing smart city and smart mobility. It explains why DRT is particularly relevant in urban areas and explores how policies can support its effective implementation and growth.

Objective: The main goal is to examine how DRT systems can be embedded into the smart city framework to create sustainable, efficient, and user-friendly mobility solutions. It also investigates international strategies and policy directives that support the development of such transport systems across the European Union.

Methodology: The study uses a systematic literature review (SLR) supported by the PRISMA and PEO frameworks. Sources were mainly drawn from the Scopus database. The methodology enables the identification of interconnections between smart mobility, smart city development, and DRT practices.

Results: The analysis identified various definitions and synonyms for DRT. It demonstrates how DRT contributes to the smart mobility agenda and how it fits into broader smart city systems. The study found that DRT can offer more environmentally friendly, effective, and sustainable mobility solutions, supported by several innovative international initiatives.

Conclusions: The research provides a solid base for further investigation and highlights DRT as a key component of future urban mobility. It outlines the importance of DRT for companies, governments, and organizations, and offers a structured vocabulary for future academic and practical work in this domain.

Limitations and future research directions: This study is limited by its reliance on a single database (Scopus) and a specific set of keywords. Future research should include other databases and primary data collection. Deeper exploration of how DRT integrates with other smart city dimensions is also recommended for future work.

Keywords: on-demand transportation, smart city, smart mobility, European Union, sustainability, urban services, sustainable development

Integrating Social Media Usage and Financial Performance of Community - Based Tourism Enterprises: Empirical Insights from Vietnam

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Background and introduction: Social media marketing (SMM) is integral for business communication, marketing, operations, and multiple other operations. There is an increasing interest among scholars, academics, and practitioners in comprehending the function of social media marketing in the tourist and hospitality sectors. However, limited research was conducted to comprehend the adoption and application of social media in community - based tourism enterprises (CBTEs).

Objective: The objective of this study is to investigate the adoption and utilization of social media platforms for financial performance by ownership of CBTEs. This study evaluates the determinants influencing owners' adoption of various platforms, grounded in an adaptation of the technology acceptance model (TAM).

Methodology: A survey was conducted with a convenience sample of 336 business owners utilizing social media in Vietnam. The SmartPLS methodology was employed to assess structural equation modeling (SEM) in order to investigate the causal relationships among all proposed constructs.

Results: The results indicate that social media utilization can improve the financial performance of CBTEs. This research presents numerous theoretical and practical outcomes.

Conclusions: The findings are beneficial for both managers and policymakers in Vietnam's community - based tourism sector, as both groups may utilize the data to attract a wider range of social media entrepreneurs to the tourism business.

Limitations and future research directions: The present study analyzed the impact of social media usage across various platforms, acknowledging their unique characteristics, advantages, and drawbacks. Future research could concentrate on individual sites for a comprehensive assessment, potentially enriching the knowledge base regarding the performance of specific platforms in relation to sustainable CBTEs.

Keywords: social media usage, financial performance, tourism enterprises, Vietnam

Integration of Artificial Intelligence in the Strategic Branding Process

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Background and introduction: In recent years, there have been fundamental changes in the marketing field due to the rapid development of artificial intelligence (AI). With the increasing availability of advanced digital tools, this is also significantly changing the way companies approach building and managing their brand. In an increasingly competitive digital environment, it is therefore imperative for businesses to seek innovative and effective methods that enable them to increase visibility.

Objective: This paper analyses the use of AI in strategic branding in several key areas: generating brand names and logos, creating personalised content, automated interaction through chatbots, predictive trend analysis or optimising campaigns based on data analytics. At the same time, it also addresses issues of creativity - it explores how AI tools can support creative processes without replacing the human factor, but instead expanding the capabilities of teams working on brand creation.

Methodology: The methodological framework of this paper is primarily based on a qualitative research approach with a focus on the case study method. The main objective was to gain a deeper understanding of the concept of AI in marketing practice, to explore the possibilities of its use in strategic branding and to identify practical implications for SMEs.

Results: The main findings show that the deployment of AI tools significantly accelerates and streamlines the process of brand creation and management. Automating routine marketing tasks with AI can reduce content preparation time by up to 40%, while increasing both the consistency of visual communication and the accuracy of customer targeting. AI enables better personalisation of marketing campaigns and higher customer engagement rates as it can analyse large volumes of data.

Conclusions: Research has confirmed that AI plays an important role in optimizing branding processes and brings practical value to businesses of all sizes. However, the best results were achieved when AI tools were combined with human creativity and strategic thinking, with AI serving as a support for original ideas. The results of this paper highlight the importance of linking theoretical knowledge with practical recommendations and provide guidance on how to effectively implement AI in marketing.

Limitations and future research directions: Limitations of the research and paper are the subjectivity of the qualitative analysis and the limited number of case studies. Further research should include more extensive quantitative exploration and deeper analysis of the impact of AI on the emotional aspects of a brand.

Keywords: artificial intelligence (AI), marketing, stratec marketing, brand

Investigating Flow-Promoting Leadership Skills by Using FLIGBY Serious Game

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Background and introduction: Despite decades of study, leadership definitions have been critiqued as "zombie leadership." Leadership extends beyond formal roles, embodying how individuals inspire the best in themselves and others. Consequently, leadership development is self-development, highlighting the need to assess skills in both everyday individuals and managers. Additionally, Csíkszentmihályi's Flow theory provides a framework for fostering this inspiration.

Objective: To assess the capability of creating flow in the workplace, this large-sample study examines flow-promoting leadership skills such as balancing skill, recognition of personal strengths, strategic thinking, and feedback among individuals with varying levels of managing experience, from none to advanced. Participants aged 18 to 60 were recruited from across Europe and the American continent.

Methodology: Data were collected between 2013 and 2024 using the FLIGBY (Flow is Good Business for You) serious game, a virtual simulation tool designed to develop and assess leadership skills on a 0–100 scale within realistic scenarios. FLIGBY places particular emphasis on fostering flow—a state of peak engagement and performance within teams. The resulting dataset enables quantitative analysis of the relationship between the four flow-promoting leadership skills and managing experience using SPSS and STATA

Results: ANOVA results revealed statistically significant differences in feedback and strategic thinking scores across time of management experience, while no significant differences were found for recognising personal strengths or balancing skills. Linear regression confirmed the significance of feedback and strategic thinking; however, the slopes indicate the effect is negligible.

Conclusions: The findings indicate that longer management experience alone does not enhance flow-promoting leadership skills. This supports the view that leadership development is not automatic with time but requires intentional self-development. Managers must take responsibility for cultivating these skills. Conversely, developing such competencies in everyday life may prepare individuals for future leadership roles and foster flow-supportive work environments.

Limitations and future research directions: Future research could consider additional variables such as age and culture, as recent studies suggest cultural differences may influence leadership skills. Exploring other FLIGBY-measured skills related to managing time, we could gain deeper insight, while grouping the 29 leadership skills may reveal new analytical directions.

Keywords: flow, FLIGBY, flow-promoting leadership, leadership skills, leadership

Investigating the Role of Hungarian Research Universities in Public Education and Their Regional Commitment

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Background and introduction: Some Hungarian higher education institutions also serve as maintainers of public education institutions, offering unique opportunities to enhance the quality of education. This study examines the role of public education networks maintained by the University of Debrecen, the University of Pécs, and the University of Szeged, with a particular focus on regional engagement and institutional competitiveness. The central research question explores the long-term benefits of university-maintained public education institutions and their potential impact on regional education systems.

Objective: The primary objective of this research is to assess the advantages that higher education institutions (HEIs) as maintainers can provide to public education institutions. Special emphasis is placed on the impact of strong links to teacher education, particularly regarding pedagogical innovation, the development of teaching methodologies, and teacher supply. Furthermore, the study investigates the optimal scale of these institutional networks and the potential benefits of a regionally embedded governance model.

Methodology: This study employs both qualitative and quantitative research methods. A document analysis will be conducted to examine the structure, functioning, and development of the public education networks managed by the three universities under investigation. Additionally, interviews will be conducted with school leaders and educators from a selected university's public education institutions, while a questionnaire survey will be administered to students and parents. Moreover, we will analyze the ranking trends of these university-maintained public education institutions across different national school ranking systems.

Results: Since the research is still in progress, the anticipated results are as follows:
1. Public education institutions maintained by universities have a competitive edge over state-maintained schools due to the direct influence of teacher education.
2. The accelerated adoption of innovative pedagogical approaches and the continuous supply of qualified educators contribute to the improvement of educational quality.
3. Defining the optimal size of the institutional network can enhance the effective utilization of governance-related advantages.

Conclusions: The expected results will highlight that the involvement of higher education institutions in maintaining public education can be a sustainable and advantageous model for the broader education system. The findings may contribute to national and international educational policy discussions, particularly regarding optimizing cooperation between higher education and public education institutions.

Limitations and future research directions: One limitation of this study is its focus on three Hungarian universities, which restricts the scope for international comparisons. Further research should explore similar governance models in other countries. Additionally, longitudinal studies spanning several years would be necessary to analyze the long-term effects of university involvement in public education governance.

Keywords: university of science, institutional sustainability, regional impact, teacher education, competitiveness, governance role

Invisible Strength: Resilience in Hungarian Single-Parent Families

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Background and introduction: The proportion of single-parent families is increasing across Europe and in Hungary, while they face social and structural disadvantages. The aim of this research is to examine the resilience and social adaptability of these families, with a particular focus on the policy. The different support systems in European countries and societies affect the financial situation of single-parent families. Understanding the risk of poverty can contribute to understanding the resilience of these families.

Objective: The ultimate aim of the research is to explore the ways in which single-parent families are able to build resilience to socio-economic challenges and the structural and institutional factors that influence this process. At this stage, the aim is to explore the research that has been done so far on this topic.

Methodology: The research relies on secondary analysis: not a full Systematic Literature Review, but a systematic selection and thematic comparison of statistical data (Eurostat, OECD, KSH), policy documents (EU and national level), and family policy literature to build the theoretical framework for later fieldwork, academic literature (Scopus, Google Scholar). The literature search used keywords such as 'single-parent families,' 'resilience,' 'poverty risk,' and 'family policy' (2000–2025).

Results: The second analysis reveals the structural marginalisation of single-parent families, the limited availability of targeted policy support and their under-representation in the social discourse. At the same time, signs of resilience can be observed through informal networks of relationships and individual coping strategies. The next phase of the research will build on this theoretical foundation through qualitative fieldwork.

Conclusions: The results so far highlight the need to incorporate the theory of resilience into family policy and sociological discourse. The research provides a basis for future qualitative studies, also indentifying key theoretical and structural dimensions.

Limitations and future research directions: The current research is limited to secondary analysis and theoretical sources, no fieldwork has been done yet. In the next phase, qualitative interviews will be conducted with members of single-parent families and their environment to explore in more depth the individual and community dimensions of resilience.

Keywords: single-parent families, resilience, social adaptation, social policy

Key Factors that Shape Agritourism Development after Diversification: A Review

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Background and introduction: Agritourism serves as a farm diversification strategy, combining agricultural activities with tourism to boost farm revenues while supporting sustainable rural development.

Objective: This review explores the consequences of adopting agritourism from the standpoint of providers. Without restricting the search to a single database or timeframe, we considered the development of agritourism over time.

Methodology: The review highlights recurring themes in the scientific literature, tracing the research focus on what unfolds after farms diversify into agritourism. Starting with farmers' reasons for entering agritourism, scientific discussions have centered on issues such as farmer identity, the relationship between agriculture and tourism, measures of success in agritourism, authenticity, and sustainability.

Results: The interconnections among highlighted themes suggest that agritourism emerges from a mix of factors, rooted in farmer identity and motivations, shaped by debates over authenticity in tourism contexts, and influencing sustainability outcomes. These evolve in response to changing tourism trends, as farmers adapt to shifting demands.

Conclusions: The ongoing redefinition of authenticity and sustainability within agritourism points to significant research opportunities, particularly in examining how providers interpret these concepts and what, in practice, agritourism becomes.

Limitations and future research directions: The search was not restricted to a single database or a specific timeframe, thus the findings may reflect inconsistencies in coverage and temporal scope. Future studies could compare sustainability outcomes across different scales of agritourism, assess how digital platforms influence marketing and engagement, and analyze how providers interpret and apply authenticity, sustainability, and emerging tourist trends.

Keywords: agritourism, sustainability, authenticity, farmer identity, tourism trends

Labor Market Implications of the Shift from Fossil Fuels to Renewable Energy: A Systematic Literature Review

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Background and introduction: The global shift from fossil fuels to renewable energy is transforming labor markets, raising questions about job creation, workforce displacement, and the effectiveness of reskilling efforts. This study aims to assess the labor market implications of the energy transition through a systematic literature review, identifying key trends, regional disparities, and policy responses that support a just and inclusive shift to sustainable energy systems.

Objective: The objective of this research is to systematically review existing literature on the labor market impacts of the global energy transition, focusing on job creation, employment shifts across sectors, and socioeconomic challenges. It aims to identify key factors influencing employment outcomes and policy measures that support a just and inclusive workforce transformation during the shift from fossil fuels to renewable energy.

Methodology: This study uses a Systematic Literature Review (SLR) to analyze research on labor market effects of the energy transition. It examines peer-reviewed articles focusing on job creation, sectoral employment shifts, and social challenges linked to decarbonization. The review synthesizes findings across regions and industries, highlighting workforce impacts and policy responses to support skill development and equitable employment outcomes.

Results: The review finds that renewable energy adoption leads to net job gains, especially in solar, wind, and hydropower sectors, benefiting marginalized groups like workers with disabilities. However, job gains vary by region and industry, with coal-dependent areas facing displacement risks. Key challenges include skill mismatches, informal employment, and gender disparities. Effective policies such as carbon pricing and skills training improve outcomes but gaps remain in achieving full labor market b

Conclusions: The study concludes that the energy transition offers significant job creation opportunities but requires tailored, inclusive policies to address regional disparities and workforce challenges. Aligning education and training with evolving energy needs and implementing effective policy tools are critical for a just transition. Further research is needed on underexplored technologies and regions to fully realize sustainable, equitable labor market outcomes in the shift to renewable energy.

Limitations and future research directions: The study is limited by reliance on existing literature, which may underrepresent emerging technologies and regions. Variability in data quality and scope across sources affects comparability. Future research should explore labor impacts in less-studied renewable sectors and geographies, address informal and gendered employment dynamics, and evaluate long-term policy effectiveness to better inform inclusive and adaptive workforce strategies during the energy transition.

Keywords: energy transition, labor market institutions, employment, renewable energy, systematic literature review

Lean Production beyond Manufacturing with Andon-log Application

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Background and introduction: Andon is usually a traffic light colored light stack that provides visual signal of the situation on the production line. This is made difficult by the fact that in many places, such as agriculture, processes take place over a much larger area than in a factory.

The developed "Andon-log" app allows for the immediate transmission of various error signals, and makes the solution process and its timing permanently visible to all participants in the process, from operators to mechanics to managers.

Objective: During the past 20 years Innostall has faced several typical circumstances and practices that are very typical of agricultural farms, and the difficulties arising from them, which hinder efficient operation and thus also result in significant losses.

These were the circumstances that prompted Innostall's experts to develop a user-friendly solution, the "Andon-log" application, which not only allows for the immediate transmission of various error signals predefined in Andon-log.

Methodology: The starting point for the research was a real problem observed in agricultural enterprises. We conducted in-depth interviews to investigate the root causes of the problem in detail, based on which we formulated our hypotheses and theories. The development of the new application offering a solution was preceded by extensive literature research, followed by the creation of the concept and the development of the application. The developed app was tested in a real environment.

Results: The real-world testing and application of the Andon-log application confirmed that problems were solved in every case and in significantly less time than before. The application also ensured traceability and led to the introduction of new and useful, easy-to-use performance indicators at the company. In addition to all this, employee motivation also increased dramatically. The results are currently being quantified.

Conclusions: Our research in the first phase confirmed that there is currently no Andon solution that can be applied in a so-called plant environment. The hypotheses and concept proved to be correct, which of course required the appropriate development and continuous testing of the Andon-log application.

Limitations and future research directions: Given that we were in constant contact with an agricultural farm (test farm) during our research and development, the application provides the right solution. The solution, i.e. the limits of the research results and developments and the possibilities for further development, are expected to become known at a later stage, when Andon-log becomes more widely used.

Keywords: Andon-log, immediate transmission, error signals, solution process

Making Angling Tourism Accessible – A Natural Symbiosis?

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Background and introduction: Around 15% of the world's population live with some form of disability Outdoor activities, including angling, the number one outdoor hobby in several European countries, often lack accessibility, which is not only an obstacle for those wishing to pursue this hobby but also a lost economic opportunity for the destinations. However, there are good examples to rely on angling tourism and recent Hungarian tourism development strategies also address this issue.

Objective: Based on the results of international studies and own research, the author presents the possibilities of making angling tourism more inclusive, also mentioning the potential lessons that can be applied by other outdoor tourism activities.

Methodology: Literature analysis, case study analysis, field work.

Results: The paper proves that it is worth counting on disabled anglers as a largely underutilised market segment, a new business potential. The author demonstrates some best practices in the field of accessible angling tourism, from different European countries.

Conclusions: Angling tourism and accessible tourism have developed a lot in recent decades both in Hungary and internationally, but there are still serious bottlenecks in this process. The paper gives best practices and ideas on how to make angling tourism more accessible.

Limitations and future research directions: It is quite difficult to reach the target group, disabled anglers, so large-scale questionnaire and other surveys concerning their special needs and problems are hard to implement.

Keywords: angling tourism, disabilities, inclusive tourism

Managing Inventory with an RFID-Based Modified Two-Bin System to Reduce the Excess Inventory

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Background and introduction: Excess inventory in Fast-moving Consumer Goods (FMCG) manufacturing operations increases costs and disrupts planning. A barcode-based two-bin systems offer limited traceability due to manual scanning, hence more responsive system is needed to align inventory with real-time demand. The purpose of this study is to provide a data-driven model including an AI-based algorithm for enhancing the efficiency of inventory management.

Objective: The main objective of the research is to develop a mathematical model for minimizing the excess finished goods inventory and enhance service efficiency using a data-driven, RFID-based modified two-bin system tailored for FMCG supply chain optimization.

Methodology: This research proposes a modified RFID-based two-bin mathematical model within a two-stage FMCG supply chain, where one bin tracks real-time demand and the other holds safety stock. The model utilizes RFID technology for improved inventory visibility, and applies the Artificial Bee Colony (ABC) algorithm to minimizing rework activities localized on the shopfloor. The model was tested through a Python-based simulation using historical sales and inventory data from a leading FMCG manufacturer.

Results: As a result of our model it demonstrates reduction up to 74% in excess inventory levels compared to the traditional approach. Furthermore, by applying the ABC algorithm, the cost reduction can be increased from an initial 32% to 44%.

Conclusions: The proposed model outperforms traditional approaches by minimizing excess inventory and maintaining operational continuity. It offers a practical, scalable solution for perishable items of FMCG industries facing demand variability and limited storage capacity.

Limitations and future research directions: Although the model was validated through simulation using real-world data, it has not been implemented yet in a live production environment. Future research studies can address to investigate how the proposed model can be utilized in making the supply chain driver for responsiveness and efficiency.

Keywords: FMCG, RFID, Two-bin Inventory, ABC algorithm

Mapping Debt and Productivity: Regional Disparities of Large Firms in the Visegrád (V4) Countries

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Background and introduction: Economic crises often reduce firms' access to external financing. Understanding how these effects vary by region is key to supporting balanced recovery. In Central Europe, large firms play a crucial role in local economies, and their financial behavior influences regional resilience during post-crisis periods.

Objective: The study investigates the relationship between corporate indebtedness and regional economic performance in the V4 countries (Hungary, Czechia, Poland, Slovakia). It focuses on high-revenue firms and aims to identify territorial financial disparities during the 2021–2023 post-pandemic recovery phase.

Methodology: We conduct a comparative analysis of financial indicators—including total liabilities and loan volumes—across NUTS 3 regions. Quantitative methods are paired with spatial mapping to explore correlations between firm-level debt data and regional productivity and resilience indicators sourced from Eurostat.

Results: Preliminary findings suggest a strong geographical concentration of corporate debt in regions with higher economic activity. The spatial distribution of liabilities aligns with regional centers and reflects structural imbalances in access to credit and capital between more and less developed areas.

Conclusions: The study highlights how regional economic hubs attract disproportionate financial resources. These patterns reveal persistent territorial inequalities in corporate financing and underscore the importance of targeting financial policy tools to support lagging regions during economic recovery.

Limitations and future research directions: The analysis is limited to formal large enterprises and does not capture micro or informal firms. Cross-country data comparability and resilience index design also present constraints. Future research should examine causal mechanisms and explore small business financing at regional levels.

Keywords: corporate debt, regional development, Visegrád Four, NUTS 3, spatial finance, economic recovery, post-COVID, resilience index

Mapping the FinTech Revolution: A Global Atlas of Transformation for 2010 and 2025

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Background and introduction: The global FinTech sector has transformed financial services over the past fifteen years, evolving from early digital disruptors to a mature, integrated ecosystem. This period witnessed the proliferation of digital payments, lending, wealth management, and InsurTech. This evolution reflects not just the digitalization of finance but a structural reconfiguration of how capital is accessed, managed, and distributed worldwide.

Objective: This study aims to map and analyze the global FinTech ecosystem for 2010 and 2025, with particular focus on Digital Lending as the largest and most representative segment. The study seeks to identify patterns of growth, diversification, and regional variation, and to situate these within wider debates on financial inclusion, digital transformation, and global economic change.

Methodology: A mixed-methods design was employed, combining quantitative mapping with qualitative interpretation. The primary data source is the Cambridge Centre for Alternative Finance (CCAF) FinTech Ecosystem Atlas, which provides harmonized information on FinTech entities by year, region, and segment. Descriptive statistics, relative growth rates, and compound annual growth rates were calculated to capture temporal dynamics, while visualizations such as bar charts, bubble diagrams, and global maps.

Results: Findings show a dramatic expansion of FinTech from fewer than 400 active entities in 2010 to over 4,000 in 2025. Digital Lending grew from 116 to 1,310 entities (+1,029%), establishing itself as the backbone of the industry, alongside Digital Payments (988) and Enterprise Tech Provisioning (869). Sub-segments of lending diversified significantly, moving from a dominance of balance-sheet models in 2010 to a multi-pillar structure in 2025, where marketplace lending, securities-based models.

Conclusions: From 2010 to 2025, FinTech shifted from fragmented experimentation to systemic integration, reshaping the architecture of global finance through scale, diversification, and inclusion. Digital Lending exemplifies this transition, evolving from a niche sector to the most dominant and structurally diverse segment. The study shows that FinTech is no longer peripheral but central to global financial systems, expanding access to credit, enabling new market models, and embedding finance.

Limitations and future research directions: The study is limited by reliance on secondary data, which may underrepresent informal or unregistered entities, especially in emerging markets. It also focuses primarily on quantitative trends, without capturing qualitative dimensions such as user trust or cultural adoption. Future research should incorporate more granular, real-time data in fast-evolving areas like crypto-assets, AI-driven finance, and regulatory technology.

Keywords: FinTech, ecosystem, digital finance, financial innovation, technology, global trends

Marketing Sustainability in Tourism SMEs: A Systematic Review of Digital Strategies for Green Innovation and Competitiveness

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Background and introduction: Sustainability and digital transformation are critical challenges for tourism SMEs. While digital marketing offers tools to promote eco-conscious practices, its impact on sustainability outcomes remains unclear. This study explores how SMEs apply digital marketing to support sustainability and identifies innovation gaps via a systematic review.

Objective: To examine how tourism SMEs utilize digital marketing to achieve sustainability goals and develop a conceptual framework linking digital tools with green innovation and competitiveness.

Methodology: A PRISMA-based systematic review was conducted, analyzing 54 peer-reviewed articles (2015–2025) from Scopus, Web of Science, and Google Scholar. Thematic coding identified digital tools, sustainability outcomes, strategic patterns, and barriers across studies.

Results: Digital tools like social media, SEO, email marketing, IoT, and analytics help tourism SMEs improve sustainability efforts. Key themes include eco-branding, digital engagement, and crisis recovery. Challenges include digital skill gaps and inconsistent sustainability messaging. A framework shows how digital strategies support sustainability.

Conclusions: Tourism SMEs integrating digital tools with sustainable practices gain operational efficiency, stronger branding, and resilience. Six core themes—ranging from digital communication to policy support—highlight the dual benefits of this alignment. The review offers a framework guiding both academic and practical advancement in sustainable digital transformation.

Limitations and future research directions: The review's English-language focus may miss regional insights. Geographic and methodological gaps remain. Future studies should assess cross-cultural contexts, AI applications, and the measurable impact of digital strategies on sustainability.

Keywords: digital marketing, sustainability, tourism SMEs, PRISMA, green innovation, eco-branding, systematic literature review

Measuring Mental Well-being in Digitally Transforming Higher Education: A Conceptual Framework

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Background and introduction: As higher education institutions undergo rapid digital transformation, addressing the negative effects of digitalization on the mental well-being of employees has become a critical factor in sustaining resilient, inclusive, and socially responsible academic communities. However, the assessment of well-being in these contexts remains fragmented, lacking clear guidance on selecting context-sensitive and theoretically grounded assessment tools.

Objective: The aim of this study is to develop a conceptual framework for assessing the mental well-being of higher education employees in digitally transforming academic environments, and to explore how the Perceived Stress Scale (PSS) and Burnout Assessment Tool (BAT) can be conceptually adapted to reflect the psychological effects of digitalization.

Methodology: The framework is developed through a targeted literature review and theoretical synthesis, drawing on Social Support Theory and Social Cognitive Theory. The paper addresses two core questions: (1) What are the main psychological dimensions of well-being in digitally transforming higher education? (2) How can the Perceived Stress Scale (PSS) and the Burnout Assessment Tool (BAT) be conceptually adapted to measure the negative psychological effects of digitalization in higher education settings?

Results: The framework identifies four key dimensions of well-being in higher education: psychological resilience, social interactions, digital work satisfaction, and perceived institutional support. These dimensions are proposed as central protective factors influencing mental health in digital academic settings. The framework is further informed by a theoretical reinterpretation of two widely used and validated psychological instruments, the PSS and the BAT.

Conclusions: The resulting model offers scholars and institutional leaders conceptual foundations for assessing and promoting employees' mental well-being, while supporting sustainable community development in higher education in response to the challenges posed by digital transformation.

Limitations and future research directions: As a conceptual study, this research does not include empirical validation of the proposed framework. Future studies should test the adapted dimensions of the PSS and BAT through qualitative and quantitative methods across diverse academic contexts to assess their reliability and relevance in digitally transformed environments.

Keywords: mental well-being, digital transformation, higher education, sustainable community development, stress and burnout management

Metadata Governance as an Enabler for AI-Driven Pharmaceutical Supply Chains: A House of Quality Approach

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Background and introduction: The pharmaceutical industry is rapidly integrating AI to enhance forecasting, resilience, and compliance in supply chain management. However, the success of AI systems is highly dependent on the quality of metadata used to train and run them. In regulated sectors like pharmaceuticals, metadata governance is critical for ensuring traceability, data integrity, and regulatory compliance. Yet, the combined role of metadata governance and AI remains underexplored.

Objective: This study aims to develop a conceptual framework using the House of Quality (HoQ) methodology to align metadata governance practices with AI system requirements in pharmaceutical supply chains. It seeks to identify critical governance features that enhance AI-driven supply chain decision-making and ensure compliance.

Methodology: A structured literature review (2015–2025) from Scopus-indexed journals was conducted using keywords such as "Artificial Intelligence," "Metadata Governance," and "Pharmaceutical Supply Chain." The findings are mapped into a House of Quality framework to align stakeholder expectations with metadata governance features.

Results: Although the study is ongoing, initial results from the literature review and conceptual framework suggest that improving metadata governance—particularly in areas like data lineage and semantic standardization—can significantly enhance AI system reliability and decision quality in pharmaceutical supply chains.

Conclusions: Although the study is ongoing, initial results from the literature review and conceptual framework suggest that improving metadata governance—particularly in areas like data lineage and semantic standardization—can significantly enhance AI system reliability and decision quality in pharmaceutical supply chains.

Limitations and future research directions: As a conceptual study, the framework awaits empirical validation through expert panels and simulation. Future research should test the model across different pharmaceutical contexts and explore its adaptability to other highly regulated industries.

Keywords: artificial intelligence, metadata governance, pharmaceutical supply chain, house of quality

Model of Energy Transformation in Regional Areas

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Background and introduction: This article proposes a short-term energy transformation model focused on regions and the use of resources in them. This is considered a meaningful direction that would simultaneously allow us to solve current social problems. The model developed in the article suggests that energy transformation is possible when regional resources are concentrated to achieve faster implementation of actions.

Objective: To create a short-term energy transformation model focused on regional energy systems.

Methodology: Cluster analysis, Asset analysis, Multi-criteria analysis.

Results: Short-term energy transformation model verified for the Lithuanian case.

Conclusions: Small countries without fossil resources have every opportunity to create decentralized energy systems based on regional energy activities. The main focuses are resource conversion to install more production capacity, circular economy, and state contribution to strengthening electricity and gas networks.

Limitations and future research directions: Limitations are related to the lack of centralized data on regions in Europe. Future directions are related to research into the possibilities of energy transformation in agriculture in Europe and the USA.

Keywords: energy transformation, rural areas, governance

Modelling Attitude as a Delighter in Supply Chains: A Kano-Based Perspective

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Background and introduction: Understanding the dynamics of relationships within supply chains is essential in today's global economy, where speed, flexibility, and information flow are key to competitiveness. These relationships shape not only transactional mechanisms but also affect production efficiency, inventory management, and customer responsiveness. Improving supply chain performance and managing its inherent risks are critical for both business competitiveness and sustainability goals.

Objective: Agile and trust-based supply chain relationships support innovation and long-term collaboration. Attitudes toward these relationships—particularly those of decision-makers—play a significant role in how networks respond to change. Digital transformation, customer integration, and problem-solving engagement are all linked to organizational attitudes that affect adaptability.

Methodology: To capture the behavioral dimension of supply chain performance, our paper integrates the Kano model into the conceptual framework. The Kano model distinguishes between basic needs, performance needs, and delighters—the latter being attributes that exceed expectations and generate strong satisfaction. In our interpretation, attitude functions as a delighter, acting as a high-impact but often underestimated driver of performance.

Results: This conceptual integration allows us to model attitude not only as a cultural or psychological trait but as a strategic lever that drives flexibility, satisfaction, and long-term supply chain competitiveness.

Conclusions: Our findings highlight the need for further research into attitudinal dynamics within logistics and supply networks, especially in contexts where digital technologies and AI are reshaping traditional decision-making structures.

Limitations and future research directions: The study underscores the importance of deeper exploration into attitudinal patterns and their operational influence, particularly as digital technologies and AI increasingly transform conventional decision-making processes in logistics and supply networks.

Keywords: supply chain, attitude, Kano model

Motherhood and the Child Penalty: Gendered Consequences in the Labour Market – A Systematic Literature Review Based on PRISMA Method

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Background and introduction: Gender inequality in the labour market remains a persistent global issue, particularly for women who become mothers. The "child penalty" refers to the economic and professional disadvantages women often experience following childbirth, such as wage gaps, reduced employment opportunities, and slower career advancement. These penalties are influenced by institutional, cultural, and occupational factors and are especially pronounced in sectors with high female representation, such as healthcare and academia.

Objective: This study systematically examines how motherhood affects women's labour market outcomes and identifies key mechanisms and patterns behind the child penalty. The goal is to map existing knowledge, synthesize findings, and suggest policy and academic discourse directions.

Methodology: The research follows the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology. A structured search was conducted in Scopus and other major academic databases using predefined keywords ("motherhood," "child penalty," "female"). After screening and eligibility assessment, 50 peer-reviewed articles were included in the final analysis. The selection process and data extraction followed strict inclusion and exclusion criteria to ensure transparency and reproducibility.

Results: The review confirms the widespread existence of the child penalty across various countries and professional fields. The most affected are highly educated women in demanding careers with limited flexibility and parental support policies. Factors influencing the penalty include inadequate maternity leave, rigid work structures, and persistent gender norms. Several studies also highlight long-term consequences such as reduced retirement savings and underrepresentation in leadership roles.

Conclusions: The child penalty is a complex and multifaceted phenomenon that reinforces gender inequality in the workforce. Although policy interventions have made some progress, the structural barriers facing mothers remain significant. Addressing these challenges requires coordinated efforts at institutional, governmental, and societal levels.

Limitations and future research directions: The study is limited by language (only English sources are included), access to full-text articles, and the heterogeneity of national labour policies. Future research should include longitudinal studies and comparative analyses across different socio-economic contexts. There is also a need for a deeper exploration of intersectionality—how race, class, and marital status interact with motherhood and labour market outcomes.

Keywords: motherhood, child penalty, PRISMA, gender inequality, labour market, female

Motivations of New Generations in Family Businesses

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Background and introduction: In many cases, family businesses established after the fall of communism are now facing a generational change. This change is due to the founder's health, loss of motivation, or simply the desire to rest after decades of work. In our research, we explore what is necessary for young family members to continue running family businesses.

Objective: We conducted our research with several objectives in mind. First, we wanted to examine which businesses are suitable for takeover and what the founder needs to do to make the organization transferable. Second, we looked for reasons why the new generation would be enthusiastic about taking over the business and making it the focus of their lives. Third, we wanted to find out what makes a takeover successful. What factors are necessary for young people to successfully take over a business?

Methodology: In addition to secondary source analysis, our research methodology involved an online questionnaire survey of nearly 300 people to explore the issue of generational change from the perspective of both transferors and transferees. We supplemented our survey with a semi-structured field questionnaire for entrepreneurs who have experienced or are currently experiencing generational change. The questions covered the following topics: the current situation of the business, the challenges and obstacle

Results: Our findings show that businesses are not aware of generational change, and most of them do not prepare for the transition in time. In addition, most companies employ single-person management, which makes handover and generational change difficult. The challenge in the transition is that functions are not clearly defined within the organization and decision-making is arbitrary, with the decision-maker not clearly identified.

Conclusions: Companies facing generational change should prepare their organization and successors for the transition much earlier and much more consciously. Failure can be avoided with greater awareness. Generational change in family businesses must begin years in advance, involving potential successors and taking systematic steps to prepare both the company and the successor for a successful transition. A much greater transfer of knowledge is needed within the organization and to entrepreneurs.

Limitations and future research directions: Although our research is not representative in terms of sample size and selection method, it nevertheless identifies trends that are useful for both entrepreneurs and support organizations to consider. This focus would be useful in ensuring that the value of our family businesses does not fall into foreign hands or disappear due to an unsuccessful takeover or a tragedy within the family.

Keywords: Generation Z, success factors, family businesses, cooperation, attitude

Navigating Disruption: A Systematic Review of Managerial Decision-Making for Resilience in Dairy Supply Chains during COVID-19

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Background and introduction: The COVID-19 pandemic caused unprecedented disruptions to global dairy supply chains, challenging stakeholders from farmers to retailers. Dairy Supply Chains (DSCs) are particularly vulnerable due to the perishable nature of their products. This study addresses a gap in the literature by providing a focused, systematic review of the specific managerial decisions that enabled resilience within the dairy sector during the pandemic, guided by the PRISMA framework to analyze relevant literature from

Objective: This study aims to systematically review and synthesize managerial decision-making and adaptation strategies employed by global dairy supply chain stakeholders to mitigate COVID-19 disruptions. The objective is to identify key resilience patterns, inform strategic planning, and provide a framework for enhancing long-term sustainability and preparedness for future crises.

Methodology: This study employed a Systematic Literature Review (SLR) following the PRISMA framework to gather and analyze data from the Scopus database. The search strategy used Boolean queries to identify relevant English-language, Open Access articles published between 2019-2025. After screening 49 records against discipline and topic-specific criteria, 8 key studies were selected for in-depth analysis, covering evidence from 13 countries across Asia, Africa, Europe, and North America.

Results: The review identified six key adaptation strategies: workforce cross-training; market diversification; policy interventions for supply-demand balance; shelf-life extension tech; risk diversification via multi-sourcing; and local sales channels. Their success was highly dependent on specific regional contexts and stakeholder capacity.

Conclusions: The findings highlight that resilience in dairy supply chains is significantly influenced by proactive, context-sensitive managerial decision-making. Key to success were organizational flexibility, rapid process adaptation, and collaborative networks. Investing in these adaptive capacities is crucial not only for immediate crisis response but also for advancing the long-term sustainability and robustness of the global dairy supply chain against future disruptions.

Limitations and future research directions: A primary limitation is the reliance on a limited number of available studies (n=8) that met the strict inclusion criteria, which may affect the generalizability of findings. Future research should conduct longitudinal studies to assess the long-term efficacy of these adaptation strategies and gather primary data to explore the role of digital technologies and policy frameworks in building systemic resilience for the dairy industry.

Keywords: adaptation strategies, COVID-19 Pandemic, dairy supply chain, managerial decision-making, resilience, sustainability

Navigating Global Trends: Sustainability and Digitalization in Regional Tourism Development in Romania

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Background and introduction: Given the ongoing global economic changes, shaped by post-pandemic recovery, financial uncertainty, and geopolitical tensions, the tourism and hospitality sectors in Central and Eastern Europe face both challenges and opportunities. This study explores how global trends in sustainability and digitalization influence regional tourism development in Romania's North-West Region, highlighting the adaptive responses of local actors amid structural constraints and socio-economic disparities.

Objective: The main objective is to examine how regional tourism stakeholders interpret and implement sustainability and digitalization principles. The study aims to identify perceptions, strategies, and barriers encountered in adapting to global trends to inform more effective and inclusive regional development strategies in the tourism and hospitality sectors.

Methodology: A qualitative research design was employed, using semi-structured interviews with professionals and decision-makers involved in tourism planning, promotion, and service delivery. The interviews focused on participants' views regarding sustainable practices, digital transformation, institutional challenges, and the role of collaboration and policy support in fostering innovation and resilience in regional tourism.

Results: Findings indicate increasing awareness of sustainability imperatives, yet practical implementation remains inconsistent due to limited resources, institutional inertia, and uneven digital literacy. Digital tools are adopted reactively rather than strategically. Stakeholders emphasize the need for stronger inter-institutional collaboration, capacity building, and coherent policy frameworks to support sustainable and innovative tourism development.

Conclusions: The study reveals how global sustainability and digitalization trends are locally interpreted and operationalized. It underscores the importance of integrated regional strategies that align environmental responsibility, technological innovation, and inclusive economic growth. These insights contribute to the broader discourse on sustainable tourism and offer practical guidance for regional policy and planning.

Limitations and future research directions: The study's exploratory nature and limited sample size constrain generalizability. Future research should expand to include comparative regional analyses and incorporate quantitative methods. Further investigation is needed into the long-term impact of public policy and digital infrastructure on sustainable tourism transformation in post-transition economies like Romania.

Keywords: digital transformation, North-West Region Romania, qualitative research, regional development, sustainable tourism

Net Zero Ambitions and the Role of SMEs: A Systematic Literature Review of EU Carbon Policy

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Background and introduction: In the context of accelerating climate change, the European Union has adopted ambitious net zero targets. Carbon pricing mechanisms, such as the Emissions Trading System (EU ETS), play a central role in emissions reduction strategies. While large corporations have been widely studied, the role of small and medium-sized enterprises (SMEs) remains underexplored.

Objective: The aim of this study is to explore the development and dynamics of the EU Emissions Trading System as a core element of EU climate policy. It examines how the system has evolved, its effectiveness in reducing emissions, its interaction with other policies, and its broader economic and environmental impacts. Particular attention is given to its influence on small and medium-sized enterprises, which are indirectly affected yet play a vital role in the EU's transition to net zero.

Methodology: This study applied a Systematic Literature Review (SLR) methodology, following the PRISMA protocol to ensure a transparent and replicable selection process. The review was conducted using the Scopus database. The PEO (Population, Exposure, Outcome) framework was used to formulate the research focus, centering on how the EU Emissions Trading System influences various stakeholders, particularly SMEs. Articles were analysed thematically to extract common patterns and insights.

Results: The findings show that the EU ETS has become increasingly effective in reducing emissions and stabilizing the carbon market, particularly after recent reforms. However, the system's complexity, administrative burden, and indirect cost pass-throughs continue to pose challenges, especially for small and medium-sized enterprises. Although SMEs are typically not directly included in the scheme, they are impacted through supply chain requirements, energy pricing, and client expectations.

Conclusions: The review highlights that while the EU ETS is central to the EU's net zero strategy, its indirect effects on SMEs must not be overlooked. For the transition to be inclusive and effective, regulatory design must take into account the diversity and constraints of smaller firms. Improved support mechanisms and better policy coordination are essential to ensure that SMEs can actively contribute to and benefit from the EU's decarbonization pathway.

Limitations and future research directions: The scope of this review is shaped by its reliance on English-language, peer-reviewed sources from the Scopus database, potentially excluding region-specific or non-academic perspectives. Future research could examine how carbon pricing mechanisms influence SME behaviour, innovation, and adaptation strategies in practice. Cross-country comparisons, firm-level studies, and sector-specific analyses could help identify enabling conditions and polices that enhance the effectiveness of the EU ETS.

Keywords: EU ETS, carbon pricing, SMEs, emissions trading, climate policy, net zero, systematic literature review

New Opportunities for Spa Tourism – Women's Spas as a Modern Return to Ancient Spa Traditions

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Background and introduction: Spas has played a significant role in health preservation and recreation for centuries, encompassing both relaxation and hygiene practices. The role of women in spa and bathing traditions is irrefutable, with beauty maintenance and fashion trends exerting a substantial influence on societal perceptions. A confluence of historical practices and contemporary wellness trends has given rise to a renewed interest in female spa intitutes, which are exclusively for women.

Objective: The objective of this study is to evaluate the demand for women spa facilities or designated female hours within coeducational baths in Hungary. The objective is to understand modern women's preferences for gender-segregated bathing environments and the potential benefits these spaces offer in terms of social interaction, health, and well-being.

Methodology: This research involved a comprehensive review of the history of spas and bathing culture. Furthermore, a survey was conducted among Hungarian women (n=500) to ascertain their interest in women spa facilities, the purposes of their visits, and the types of programs or health-promoting activities in which they would participate.

Results: The findings, evaluated by SPSS, indicate a significant interest among Hungarian women in utilising women spa facilities or attending female-designated hours in coeducational spas. The respondents (n=500) expressed a preference for engaging in sport activities, beauty treatments, health maintenance, mirroring practices from ancient spa and bathing traditions. Such environments could facilitate social connections among women, contributing positively to their mental health and overall well-being.

Conclusions: The present research highlights a contemporary necessity for women spa institutions within Hungary, in alignment with international trends underscoring the growing popularity of female spas and retreats. The establishment of such facilities has the potential to cater to women's desires for privacy, comfort, and community, while concurrently promoting health and wellness.

Limitations and future research directions: It is important to note that the study's findings may not be generalisable to other regions, due to particular cultural and geographical context. It may be beneficial for future research to explore the implementation and management of women spa facilities, assess their long-term viability, and examine their impact on women's health and social networks. In addition, conducting comparative studies across different cultures could offer a more comprehensive understanding.

Keywords: spa, spa tourism, spa tradition, spa trend, women

Opportunities for People with Disabilities in Higher Education Based on an Exploratory Research

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Background and introduction: The integration of students with disabilities into higher education has become a pivotal aspect of educational policy and academic research. Despite the existence of legal frameworks and international conventions that promote equal access, students with disabilities continue to encounter persistent barriers – physical, digital and attitudinal – that hinder their academic success and social participation.

Objective: The present study has been designed to explore the manner in which Hungarian universities provide support to students living with disabilities, and to assess the inclusiveness of their institutional practices. The investigation will examine the extent to which legal mandates and inclusive strategies are reflected in real-world university environments, with a particular focus on accessibility and communication.

Methodology: The research employs qualitative methods, including content analysis and semi-structured interviews, to examine practices at three major Hungarian universities: Széchenyi István University, Eötvös Loránd University, and the University of Pécs. The selection of these institutions was made with the aim of providing a range of regional and institutional diversity in the assessment of the implementation of disability-inclusive policies.

Results: The findings indicate that, while legal compliance is in place at a fundamental level, considerable disparities persist in the physical, digital and social accessibility of university life. Students frequently encounter inadequate support, underrepresentation in institutional communication, and a paucity of trained staff, although some progress has been made through assistive technologies and targeted programs.

Conclusions: The study emphasizes the necessity for systemic and cultural transformation in Hungarian higher education. The study's recommendations encompass several key areas, including the enhancement of instructor training, the development of inclusive communication strategies, and the active involvement of students with disabilities in decision-making processes. These recommendations are designed to promote the creation of more equitable and effective learning environments.

Limitations and future research directions: The present study is constrained by its narrow focus on a mere three Hungarian universities and its utilization of a qualitative approach, which may not adequately capture the national context or permit generalization. Future research should include a broader range of institutions, apply mixed methods for a more comprehensive view, and explore specific disability types. Longitudinal studies could also assess the long-term impact of inclusive policies and practices.

Keywords: higher education, students with disabilities, inclusion, accessibility, support practices

Optimal Sharing of Family Tax Allowance Among Parents Subtitle: Personal Income Tax Optimization Strategies in Hungary

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Background and introduction: Although tax optimization is predominantly a concept associated with the corporate sector, it can also present an opportunity for households to be aware of and consciously make use of the legal possibilities offered by personal income taxation in Hungary. Two features of the family tax allowance system in Hungary present opportunities for optimization.

Objective: Two features of the family tax allowance system in Hungary . Firstly, the beneficiaries of the family tax allowance have the freedom to choose how to distribute it among themselves. Secondly, a portion of the allowance can be claimed as a social security contribution. However, most research in this field neglects to consider the latter factor, thereby limiting the comprehensiveness of their analyses. The objective of this study is to find the optimum of the family tax relief.

Methodology: In our analysis, we have chosen a numerical approximation of the optimum search method, which iteratively searches for the maximum value by dividing a range of values into equal step intervals. First, it searches for the situation where the household's net income is the highest, and then, if there are several optimum locations (which is the case), we select the one where the value of the personal income tax, and hence the degree of tax provision is maximum.

Results: The main findings of this study indicate a person that for both two-child and three- and four-child families, we find households with incomes that can only maximise their disposable income if they choose the optimal family tax allowance splitting strategy.

Conclusions: Our main conclusion is that there is room for tax optimization in Hungary for households with two, three and four children: in the low(abb) income categories there are several possible optima, while in the middle income categories it is very important to find a single optimum. This may require targeted measures to raise tax awareness in society, especially in view of the many changes in the rules over time. Parental financial literacy is crucial for filling in tax advance declaration.

Limitations and future research directions: The analysis is limited to the case where parents do not receive an one-off (taxable) benefit during the year, e.g. in the form of a bonus or premium. The model could also be extended to those benefits that are currently excluded, namely the under-25s, mothers under 30, the personal allowance, first-time couples and the disability allowance for children. The extension to incomes from which only the 10% pension contribution is deducted instead of the 18.5% social security contribution.

Keywords: household finance, personal income tax, family tax allowance, tax optimization, numerical optimization, simulation

Organizational Challenges of Territorial Economic and Spatial Development in Hungary during the 2020's

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Background and introduction: Starting with the 2010's, significant legislative and organizational changes have started in the territorial level economic and spatial development on the NUTS 2 and 3 levels in Hungary. These changes resulted the dissolution of the regional development agencies and the counties new development function was established. The purpose of the study and the research was to investigate the county level development functions, organizations, their competences and results of the last 10 years.

Objective: The objective of the study is to show, that at present, no organizational and personnel competencies are available neither on regional, county or districts level for economic upscaling and spatial development is limited strictly to the utilization of the financial allocations of the TSDOP Plus. Territorial development is limited to the TSDOP Plus allocations and other state government related and managed financial resources, which implies, that self-driven territorial development does not exist.

Methodology: The study is based on a questionnaire-based primary research in which all 19 county administrations of Hungary are addressed to report on their territorial development activities, organizations, HR competencies and the limitations realted to these activitties. In the relevant counties, the county development companies are also addressed and in the relevant regions the regional innovation agencies, as they function as regional level development organizations.

Results: The research proved, that territorial level development organizations don't have economic development roles and they don't play any role in FDI projects and a complete lack of organizational and HR competencies for upscaling the NUTS2 and 3 levels of Hungary was found. FDI promotion activites are organized centrally, county-level actor's lack all competencies and resources, their role is limited to the utilization-administration of pre-allocated EU funds.

Conclusions: Territorial level development in Hungary is limited to the administration of the pre-allocated funds of the TSDOP Plus. County administrations (local governments) don't play any role in spatial development other than the managament of these funds, they don't have any FDI promotion, although this level would be the most relevant for supporting economic development. Only city municipalities with county rights have relevant organizational and HR competencies, but without county level competencies.

Limitations and future research directions: The research focused on the county level, where all-relevant bodies/actors were addressed. In some counties functioning co-operation was reported with the county seat city municipaliiies, which implies, that in the next phase of the research, the city development companies activities will be investigated, to double-check, whether the county-level function is operated (or managed) by the county seat city's development company (or not).

Keywords: county development, regional development, development organizations

Organizational Onboarding and Generation Z: The Hidden Impact of Social Media

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Background and introduction: The workplace is undergoing vast changes with the entry of Gen Z (born between 1995–2010), the first generation to grow up in the age of social media. Their values, expectations, and work habits differ significantly from those of previous generations. Social media, as a defining feature of Gen Z's upbringing, influences how they communicate, collaborate and perceive work.

Q1. How does social media influence Gen Z's expectations and behaviours in the workplace?
Q2. What are the main sources of co

Objective:

1. To analyze how social media shapes Gen Z's workplace behaviours and expectations.
2. To identify sources of conflict during onboarding and strategies for resolution.
3. To examine organizational responses to social media-driven changes in workplace onboarding.

Methodology: This conceptual paper develops a framework for understanding the unique onboarding challenges faced by Gen Z. First, we conducted an extensive review of literature spanning Gen Z characteristics, organizational socialization theories, onboarding challenges specific to Gen Z and digital media effects. Sources were identified through targeted keyword searches in academic databases and prioritized for relevance and scholarly impact. Following this, we engaged in a process of theoretical synthesis.

Results: The study highlights how social media shapes Generation Z's onboarding experience, influencing expectations, identity presentation, learning styles, and workplace integration. Instant feedback culture clashes with traditional onboarding, leading to frustration. Algorithm-driven self-curation hampers authentic adaptation, while fragmented attention demands microlearning. Social comparison fosters anxiety, and unmet diversity or mental health concerns push early departure.

Conclusions: The most important conclusion is that the difficulties in integrating Gen Z can be traced back to the adolescent brain's exposure to social media. Traditional training materials (e.g., long videos, documentation) often fail to capture Gen Z's attention. Microlearning and interactive modules may be more effective. Clear, goal-oriented guidance is important. Gen Z is also more sensitive to feedback. Onboarding programs should pay attention to psychological safety and empathetic communication.

Limitations and future research directions: Future research should empirically examine how these insights can be applied in practice, especially in the areas of microlearning, value-based integration, mental well-being support, and the integration of technological solutions into onboarding.

Keywords: Onboarding, social media, Gen Z, instant feedback culture, self-expression, microlearning, mental health

Perceptions of Social Equality and Emigration Intentions Among University Students in Albania

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Background and introduction: Widespread perceptions of inequality can shape young people's outlook on their future, including the decision to emigrate. In Albania, where socioeconomic disparities and institutional distrust persist, this study examines how university students' perceptions of social equality influence their intentions to emigrate. We ask: Do perceived inequalities drive emigration aspirations among educated youth?

Objective: This study aims to analyze the relationship between university students' perceptions of social equality and their intentions to emigrate from Albania. It seeks to determine whether perceived social and institutional inequalities significantly influence students' migration aspirations, while accounting for demographic and socioeconomic factors.

Methodology: A cross-sectional survey was conducted among university students across major Albanian institutions. The questionnaire measured perceptions of social equality, emigration intentions, and demographic variables. Data were analyzed using logistic regression to assess associations between perceived inequality and migration intent, controlling for socioeconomic and academic factors.

Results: Students perceiving higher levels of social inequality were significantly more likely to express intentions to emigrate (OR = 2.15, $p < .01$). Emigration intent was also higher among those reporting low trust in public institutions. Socioeconomic background and field of study moderated these relationships, with social science students showing the strongest effects.

Conclusions: Findings suggest that perceptions of social inequality significantly shape emigration intentions among Albanian university students. Addressing perceived injustice and institutional distrust may be crucial to mitigating youth brain drain. The study highlights the need for policies that foster social inclusion and restore confidence in domestic opportunities.

Limitations and future research directions: The study relies on self-reported data and a cross-sectional design, limiting causal inference. The sample may not capture students from all geographic or institutional backgrounds. Future research should use longitudinal methods and include qualitative insights to explore how perceptions evolve over time and influence actual migration behavior.

Keywords: social equality, migration intentions, university students, Albania, inequality of opportunity

Platform for Taste: Digital Innovation Driving Artisanal Cheese Tourism in Hungary

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Background and introduction: The Hungarian-developed digital cheese evaluation software, a unique innovation in Europe, has been supporting artisanal cheese competitions for four years. Digital solutions like this play a growing role in sustainable tourism by strengthening local communities and promoting environmental awareness.

Objective: This study explores how this unique European digital system contributes to the development of gastro-tourism, supports sustainability goals, and enhances community-based artisanal food initiatives in a data-driven, environmentally conscious way.

Methodology: The research combines quantitative and qualitative methods: statistical analysis of evaluation data, questionnaires for cheese producers and judges, and geospatial mapping of the cheeses and competition locations to identify regional patterns and tourism impact.

Results: Preliminary results show that the system improves objectivity, reduces paper use, and provides structured data. The competitions have measurable gastro-tourism effects, and the geographical distribution of entries highlights regional engagement and reach.

Conclusions: As a European-first, this Hungarian digital innovation effectively contributes to sustainable tourism, food quality tracking, and community value building. It merges digital tools with local gastronomic traditions to promote quality, transparency, and regional identity.

Limitations and future research directions: Limitations include the current scope of competition data and geographic coverage. Future research will expand the dataset and explore long-term economic and tourism impacts, especially to better understand digital tools' role in local development.

Keywords: digital innovation, gastro-tourism, sustainable tourism, cheese competition, artisanal food, data-driven decision-making

Pneumatic tube systems in healthcare logistics: Case Study on operational efficiency and development requirements in Hungary

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Background and introduction: The COVID-19 pandemic accelerated the growth of e-commerce, increasing the importance of fast and efficient home delivery. Last-Mile Delivery, the final step in the logistics chain, has become critical but also faces challenges in both urban and rural areas. One potential solution is the use of pneumatic tube systems, already implemented in some countries for specific purposes. This investigation focuses on examining the operation of a pneumatic tube system in a Hungarian hospital.

Objective: The aim of the publication is to examine how pneumatic tube systems can contribute to enhancing the efficiency of Last-Mile Delivery, with a particular focus on Hungarian healthcare institutions. The objective is to identify potential areas for development and explore broader applications of these systems beyond their current use.

Methodology: The research focused on a pneumatic tube system operating within a Hungarian healthcare institution. Data was collected through a questionnaire-based survey and with in-depth interviews, targeting users of the system. The survey explored user experiences, expectations, and suggestions for improvement.

Results: The results of the questionnaire indicate that while pneumatic tube systems offer several advantages, there are also various areas that require improvement. Respondents emphasized the importance of speed and reliability, and highlighted the need for technical modernization. The feedback suggests that beyond the healthcare sector, pneumatic tube technology may have potential applications in other logistics fields as well.

Conclusions: Pneumatic tube systems represent a viable alternative for addressing increased Last-Mile Delivery demands, especially in closed or specialized environments such as healthcare institutions. The research demonstrated that, with appropriate development and adaptation, these systems could be extended beyond their traditional use and applied in new logistical contexts.

Limitations and future research directions: The study is limited by its focus on a single healthcare institution, but a similar system is used in several healthcare institutions in Hungary. Extension to other databases and more reliable data from healthcare institutions in different regions could provide a comprehensive picture.

Keywords: pneumatic tube system, supply chain, healthcare logistics

Preservation and Renewal: Examining Organizational Innovation Behavior in the Context of Sustainability, Social Responsibility, and Environmentally Conscious Management

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Background and introduction: In a continuously evolving and renewing technological environment, it has become essential for organizations to be open to innovation. Organizational innovation enables maintaining competitiveness, creating more sustainable jobs, and long-term development. The concept of sustainability, social responsibility, and environmentally conscious management, as well as the organizational innovation offers numerous economic and social benefits for both employers and employees.

Objective: The aim of the research was to assess the innovation behavior organizations operating in the Hungarian SME sector in relation to sustainability and environmentally conscious management, with a particular focus on leadership attitudes, styles, and the involvement and activity of employees in innovation. Our goal was to explore what environmentally conscious yet innovative solutions small and medium-sized enterprises implement, social responsibility in mind, in order to ensure sustainable.

Methodology: The empirical research was conducted using a quantitative research method, through a questionnaire survey. The sampling method used was the non-probability sampling technique, namely heterogeneous snowball sampling. Our goal was to obtain the broadest possible sample in terms of industry classification. A total of 1385 valid responses were collected. Non-parametric statistical tests were used for the statistical analysis of the hypotheses.

Results: Ours research shows that the innovation policy of SMEs is based on strategic and social responsibility considerations. The innovation behavior, which is aimed at ensuring sustainable and environmentally conscious management, is shaped by the leadership style, and the active involvement of employees in innovation. The CSR policies of these companies reflect that the more valued employees feel, the more willing they are to act in the best interests of the organization and adapt to innovations.

Conclusions: The innovation behavior of Hungarian SMEs focusing on sustainability is the result of effective cooperation between the strategic and operational level. The implementation of sustainability-oriented innovations by management depends on the active involvement of employees. Environmentally conscious management is perceived as a shared interest and responsibility however, it is also essential for management to consider the professional and livelihood aspects of employees.

Limitations and future research directions: The empirical limitation is associated with data collection, as organizations are often reluctant to share information related to their strategies and innovation policies, since such data may be considered business secrets. For instance, it could be valuable to investigate how sustainability is implemented into corporate strategy, including through the realization of ESG goals. It may be insightful to explore what practical connections exist between artificial intelligence and sustainability.

Keywords: organizational innovation behavior, sustainability, corporate social responsibility, environmentally conscious management, Hungary

Profitability of Hungarian wineries in a changing world

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Background and introduction: The rapidly changing global environment poses significant challenges to Hungarian wineries. While the COVID-19 pandemic – undoubtedly the most disruptive event of recent years – had a considerable impact on the financial and profitability of all domestic companies, wineries must also contend with the effects of climate change, shifting wine consumption trends, and regulatory risks.

Objective: In our study, we examine how the profitability and financial position of Hungarian wineries evolved during the polycrisis period from 2016 to 2023. Our aim is to explore the relationships between capital structure, financing strategy, and profitability, and to understand how these indicators differ between the pre- and post-COVID periods among the most prominent Hungarian wine-producing enterprises.

Methodology: Our empirical research uses data from 208 active Hungarian grape wine producers. We selected 108 companies based on our inclusion criteria: annual revenue over HUF 100 million and continuous operation since 2016. The literature review focused on size, capital structure, and financing strategies of Hungarian wineries, leading to the selection of key performance indicators: equity-to-debt ratio, financial leverage, ROE, ROA, and ROS.

Results: Preliminary results indicate that the sampled wineries achieved a compound annual growth rate (CAGR) of 5.9% in total revenue during the study period. Aggregate profitability – measured both in terms of operating profit and pre-tax earnings – increased even more significantly at annual growth rates of 18.4% and 22.1%, respectively. However, detailed analysis of the company-level data reveals considerable variation in growth across individual years and wineries.

Conclusions: Furthermore, while the profitability showed improvement over the period, this growth trajectory was disrupted and began to decline following the COVID-19 pandemic. Our research contributes to a deeper understanding of resilience and adaptive strategies of wineries. The findings provide valuable insights for decision-makers, supporting more effective financial and capital structure decisions aimed at ensuring enterprise stability and sustainable growth under diverse macroeconomic conditions.

Limitations and future research directions: Potential directions for future research include extending the timeframe of the study, incorporating additional performance metrics, or conducting international comparisons to better understand the impact of structural differences across regions.

Keywords: wineries, capital structure, profitability, resilience

Redefining the Tourist Experience: A Theoretical Framework for Metaverse-Based Tourism

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Background and introduction: Tourism is in a constant state of change, driven by technological innovations and evolving consumer needs. In recent years, the metaverse — an immersive, virtual, and interactive digital environment — has gained attention as a potential extension of traditional tourism offerings. While traditional travel requires physical presence and mobility, the metaverse provides opportunities for virtual experiences that can overcome geographical and financial barriers.

Objective: This thesis aims to develop a theoretical framework that systematically describes and analyzes the unique characteristics of metaverse-based tourism. This framework will identify opportunities and challenges to create a sound understanding of this form of tourism.

Methodology: This study is based on a thorough review of the literature in the fields of tourism, virtual reality, consumer behavior, technology acceptance, and experience design. Theoretical concepts such as Pine and Gilmore's Experience Economy, the Technology Acceptance Model, and current research on immersive environments were also integrated. The analysis is based on a conceptual model describing key influencing factors and interactions in metaverse-based tourism.

Results: The study shows that metaverse tourism is characterized by several core elements. We can confirm that the quality of virtual experiences largely depends on immersive technology. Tourists and users expect to actively participate and have individual needs that can be fulfilled. Technologies like artificial intelligence and big data enable personalized tourism offerings. While metaverse tourism has the potential to reduce physical environmental impact, questions about digital sustainability arise.

Conclusions: Metaverse-based tourism introduces new dimensions to the traditional tourism experience. While it expands on these models, it does not completely replace them. It enables innovative business models, new approaches to target groups, and hybrid experiences. However, it also requires new skills for designing virtual spaces and a deep understanding of users' psychological and social needs.

Limitations and future research directions: The work is primarily based on theoretical concepts and literature analyses. To date, empirical validation and practical case studies have largely been lacking. Future research should focus on the following areas: empirical studies on user behavior regarding metaverse tourism; economic impact on traditional tourism providers; sustainability analyses, both ecological and psychological.

Keywords: metaverse-based tourism, immersive environments, sustainability in digital tourism, consumer behavior in virtual tourism.

Reducing Bias in Risk Assessment: Evaluating Aggregation Methods for Expert Group Estimations

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Background and introduction: Accurate risk assessment often relies on expert judgment, especially in contexts where objective data are lacking. However, such estimations can be significantly affected by cognitive biases. The growing complexity of decision-making in uncertain environments highlights the need for effective methods to aggregate expert opinions. This study investigates how different aggregation techniques can improve the reliability and accuracy of risk evaluations based on expert group inputs.

Objective: The objective of this research is to evaluate and compare four aggregation methods—arithmetic mean, ordered weighted averaging (OWA), fuzzy TOPSIS, and hybrid weighting techniques—in terms of their ability to reduce bias in expert-based risk assessments and support more informed decision-making processes.

Methodology: The study employed simulation-based scenarios combined with a case study approach. Expert group estimations were generated and aggregated using four distinct methods: arithmetic mean, OWA, fuzzy TOPSIS, and hybrid weighting techniques. The aggregated results were then analyzed based on their consistency, sensitivity to outliers, and potential to support robust decision-making. Comparative analysis was conducted to assess how each method mitigates individual biases and reflects group-level consensus.

Results: The findings demonstrate that advanced aggregation methods—particularly fuzzy TOPSIS and hybrid weighting—offer improved reliability compared to simple averaging. These approaches better capture the diversity of expert input and minimize the influence of extreme or biased estimates. OWA also proved effective by allowing adjustable emphasis on optimistic or pessimistic scenarios, contributing to more balanced assessments. Overall, the hybrid methods provided the most accurate representation of group expertise in complex decision environments.

Conclusions: The research concludes that while the arithmetic mean remains widely used for its simplicity, more sophisticated aggregation methods significantly enhance the reliability of expert-based risk assessments. By accounting for individual competence, bias, and scenario weighting, methods like fuzzy TOPSIS and hybrid weighting contribute to more precise and context-aware decisions. The study highlights the strategic relevance of method selection in expert-driven evaluation processes.

Limitations and future research directions: This study was limited by its reliance on simulated data and hypothetical expert judgments. Future research should validate the findings in real-world organizational settings, involving diverse expert panels and live decision-making processes. Additional studies could explore the integration of machine learning with expert aggregation, and examine the psychological factors influencing expert consistency across different contexts.

Keywords: risk assessment, expert judgment, aggregation methods, OWA, fuzzy TOPSIS, hybrid weighting, cognitive bias, decision-making

Responsible Tourist Guiding - Theory and Practice

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Background and introduction: Tourist guides play a key role in shaping the experiences and behaviours of travellers. Positioned at the frontline of tourist-destination interactions, guides have the potential to influence not only visitor satisfaction but also the sustainability of the destinations they interpret. This paper investigates the extent to which professional tourist guides incorporate principles of responsible and sustainable tourism into their everyday guiding practices.

Objective: The aim of the research is to explore whether and how tourist guides incorporate principles of responsible and sustainable tourism in their daily work, and to identify good practices they use to influence tourist behaviour in a positive and ethical way.

Methodology: The study uses a mixed-method approach in three stages: (1) a pilot study with 10 semi-structured interviews of tourist guides to explore responsible tourism practices; (2) a broader online survey to quantify attitudes, behaviours, and challenges (target: 200 respondents); and (3) follow-up interviews to deepen insights from the survey (10-15 guides selected from survey respondents). This design allows for both breadth and depth in understanding how guides promote responsible tourist behaviour.

Results: The research is currently in progress. The anticipated contribution of the pilot study is revealing initial patterns in how guides perceive and apply responsible tourism principles. The full study aims to identify common good practices and barriers, providing data-driven insights to support guide training and policy development.

Conclusions: While the findings are still pending, the research is expected to highlight the often-overlooked role of tourist guides in promoting responsible tourism. It will contribute theoretically to understanding guides as agents of sustainable behaviour and offer practical insights for guide training, tourism policy, and destination management focused on responsible visitor engagement.

Limitations and future research directions: The study may be limited by a small convenience sample and potential bias in self-reported practices. Further research should include observational studies of guiding in practice, cross-cultural comparisons, and longitudinal approaches to assess the long-term impact of responsible guiding on tourist behaviour and destination sustainability.

Keywords: responsible tourism, guide, sustainability, economic impacts, social impacts

Rethinking Industrial Policy for Global Supply Chain Resilience: A Comparative Analysis of National Strategies and International Spillovers

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Background and introduction: Global supply chains are under growing pressure from pandemics, geopolitics, and climate change. In this study, I explored how industrial policies—like subsidies, tariffs, and export bans—impact supply chain resilience and global welfare. Using a three-country model, I found that while national strategies can stabilize supply locally, they often create global ripple effects, highlighting the urgent need for smarter policy design and international cooperation.

Objective: The objective of this paper is to understand how different industrial policy tools affect global supply chain resilience. By simulating a three-country trade model under disruption risks, I aimed to explore the domestic benefits and international spillovers of policies like subsidies, tariffs, and export bans—ultimately to highlight how coordinated global action can better support stable and resilient supply networks.

Methodology: This study uses a three-country economic model simulating global supply chains under random disruptions. I analyzed the effects of four industrial policies—entry subsidies, production subsidies, input tariffs, and export bans—on welfare and supply volatility. The model incorporates risk, trade costs, and firm behavior, using simulations to measure outcomes across countries and policy scenarios.

Results: The results show that entry subsidies reduce supply volatility but are costly. Small production subsidies can improve global welfare, especially when applied symmetrically. Tariffs lead to a prisoner's dilemma, lowering welfare without improving stability. Export bans create inefficiencies and reduce overall welfare. Simulations reveal that uncoordinated policies often worsen global outcomes despite local benefits.

Conclusions: The model is simplified and doesn't capture multi-stage production or real-world political dynamics. It also assumes constant elasticity and perfect competition in final goods. Future research could expand to multi-country, multi-sector models and explore how different risk types and firm behaviors affect outcomes. Greater empirical work is also needed to validate theoretical spillovers and guide policy design.

Limitations and future research directions: The model simplifies global trade by focusing on three countries and two production stages, and assumes perfect competition and constant elasticity. It doesn't fully capture geopolitical dynamics or sector-specific complexities. Future research could explore multi-country, multi-stage networks, include firm heterogeneity, and assess policy impacts under varied disruption types and institutional settings for more realistic insights.

Keywords: supply chain resilience, industrial policy, trade disruptions;, ntry subsidies, production subsidies, tariffs, export bans

Revolutionizing IT Service Process Monitoring with AI

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Background and introduction: This study investigates a novel artificial intelligence (AI) tool that plays a pivotal role in process monitoring, metric creation, and statistical generation with minimal human intervention.

Objective: By leveraging AI capabilities, the research aims to demonstrate potential efficiency improvements, thereby enabling teams to focus on customer excellence.

Methodology: The study employs literature review and a primary, qualitative analysis through a case study based on six in-depth interviews within a Hungarian subsidiary of a multinational IT company.

Results: The proposed AI tool offers a consultative approach to understanding IT data, utilizing AI and ML to identify issues and opportunities, and automating issue resolution with minimal human intervention. It also provides a unified user interface focusing on critical incidents, aiding departments in addressing availability and cost issues.

Conclusions: The research aims to elucidate the efficiency of AI tools in enhancing data analysis accuracy, improving key business metric identification and prioritization, bridging IT operation skill gaps, minimizing human intervention, and optimizing system performance through a unified user interface.

Limitations and future research directions: By addressing key challenges and leveraging AI capabilities, organizations can achieve significant efficiency improvements, reduce costs, and enhance overall system performance. The results of data collection will be shared in the upcoming publication.

Keywords: AI, efficiency, measurement

Sajttájak: Showcasing Hungary's Regional Identity through Artisan Cheese and Culinary Tourism

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Background and introduction: Hungary is currently experiencing a renaissance in artisan cheesemaking, with small-scale producers across its seven regions crafting cheeses that reflect local traditions, terroir, and innovation. This movement not only enriches the country's gastronomic diversity but also contributes to strengthening rural economies and regional identities.

Objective: The "Sajttájak" (Cheese Landscapes) initiative aims to highlight this burgeoning movement by collaborating with master chefs to create artistically curated cheese platters. Each platter features regional cheeses paired with complementary local products—such as jams, oils, nuts, breads, and beverages—emphasizing the unique gastronomic identity of each area. The project serves multiple objectives: promoting regional gastronomy, supporting artisan cheesemakers, and enhancing culinary tourism.

Methodology: Conducted a comprehensive survey of regional cheese varieties and identified suitable pairings with local products. Collaborated with culinary experts and master chefs to design visually compelling cheese platters that reflect each region's unique characteristics. Presented these cheese landscapes at national events, such as OMÉK, to foster appreciation for Hungary's diverse culinary heritage and stimulate interest in regional food tourism.

Results: Developed seven unique cheese platters, each representing the gastronomic identity of a specific Hungarian region. The platters received positive feedback at national events, contributing to increased awareness and appreciation of artisan cheesemakers and local products. The project facilitated stronger connections between regional gastronomy and culinary tourism, highlighting the potential of local food culture as a driver for economic development.

Conclusions: The "Sajttájak" project demonstrates that integrating traditional cheesemaking with contemporary culinary arts can effectively promote regional identity and boost tourism. The artistically curated cheese platters not only provide gastronomic experiences but also serve an educational purpose, raising consumer awareness about local products and traditions.

Limitations and future research directions: Plans are underway to test the cheese platters with panelists to obtain objective feedback on flavor profiles and presentation. Organizing a cold platter preparation competition for hospitality students is envisioned to engage the younger generation and encourage creativity. Exhibiting the cheese platters at events like the Sajtmustra aims to reach a wider audience and further promote the project's outcomes.

Keywords: artisan cheese, local food culture, terroir, food tourism, Hungarian gastronomy

Shared Services Centers as Business Strategy and the Relevance of Intercultural Communication: Definitions and Research Directions From a Systematic Literature Review

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Background and introduction: A Global Shared Services Center (GSSC) refers to the centralization of business functions within a multinational organization, integrating professionals from various cultural backgrounds. This study seeks to examine: What is a GSSC and Why is it adopted as a strategic business model? Why must intercultural communication be considered essential part of it? Despite its effectiveness, this model poses challenges, particularly related to communication and integration.

Objective: The aim of this contribution is to examine, with particular focus on GSSCs, how and why they are used as a business model, additionally to highlight the effects and challenges encountered in environments characterized by intercultural composition.

Methodology: Employing a qualitative methodology based on bibliographic review, academic articles, books, and reports were analyzed to explore the strategic role of GSSCs and the connection relating to challenges of intercultural communication within their structure. The study synthesizes existing knowledge to uncover key implications.

Results: Given that the majority of the workforce in GSSC comprises immigrants, intercultural communication becomes essential to achieving organizational goals. As a business model, GSSCs centralize support functions to enhance efficiency, reduce costs, and standardize processes across multinational organizations—objectives that depend heavily on effective collaboration across cultures.

Conclusions: Findings indicate that intercultural communication is not merely a complementary aspect but an intrinsic element of the GSSC model. Its effectiveness depends not only on operational efficiency, but also on the organization's ability to manage cultural diversity, making intercultural competence a strategic requirement for success in global service structures.

Limitations and future research directions: This study's reliance on qualitative bibliographic review limits its empirical applicability and generalizability. Future research would adopt empirical methods, such as surveys and/or ethnographic studies, to examine how intercultural communication is managed in practice, as well as explore region and/or sector specific and the impact of intercultural training programs.

Keywords: business strategy, global shared services centers (GSSC), intercultural communication

Social Connections and Tourism in Szigetköz (Hungary)

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Background and introduction: Szigetköz is the counterpart of Csallóköz in Slovakia (called Kukkónia), and the two are Europe's largest freshwater islands. The Szigetköz is the pantry of the Kisalföld, with a significant wild-fish gastronomy, A small area with significant freshwater resources, it represents an important tourist potential for water and cycle tourism.

Objective: This research aims to examine the relationship between social factors. With a special focus on age education level and income and the level of tourism activity.

Methodology: In addition to descriptive statistics based on the questionnaire, ANOVA, factor and cluster analysis were used to answer the research questions. A sample of 950 respondents collected in Szigetköz is used to test the hypotheses. The results were tested with SPSS 25.0.

Results: Respondents in the older age group are the most willing to borrow according to the ANOVA analysis. Participation in regional guided tours increases with age. The use of port infrastructure is most popular among the younger age group. Satisfaction with the quality of waterways is inversely proportional to the standard of living.

Conclusions: The results of our research can be used to develop programmes for regional tour operators. In the case of cycle tourism, both cost and logistical considerations are important in determining which target groups are most in need of rental facilities. It is also important to know how the popularity of tour operator programmes varies by age group. From the point of view of safety and comfort, it is worth paying particular attention to the infrastructure of the ports, especially with regard to fiata

Limitations and future research directions: The main objective of the research is to extend the research to the neighbouring border region of the Csallóköz and cross-border developments.

Keywords: Szigetköz (Hungary), active tourism, accomodation, guided tours, satisfaction,

Social Drivers of Sustainable Transport Behavior: Evidence from a Survey-Based Regression Model

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Background and introduction: As cities work toward decarbonizing transport, understanding the human dimension of mobility becomes essential. Mobility choices are shaped by complex sociological and contextual factors.

Objective: The main objective is to examine how social and behavioral factors influence mobility choices. It aims to assess their impact on individual transport-related CO_2 emissions.The goal is to support socially informed sustainable mobility policies.

Methodology: A structured survey will collect data on sociodemographics, environmental values, and travel behavior. Participants from Hungary and Colombia will be selected for cross-national comparison and individual CO_2 emissions will be estimated based on reported mobility patterns. Multiple linear regression will identify predictors of low- or high-emission behaviors.

Results: The study will reveal key sociological variables linked to emission levels. Patterns in mobility behavior will differ across national and social contexts.These findings will inform targeted policy interventions for emission reduction.

Conclusions: Mobility choices are deeply influenced by social values and context-specific factors. Policies that account for these dimensions are more likely to be effective and inclusive. The comparative approach enhances understanding of how culture shapes sustainability behavior.

Limitations and future research directions: Findings may not be generalizable beyond Hungary and Colombia due to contextual differences. Future research should include longitudinal methods, broader geographic scope, and mixed-method approaches for deeper analysis.

Keywords: mobility behavior, carbon emissions, sustainable transport

Social Tourism and Aging: Economic and Well-being Dimensions in Contemporary Research

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Background and introduction: This study is mapping scientific research on aging populations from 2012 to 2025, with a focus on economic sustainability and social tourism. What are the primary thematic areas and disciplinary trends in scientific research focused on aging populations, particularly about economic sustainability and social tourism? How is the concept of social tourism represented in academic literature, and what gaps exist in connecting it with the well-being and quality of life of older adults?

Objective: It aims to identify dominant themes, assess how social tourism is represented, and provide a foundation for further interdisciplinary research.

Methodology: The study applies bibliometric analysis using data from the Web of Science (2012–2025). VOSviewer software is used to perform co-occurrence analysis of keywords, enabling the visualization of thematic clusters, research trends, and disciplinary overlaps related to aging, economic sustainability, and social tourism.

Results: The analysis revealed growing interdisciplinary interest in aging, especially in health, economics, and management. Social tourism is an emerging topic, yet underrepresented. Few studies link economic sustainability with quality-of-life outcomes, highlighting a need for integrated approaches. Thematic clusters show increasing attention to non-medical strategies for aging well.

Conclusions: The study highlights rising interdisciplinary interest in aging, with growing focus on social and economic aspects. Social tourism emerges as a promising yet underexplored field. The lack of integrated models connecting quality of life with financial sustainability signals a research gap. Findings suggest social tourism can enhance well-being beyond medical care, offering valuable insights for future research and policy development.

Limitations and future research directions: The study is limited by its reliance on the Web of Science database, potentially omitting relevant literature from other sources. Additionally, restricting the analysis to English, Czech, and Slovak languages and select publication types may have introduced bias. Broader database use and keyword variety are suggested for future research.

Keywords: accessibility, bibliometric analysis, economic resources, older adults, social tourism

Societal and Industrial Expectations for the Future of Road Freight Transport Vehicles

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Background and introduction: As our world changes, so do the expectations toward road freight transport. People increasingly care about cleaner air, safer roads, and smarter technology, while industries look for efficiency, cost-effectiveness, and ways to meet growing environmental regulations.

Objective: This presentation takes a closer look at what both society and the transport sector expect from the next generation of freight vehicles. We expect big changes in freight transport, from automation and digital tracking to bodywork design to the increasing use of electric and alternative fuel trucks.

Methodology: In this talk, we aim to articulate from an industrial and societal perspective where there is a need and where there can and should be transformation in the freight transport of tomorrow.

Results: We also ask a simple but important question: what do people and industry experts really want from these vehicles – and where do their expectations match or diverge? Fast chargers must be installed along logistics hubs and major transport routes, e.g. TEN corridors, in accordance with mandatory EU guidelines and with the involvement of private capital.

Conclusions: Our goal is to understand the challenges and opportunities ahead, and how we can design freight transport solutions that make sense not only for business, but also for society and the environment. We recommend axle load relief only for zero-emission vehicles, compensating for the weight of the batteries and complying with the load limits of the physical road infrastructure.

Limitations and future research directions: From a technological point of view, developments have already reached a level where commercial application is realistic. Autonomous vehicles, for example, are already capable of safe transportation in certain environments. However, society remains skeptical in many cases: a lack of trust and technophobia may slow down acceptance.

Keywords: road freight transport, societal expectations, industrial needs, sustainability, automation, alternative fuels

Steering through Competence Disruption while the Mobility Game Rewrites Its Own Rules

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Background and introduction: The automotive world is no longer what it used to be. AI, cybersecurity, digital twins and societal demands twist the rules of the game, reshaping skills, business models and power balances. Startups breach old walls, OEMs face new rivals and trust-centred design rewires user expectations. Competence and leadership must evolve or risk irrelevance.

Objective: This paper offers a strategic guide to help leaders steer through competence disruption. It explores how technological shifts, societal expectations and agile new entrants reshape sector structures, guiding executives in realigning strategy, workforce development and dynamic partnerships.

Methodology: A conceptual synthesis connects technology trends, organisational shifts, Social Sciences and Humanities (SSH) integration and entrepreneurial dynamics. It uncovers competence transitions, partnership models, leadership challenges and trust-building practices vital for survival in a rapidly transforming mobility landscape.

Results: New entrants weaponise digital platforms, AI and trust-based services, confronting established players. Skills blend technical, ethical and societal domains. Leadership agility, cross-sector cooperation and user-driven innovation become non-negotiable ingredients for sustainable competitiveness at every level.

Conclusions: To stay in the game, leaders must realign competencies with shifting rules. This means embedding SSH in design, fostering trust, forging adaptive partnerships and adopting flexible, knowledge-based strategies that evolve with both technology and society.

Limitations and future research directions: Empirical work should validate these pathways across diverse contexts. Future studies may explore how competence-sharing, trust mechanisms and ecosystem-level partnerships unfold between OEMs, SMEs and new mobility actors in real-world disruptions.

Keywords: automotive skills evolution, AI, cybersecurity, mobility services, trust, business strategy, startups, servitisation

Steps to a Comparative Housing Affordability Study of Poland, the Czech Republic and Hungary

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Background and introduction: Affordability it's a complex area of housing research connecting economy and social questions, like the possibility to move where it is easier to find a job, to find an adequate home for the family. Our research uses the development of David Slavata a new experimental approach at regional (NUTS 2) level. The results show serious differencies even with common roots. Which could be a cause by a badly choosen snapshot or pesisting difference in policy tools.

Objective:
-Translate the term of affordability in statistical-econometric approach
-Test and correct new methodology
-Find common phenomena and differences between countries with common historical and economic background

Methodology: Our paper uses an innovative statistical methodology based on regional (NUTS 2) data of three countries: Czechia, Poland and Hungary. The methodology complies in one hand owner occupied and rental housing, and, in other hand availability (number of dwelling sales and renting adds) and prices / rents. We used statistical (national and Eurostat) data and other publicly available secure information on dwellings, selling and renting offers.

Results: We could calculated SAI (complex affordability index) for all NUTS 2 regions of the three countries. The result shows a difference between the three countries in the position of regions with lower GDP and regions with big cities.

Conclusions: As far as we are using an innovative methodology and we realized an international comparison which results should first of all studied with precautions because of the differences in national frameworks, use terminology, statistical habits etc. However, this methodology is ready to broader international comparison.

Limitations and future research directions: After the analyses and, if needed, revision of the methodology and result, a deep understanding of similarities and differences, a broader analysis can started for the whole CEE region and Europe. Statistical analyses should goes simultaneously with comparison of macroeconomic, legal and housing related subsidy framework. This study is followed up by a project financed by Visegrad Fund as a next step.

Keywords: housing policy, housing affordibility, regional unequalities

Striving for a Civilized Everyday Life: Ukrainian Refugee Women in Hungary

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Background and introduction: least one of their children, and many of them are with their husbands. Findings indicate that while the initial humanitarian response met the refugees' basic needs, numerous challenges persist regarding long-term integration. These include language barriers, difficulties in securing stable employment, and ongoing psychological distress.

Objective: The present study is dealing with the integration of Ukrainian refugee women in Hungary after their displacement caused by the war in Ukraine. By applying qualitative methodology based on eleven in-depth interviews with Ukrainian refugee women, the research examines the multifaceted experiences of these women, focusing specifically on their integration process into Hungarian society, the emotional struggles they have faced, and their future outlook. All participants have been living in Hungary

Methodology: By applying qualitative methodology based on eleven in-depth interviews with Ukrainian refugee women, the research examines the multifaceted experiences of these women, focusing specifically on their integration process into Hungarian society, the emotional struggles they have faced, and their future outlook.

Results: By presenting the current situation of refugees in Hungary, this paper contributes to a deeper understanding of the integration process and supports the development of more effective policies and services for Ukrainian refugee women in host countries.

Conclusions: Findings indicate that while the initial humanitarian response met the refugees' basic needs, numerous challenges persist regarding long-term integration. These include language barriers, difficulties in securing stable employment, and ongoing psychological distress. At the same time, many respondents demonstrate resilience and hopefulness, which reflect the complexity of their emotional narratives. This applies both to the women in our sample who arrived following their husbands and to those cu

Limitations and future research directions: o gain a deeper understanding of the situation, more interviews need to be conducted. Although the selection of the women was not purposeful, our sample ended up consisting almost entirely of those whose husbands were already living in Hungary. It would be worthwhile to seek out women who did not come to the country to join their husbands and to explore their circumstances as well.

Keywords: Ukrainian refugees, integration, emotional experiences, future outlook, Hungary

Structural Changes – Theories and Tendencies

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Background and introduction: The structural transformation of the national economy is a key factor influencing a country's economic development and competitiveness. In Hungary, the 20th century witnessed significant economic and social changes that fundamentally reshaped the relative shares of the agricultural, industrial, and service sectors. This study aims to analyze the structural changes of Hungary's national economy from 1900 to the present, putting it to an international comparative context.

Objective: The central research question is how the Hungary's economic structural changes has transformed over the past century and how these changes relate to international trends. Particular attention is focusing the relative weight of the agricultural, industrial, and service sectors on GDP, as well as to the socioeconomic consequences of this structural transformation and future development opportunities. Patterns among countries from different continents are also target to be identified.

Methodology: This study combines quantitative and qualitative methods. Historical statistical data from the Hungarian Central Statistical Office (KSH), Eurostat, OECD, and World Bank databases were collected and analyzed chronologically. For comparative analysis, structural transformation data from several countries (Germany, Poland, South Korea and the United States) were examined to identify differences and similarities. Using triangle graph and trends for presenting the data.

Results: The analysis reveals that Hungary's economic structure at the beginning of the 20th century was strongly agriculture-oriented, characteristic of the Dual Monarchy period. Significant industrialization occurred during the socialist economy era, while the agricultural sector's share significantly declined. After the regime change, the service sector became dominant, although the industrial sector remained important, recently sifted back on importance but also producing lower value-added products.

Conclusions: Hungary's economic structure has undergone significant transformation; however, features typical of modern post-industrial economies, such as a high level of innovation and knowledge-intensive services, have only partially materialized. This results in structural challenges that may hinder sustainable economic growth and international competitiveness. Regional disparities remain significant, affecting social cohesion as well. For further advance, some areas are recommended to focus on.

Limitations and future research directions: This comparison can be made in other regions as well so further analysis is possible to continue within this same subject. Patterns and trends can be defined. Also comparison between different organization future expectations and trend scenarios can be another area to research. Note that the digitalization recent boom and climate change influences can result several variance on future possibilities worth analyzing in detail.

Keywords: structural changes, GDP, development, tendencies, future scenarios

Structural Transformations in the Parcel Logistics Sector: Theoretical Model and Methodological Framework in a Grounded Theory-Based Approach

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Background and introduction: Before 2021, the Hungarian CEP (courier, express, parcel) and broader logistics sector displayed a fragmented, oligopolistic market structure with largely independent actors. The COVID-19 pandemic triggered a marked transformation: cooperation intensified and market concentration accelerated. This research aims to explain the structural shift through a theoretical model comparing pre- and post-pandemic, applying multiple methods:grounded theory, game theory, fuzzy logic, and narrative analysis.

Objective: The aim of the research is to develop a theoretical framework that can describe and interpret the two market states of the last-mile logistics sector under study and the structural and behavioral factors strongly influencing the transition between them. Our primary objective is to analyze market participants' strategic choices based on their cooperative and competitive attitudes.

Methodology: This research employs grounded theory, allowing theory development from qualitative data. Behavioral patterns identified via semi-structured interviews and narrative analysis are incorporated into a complex systems model. Game theory simulations and fuzzy logic explore shifts in cooperative behavior, while statistical and secondary data (e.g., e-commerce, labor markets) provide structural context. The methodology reveals how and why zero-sum logic evolved into cooperative strategies.

Results: Based on our preliminary results, the increase in market concentration can be interpreted not only as a consequence of external pressure, but also as a consequence of an internal transformation, where resource-constrained actors recognize the potential for cooperation. The narratives of cooperation and their spread can be particularly well traced through the attitude towards parcel lockers' application.

Conclusions: Researching the structural transformation of the last-mile logistics sector - interpreted as a complex system - requires a methodological combination that can simultaneously take into account the perceptions and narratives of the actors, as well as objective market trends and resource relations. Grounded theory provides the opportunity to continuously adapt the theoretical model to the experiences explored.

Limitations and future research directions: The research is currently based primarily on qualitative data, therefore the future goals include integrating it with quantitative data and validating the model through simulation. Additional research directions include incorporating counterfactual hypotheses and tracking the dynamics between actors over longer term.

Keywords: last-mile logistics, grounded theory, game theory, fuzzy logic, narrative analysis, system model

Success Factors of Digital Solution Implementation

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Background and introduction: Digitalization is one of the greatest challenges and opportunities of our time. While digitalization offers numerous advantages, organizations also face significant difficulties in implementing digital solutions, making it essential to examine the factors that lead to success or failure.

Objective: The aim of the paper is to investigate the success factors of implementing digital solutions. Digital solutions encompass a broad array of internet-based, communication, and other digital technologies, and tools. The main DSs, namely enterprise resource planning (ERP), customer relationship management (CRM), business intelligence (BI), document management systems (DMS), workflow management (WF) and robotic process automation (RPA) are analyzed.

Methodology: To answer the research question, a systematic literature review and qualitative research were conducted. The process resulted in 214 Scimago Q1-ranked articles, which were analyzed. Based on these articles, 52 further publications were included. Afterwards, we conducted semi-structured interviews. A key criterion for expert sampling was that participants had multiple years of leadership and DS implementation experience. Theoretical saturation was reached after 10 interviews.

Results: Our research summarized the success factors of DS implementation into three key categories: technology, technology–organization fit, and management competence. This study comprehensively examines DSs—using a systematic literature review and qualitative interviews—to define the key factors and supplement them by highlighting Hungarian specifics. The interviews complementing the systematic literature review also highlight several issues that are internationally interesting.

Conclusions: Our research provides guidance to digitizing organizations by identifying and interpreting the success factors (and main pitfalls) of DS implementation.

Limitations and future research directions: The limitation of our study is that our search was restricted to Q1 articles within the Scimago "Business, Management and Accounting" category, and we examined six DSs. Future research directions should include investigating success factors for other newly emerging solutions and systems, as well as examining how artificial intelligence (AI) integrates into DSs and how this affects success factors.

Keywords: business intelligence, ERP, document management system, software robot, workflow system

Supply Chain Transparency as a Marketing Differentiator in Healthcare: Advacing Responsible Consumption and Production under SDG 12

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Background and introduction: Adoption of sustainable and ethical policies is important. Consistent with SDG 12 (Responsible Consumption and Production), the paper investigates how open healthcare supply chains might improve customer behavior, brand trust, and support of sustainability objectives.
Research Questions:

1. How do healthcare companies convey supply chain transparency?
2. Does openness affect healthcare customer choice and confidence?
3. In what way does supply chain openness fit SDG 12 in marketing strategies?

Objective: Objective is to investigate how supply chain openness functions as a strategic marketing strategy in the healthcare industry and looks at how openness is communicated, how it affects customer trust and decision-making, and how it fits into marketing driven by sustainability.

- To examine how supply chain openness is communicated in healthcare companies.
- To find out how openness affects consumer confidence and medical decisions.
- How marketing strategies match supply chain openness with SDG 12

Methodology: This work employs a mixed-method approach. Semi-structured qualitative interviews with healthcare professionals and a quantitative consumer survey investigate how supply chain transparency influences marketing, trust, and fits with SDG 12. Stratified random sampling and intentional sampling. Data interpreted by both statistical analysis and theme analysis. Structured questionnaire, interview guide are the research tools Statistics to investigate link between transparency practices and responses

Results: According to the survey, sustainability reports, digital platforms, and product labeling are the main means of supply chain openness used by healthcare institutions. Transparency greatly increases customer confidence and shapes the decisions on healthcare services. Customers more brand loyal to companies with easily available supply chain data. Marketing plans including supply chain openness directly relate with SDG 12 and encourage responsible consumption. Supply chain openness strategic tool.

Conclusions: Supply chain openness is crucial to building consumer confidence in the healthcare industry. It guides companies to promote ethical behaviors and responsible consumption in line with SDG 12, therefore supporting sustainable marketing in line with long-term competitive advantage.
Practical Findings: Strong consumer trust is built by health care organizations who have supply chain transparency.
Theoretical Findings: Supply chain transparency integrates sustainability into Consumer Behavior models

Limitations and future research directions: Future studies could solve constraints by increasing generalizability by including different geographic areas and healthcare environments, therefore strengthening the sample. Longitudinal research might look at how consumer behavior changes with supply chain openness over time. More study of digital transparency tools and their use in various cultural settings is required. Deepening knowledge would come from looking at how third-party certifications and regulatory systems may help to improve.

Keywords: transparency in supply chains, consumer trust, healthcare marketing, responsible consumption, SDG 12, sustainability, ethics

Suppressed Innovation Dynamism: Systemic Disharmony and Zombification

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Background and introduction: The presentation addresses the underlying systemic problems behind the weakening innovation dynamism in advanced economies.

Objective: The objective is to (i) decipher the more and more asymmetric relationship between the financial sphere and the real economy resulting in anemic innovation dynamism; (ii) to show one of the most intriguing side-effects of such disharmony: the emergence and perseverance of zombie firms; and (iii) to draw important policy recommendations.

Methodology: Building a verbal model based on quantitative and qualitative data and information available at publicly accessible and authoritative international databases (World Bank, OECD etc.).

Results: One of the most basic systemic underlying process behind weakening innovation dynamism is identified. Zombification is addressed with a systems view by calling for an approach which is unique and new-fangled in the literature.

Conclusions: Zombification may be interpreted as a manifestation of self-organised criticality of modern capitalism (bias toward overproduction and overconsumption) that requires an entirely different approach to spur innovation.

Limitations and future research directions: The paper draws important lessons for how to trigger innovation while addressing zombification, which requires a totally new approach to economic growth. A more qualitative growth oriented socio-economic system is needed. Research shall focus on how that system can be cultivated.

Keywords: suppressed innovation dynamism, systemic disharmony, zombification and the future of growth

Sustainability in Practice: Understanding the Intention-Behavior Gap Among Middle-Class Consumers in Lucknow

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Background and introduction: We observe a discrepancy between the attitude and the actual behaviuor of the consumers. This is "attitude-behavior gap." To save our ecosystem this gap has to be closed. The main research questions are: (1) How conscious are the middle class consumers in Lucknow about sustainability and ethical consumption? (2) What main elements explain the discrepancy between knowledge and sustainable buying behavior? (3) How may this gap be closed and action-oriented sustainable consumption encouraged?

Objective:

1. To find out how conscious urban middle-class Lucknow consumers are of sustainability and responsible consumption.
2. To compare consumers' intentions with their actual practices on sustainable living.
3. To find the structural and personal obstacles stopping customers from turning awareness into environmentally friendly behavior.
4. To investigate how sociocultural elements influence environmentally friendly consumer behavior.
5. To investigate how peer behavior affects sustainability.

Methodology: The method is analytical—to pinpoint elements causing behavioral changes—as well as descriptive—to gauge degrees of awareness. Data are gathered using a cross-sectional time frame. Targeting urban middle-class Lucknow residents aged 18–45, the survey is stratified random depending on income and age. Primary technique of data collecting is a structured questionnaire survey; optional in-depth interviews follow. With Cronbach's alpha score was 0.84, the dependability of research instrument proved

Results: Information gathered from 200 Lucknow middle-class urban consumers offers insightful analysis of present behavioral trends, perceived obstacles, and possible incentives for sustainable living. Results expose a clear difference between awareness and behavior. Of the respondents, an astounding 85% said they knew about problems with sustainability and responsible consumption. This disparity emphasizes how insufficient awareness by itself is to inspire environmentally friendly purchasing behaviour.

Conclusions:

Theoretical Results

1. Validated Intent-Behavior Gap
2. Impact of Socio-Demographic Elements
3. Forecasters of Ecological Behavior
4. Communication and social influence roles

Practical Findings

1. Obstacles to Sustained Consumption
2. Value of Reliable Brands
3. Designed Interventions for Important Groups
4. Using Social Impact

Significance

1. Filling up Sustainability's Intention-Behavior Gap
2. Contextual understanding from a population under researched

3. Evidence-Based Finding

Limitations and future research directions:

1. Investigating regional differences in sustainable consumer behavior by means of comparative studies among several urban categories—tier 1 tier 2, and rural areas of India.
2. Design Using Longitudinal Research
3. Behavioral Interventions Experimentally: Future studies can help create causal evidence by evaluating strategies including influencer marketing, eco-labeling, and pricing incentives using field tests or randomized controlled trials.
4. Incorporation of more psychographic variables.

Keywords: consumers, awareness, intention, action, behavior gap, sustainable development, responsible consumption, purchase behavior

Sustainable and Digital Cultural Tourism as Driver of Regional Development in the Romania–Hungary Cross-Border Area

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Background and introduction: In the context of rapid global economic shifts and the transition toward sustainable and digital development, cross-border cultural tourism gains strategic importance for border regions. This study focuses on the Romania–Hungary border area, with a special focus on two county pairs in each country: Bihor and Satu Mare (Romania), and Hajdú-Bihar and Szabolcs-Szatmár-Bereg (Hungary), where cultural events play a growing role in fostering regional identity, cohesion, and local development.

Objective: The paper aims to explore how sustainability and digitalization trends influence cross-border cooperation (CBC) in tourism and culture. It emphasizes the role of cultural events in strengthening regional identity and examines how digital tools and sustainable policies support or hinder CBC between Romania and Hungary.

Methodology: A qualitative approach was used, combining semi-structured questionnaires with interviews. Data were collected from 56 participants during cross-border cultural events and 10 stakeholders, including organizers, local authorities, NGOs, and digital promoters. The study was also complemented with policy analysis and case studies.

Results: Our findings show that cultural events are widely valued for enhancing regional cohesion and visibility. However, digital integration and cross-border cooperation face challenges, due to the lack of interest at the level of communities, local administrations, and the business environment, as well as due to organizational and legal barriers. Moreover, digital expansion in cultural tourism is uneven, influenced by participants' socio-cultural backgrounds and digital readiness.

Conclusions: Cultural events are key tools for regional development, but their full potential is limited by fragmented digital strategies and cooperation gaps. A shared framework is needed to align cultural and tourism policies, improve digital inclusion, and foster long-term collaboration across the Romania–Hungary border.

Limitations and future research directions: The study is limited by its qualitative nature and regional focus. Future research should include quantitative data and broader geographic coverage but also exploration of digital literacy, institutional cooperation models, and the long-term impact of cultural events on cross-border strategies.

Keywords: cross-border cultural tourism, digitalization, regional development, qualitative research, sustainability

Sustainable Marketing in Agri-Food Business: A Brand Development Strategy in the Context of Digital Transformation

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Background and introduction: In the face of globalization, climate change, and growing demands for environmental responsibility, sustainable marketing in agriculture is gaining critical importance. It goes beyond traditional goals, considering long-term environmental, social, and economic impacts. The study aims to develop strategies for sustainable brand development of agricultural products to enhance consumer trust and support the sustainable growth of agribusiness.

Objective: The purpose of the study is to develop recommendations for the formation of sustainable marketing strategies for agri-food businesses, with an emphasis on the development of the agricultural and food product brand in the context of digitalization and growing environmental awareness of consumers.

Methodology: The research applies systems analysis to explore marketing trends in agribusiness and uses synthesis to integrate theories of sustainable marketing and brand management. Comparative analysis examines branding practices in Ukraine and the EU. Cause-and-effect and factor analyses identify links between brand development and marketing effectiveness, as well as key factors influencing consumer demand for agricultural products.

Results: The research applies systems analysis to explore marketing trends in agribusiness and uses synthesis to integrate theories of sustainable marketing and brand management. Comparative analysis examines branding practices in Ukraine and the EU. Cause-and-effect and factor analyses identify links between brand development and marketing effectiveness, as well as key factors influencing consumer demand for agricultural products.

Conclusions: The proposed toolkit allows agri-food business to more effectively formulate sustainable marketing strategies adapted to modern challenges. Taking into account the social and environmental context in brand management processes contributes to increasing consumer trust, strengthening competitive positions in the market, and supporting the sustainable development of the enterprise.

Limitations and future research directions: The main limitation of the study is the general nature of the proposed models, which require adaptation to the specifics of individual sub-sectors of the agricultural sector. Further research should focus on developing sectoral and regional sustainable marketing strategies, as well as studying the impact of digital tools on sustainable consumer behavior in the agricultural sector.

Keywords: sustainable marketing, agribusiness, agricultural products, brand, brand development strategy, marketing management, consumer

Sustainable Procurement in Interior Design: Corporate Challenges and Solutions

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Background and introduction: Environmental awareness is playing an increasingly significant role in every part of the world, whose key elements are sustainability and recycling process. The research was based on four main questions, how procurement and supply chain management are appear in construction processes, and what challenges these processes face that can influence sustainable material use in construction supply chains.

Objective: The aim of this research is to investigate the challenges companies face in terms of sustainability when implementing procurement and supply chain management processes related to interior design.

Methodology: The study work was based on a systematic literature review using the SCOPUS database, which contained 480 scientific articles for keyword search. These were filtered using PRISMA screening processes, the PEO framework and content analysis, so the result is 70 relevant articles. Based on the CIT methodology, it examines procurement and supply chain management processes through practical examples, data collection, analysis and drawing conclusions. The method helps to identify specific situations that analyze the success and failure of sustainability. The application of text mining will be used to identify new trends in sustainable sourcing and consumer attitude.

Results: The findings indicate that this topic represents a research gap where supply chain management, sustainable construction and urban planning intersect.

Conclusions: Companies must confront several challenges related to new technologies and environmental awareness in order to develop or transform well-functioning supply chain management processes.

Limitations and future research directions: In future research, more relevant journals will be analyzed, as additional databases will be utilized. In this way, a broader perspective can be used to examine the topic. Furthermore, case studies and surveys will provide more information to support the current findings.

Keywords: systematic literature review, supply chain management, procurement, interior design, sustainability

Sustainable Smart City Development: The Case of Six South Asian Cities

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Background and introduction: The diffusion of smart city initiatives faces varying challenges depending on the economic and infrastructural development of cities. This research compares six Southeast Asian cities (Singapore, Taipei, Jakarta, Kuala Lumpur, Manila, and Bangkok) to examine how levels of development influence the success of smart city projects across three key dimensions: sustainability, digitalization, and quality of life.

Objective: The first generation of smart city initiatives were mainly technological projects, while today the focus is increasingly on supporting quality of life and sustainability. Research on sustainable cities is an increasingly popular research trend, with a particular lack of knowledge on Southeast Asian cities. Therefore, this research seeks to partially fill this research gap through a case study of 6 cities.

Methodology: The research was carried out using a multiple case study methodology, with expert sampling across two developed, two moderately developed and two less developed cities.

Results: Findings indicate that highly developed cities (e.g., Singapore) have made significant progress through integrated digital strategies, such as AI-driven industrial upgrades and smart infrastructure. In contrast, less developed cities face major barriers due to inadequate utilities and limited institutional capacity. The novelty of this study lies in its contextualized approach, analyzing smart city development not in isolation but in relation to structural conditions and development levels.

Conclusions: This research offers valuable insights into how smart city models can be adapted to local contexts. It highlights the importance of tailored strategies that consider a city's institutional readiness and infrastructural baseline. These findings may support urban planners and policymakers in designing more realistic, inclusive, and effective smart city frameworks—especially in rapidly urbanizing regions with uneven development.

Limitations and future research directions: The limitation of the research is the sample selection of a few large cities in a region, which also provides an opportunity to continue the research within the framework of the study.

Keywords: quality of life, ASEAN, digitalization, digital transformation, urban development

Sustainable transport in China and Europe: Strategic and regional approaches

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Background and introduction: Freight transportation is one of the most important contributors to global greenhouse gas (GHG) emissions. This study analyzes and compares how sustainability targets and practices are being implemented in road freight across three key regions: Europe, China, and North America.

Objective: The aim is to evaluate the challenges, opportunities, and lessons learnt. Multiple approaches were applied: (1) a comprehensive literature review of sustainability regulations and technological trends; (2) secondary data collection from sustainability reports in the automotive industry; and (3) a primary survey distributed to international forwarders and service providers.

Methodology: The results indicate that Europe is mainly driven by regulatory decarbonization with strong commitments to electrification and intermodal freight, though infrastructure gaps remain. China demonstrates fast and strong progress in electrification and digital logistics platforms, but faces challenges in implementation across regions. North America shows slower regulatory adoption but strong industry-driven initiatives in efficiency and alternative fuels.

Results: Results from the questionnaire indicate that cost pressures, service reliability, and infrastructure readiness are the most well-known challenges, while collaboration and digital transparency tools are seen as key points toward sustainability.

Conclusions: The study forecasts a clear route that can give direction to political decision-makers and to industry leaders for creating strong procurement strategies and a stable base for creating and implementing sustainable solutions within the local and global supply chains.

Limitations and future research directions: It is confirmed within the study that even though each region takes a different path, the key drivers of success are similar: using new technologies, working together across industries, and keeping government rules in line with market needs (Ministry of Transport of China, Council of the EU 2024/AFIR). These points confirm what earlier studies also found (McKinsey) and can guide both future research and practical steps in making freight procurement more sustainable.

Keywords: carbon neutrality, CO_2 reduction, cross region study, decarbonization, freight transport, road freight, sustainability

Symbiosis and Tension Between Profit and Purpose Across European Healthcare Systems

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Background and introduction: European healthcare is grounded in equity and universal access, yet the involvement of for-profit actors varies across systems. Broadly, countries fall into three patterns: Privately-Integrated Systems with significant for-profit roles, mixed-systems with regulated coexistence, and dominant-public systems with limited private involvement. This mix raises questions about competition, complementarity, and system outcomes.

Objective: To objectively review how profit- and purpose-driven healthcare actors coexist across European systems and identify patterns that shape their interaction and influence system performance.

Methodology: A comparative review of selected European countries is conducted, grouped into privately-integrated, mixed, and dominant-public systems based on the scale of for-profit integration. Each group is analyzed through examples of regulatory frameworks, funding models, and public-private interaction to identify structural features influencing collaboration, conflict, and performance.

Results: Privately-Integrated Systems, such as the Netherlands and Switzerland, show stable coexistence where roles and reimbursements are clearly defined. Mixed-systems like France and Austria balance access and flexibility through regulation and public funding. Dominant-public systems such as the UK and Nordic countries show limited integration, yet rely on private capacity in specific areas. Poor regulation across any group tends to increase inefficiencies and inequity.

Conclusions: The coexistence of profit- and purpose-driven actors varies across Privately-Integrated, Mixed-Governed, and Public-Led systems. Where roles are structurally defined and guided by aligned objectives, cooperation leads to improved efficiency and accessibility. The dynamics are not binary but reflect national priorities, institutional maturity, and policy design, shaping how effectively public and private sectors can serve patient-centred outcomes.

Limitations and future research directions: This study is limited by its reliance on secondary sources and broad system-level grouping, which may overlook sub-national variation. Future research should explore in-depth country case studies, longitudinal policy shifts, and emerging areas such as digital health integration and public trust. Stakeholder perspectives could reveal how patients and professionals perceive this evolving public-private landscape.

Keywords: public-private healthcare, for-profit actors, non-profit systems, health policy, service delivery

Synthetic Trust: Exploring Audience Perception of Authenticity and Engagement Toward AI-Driven Influencers Across Lifestyle and Healthcare Sectors

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Background and introduction: As AI-generated influencers gain traction in digital communication, their ability to foster trust and authenticity varies across sectors. This study compares audience perception of virtual influencers in lifestyle and healthcare contexts. The central research question is: How do AI-driven influencers affect consumer perception and engagement across different professional sectors?

Objective: The aim of this research is to examine how AI-generated influencers are perceived across distinct sectors by analyzing audience engagement, sentiment, and trust indicators. By comparing a lifestyle-focused and a healthcare-focused virtual influencer, the study seeks to understand how sector-specific norms shape the effectiveness and credibility of AI-mediated communication.

Methodology: A mixed-methods approach was used, combining a systematic literature review (2016 - 2025) with qualitative content analysis. Two AI influencers - Milla Sofia (lifestyle) and Wanda (healthcare) - were selected. Ten Instagram posts per influencer were analyzed for engagement metrics, sentiment, and trust indicators to compare audience perceptions across sectors.

Results: VIs often excel in credibility and visual appeal but face challenges in emotional connection. In healthcare, VIs like Wanda show promise in promoting preventive behaviours and building trust, though their reach remains limited. Lifestyle virtual influencers like @millasofiafin demonstrate high engagement and positive audience reception, highlighting their effectiveness in visually driven sectors. Integrating virtual and human influencers enhances campaign effectiveness across sectors.

Conclusions: This study shows how AI influencers impact trust and engagement differently across healthcare and lifestyle sectors. Lifestyle influencers like Milla Sofia leverage aesthetics and emotion, while healthcare figures like Wanda must build credibility in sensitive contexts. Results highlight the need for tailored strategies, balancing innovation with authenticity.

Limitations and future research directions: This study is limited by a small sample size and only one AI influencer per sector, which may not represent the full diversity of virtual personas. Sentiment and trust were measured qualitatively via comment analysis, lacking experimental or survey data. Future research should expand the dataset and use mixed methods, such as interviews and behavioural experiments, to validate and deepen these findings.

Keywords: artificial intelligence, branding, influencer, PR, virtual influencer

Table for AI - Exploring Consumer Acceptance Toward Artificial Intelligence in Restaurant Experiences

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Background and introduction: Digital technologies, particularly AI, are significantly reshaping restaurant operations and guest experiences globally. This study explores Hungarian consumers' acceptance and attitudes toward AI-based restaurant solutions, addressing a notable research gap.

Objective: This study aims to investigate the underlying reasons for consumer acceptance or resistance to artificial intelligence (AI)-based technologies in Hungarian restaurants, providing insights into consumer preference groups and acceptance factors. Given the increasing adoption of AI technologies in hospitality, understanding these attitudes is critical for strategic management and successful technology integration.

Methodology: A mixed-method design combining qualitative in-depth interviews with consumers (n=20) and Q-methodology was applied. Data were analyzed using PQMethod software to systematically classify consumer typologies based on subjective attitudes toward AI.

Results: Preliminary results reveal distinct consumer groups varying in AI acceptance. Key factors include perceived utility, trust, human interaction desire, and anthropomorphic design. Personalized AI recommendations were highly valued, while resistance arose around authenticity concerns.

Conclusions: Consumer acceptance of AI in restaurants depends significantly on emotional and experiential factors. Effective AI integration requires balancing technology with human elements, emphasizing trust-building and EQ-focused change management strategies for improved adoption.

Limitations and future research directions: Limitations include geographic restriction to Hungary and small qualitative sample. Future research should encompass broader demographics, cross-cultural analysis, and longitudinal studies to deepen understanding and generalizability of AI acceptance patterns.

Keywords: artificial intelligence, hospitality, consumer acceptance, Q-methodology, restaurants, digitalization

Teaching Accounting as a Service

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Background and introduction: In recent years, both accountancy and business processes have undergone significant transformations due to digitalization and sustainability considerations. In this context, the study deals with higher education as a service.

Objective: From this perspective, the paper examines the range of external and internal stakeholders. It investigates the accounting knowledge of students participating in business and management and whether the knowledge of BA graduates meets the expectations of the labour market.

Methodology: The paper presents the most important characteristics of education, including accounting education, based primarily on relevant national and international literature. Using the COM-B model, it proposes solutions for the further development of accounting education in order to prepare students more to meet the labour requirements.

Results: It shows the achievements in accounting education of a Hungarian higher education institution from the above-mentioned approach. It presents a possible methodological change in education, which could result in numerous benefits not only for students, but also for the institution. It could strengthen the competencies of students and their preparedness for the demands of the labour market.

Conclusions: The study is undoubtedly timely. It examines the current situation and proposes some educational methodological changes that are essential in the current technological and professional environment to help as many students as possible to successfully complete their studies.

Limitations and future research directions: The scope of the processed data only applies to students from the Széchenyi István University's Business and Management major in the last five years. However, based on the presented model, it can be applied to a wider range. Future testing of the new educational project to be introduced will presumably provide a lot of useful information on whether it really improves the labour market readiness of graduates.

Keywords: higher education, service, accountancy, stakeholders, external and internal environment

Technological Trends in the Event Management Market

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Background and introduction: The event management sector has undergone profound technological transformations in recent years, generating both novel opportunities and complex challenges for organizers, participants, and service providers alike. This study seeks to critically examine emerging technological trends that are redefining the planning, implementation, and experiential dimensions of event organization.

Objective: A central focus is placed on the application of artificial intelligence (AI), which enhances participant engagement and strategic decision-making through personalized program recommendations, chatbot integration, and data-driven predictive analytics. Hybrid and fully virtual events have established themselves as standard formats, offering multi-perspective live streaming, interactive digital environments, and gamified participation frameworks.

Methodology: We selected interviews, as this approach enables us to obtain in-depth insights that go beyond the capabilities of general qualitative methods. The interviews are conducted with experts who were responsible for the creation, design, and implementation of the fan engagement initiatives mentioned above. The international sporting events selected for analysis include the FINA World Championships in 2022, the World Athletics Championships in 2023, and the Swimming Championships (25m) in 2024.

Results: The interviews are expected to reveal how AI-powered fan engagement tools enhanced audience interaction, emotional involvement, and overall event satisfaction. Furthermore, the study will likely demonstrate the operational benefits of integrating technologies like IoT, AR/VR, and blockchain, particularly in terms of security, efficiency, and immersive experience delivery.

Conclusions: The research outcomes will elucidate the ways in which distinct elements of the attendee experience were operationalized and evolved throughout the analyzed events, drawing upon knowledge derived from previous implementations.

Limitations and future research directions: While the current study focuses on implementation and immediate outcomes of technological innovations (especially AI-driven tools) in international sporting events, a promising avenue for further research would be to examine the long-term impact and audience perception of these technologies.

Keywords: fechnological trends, event management, sport events, AI, fun engagement tools

The Attitudes of Families Towards Insurance Policies in Hungary based on Qualitative Research.

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Background and introduction: Insurance policies in post socialist countries are often viewed suspiciously and the trust towards them is low or unstable. The research tries to reveal the determining factors behind the attitudes concerning such policies.

Objective: The study aims to reveal the attitudes, perceptions, judgements and opinions of students with respect to different insurances. The research shed light on how attitudes towards insurances in post-socialist societies are rooted in beliefs and judgements that involve trust and security.

Methodology: The interviews were conducted individually with students and their families about the choices of insurances, how important and necessary families consider such policies. 40 interviews were conducted, each focusing on the factors that determine the decisions behind insurance policies.

Results: The results show that there are four main factors that have a determining role which influence the attitudes towards insurance policies. The first is age, as the young are exposed to limited importance of insurances. The second is social status that explain how important respondents view insurances. The third factor is entrepreneurship and professional status as such roles require the expertise towards insurances. The fourth determining feature is media and social communication.

Conclusions: The conclusions emphasise that the attitudes towards insurance policies are greatly dependent on the education level and lifestyle of the respondents. Families differ in both social status and level of education, in terms of viewing insurance policies as indispensable and fundamental in the case of risk management and providing a secure future for family members.

Limitations and future research directions: The limitations of the research are due to its qualitative nature and the limited number of respondents involved in the stud. However in the future further interviews are to be conducted to reveal deeper connections with reference to social attitudes towards insurance policies.

Keywords: insurance policies, attitudes, interview, social status, determining features

The Balaton Sound's Life Cycle and its Effects on Tourist Inflow and Seasonality of Tourism in Zamárdi and Nearby Municipalities

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Background and introduction: Popular music festivals have become key components of contemporary event tourism and festival tourism. These events not only offer cultural attractions but also exert significant economic and social impacts on the host destinations. Balaton Sound—operating as a major festival in Hungary between 2007 and 2024 is a prime example of how a music event can evolve into a complex tourism product.

Objective: The primary aim of this study is to explore the life cycle of the festival, with particular focus on its development, peak period, and phases of decline. The theoretical framework is based on Richard W. Butler's Tourism Area Life Cycle (TALC) model, which allows for the analysis of Balaton Sound's evolution and its regional impacts across six distinct stages.

Methodology: The research combines qualitative and quantitative methodologies. On the qualitative side, the study examines the stages of the festival's life cycle, local social impacts, community responses, and the transformation of the festival's image. The quantitative dimension involves the analysis of visitor numbers, guest nights, and fluctuations in the Gini index during the festival periods.

Results: The findings highlight that the festival reached its peak in the mid 2010s, when Balaton Sound had not only high tourism relevance but also substantial social prestige. This was the period during which it exerted its greatest economic and social influence on both the host town and the wider region. The decline was mainly driven by the COVID-19 pandemic, changing consumer behavior, and a perceived drop in value for money, all of which weakened the festival experience.

Conclusions: The research reveals that although Balaton Sound significantly contributed to the development of summer tourism in the region for many years, recent economic, environmental, and social challenges ultimately led to the termination of the event and a restructuring of Zamárdi's tourism landscape. This is particularly concerning given that Balaton Sound was a medium-sized, award-winning festival attracting over 100,000 visitors, and functioned as a substantial tourism product in its own right.

Limitations and future research directions: Future research directions include the analysis of life cycles and impact mechanisms of other (popular music) festivals, as well as the investigation of structural transformations triggered by such events in individual tourist destinations.

Keywords: Balaton Sound, festival tourism, tourism seasonality, Zamárdi, Butler life cycle model

The Challenge and the Future of Artificial Intelligence: The Case of Győr Secondary Schools

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Background and introduction: In education, artificial intelligence presents a current challenge, as well as a glimpse into the future. AIEd is the new generation's tool - also for students and teachers, for learning and teaching progress.

Objective: Győr secondary school teachers and students' opinions on AI's impact on education were the focus of our research. In this regard, we believe that it is necessary for adolescents to acquire and utilize the new technologies due to their ability to explore the best ways to not only gain and use the new technologies in the future – for everyday life or university studies.

Methodology: The database was created between January and February 2025. The two questionnaires had been developed at the end of 2023. The questionnaires are self-complete; the respondent received the questionnaire via QR code and sent it after completion online. Online research can be shorter than face-to-face interviews. This has the advantage of not influencing interviewers. Anonymity and the possibility of self-complete make honest answers more likely. The questionnaire contains 26 questions.

Results: Our research shows that AI can become a driver of education if we learn to use it wisely together. We summarize the results into 3 main topic: usage of AI, teaching-learning process with AI and the school of future with AIEdTech.

Conclusions: Both groups see new opportunities for learning, but uncertainty about the changes also emerges. Openness to new ideas and continuous learning are key to success.The results show that the vast majority of the children surveyed have already encountered artificial intelligence in daily activities, and that they are more interested in technological innovations than afraid of them.

Limitations and future research directions: We would like to continue the research in the Széchenyi István University as well. We also want to try out some apps at secondary school or/and at the university, too.

Keywords: AIEd, Győr, secondary school, future, teaching-learing process

The Digital Divide in Participatory Budgeting: Lessons from Budapest on Older Adults' Inclusion

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Background and introduction: Our paper examines how the digital divide hinders older adults' participation in community life through a natural experiment. This experiment is based on the online participatory budgeting processes organised by the Municipality of Budapest in 2020/21 and 2021/22. The research focuses exclusively on age, even though we are aware that other characteristics can also influence digital literacy. For the purposes of this study, however, age is the most important variable.

Objective: The aim of the article is to show that the secondary digital divide prevents older citizens from participating in social decision-making with sufficient intensity.

Methodology: We measured older adults' willingness to engage in community life using a proxy variable based on their turnout in the 2014 parliamentary elections. While individuals aged 65 and older had higher election participation rates than younger age groups, their involvement in participatory budgeting was significantly lower. They contributed fewer ideas and participated even less in voting.

Results: We measured older adults' willingness to engage in community life using a proxy variable based on their turnout in the 2014 parliamentary elections. Older adults' active participation in public life is also supported by findings in the literature. While individuals aged 65 and older had higher election participation rates than younger age groups, their involvement in participatory budgeting was significantly lower. They contributed fewer ideas and participated even less in voting.

Conclusions: While individuals aged 65 and older had higher election participation rates than younger age groups, their involvement in participatory budgeting was significantly lower. They contributed fewer ideas and participated even less in voting. This gap is explained by the digital divide. To boost voting, the municipality widely promoted the process, engaging more younger citizens. However, while these younger individuals voted, they rarely submitted ideas. In contrast, older individuals who were techn

Limitations and future research directions: The study focused only on Budapest, although public budgeting is also present in other Hungarian cities. It would be worth analyzing the participation of older adults in these locations as well and showing how the situation develops in rural area. The study does not address differences in participation by gender or educational attainment, as its primary focus is the digital divide related to age.

Keywords: public budgeting, online voting, digital divide, participation of older adults

The Digitalization Evolution in Supply Chain Management: A Systematic Literature Review and a Transformation Model Assessment

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Background and introduction: The successful evolution of digitalization is evident within many industries' supply chain management and operation. With the need for process efficiency and competitive advantage achievement, enterprises have integrated and implemented diverse technology at different levels for their supply chain to target the goal of digitalization transformation.

Objective: The research aims to investigate the development of the digitalization transformation era, the model applicability and its measurement.

Methodology: Approaching a mixed methodology, the study combines a thematic qualitative review with case study analysis and quantitative correlation analysis additional with cluster visualization.

Results: The findings of the paper highlight the significant evolution of digitalization in SCM, the primary focus on process development when building digital chains, and a navigation framework for organizations to assess their digital transformation, offering a strategic roadmap for enterprises to advance their digital supply chain performance.

Conclusions: The author has explored such evolution by conducting a systematic literature review of 284 articles from Scopus and Web of Science; proposing a transformation model with three dimensions: data management, digital integration, and supply chain decision-making, assessed through three key metrics -adoption level, readiness level, and digital maturity level.

Limitations and future research directions: One room for improvement is the need to collect a larger sample of respondents, which can help to enlarge the dataset, as it's crucial for quantitative method validation. Additionally, in the future the author can concentrate on one precise company or industry to investigate their practical situations within the author's model.

Keywords: supply chain management, digitalization, transformation, Industry 4.0, model validation

The Dynamics of Influence: Content Marketing through Digital Influencers

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Background and introduction: Influencer marketing has become one of the most dynamic and rapidly evolving areas in modern marketing, driven by collaborations between brands and digital content creators. As social media continues to shape consumer behaviour, both real and virtual influencers are playing an increasingly prominent role in digital communication.

Objective: Influencer marketing is one of the most dynamically evolving areas in contemporary marketing, with collaborations between brands and content producers constantly adapting to current trends. The objective of this study is to make a comparison between the social media activities of a popular Hungarian content producer (WhisperTon) and a virtual influencer (Aitana Lopez) and to explore their impact on consumers.

Methodology: Three methodologies were employed in the research study. Firstly, qualitative and quantitative online content analysis investigated WhisperTon and Aitana Lopez's activities (November 2023 – February 2024). Then, an interview survey explored attitudes of Generation Z towards virtual influencers (n=6). Finally, an online survey assessed consumer attitudes towards influencer marketing (October 2024, n=111). Thematic analysis processed the qualitative data and the Excel statistical software package

Results: WhisperTon's content was more active on both platforms, while Aitana Lopez's posts had more comments. WhisperTon is more credible and trustworthy, while Aitana's content is innovative. Human values and authenticity are still key on social media. Virtual influencers will become more prominent. Generation Z favours real influencers because of authenticity, but is also open to new experiences with virtual influencers.

Conclusions: The most important part of influencer marketing is creating content that feels natural and is accepted by all. It is vital to make sure that there is no harm caused by people trying to be perfect in front of the camera. It is recommended that companies work with influencers who are able to share positive messages and encourage people to watch online videos. It is very important to educate young people so they can think critically and understand what healthy content looks like.

Limitations and future research directions: This study has a narrow timeframe and focuses on two influencers, limiting the findings. The qualitative sample and survey numbers may not fully represent Generation Z. Future research should include a broader range of influencers and a larger sample. Extending the study period would help capture evolving trends in influencer marketing. Using experimental methods and exploring virtual influencers' platform-specific and ethical aspects could provide deeper insights.

Keywords: influencer marketing, virtual influencers, social media strategy, authenticity

The Economic Opportunities and Social Constraints of Women's Participation in Business in Hungary

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Background and introduction: The economic and social significance of women's presence in corporate management and the entrepreneurial sector is receiving increasing attention worldwide. Different cultures interpret and treat the role of women in economic decision-making differently, and significant regional differences can be observed in the intensity of women's business activity.

Objective: The aim of the research is to explore the structural and cultural factors that shape women's economic participation in Hungary and to contribute to a rethinking of gender equality from an economic policy perspective.

Methodology: Based on a review of the literature, this study examines the economic value of women's presence in business and the social and institutional factors that limit the realization of this potential. It pays particular attention to the situation in Hungary, where women's economic activity is strengthening according to certain indicators, but their participation in management positions remains low, especially in large companies.

Results: Our research has found that there is a correlation between women-owned businesses in Hungary, corporate decisions made with female representation, and the success and profitability of businesses.

Conclusions: Increasing women's participation in business is in the interests of both companies and economies, because higher participation of women in corporate management and the entrepreneurial sector directly and indirectly stabilizes and improves the performance of companies and, through them, national economies. This is supported by a review of the literature, which shows that women-owned businesses and corporate decisions involving women are associated with a company's performance and profitability.

Limitations and future research directions: Future research should explore the phenomenon of forced female entrepreneurship and the possibilities for supporting women who start businesses for livelihood purposes, as well as the impact of social norms and stereotypes on female leaders and entrepreneurial motivation in order to understand the diverse motivations behind female business activities and promote the growth of female entrepreneurial activity and leadership roles and economic and social development.

Keywords: female entrepreneurs, leadership, financial impact, incentives, mobbing

The Economical, Social, Political and Environmental impacts of the CATL battery factory regarding the city of Debrecen and its region

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Background and introduction: This study explores the economic, environmental, and social impacts of the CATL battery factory investment in Debrecen, Hungary. It examines local public opinion, political dynamics, and regulatory shortcomings. The research investigates whether the project intensifies economic convergence challenges, environmental degradation, and social tensions, using expert interviews and case comparisons as its foundation.

Objective: The aim of the research is to assess the potential consequences of the CATL battery factory in Debrecen, focusing on environmental risks, economic benefits, and social impacts. It seeks to understand how such foreign investments affect local communities, regulatory frameworks, and political dynamics in Hungary.

Methodology: Here is a 500-character summary of your research design including all three methods. The research applied a mixed-methods design: (1) a quantitative attitudinal survey gauging public opinion on CATL's investment; (2) qualitative observational research exploring generational and emotional differences in public reactions; and (3) in-depth interviews with local officials, experts, and stakeholders. Together, these methods assessed economic, environmental, and social dimensions of the battery plant

Results: The research found that 65% of respondents had a negative opinion of the CATL factory, 15% were neutral, and 20% positive. Most residents oppose the investment, citing environmental risks, weak regulation, and lack of transparency. Observational data showed younger people reacted more emotionally, while older generations focused on economic and ecological risks. Interviews revealed widespread distrust in official communication and regulatory oversight.

Conclusions: The research highlights significant public opposition to the CATL factory in Debrecen, driven by environmental, social, and political concerns. It reveals regulatory weaknesses, lack of transparency, and polarized public opinion. The study underscores the need for stronger communication, stricter oversight, and community engagement. Theoretically, it shows how foreign investment can deepen mistrust; practically, it urges reforms to balance development with local interests.

Limitations and future research directions: The research is limited by the factory's non-operational status, restricting access to real-time environmental or economic impact data. Survey and interview responses may reflect subjective perceptions. Future research should include longitudinal studies after the factory begins operation, environmental monitoring, and comparative analyses with similar projects to assess actual impacts and policy effectiveness.

Keywords: Catl, Debrecen, environment protection, sustainability, EV cars, battery

The Educational Structure of the Population and its Impact on Spatial Inequalities in Household Incomes and the Working Poor in Bulgaria

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Background and introduction: Currently, the rise of the working poor and the deepening wealth gap generate serious challenges to socioeconomic development, and these issues are closely linked to extensive European research on spatial inequalities and labor market segmentation. Examining the impact of the educational structure on poverty and incomes of the population, the paper builds on prior studies in Bulgaria and abroad, applying a strong spatial approach and a variety of indicators (demographic, economic, and social).

Objective: The study aims to explore the impact of the educational structure of the population, respectively, the labor force, on the evolution of inequalities and spatial differences in household income, as well as the number and share of working poor in the country's regions at the NUTS 3 level.

Methodology: The study is based on analyzing data from the National Statistical Institute and the Employment Agency of Bulgaria, as well as legislative documents; statistical analysis (correlation and cluster analysis) of empirical data on indicators characterizing the age and educational structure of the population, indicators of poverty and social inclusion, and the Gini coefficient.

Results: Statistical analysis (5 clusters and the correlation values) reveals that educational disparities impact the spatial polarization in incomes and labor markets in NUTS 3 regions of Bulgaria. The capital district stands out as the country's economic and educational hub, but at the cost of high inequality (Gini index: 39.3, 2024) and poverty rate. Conversely, 9 out of 14 regions in Northern Bulgaria have high unemployment and deprivation rates due to low educational attainment and R&D capacity.

Conclusions: The widening of economic, social, and demographic disparities in Bulgaria has been an intensifying process in recent years, and, therefore, the areas in the country with a high share of the population living below the poverty line are expanding. Economic activities with low added value and low labor productivity result in an increase in the nominal number of working poor and a decrease in the standard of living for a significant part of the population in Bulgaria.

Limitations and future research directions: The study limitations are predominantly related to the lack of information at a lower spatial level. Future research will elucidate the regional focus aimed at establishing the relationship between the educational attainment of the population and the vocational profile of schools within specific territorial units, on the one hand, and the economic activities and the qualification of the labor force, on the other.

Keywords: working poor, educational structure of the population, regional disparities, household income

The Evolving Financial Landscape: A Systematic Literature Review Of Remote Work and Home-Office Impact On Corporate Strategy

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Background and introduction: Flexible work models, such as remote work and home office, have become a permanent factor influencing corporate financial and strategic structures. This study presents a systematic literature review to analyze the impact of these models on a company's financial situation and strategy. The main objective is to identify and evaluate key changes in corporate finance after the introduction of remote work and hybrid regimes.

Objective: The primary objective of this study is to identify and evaluate the key changes that have occurred in corporate finance, financial management and financial strategies as a result of the implementation of flexible work models such as teleworking and working from home. The research aims to synthesize findings from a systematic literature review to provide a comprehensive overview of the topic while also disclosing research gaps and limitations.

Methodology: A systematic literature review was conducted using the SPAR-4-SLR framework. A search for scientific articles was conducted in the Google Scholar database for the period from 2010 to May 2025. Out of 161 relevant contributions, nine studies were selected for the final analysis, excluding dissertations, patents, books and letters. The extracted information was structured using thematic analysis, which includes Results, findings, Limits and Methods used.

Results: The analysis of the publications confirms that companies with remote work or home-office can achieve significant cost savings on various expenses, such as real estate and energy. However, the transition also increases cyber threats, requiring new investments in cybersecurity. This shift necessitates a re-evaluation of financial forecasting and budget allocation to address these new risks and opportunities.

Conclusions: The research concludes that remote work and home-office fundamentally change corporate financial dynamics, presenting both opportunities and risks. While companies can realize substantial cost savings, these gains are balanced by the necessity for strategic reinvestment in cybersecurity and a complete re-evaluation of financial planning to mitigate new risks. The findings provide practical insights for managers to navigate these financial shifts.

Limitations and future research directions: The primary limitations are the small sample size and a narrow research context (e.g., Australia's resource sector). To overcome these limitations, future research should focus on primary empirical studies with broader samples across different countries and industries. It is also recommended to quantify the long-term financial impacts, the ROI of cybersecurity investments, and the financial benefits of increased employee loyalty and productivity in hybrid work models.

Keywords: corporate finance, cost savings, home-office, organizational strategy, remote work

The Impact of Digital Transformation on Firm Efficiency and Labor Productivity in Europe

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Background and introduction: Digital technologies refer to the use of digital tools, systems and devices to process and transmit data (Pullen, 2009) [1]. Digital transformation speaks to the overall use of digital technologies on the organizations processes and operations (Verhoef, P. C., Kannan, P. K., & Inman, J. J., 2021) [2]. At the heart of business in the current period is the advancement in technologies and digital transformation which are the present and future drivers for growth and efficiency in the business.

Objective: The research aims at understanding the impact digital transformation has on labour productivity within an organization by exploring how the adoption of different digital technologies affect employee productivity.

Methodology: This study will adopt a quantitative cross-sectional design to examine the impact digital transformation has on labour productivity. The study will examine literature review and also secondary data from national and international databases such as the OECD, World Bank, Eurostat, and national statistics offices to compare digital adoption indicators with labour productivity metrics across industries and countries in Europe. The data will be analysed using descriptive statistics and regression.

Results: Digital transformation (DT) has profoundly influenced firms' operations, boosting both efficiency and labor productivity. By incorporating technologies such as cloud computing, artificial intelligence, and data analytics, businesses can optimize processes, cut costs, and improve decision-making allowing employees to concentrate on complex tasks. This leads to greater operational efficiency through automation, better labour resource management, and quicker adaptation to market shifts. This paper

Conclusions: Recent literature confirms that digital transformation significantly impacts labor productivity by automating repetitive tasks, enabling better decision-making through AI, and fostering collaboration through digital platforms (Bresnahan, 2002) [20]. The adoption of digital tools leads to greater efficiency, allowing firms to allocate human capital more effectively, reduce administrative burdens, and streamline workflows (Brynjolfsson, 2014) [5].

Limitations and future research directions: The study is limited to secondary data and therefore lacks the firm-level insights which are needed to fully capture the effects of digital transformation on labor. Some possible sectoral and regional differences may also be under represented in the aggregated databases. Future research in this area should include primary data and qualitative insights and emerging technologies.

Keywords: digital transformation (DT), digital technologies, innovation

The Impact of Food Waste on Environmental, Economic, and Social Issues: A Study on Consumer Behavior in Hungary

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Background and introduction: Food waste is a pressing global issue with severe environmental, economic, and social consequences, including resource depletion, greenhouse gas emissions, and food insecurity. In Hungary, households account for a significant share of total food waste, yet limited research has examined the sociodemographic and behavioral factors driving it.

Objective: This study aims to explore the relationships between consumer behavior, demographic characteristics, and household food waste patterns in Hungary, with the goal of identifying key drivers and potential intervention points for waste reduction.

Methodology: A quantitative survey was conducted with 798 Hungarian respondents, using a structured questionnaire to capture food purchasing habits, disposal frequencies across specific food categories, environmental attitudes, and demographic data. Data analysis employed descriptive statistics, variance analyses (F-tests), and correlation measures to assess the influence of gender, age, education, income, and place of residence on waste behaviors.

Results: Baked goods, leftovers, dairy products, and fresh produce emerged as the most frequently discarded items, whereas canned goods, frozen products, and spices were rarely wasted. Higher education levels and stronger pro-environmental attitudes were associated with lower waste levels, while younger respondents and higher-income households reported more frequent disposal. Urban residents wasted more than rural households, where composting and leftover reuse were more common.

Conclusions: Household food waste in Hungary is strongly shaped by demographic and behavioral factors, suggesting that targeted interventions are needed. Strategies such as environmental education, improved food planning tools, expanded composting infrastructure, and support for food rescue initiatives should be tailored to specific population segments. The findings offer actionable insights for policymakers, NGOs, and industry stakeholders to promote more sustainable consumption and reduce household waste.

Limitations and future research directions: The study employed a non-representative, convenience-based sampling approach, which limits the generalizability of the findings to the entire Hungarian population. Additionally, cultural, psychological, and seasonal factors influencing food waste behaviors were not examined and warrant further investigation in future research.

Keywords: food waste, sustainability, consumer behavior, environmental awareness, demographic factors

The Impact of Green Space Management Practices on the Climate Adaptation Potential of Urban and Suburban Areas

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Background and introduction: Urban and suburban green spaces, including private ones, are vital for communities' adaptation to climate change. Previous research shows that individuals view their private green spaces as distinct entities and often neglect their integration into the wider neighbourhood ecosystem. However, the quality of these green spaces influences the overall neighbourhood ecosystem, whilst individual management practices relate to the municipality's capacity for climate adaptation.

Objective: The research aimed to explore the role of environmental awareness in individual decisions regarding green space management practices in suburban areas. Another objective was to identify and evaluate policies that could promote individual behaviours supporting climate adaptation strategies at the municipal level.

Methodology: Behavioural economics provided the theoretical framework for the research. At the empirical level, surveys of residents were conducted in 12 suburban villages across 4 cities in Hungary, Romania, and Slovakia. Data analysis was performed according to the MADB (Motivation/Attitude Driven Behaviour) model.

Results: Our study revealed significant differences in private green space management practices based on the residents' origins. While long-term residents ("villagers") tend to value practical and ecological aspects, newcomers ("settlers") are more motivated by aesthetics, convenience, and social status. These differing perspectives impact local biodiversity, water management, and climate. Furthermore, social norms, emotional responses, and limited knowledge also shape behaviour.

Conclusions: The paper revealed that societal changes influencing existing social norms are vital for adopting environmentally friendly private green space management practices. Policies should encourage cultural change through education, incentives, community initiatives, and partnerships. Media and frameworks such as the Entente Florale Europe competition assist in shifting attitudes. Community gardens provide benefits, but also encounter legal and engagement challenges.

Limitations and future research directions: The paper is constrained by its regional focus on Central and Eastern Europe, which may affect generalisability. Self-reported data may also reflect social desirability bias. Future research may explore longitudinal behavioural changes, test interventions across diverse urban contexts, and examine how digital tools or gamification can support sustainable practices in private gardens. Cross-cultural comparisons could deepen insights into social norm dynamics.

Keywords: private green space management, attitudes and behaviour, climate adaptation, suburban area, urban ecological networks

The Impact of Hungarian Universities on Regional Development: A Focused Study on Third Mission Goals for Sustainable Community Development

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Background and introduction: The third mission of universities has gained significant importance in Hungarian higher education, impacting funding and accreditation. However, despite many studies, there is still no consensus on indicators for assessing the quality in these activities. Social engagement and responsibility are key factors for the sustainable future of universities, highlighting the urgent need for a structured evaluation of third mission activities, especially concerning sustainable community development.

Objective: This study identifies and analyses indicators that promote sustainable community development through universities' 3M activities. It explores the role of environmental awareness and identity in education, focusing on these activities' economic impact. The research includes empirical studies three universities' 3M strategic goals and activities for community development, digitalization, and environmental sustainability while addressing marginalized groups' needs.

Methodology: The research evaluates 3M activities at three Hungarian universities through extensive document analysis, focusing on how these goals are integrated into strategic plans for sustainable community development. The study hypothesizes that key indicators - heritage preservation, service development, local resource utilization, and community well-being - assess 3M activities and serves as a model for sustainable social responsibility in higher education, enhancing local community engagement.

Results: The findings of this study reveal that the integration of 3M goals into the strategic framework of the examined universities, particularly those related to sustainable community development and environmental awareness, is both feasible and beneficial. As a result of the comparative analysis, the study highlights the strategic goals that serve the establishment and development of sustainable communities.

Conclusions: The research emphasises the educational shaping of environmental and community (identity) awareness among university citizens as one of the objectives of the universities' third mission. The study begins with the premise that sustainability is a critical component of third mission activities, measuring how elements of sustainability, such as environmental awareness and identity, are integrated into strategic goals.

Limitations and future research directions: Future research could focus on examining the indicator system based on other models and frameworks. Moreover, further studies could investigate the dynamic nature of third mission activities over time, exploring the evolving role of universities in regional development and social engagement.

Keywords: assessing HEI's third mission, sustainable social responsibility, community development

The Impact of Operating Cash Cycle on Firm Profitability: Evidence from Hungarian SMEs

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Background and introduction: Understanding the relationship between working capital management and firm profitability is crucial for SMEs, as liquidity constraints often affect their financial health. The operating cash cycle (OCC), which consists of days inventory outstanding (DIO) and days sales outstanding (DSO), plays a key role in determining profitability. This study examines the impact of OCC on firm profitability, measured by return on assets (ROA), while also assessing the separate effects of DIO and DSO.

Objective: This research aims to analyze the effect of OCC on ROA in Hungarian SMEs, specifically investigating whether the relationship follows a nonlinear pattern. Additionally, it explores the independent impact of DIO and DSO on ROA.

Methodology: The study employs a sample of 1,230 Hungarian SMEs, covering 3,357 firm-year observations between 2019 and 2023. Using ordinary least squares (OLS) regression models with firm-level clustered errors, the study assesses the relationship between OCC, DIO, DSO, and ROA.

Results: The findings reveal a U-shaped relationship between OCC and ROA, suggesting that both very high and very low OCC levels are associated with higher profitability, while moderate OCC levels are linked to lower profitability. Similarly, DIO follows a U-shaped pattern, indicating that firms benefit from either very fast or very slow inventory turnover, while moderate levels reduce ROA. In contrast, DSO does not exhibit a significant effect on ROA.

Conclusions: The results of this study show that firms appear to benefit from either aggressive cash cycle minimization or a strategic extension of OCC and DIO, possibly due to economies of scale, supplier negotiation power, or flexibility in managing supply chain risks. Moderate levels of OCC and DIO may reflect inefficiencies or suboptimal resource allocation, leading to lower profitability.

Limitations and future research directions: This study focuses exclusively on Hungarian SMEs, limiting its generalizability to other contexts. Future research could explore sector-specific variations, incorporate alternative profitability measures, and investigate the role of macroeconomic conditions in shaping these nonlinear effects. Additionally, further exploration into why DSO shows no effect on profitability could provide valuable insights into SME credit policies.

Keywords: operating cash cycle, days inventory outstanding, days sales outstanding, firm profitability, SMEs

The impact of Sport Events on the Brand Image of the Country - Focussing on Mega-events

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Background and introduction: Sport has long played a vital role in the cultural and societal life of nations. Major sporting events such as the Olympic Games and world championships not only promote athletic excellence but also generate significant economic and infrastructural change, while shaping international image and cultural identity. This paper explores how sports can serve as strategic tools for enhancing national branding and fostering social and economic development.

Objective: The primary objective of this study is to explore the multidimensional economic, social, and symbolic impacts of international sport mega-events on host country image. By comparing three distinct events, the research aims to identify key mechanisms through which such events influence national branding, regional development, and long-term economic externalities, while offering policy-relevant insights for sustainable event planning.

Methodology: This study applies a case study methodology to examine the impacts of three major international sporting events: the Formula 1 Hungarian Grand Prix, the 2017 European Youth Olympic Festival (Győr), and the 2024 Paris Summer Olympics. Based on a fixed set of criteria (e.g., economic, social, image-related impacts), each case is analyzed to explore how such events shape national image and contribute to economic and infrastructural development.

Results: The three case studies—Formula 1 Hungarian Grand Prix, EYOF 2017 in Győr, and the 2024 Paris Olympics—demonstrated significant impacts on national image, economy, and infrastructure. Comparative analysis revealed differences in scale and legacy. While the F1 Grand Prix contributes to sustained tourism, EYOF and Paris showcased best practices in infrastructure reuse and sustainability, offering valuable lessons for future mega-event planning and image-building strategies.

Conclusions: The study highlights that large-scale sporting events function as strategic economic instruments with multiplier effects on GDP, tourism, and employment. Sustainable infrastructure investments and coherent nation branding yield long-term returns. Policymakers should integrate cost-benefit analysis, stakeholder engagement, and legacy planning to maximize social utility and enhance international economic positioning.

Limitations and future research directions: This research is limited by its case-study methodology, which, while insightful, constrains generalizability. Future research should apply econometric modelling and longitudinal analysis to assess causal effects. Expanding the dataset with stakeholder interviews and macroeconomic indicators could further validate findings and support robust policy recommendations regarding the economic utility of sport mega-events.

Keywords: nation branding through mega-events, tourism-driven regional development, sport-related economic externalities, infrastructur

The Implementation of Lean Methodology in SMEs: Exploring Its Possibilities and Impact on Profitability

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Background and introduction: Lean methodology is increasingly viewed as a vital approach for improving operational efficiency and profitability. This paper investigates the feasibility and practical outcomes of Lean implementation in small and medium-sized enterprises (SMEs), with a focus on both strategic adoption and measurable business impact.

Objective: The research aims to explore the potential of Lean methodology within SMEs and to evaluate how its implementation affects financial performance, efficiency, and organizational adaptability.

Methodology: The study involves two phases. First, a systematic literature review was conducted using the Scopus database, applying the PEO framework and PRISMA method, identifying 40 relevant studies from an initial 746. Second, primary data was collected from SME partners to assess Lean knowledge, tool usage, cultural readiness, and stakeholder commitment, followed by statistical analysis.

Results: The literature review identified diverse Lean practices adapted to SME contexts, and highlighted links to cost savings and environmental sustainability. The empirical phase aims to uncover the organizational and cultural factors influencing successful Lean implementation in SMEs.

Conclusions: This study builds foundational knowledge about how Lean can enhance SME profitability and competitiveness. The findings aim to guide SMEs in aligning Lean practices with internal capabilities and long-term goals, while offering a knowledge base for practitioners and researchers alike.

Limitations and future research directions: Limitations include the use of a single database and early-stage primary data. Future research should expand the data scope and explore industry-specific dynamics. Further studies may examine Lean's long-term financial and environmental effects across diverse SME sectors.

Keywords: SME, lean, productivity, enviromental sustainability

The Importance of Culture on Student Service Quality Perceptions

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Background and introduction: Student higher education service quality perceptions have been in the center of research in the past decades. Its importance lies in the fact that quality perceptions might determine student satisfaction, which can further the positive word-of-mouth recommendations of the institution among students. However, there is a gap in our understanding of how service quality perceptions are influenced by the culture of international students, originating from diverse countries.

Objective: Therefore, the aim of this research is to provide insights into how culture influences the service quality perceptions of international students in diverse service quality environments.

Methodology: By examining cohorts of international students in various universities, this study employs a mixed method research design. Qualitative in-depth interview results are introduced together with quantitative results obtained via online surveys at multiple higher education institutions.

Results: Qualitative results show that international students perceive a higher service quality at the examined institution in the USA, while the same perceptions are lower at the examined Hungarian university by their cohort of international students. Results of the quantitative research are consistent with the interviews showing higher quality perceptions in the institution in the USA.

Conclusions: However, when comparing the predictive power of the culture and the institutional affiliation of international students, we can conclude that students' culture seems to be a stronger predictor of perceived higher education service quality than the examined institutional affiliation.

Limitations and future research directions: Even though this research is limited in terms of the involvement of higher education institutions, it seems to further our understanding on how the culture of international students influence their perceptions of the higher education services. Further, there is a need for future studies comparing a higher number of institutions and their international student service quality perceptions.

Keywords: higher education, student service quality perceptions, culture

The Importance of Sustainable Principles in Education: A Research Agenda on Higher Education

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Background and introduction: Given the increasing importance of higher education, the research aims to analyze how universities provide quality education to students by adapting to the sustainable demands of the economy and shaping young people's behaviour. At the same time, we examined the adoption of technology and the transition toward digital education, analyzing the case of Romania and the country's largest university.

Objective: The purpose of the research was to analyze the way how the SDGs are implemented in higher education in Romania, with a particular focus on SDG 4 – Quality Education. Additionally, we examined the implementation of sustainable principles by the largest university in the country the impact that sustainability standards have had on academic programs and the way the faculties coordinated by the university carry out their activities.

Methodology: The study is based on a systematic literature review of the meaning and significance of the SDGs by examining relevant literature found in international databases. At the same time, a documentary research was conducted, allowing to analyze the main measures implemented at the level of the analyzed university, which were critically and objectively compared with the measures adopted in the international higher education system.

Results: Given that Romania is an emerging market, the implementation of sustainable principles in a key sector - education - has proven to be a major challenge. The results showed that the largest university in the country has started the process of integrating the SDGs into its institutional structure, with the first stage being the improvement of curricula by adding SDG-related labels. At the same time, the digitalization process has also supported the application of sustainable principles.

Conclusions: The conducted study is the first to consider the implementation of sustainable principles in higher education in Romania and the consequences of this action. The implementation and development of the SDGs represented a shift from an incremental approach to a transformative one, integrated into the educational system, into young people's behavior, and subsequently, into the business models they design or manage.

Limitations and future research directions: The first limitation of this study is the use of documentary research, which relies primarily on the objectivity of the researchers. Another potential limitation is the focus on a single university. A future course of action is to conduct quantitative research, both among academic staff and students, to assess how the application of sustainable principles in higher education is perceived and to enable comparisons with other universities.

Keywords: Sustainable Development Goals (SDGs), higher education, infrastructure, National Sustainable Development Strategy

The Importance of Tacit Knowledge Transport during the Onboarding Process – Systematic Literature Review

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Background and introduction: The global economy is currently facing several challenges that affect the field of human resource management. These include low productivity growth, skill shortages, labour market inequalities, as well as structural transformations caused by technological advancements. Another challenge lies within globalized organizations, where knowledge transfer requires intercultural competence, a common language, so all of these make the onboarding process increasingly important following recruitment.

Objective: The aim of this study is to review recent publications related to the informal, experience-based transfer of tacit knowledge within increasingly emphasized onboarding processes, using the method of systematic literature review. The focus is placed in particular on the mechanisms, conditions, and barriers that influence this process during the onboarding of new employees. The study also seeks to identify existing research gaps that require further investigation.

Methodology: The study builds on the systematic literature review (SLR) based on PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). The 865 publications filtered from Scopus and Web of Science using given keywords were limited to English language journal articles published between 2016 and 2025 to cover the most recent results, and after reviewing titles and abstracts, 53 articles were selected and analysed in detail, of which 46 articles were finally found to be relevant.

Results: The reviewed articles emphasise the transfer of tacit knowledge as a factor of individual and company performance, as well as the transfer of tacit knowledge to new employees to reduce knowledge loss and turnover. Most of the articles deal with the transfer, measurement and transformation of tacit knowledge in different countries, fields and industries, but only a few articles examine the importance of transfer in the context of onboarding process between knowledge workers.

Conclusions: This study highlights the importance of tacit knowledge and how its transfer is a key factor in individual and corporate performance, corporate commitment and avoiding knowledge loss. Furthermore, the limited number of research results highlights the importance of future research on this topic. Research on tacit knowledge transfer during the onboarding process is a gap area that is important to address in the future.

Limitations and future research directions: This study has certain limitations. It does not distinguish between organizational size, industry or job function, even though the nature and methods of tacit knowledge transfer may differ significantly across contexts—for example between engineering and commercial roles. While the literature search was based on international databases such as Scopus and Web of Science, the limited number of directly relevant results suggests the value of expanding the scope to additional, more targeted sources.

Keywords: onboarding, systematic literature review, transfer of tacit knowledge, integration, new employee

The Interplay between Leadership, Strategy, Income, and Work-Life Balance: A Mixed Method Approach Study of Teaching Hospitals

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Background and introduction: This study investigates the interplay between leadership styles, strategic planning, income satisfaction, and work-life balance among healthcare professionals in teaching hospitals in Ghana. The research seeks to understand how these factors influence healthcare workers' experiences and overall job satisfaction within the organizational setting.

Objective: The objectives of this research are to examine the relationship between leadership styles and work-life balance among healthcare professionals in Ghanaian teaching hospitals, and investigate how strategic planning, such as flexible work schedules and career development opportunities, influences employee satisfaction and work-life balance. Additionally, the study aims to assess the impact of income satisfaction, driven by compensation policies and promotion pathways.

Methodology: Approach: A mixed-methods approach was utilized, combining quantitative data analysis using SPSS and qualitative insights derived from NVivo thematic analysis. This integration allowed for a comprehensive understanding of the topic from both numerical and experiential perspectives. Data were collected from 350 healthcare professionals, with 300 valid survey responses (86% response rate). In addition, 14 face-to-face interviews were conducted with a balanced sample of doctors and

Results: Proposed Findings: The study is expected to highlight that transformational leadership positively influences income satisfaction and work-life balance by creating a supportive work environment

Conclusions: This research underscores the interconnectedness of leadership styles, strategic planning, income satisfaction, and work-life balance. Transformational leadership and inclusive strategic planning play pivotal roles in improving job satisfaction and work-life balance. The findings emphasize the importance of leadership development programs and equitable compensation systems in fostering a productive and satisfied workforce in healthcare settings.

Limitations and future research directions: The study has limitations, including self-reported samples to improve generalisation. Future research should involve a larger, more diverse sample to improve generalizability.

Keywords: leadership, strategy, income, work-life balance, mixed method approach, teaching hospital

The Relationship Between Financial Personality and Financial Stress in Consumer's Decision-Making

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Background and introduction: Financial literacy and behaviour, as well as the skill to deal with stress, significantly influence the consumer choice. However, not much is found regarding how they interact with each other and in different social and cultural situations.

Objective: To analyse the impact of financial literacy upon financial conduct across behavioural segments and the association between knowledge and management of stress across cross-country and demographic variation.

Methodology: With the aid of OECD financial literacy survey statistics, we apply quantile regression to control for heterogeneous knowledge impacts on behaviour and multigroup factor analysis to verify invariance in the management of stress across countries, sex groups, and age groups.

Results: Findings show that financial literacy has heterogeneous behavioural-level effects. Stress management strategies are partially consistent across segments and show cultural and demographic differences in coping strategies.

Conclusions: Financial literacy influences decision-making and coping with stress in complex manners. Our outcomes reinforce the necessity of specialized financial education, adapted to the demographic and cultural environment, in order to enhance effective consumer decision-making.

Limitations and future research directions: The analysis is based on cross-sectional OECD survey data, constraining causality. There is a future direction to utilize longitudinal data and to examine psychological considerations and interventions in order to enhance financial literacy and stress management.

Keywords: financial literacy, financial behaviour, financial stress, decision-making, quantile regression, factor analysis

The Reliability of the Transport Process as the Main Factor of Effective Management of the Unified Logistics Supply Chain

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Background and introduction: The research was conducted at the Departments of Transport and Logistics of Akaki Tsereteli State University and Georgian Technical University. Master's and doctoral students are involved in the research.

Objective: The goal of the research is to improve methods for increasing the reliability of the transportation process in a unified logistics chain.

Methodology: The research is being conducted in parallel with the development of the "traceca" transport corridor, and involves, together with university professors, groups of interested master's and doctoral students, representatives of the practical organization and management of transport and logistics processes. The research uses mathematical analysis, electronic simulation, random process management and other methods.

Results: The process of moving (transporting) material, service, financial or other types of flows is the basis of any logistics activity, therefore the reliability of the transportation process determines the efficiency of the logistics chain.

Conclusions: The reliability of a unified logistics chain is determined by the reliable functioning of all subsystems and elements participating in the transportation (movement) process, which is the main indicator of the overall efficiency of the supply chain.

Limitations and future research directions: It will be possible to identify further development directions of research in the processes of development and implementation of transport and energy infrastructure projects moving through Georgian territories and seaports.

Keywords: transportation, logistics chain, reliability, effective management

The Role of AI in Transformational Change in Higher Education: From VUCA- to FLUX-world

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Background and introduction: The link between higher education and socio-economic development has been redefined in the light of the knowledge economy and the changing labour market, with an increasing emphasis on cognitive, social and technological skills.With the rise of AI and the transition from the VUCA world to the FLUX world, new competences are coming to the fore. Our research uses the example of Budapest Metropolitan University to examine how institutions are responding to these challenges.

Objective: This study aims (i) to contribute to both national and international discussions on AI-driven educational innovation, emphasizing a competency development perspective rather than a purely technological one, with a focus on the link between soft skills and the future of education under the umberlla of the transfromational change in higher education. Through thematic coding,(ii) to identify which skills have emerged as priorities, what types of pedagogical innovation have been introduced.

Methodology: This study adopts a qualitative, exploratory research design, grounded in expert interviews conducted at Budapest Metropolitan University (METU) during the 2023–2024 academic year. Data collection involved 12 semi-structured expert interviews with faculty members, academic leaders, and instructional development specialists who actively contribute to shaping educational content, methodologies, or technologies. Interview data were analyzed using thematic coding.

Results: The qualitative findings were supplemented by a document analysis of BA and MA course syllabi across various departments at METU. This analysis mapped the presence and integration of soft skills and AI applications within official curricula, both in terms of scope and format. Examining these syllabi enabled contextualization of the interview-based insights and facilitated an exploration of the alignment between theoretical objectives and actual pedagogical implementation.

Conclusions: Learning support AI tools (e.g. chatbot, recommender system, feedback engine), automatic assessment systems (e.g. essay improvement using AI) and the development of reflective thinking (e.g. learning diary analysis using AI, career portfolio) will make the transformation process in higher education more effective, especially with regard to the challenges of the knowledge economy and the skill gap and the process from VUCA to FLUX-world.

Limitations and future research directions: The empirical research, especially the thematic analyses, is at the level of the legitimised curriculum, and does not provide reliable data on the implementation of the transferred and achieved curriculum. The situation is similar at the hidden curriculum level. Accordingly, it is worthwhile to collect data on practical implementation and institutionalisation through classroom visits and further interviews, in particular on the AI support system at individual, team and organisational levels.

Keywords: transformation, knowledge economy, skill gap, AI

The Role of Artificial Intelligence in Business Education

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Background and introduction: The 21st century has profoundly impacted business education. Evolving business environments, shifting production paradigms, and especially rapid technological change challenge traditional teaching. The introduction of computers required adaptation, but the 2022 release of ChatGPT, a widely accessible large language model, has transformed the educational landscape in unprecedented ways, raising urgent questions for educators.

Objective: This paper examines the distinctions between human and AI learning, drawing on neurological research, and considers how this groundbreaking technology can be leveraged to enhance learning, enrich business education, and potentially reshape human learning.

Methodology: This paper combines secondary research with reflective analysis of primary teaching experiences involving AI from the past two academic years. The teaching contexts include bachelor's and master's level courses in business education. Classroom integration of AI tools and student engagement were observed and reflected upon to evaluate the pedagogical impact of emerging technologies.

Results: Findings suggest that AI can be a powerful tool to support learning when used thoughtfully, offering new ways to engage students and deepen understanding. However, inappropriate or uncritical use may lead to reduced critical thinking and superficial knowledge. The dual nature of AI in education highlights the need for pedagogically sound, research-based integration strategies.

Conclusions: Higher education teachers must develop research-based understanding of human cognition and the pedagogical role of technology. AI's rise has sparked intense debate on its impact on learning quality, knowledge retention, and student attitudes. This paper contributes to the theoretical and practical discourse on integrating AI in education responsibly and effectively.

Limitations and future research directions: The findings are based on early-stage observations within a limited time frame since the release of generative AI tools. Long-term impacts remain uncertain, and definitive conclusions would be premature. Future research should explore longitudinal effects on student cognition, critical thinking, and the evolving role of educators in AI-enhanced learning environments.

Keywords: business education, artificial intelligence, human learning, educational technology, neuroscience

The Role of Artificial Intelligence in Sustainable Food Supplement Product Development

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Background and introduction: In the food supplement market, sustainable product innovation, continuous development, the introduction of new products, and the regular renewal of flavour profiles are essential for maintaining competitiveness and responding to evolving consumer preferences. This study explores the potential of artificial intelligence (AI)-based methods to support and enhance product development and marketing processes within the food supplement industry. By identifying the key milestones of traditional product development workflows, the research examines how existing AI-driven software solutions can be effectively integrated into these stages to improve efficiency, foster innovation, and enhance product quality.

Objective: The role of AI in sustainable food sustainable product development is an emerging research topic. Thus, the purpose of the paper is to develop a conceptual framework for developing market-oriented, AI-enabled products in a more sustainable and data-driven manner, and support that with practical use cases.

Methodology: The analysis is based on a conceptual framework developed by the author's based on a systematic literature review. The empirical research consist of practical use cases, highlighting the potential applications of AI across the product innovation lifecycle—from idea development to marketing strategy formulation.

Results: This article focuses on food supplement manufacturing, specifically on innovations in the new product development process, emphasizing the role of artificial intelligence-based opportunities. Industrial digitalization is emerging as a key pillar of competitiveness, as it significantly contributes to improving production sustainability and efficiency—an especially critical factor in a globalized world facing population growth and resource constraints. In the food industry, various applications AI are increasingly gaining ground, opening up new opportunities for optimizing both production and development processes. The findings provide valuable insights for industry stakeholders and policymakers seeking innovative, scalable, and future-ready solutions in the field of dietary supplements.

Conclusions: The findings of this study suggest that adopting an AI-driven approach in the development and commercialization of food supplements holds considerable potential for enhancing both product success and operational efficiency, thus sustainability. The integration of AI—whether partial or full—into processes such as trend analysis, data-driven formulation, and marketing strategy development can streamline decision-making and support more targeted, adaptive solutions. As digital transformation continues to shape the food industry, the use of intelligent, automated tools may offer a competitive advantage for companies seeking to stay relevant and innovative in a fast-changing market.

Limitations and future research directions: This study is the first of its kind, laying the foundations for a number of subsequent research projects. While the limitation of this paper is that only a few dozen AI-enabled solutions have been investigated so far, the aim is to continue the research and explore the potential for integrating the rapidly evolving new technologies.

Keywords: industry 4.0, digital transformation, innovation, new product development

The Role of Coaching on Organizational Sustainability

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Background and introduction: Sustainable management promotes long-term growth by conserving resources and supporting social and human development. This paper examines coaching as an effective tool for enhancing organizational sustainability through employee development. Coaching has a direct impact on the individual. This research shows that organizations that use coaching strategically in human resource development not only enhance short-term performance, but also gain long-term competitive advantages.

Objective: Despite numerous separate studies in the field of organizational coaching and organizational sustainability, the relationship between coaching techniques and different dimensions of organizational sustainability has remained largely unexplored. On the other hand, while coaching techniques empower individuals to take on meaningful roles within organization, most exiting research has primarily focused on procedural aspect of organizational sustainability.This study aims to hig

Methodology: This qualitative study employed used semi-structured interviews with 33 managers and HR staff in organizations that have implemented coaching programs to collect data. The interviews were conducted online and lasted between 45 and 60 minutes.
Research tools include:

1. Semi-structured interview
2. Individual coaching session
3. Second interview after coaching session
4. Coding of extracted keywords
5. Keyword analysis in the graph with comparative comparison before and after coaching ses

Results: The results of the study showed that the more employees become self-aware, have fewer mental barriers, and change their mindsets with the help of coaching techniques, the more they choose behavior that improves sustainability in the organization. On the other hand, a sustainable organization increases motivation, job commitment, and better employee performance.

Conclusions: In summary, it can be said that coaching, by focusing on self-awareness, shifting mindsets, and removing mental barriers, makes a significant and lasting contribution to organizational sustainability. An organization that prioritizes coaching is, in fact, making a long-term investment in its human capital in the long term. Such an investment is key to ensuring continued growth sustainable development. The results of this study show that organizational coaching techniques, as a powerful tool f

Limitations and future research directions: There were more indicators that could be examined, but due to time constraints, they were not included in the article, and the following topics of future research can be considered. The effect of coaching on improving organizational culture with an organizational sustainability approach. The effect of coaching on employee management with an organizational sustainability approach

Keywords: coaching, organizational sustainability

The Role of Microfinance in Women's Empowerment: A Bibliometric Review

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Background and introduction: Over the past few decades, women's empowerment through microfinance has been recognized as a strategic tool for poverty reduction, gender equality, and inclusive development. As a result, it has become a critical focus for scholars in the fields of development and financial inclusion research.

Objective: This study aims to assess, evaluate, and synthesize past, current, and future trends and research trajectories in the field of microfinance and women's empowerment by extracting bibliographic metadata from the Web of Science and Scopus databases.

Methodology: This study employs a bibliometric analysis of 455 scholarly documents published between 1996 and 2024.

Results: The results indicate an annual publishing growth rate of 14.18%, underscoring the rising academic interest in the subject. India excels in research output, although the United Kingdom and South Africa demonstrate the greatest citation impact, signifying substantial academic influence. Emory University (USA), the University of Liverpool (UK), and the University of Oxford (UK) are prominent contributing institutions.

Conclusions: The international collaboration rate of 23.08% signifies an expanding worldwide research network in this domain. The co-occurrence network method visually illustrates the evolution of the research domain, emphasizing important subject themes including microfinance and poverty alleviation, gender equality and health, financial inclusion and policy, and empowerment within rural credit initiatives.

Limitations and future research directions: The limitation with this study is that it only uses quantitative data, including citation metrics, co-citation, and keyword co-occurrence, which are based on Biblioshiny and VOSviewer. This study addresses the gap by delineating the evolution of significant research areas. The findings may inform future research and assist policymakers, NGOs, and development organizations in the formulation of effective, evidence-based microfinance programs.

Keywords: microfinance, women's empowerment, gender equality, financial inclusion, bibliometric analysis

The Role of Public Spending in Times of Crisis in the EU and Its Member States

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Background and introduction: The paper discusses the linkages between public spending and economic crisis situations. It examines spending in EU Member States as well as eventual changes in the EU budget. The hypothesis of the paper is that the role of public action (and, consequently, public spending) increases in times of crisis.

Objective: The objective of the paper is to show the effects of economic crises on the level of public spending, public deficit and public debt and on their share in GDP. Beyond the analysis of national budget trends, the paper also deals with the effects of economic crisis on EU finances.

Methodology: The paper is based on the analysis of macroeconomic data of EU Member States (GDP, public spending, public deficit, public debt) as well as of EU budget (and related finances) figures. It compares non-crisis periods with two periods of crisis: the 2007-2009 Global Financial Crisis and the COVID-19 recession. The results are based on the statistical analysis of these data.

Results: The analysis of the data supports the hypothesis: the volume or at least the share of public spending has increased in EU Member States during the crises tackled in the paper. An increase in EU finances (items not being part of but related to the EU budget) could also be observed as a reaction to the COVID-19 recession.

Conclusions: The results show a clear linkage between economic crisis and public spending. Based on this knowledge, specific rules, actions, long-term economic policy strategies can be designed in order to make the handling of crisis smoother and more sustainable,

Limitations and future research directions: The paper concentrates on one aspect of crisis management (public financing of economic policy actions). There are, of course, many other aspects; first of all, the content of these actions is of crucial importance. Potential future research directions include the detailed analysis of the content and effects of the measures taken during crisis times.

Keywords: economic policy, European Union, public finance

The Role of the Interpersonal Aspects of Internal Corporate Communication in Retaining Workforce: Research Plan and Progress Report

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Background and introduction: Several management studies highlight the importance of internal communication for the success of organization and the wellbeing of its members. In our research, we aimed to explore the background of these effects.

Objective: In our research, we aimed to explore the background of these effects. The aim was to determine if internal corporate communication has an effect on retaining the workforce and which communication circumstances are most important for employees. Our main research questions were: a) Do employees perceive the importance of communication when deciding whether to change to a new job (voluntary turnover)? b) How important are some aspects of communication during this decision?

Methodology: In our SZEKO-MEM project, we performed an online survey. We compiled the questions according to two groups of respondents: (1) those who changed job voluntarily in the year of the data collection (in 2023) or in the previous year (in 2022), and (2) who had not changed voluntarily and formed their opinions reflecting on their current employment. We used the Survio web service for data collection. To our 53 questions, 265 respondents gave answers.

Results: In the current paper we present the research plan and the progress-report of our study. The aim of the second part is to address the following research questions:

(Q1) Association between communication and voluntary turnover

(Q2) Self-predicted versus self-attributed behavior comparison

This is visualized by displaying six histograms within a common coordinate system.

Conclusions: Planned interpretation: We have established that the causality is bidirectional. For example, offensive communication can cause voluntary job changes; conversely, changing jobs may affect how former employees retrospectively evaluate offensive communication in comparison to those who remain with the organization.

Limitations and future research directions: The sample is not representative (70% of the respondents completed higher education, 45% were employed by companies having more than 500 employees). The data enable analyses from multiple aspects.

Keywords: internal corporate communication, retaining workforce, interpersonal aspects

The Role of Workplace Learning in Hotel Management Education

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Background and introduction: Developing skills and competencies of the employees through education and training is of vital importance to any business system. Education is a human virtue, an essential driver of the society, also playing a significant role in the hospitality industry. The hospitality industry is a large subsection within the service industry and consists of four main areas: Food & Beverage, Travel & Tourism, Accommodation and Recreation.

Objective: The aim of the following research is to demonstrate the role of workplace learning in hotel management education from the perspective of university students and members of hotel management.

Methodology: Semi-structured interviews and a questionnaire were applied to investigate the research questions.

Results: As the demand for educated and trained staff is constantly growing different accommodation types, particularly hotels have become one of the most dominant players among the industry placements of university students.

Conclusions: Working in different departments of the hotel industry requires a wide range of skills and competence, therefore most of the applicants can find a specific position in a hotel that suits their professional interests, skills and abilities.

Limitations and future research directions: One limitation of the research is the fact that the data were collected only from employees working in hotels in Hungary. Another significant limitation is the investigated sample size.

Keywords: hospitality management, hotel management, workplace learning, industry experience

The Sustainability Narrative: How Green Marketing Shapes Consumer Behaviour

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Background and introduction: Sustainable development is now central to society, government and economy, especially in strategic marketing processes. Environmentally conscious models reduce ecological footprints and offer a competitive advantage in saturated markets. The growing demand for environmentally-friendly products makes sustainable practices a strategic necessity. Green marketing opens new corporate communication paths but also brings risks like greenwashing, which can harm and consumer trust.

Objective: The aim of this research is to explore both the theoretical and practical dimensions of green marketing as a strategic corporate process, with a focus on its strategic application in the context of corporate sustainability frameworks. A further goal is to examine consumer attitudes, awareness, and trust in relation to green marketing and greenwashing practices.

Methodology: The study's first phase reviewed international and Hungarian literature to define green marketing, trace its evolution, and identify key strategies and application with special attention to greenwashing, its types and consumer attitudes. The second phase used a quantitative survey to assess consumer views about green marketing, greenwashing awareness, environmental consciousness, purchases attitudes, and trust in corporate sustainability messages.

Results: Findings show that while most consumers are aware of green marketing, they often distrust corporate intentions. Greenwashing triggers strong scepticism, weakening sustainability messages. However, growing awareness and positive attitudes indicate increasing support for truly sustainable practices. The study highlights that clear and genuine communication is crucial for effective green marketing.

Conclusions: The results reveal the dual nature of green marketing: it offers strategic benefits and meet rising consumer demand but poses reputational risks if misused. Greenwashing fuels mistrust, highlighting the need for authenticity and transparency in corporate communication. Overall, the study emphasizes aligning marketing efforts with real environmental practices to build lasting consumer trust and loyalty.

Limitations and future research directions: The study's limitations include the size and demographic characteristics of the sample, which primarily consisted of young, urban consumers. Future research should employ qualitative methods (e.g., interviews, focus groups) to gain deeper insights into the psychological drivers of consumer decision-making and explore the long-term impact of green marketing strategies on corporate reputation and consumer loyalty through longitudinal studies.

Keywords: sustainability, green marketing, greenwashing, consumer behaviour, corporate credibility, strategic marketing processes

Tourism and Regional Development in a Borderland Context: Insights from Great Rye Island Residents

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Background and introduction: Great Rye Isla with its 1200 km2 is Europe's largest freshwater island from Bratislava to Komarno (Slovakia). It has thermal baths and a huge fresh water supply, besides, its wild water world is an additional attraction for tourists. Last year, one million tourists visited the region's top thermal baths. The population of Csallóköz is 223,270, of which 127,621 are Hungarians and 90,008 are Slovaks. Rural settlements are typical, 52% of the population living in towns and 48% in villages.

Objective: Tourism infrastructure development is a priority in the Great Rye Island for which it is important to know the attitudes of residents. Therefore the research explores their satisfaction with different types of infrastructure, development expectations and the strength of their local identity. The aim of this research is to identify different resident profiles and understand their attitudes towards rural tourism development.

Methodology: A sample of 528 respondents collected in the Great Rye Island, Slovakia was collected and analysed. In addition to descriptive statistics based on the questionnaire, ANOVA, PCA and k-means cluster analysis were used to answer the research questions. The results were tested with SPSS 25.0.

Results: Five interpretable factors were identified, of which two factors relate to satisfaction, two others to development expectations and the fifth to identity of the residents. The cluster analysis reveled eight different resident profiles. The different clusters revealed contradictory attitudes, which makes the task of urban planners very difficult. The research showed that, contrary to expectations, for several resident profiles, satisfaction and the need for improvement don't necessarily coincide.

Conclusions: The development of rural tourism in the Great Rye Island is not easy, as many different resident profiles need to be managed simultaneously. Understanding them not only has practical and policy implications, but also serves to improve the theory, as several interrelationships have been identified that were contrary to our previous expectations. Dissatisfaction does not necessarily imply a need for improvement, and that even in the case of satisfaction there may be a need for further improvement.

Limitations and future research directions: The research was specifically limited to one region, the Great Rye Island, but the novel findings should be tested in other regions. In particular, it is interesting to study the relationship between satisfaction and development needs in more detail.

Keywords: rural tourism, hospitality, infrastructure, development policy, border area, regional development

Tourism, GDP, and Social Outcomes: Strategic Insights for Transatlantic and Pacific-Basin Promotional Marketing

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Background and introduction: The year 2025 marks a critical juncture for global tourism and economic policy, particularly in the Pacific Basin. In the United States, inbound tourism has declined sharply. New York City alone is expected to lose 2 million international visitors, resulting in a projected $4 billion loss in tourism, visa delays, trade barriers, and threats to economic stability. Meanwhile, Europe continue to experience growth in tourism demand, albeit with rising concerns over overtourism and sustainability.

Objective: This paper addresses these questions by constructing a structural equation model (SEM) that captures the causal relationships between GDP per capita, tourism, and key social outcomes. We simulate the effects of economic variables on regional payoffs for America, Europe, and Pacific-Basin economies, and test five hypotheses grounded in economic theory and supported by Nobel Laureates: Becker, Krugman, Deaton, Sims, and Heckman.

Methodology: We employ a log-linear SEM framework to estimate the direct and indirect effects of GDP per capita and tourism on regional welfare outcomes using panel data from 85 countries spanning 1995 – 2023. The sample comprises a diverse range of economies from all continents, incorporating variables such as Tourism, GDP per capita, HALE, GHS, Crime, and Employment.

Results: Europe and Pacific-Basin economies benefit from increased tourism and GDP, experiencing reductions in crime and improvements in health-adjusted life expectancy (HALE). The United States, in contrast, shows diminishing welfare returns and a slight rise in unemployment, despite economic growth, supporting the five Nobel-backed hypotheses: Becker, Krugman, Deaton, Sims, and Heckman.

Conclusions: These results validate the five theoretical Nobel Laureates and underscore the importance of region-specific economic and promotional strategies.

- Tourism promotion must be integrated with the labor market and health policy
- Economic growth should be aligned with social equity and resilience goals
- One-size-fits-all strategies are ineffective in a region marked by economic diversity and institutional variation.

Limitations and future research directions: Future research should explore dynamic extensions of the model, incorporate climate and migration variables, and test for nonlinearities in the growth-welfare relationship. Policymakers are encouraged to adopt region-specific strategies that balance economic expansion with social equity and labor market resilience.

Keywords: tourism finance, regional development, Structural Equation Modeling (SEM), crime and unemployment, Pacific-Basin economies

Towards a Knowledge-centric Recruitment Model Aimed at Organizational Learning

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Background and introduction: The paper discusses interfirm learning-by-hiring as a means of organizational learning. An organizational knowledge-centric recruitment model is proposed. Proposition 1: firms use learning-by-hiring to onboard managerial experts who fit specific job requirements, and who provide access to new organizational knowledge in addition. Proposition 2: Such a candidate has complementary fit to the firm's existing knowledge, and an imperfect fit with the specific vacant position; termed dynamic fit.

Objective: The aim of the research is to describe individual employee mobility instances, where organizational knowledge acquisition was the objective of the recruiting firm and its hiring manager. Based on observation and managerial experience, we seek a deeper understanding of the learning-by-hiring and the knowledge transfer processes. We aim to find out how the assimilation and contextualization of the tacit knowledge carried by individuals may be optimized at the focal firm.

Methodology: 10 senior recruiter-candidate pairs (20) were interviewed separately using qualitative questionnaires to evaluate the organizational learning that resulted from these recruitments. The firms in question are multinationals with advanced human resources systems operating in foreign countries in search of accelerated knowledge transfer into their local subsidiary. The questionnaires are designed to reveal the existence of both job-specific and organizational learning-focused selection criteria.

Results: Practitioner experience (interviews) validates and supports the key terms of learning-by-hiring and knowledge transfer in extant literatures. We expand the definition of learning-by-hiring to include post-hire socialization as part of our model as it serves to strengthen person-organization fit, and to deepen the assimilation of the acquired knowledge. We compare standard recruitment with learning-by-hiring and suggest firms to adopt the latter.

Conclusions: We conclude that it is important to deepen further our understanding of the learning-by-hiring and associated knowledge transfer processes and to research into the mechanisms of transferring complex, non-patented, non-technical knowledge. Such knowledge transfer requires the investigation of knowledge as a social construct that is co-created between the new hire and the incumbents at the focal firm.

Limitations and future research directions: Limitations stem from the qualitative interview method and restricted interviewee availability. Interviewing incumbents at the hiring firm would shed light the interactions, collaborations which provide the context of emergent knowledge transfer. A larger interview sample would enable more robust conclusions. Future research is invited with longitudinal studies of individual recruitment cases to reveal the relationship between knowledge transfer and dynamic fit.

Keywords: knowledge transfer, tacit knowledge, learning-by-hiring, person-organization fit

Treehouse Tourism in Slovakia: Theoretical Foundations, Global Trends and Perspectives In the Context of Glamping Development

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Background and introduction: Treehouse accommodation is a specific form of glamping that combines nature-based tourism with unique experiences. Despite its growing popularity, scientific attention in Slovakia remains limited. Although this trend is gaining momentum, a comprehensive scientific analysis of this phenomenon from a tourism perspective is still lacking. This study presents a theoretical framework for the analysis of treehouse tourism.

Objective: The aim is to summarise current knowledge about treehouse tourism, review domestic and foreign research to date, identify key factors in its development, and propose methodological approaches for future empirical research in Slovakia.

Methodology: The article uses methods of systematic literature review and critical analysis of relevant scientific studies, case studies, research articles, and available data on treehouse tourism at the international level. Secondary data are thematically analysed and synthesised.

Results: Previous research points to the growing importance of treehouse tourism as a form of sustainable and experiential tourism that contributes to destination differentiation. Key typologies, motivational factors for demand, and challenges related to sustainability have been identified. International studies emphasise their economic potential and experiential value. In Slovakia, existing scientific outputs are rare, which points to the need for empirical research in terms of tourism.

Conclusions: The summary of findings confirms that treehouse tourism is a significant and sustainable form of glamping with global potential for destination differentiation. Theoretical foundations and international trends show its contribution to experiential and slow tourism. However, this area has not been sufficiently researched in Slovakia, which indicates an urgent need for systematic primary research into supply, demand and sustainability.

Limitations and future research directions: The absence of primary data limits the study and reflects the initial research phase on this topic in Slovakia. Despite growing interest, there is a deficit of comprehensive scientific research in the field of tree tourism in Slovakia. The present study defines the basis for future empirical research, applying quantitative and qualitative methods, which should overcome the current gaps in knowledge and provide detailed data on the Slovak market.

Keywords: treehouse, glamping, treehouse tourism, Slovakia

Understanding Gen Z's Purchase Intentions towards Green Apparel: Evidence from CEE countries

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Background and introduction: This study explores the factors influencing Gen Z women's purchase intentions towards green apparel in Central and Eastern Europe, a context largely understudied. It builds on the Knowledge-Attitude-Behaviour (KAB) framework, examining how knowledge, attitudes, and social norms shape decisions, and how perceptions of greenwashing might alter these effects.

Objective: The research aims to identify and analyze the key determinants of Gen Z female consumers' purchase intentions towards green apparel in selected CEE countries, and to assess the moderating role of greenwashing perceptions in these relationships.

Methodology: A web-based survey was conducted among 464 Gen Z female respondents from Slovakia, Czech Republic, Slovenia, and Lithuania. Constructs were measured using validated multi-item scales. PLS-SEM analysis was used to assess reliability, validity, structural paths, and moderation by greenwashing perception.

Results: Attitudes had the strongest direct effect on purchase intentions, followed by social norms and knowledge. Greenwashing perceptions weakened the positive link between attitudes and purchase intentions. The model explained 40.4% of the variance in purchase intentions, and 16.4% in attitudes.

Conclusions: The study confirms attitudes, social norms, and knowledge as key drivers of green apparel purchase intentions among Gen Z women. Greenwashing undermines these effects, highlighting a trust issue. Findings provide practical insights for marketers, policymakers and educators promoting sustainable fashion and sustainable consumer behaviour.

Limitations and future research directions: The study's convenience sample and regional scope limit generalizability. Future research should include broader demographics, test longitudinal effects, and explore other potential drivers and moderators, such as trust or perceived behavioral control, to enhance model explanatory power.

Keywords: CEE countries, Gen Z, greenwashing, green apparel, KAB framework, moderation, PLS-SEM, purchase intentions, social norms

Understanding Motivational Barriers in Digital Adoption: Evidence from Healthcare Systems in Indonesia

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Background and introduction: The digital divide in healthcare persists despite advancements in digital technologies, with inconsistent adoption levels across different settings. Traditional models like TAM, UTAUT, and TTF explain adoption based on usability and organizational factors but often overlook motivational barriers. These barriers, including psychological resistance and habitual preferences, can hinder meaningful digital engagement even when structural and cognitive readiness are high.

Objective: This study aims to investigate the role of motivational barriers in digital adoption within healthcare institutions in Indonesia. It seeks to understand how these barriers interact with traditional adoption variables and influence system engagement in different institutional contexts.

Methodology: The study employs a partially mixed-methods approach, combining TAM-based surveys and interviews in a rural clinic and TTF–UTAUT-based surveys in an urban hospital. Two contrasting case studies are analysed: a rural clinic using the E-Clinic system and an urban hospital implementing a Hospital Management Information System (SIMRS).

Results: Findings indicate that even when users report high system usability and institutional support, adoption remains partial or passive due to psychological resistance, habitual preferences, or hierarchical compliance. Motivational barriers significantly affect digital adoption in both settings, underscoring the limitations of traditional adoption models.

Conclusions: The study highlights the importance of addressing motivational factors in digital transformation strategies. It contributes to the literature by contextualizing motivational disengagement in real-world healthcare settings and offers practical recommendations for improving adoption outcomes.

Limitations and future research directions: This study is limited by its focus on two specific healthcare institutions in Indonesia. Future research should expand to other regions and healthcare settings to explore the generalizability of motivational barriers across diverse contexts. Additionally, longitudinal studies could investigate how motivational barriers evolve over time and how they might be effectively mitigated through targeted interventions.

Keywords: digital adoption, healthcare, motivational barriers, Technology Acceptance Model (TAM), Task-Technology Fit (TTF)

Unlocking Lean Potential in SMEs: A Study on Commitment, Tools and Outcomes through Systematic Review and Data Analysis

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Background and introduction: Lean management has been a widely accepted approach to process optimisation yet its implementation within Small and Medium Enterprises – SMEs remains unexplored. Resource limitations and inconsistent engagement can create gaps between lean knowledge and actual practice.

Objective: This research investigates how leadership commitment and awareness of Lean tools influence successful implementation outcomes, with a focus on operational efficiency and supply chain resilience.

Methodology: A mixed method design was used, including a systematic literature review using PRISMA and PEO frameworks, followed by a structured survey. Responses from 780 SME professionals were analysed using various statistical methods.

Results: Top and Middle management commitment significantly predicted perceived Lean success. A measurable knowledge to practice gap was identified between methods known and those applied, highlighting the need for strategic alignment and cultural engagement.

Conclusions: The study brings novelty by linking leadership behavior to Lean outcomes and quantifying the extent to which theoretical knowledge is or isn't translated into action in real SME environments. It can be seen that leadership commitment and holistic implementation of Lean can produce significant positive results.

Limitations and future research directions: The study is limited by focus on the SMEs of a single country and database. Expansion to other databases and more robust data from SMEs of different regions can provide a comprehensive view. Future work will expand to other countries and integrate ESG indicators, financial outcomes, and cross sectoral comparisons.

Keywords: lean management, lean, leadership, supply chain, SMEs

Urban-rural Happiness Paradox – Is it Exists in Hungary?

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Background and introduction: Happiness has not been the subject of scientifically valuable empirical for a long time. The empirical literature on the economic determinants of happiness is largely based on a variety of spatial observations, but the spatial dimensions of happiness were less researched area Empirical studies show that the happiness of the urban population is lower than that of those living in rural areas. Our research question is whether this is true for Hungary as well.

Objective: Previous research has extensively examined whether residing in urban or rural areas results in higher subjective well-being, typically measured as life satisfaction. This phenomenon is called urban-rural happiness paradox, meaning that cities, despite being centres of wealth and opportunity, often report lower subjective well-being than do rural areas. We would like to examine whether this paradox exists in Hungary-

Methodology: Using spatial data of the Hungarian Central Statistical Office, firstly we would like to present life satisfaction in different spatial areas and settlement types in Hungary. Then using control variables (like income and level of education) we would like to examine whether the difference in urban and rural areas are exists purely because of the inhabitants different socio-economic status, or because of spatial reasons.

Results: Life satisfaction in Hungary is higher in the capital and larger cities than in small towns and villages, so if we ignore all other factors, the paradox does not apply in Hungary. However, if we apply control variables (e.g. income status, education), the differences between settlements decrease, which suggests that in terms of subjective well-being, the impact of these factors is strong, and not only the type of settlement is the determining factor.

Conclusions: Our findings challenge the simplistic assumption that urbanization inherently results in greater life satisfaction, as although in Hungary life satisfaction is higher in larger cities and in the capital, it seems to be strongly connected to the individual aspects of life satisfaction like income and education level. At the same time the results also challenge the urban-rural paradox, as the greater happiness level of rural areas is not as obvious in Hungary as in Western European countries.

Limitations and future research directions: The main limitation is that we use only the settlement size to define urban and rural areas. There is an absence of a universally accepted definition of urban areas; classifications vary significantly across national contexts and research objectives. Further research can classify more precisely the urban and rural areas within the country. Other limitations include the limited number of used control variables, further researh can use other variables to explore the complex dynamics.

Keywords: happiness, urban-rural paradox, life satisfaction

Using EU development funds for the development of higher education in the NUTS 2 region through the example of a Hungarian university of applied sciences

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Background and introduction: The justification of this study is that the EU 2020 development cycle has come to an end, the strategic directions and developments of higher education have also been identified. The data available to us can create a diverse analytical focus, and the starting point of our research was a Hungarian higher education institution belonging to the NUTS 2 region of Central and Eastern Europe. All this is because the statistics of this development period – Széchenyi 2020 – have become available in Hungary for our region within the country, both as beneficiaries and as operational programmes.

Objective: Examining the open access database, we assume that universities compete with each other not only in the quality of education, which is supported by international education surveys and can be part of measuring national competitiveness (Duncan, 2014; Martens and Niemann, 2010; Morris, 2011; OECD, 2013a), but also for accessing development resources, which affects their long-term survival and future path. During our research, we seek to answer the question: do higher education institutions compete for development funds within the same country, also within the region?

Methodology: The research examines the interpretation of the connection between Hungarian development policy through the document entitled National Development and Regional Development Concept. In the next stage of the research unit, secondary data analysis is carried out, through individual filters. The EU resources and published operational programs of the 2014-2020 period are available in Hungary through a wide database. The data on the winning applications received during the development period can be analyzed: which region implemented what type of projects, how many projects, and how much support. The University of Dunaújváros, which is the focus of the study, received support for which projects as a beneficiary. Starting from the database obtained in this way, it can be examined whether the support of higher education institutions with project locations in the given Hungarian region for these same calls for proposals differs from each other - that is, whether they really compete for funds.

Results: Related to my topic, we assume that "just as there is competition for buyers on the market, cities compete for population, tourists, investors and companies in the 21st century" (Jakab - Konczosné 2015, 46). Universities compete for development funds.

Conclusions: The results point to the differences in development implemented by the regions. According to the statistics of the Széchenyi 2020 development programs, in the Central Transdanubia region, they account for 9% of the amount paid, approaching the case under study. Within this, the most significant proportion of developments was reported by the Regional and Settlement Development Operational Programs, which are 23% of all project implementations in terms of the amount paid. In the Central Transdanubia region, it can be stated that the EFOP schemes are among the sixth highest paid subsidies in the region out of the nine schemes. Regarding my analyses of these schemes, from a regional perspective, the results show that project implementations of different volumes can be identified among higher education institutions, which confirm the competition for development resources, i.e. the presence of competition between higher education institutions.

Limitations and future research directions: In future studies, it may be important to mention what kind of organizational culture may be behind the fact that the grants awarded to the region arrive with the same variance in response to the call for applications, who could have developed the submitted projects? Was a separate team created for this purpose, or did the higher education institutions work on it on their own? Could the development of the projects have a positive impact on the workforce, did certain institutions become the first based on the experiences of the submitted project work – were they able to increase the funding of individual projects with their experiences? Did the procedure result in a competitive advantage for the higher education institution concerned? Did the process provide the region with a competitive advantage?

Keywords: higher education, competition, development policy

Visual and Verbal Aspects of Marketing Communication and Their Parallels with Trends Influencing the Promotion of Truffle Consumption

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Background and introduction: Brand communication built around truffle consumption today conveys a complex system of meanings, combining sustainability, closeness to nature, luxury and hedonism. The aim of the research is to explore the visual and verbal tools used to promote truffle consumption in brand communication, in connection with current trends that determine consumption.

Objective: The analysis reveals the connections between content and colour associations, contributing to a deeper understanding of truffle marketing communication.

Methodology: The research covers the websites and social media platforms of 20 foreign and domestic brands that sell truffle products. Qualitative content analysis is performed using NVivo software, enabling the joint examination of text and image content. During coding, the analysis is based on two main trends: sustainable-natural and luxury-hedonism.

Results: Verbal expressions such as 'local', 'organic', "premium" and 'curiosity' 'luxury' are compared with the use of colours by brands, such as green, brown, natural or gold, black and white, which are visual elements of marketing communication and fundamentally determine consumer attitudes towards the brand. The results show that in many cases, parallels can be drawn between the visual and verbal levels of marketing communication and the trends influencing truffle consumption.

Conclusions: The results show that in many cases, parallels can be drawn between the visual and verbal levels of marketing communication and the trends influencing truffle consumption.

Limitations and future research directions: The study is limited to brand websites and social media, so it does not take into account other channels (stores, offline advertising). Cultural differences result in different marketing communication solutions. Further research opportunity: Comparison of truffle marketing communication in different countries (e.g. Italy, France, Japan, USA), with particular regard to different cultural backgrounds.

Keywords: marketing communication, consumer behavior, truffle

Where Is Poland Now With the Adoption of Unmanned Stores?

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Background and introduction: In recent years, there has been an increase in the number of unmanned stores, although the global growth rate has not yet reached the level of expansion that was predicted. The expansion of unmanned stores exhibits varied dynamics across the countries in which they are present. A notable instance is Żabka Nano's expansion in Poland, where 48 stores are currently operational and have been steadily expanding since 2021. The company is also making inroads into the German market.

Objective: The study examines the acceptance of cashierless technology in Poland. The aim of the research was to reveal which factors affect the attitude toward cashierless transactions within the extended unified theory of acceptance and use of technology.

Methodology: The survey conducted in Poland (n = 341) constituted a segment of a broader investigation into the technological adoption of unmanned retail establishments across multiple countries (Hungary and Croatia). The development of the questionnaire incorporated the utilisation of validated scales, with Generation X being the targeted demographic for completion of the survey. Partial least squares structural equation modeling was used to analyze data and test research model.

Results: The findings indicate that behavioural intention is positively influenced by performance expectancy, effort expectancy, social influence, and price sensitivity. Conversely, no significant relationship was found between behavioural intention and atmosphere or between behavioural intention and hedonic motivation. No statistical evidence was found that behavioural intention has an impact on use behaviour.

Conclusions: Generation Z shows the strongest interest in cashierless technology, with generally positive attitudes toward its use. Shop atmosphere appears unimportant, and enjoyment doesn't significantly influence their intention to use it. Despite the technology's availability—mainly in Poland's capital and large cities—actual usage remains low, likely due to limited access. These findings can inform policymakers and practitioners, and future research can explore factors influencing real-world adoption.

Limitations and future research directions: Despite the considerable magnitude of the sample size, it is not possible to extrapolate the study's findings to the broader Polish population. With the progression of the analysed technology, the incorporation of new variables will become imperative. The uptake of unmanned technology varies from country to country, therefore it is worth comparing the factors influencing use and identifying the differences.

Keywords: unmanned stores, cashierless stores, retail, technology acceptance, regression model

Who is the "Missing Hero" in Sustainable Freight Transport? Identifying Leading Stakeholders in Europe's Electric Freight Corridor

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Background and introduction: As global freight transport comes under increasing pressure to decarbonize, innovative technological solutions must be matched by effective governance and sustainable financing mechanisms. The ECORE project explores the potential of ERS—based on pantograph-equipped vehicles—as a viable solution for long-distance, low-emission freight corridors in Europe. While technical feasibility is promising, systemic barriers remain, particularly concerning stakeholder coordination a investment risk-sharing.

Objective: This study assesses the feasibility of deploying an Electric Road System (ERS) for heavy-duty freight transport along the Rotterdam–Budapest corridor, with specific focus on the financial and governance frameworks required for implementation in the Hungarian section (M1 highway). We also seek to identify a key stakeholder capable of initiating commitment—what we term the "missing hero"—and define possible incentives for them.

Methodology: We employ a multi-dimensional feasibility assessment combining technical analysis, stakeholder mapping, and review of potential financing models. To explain persistent inaction, we apply the concept of a social fence—a collective action dilemma in which all parties wait for others to act. We use this framework to introduce the metaphor of the "missing hero": the stakeholder needed to catalyze commitment.

Results: Our findings highlight significant long-term benefits of ERS for logistics efficiency, emission reduction, and infrastructure modernization. However, the current absence of a lead actor reflects a governance gap where no stakeholder has yet assumed the risk of initial investment. Preliminary financial pathways such as public-private partnerships and EU-level funding mechanisms offer partial solutions, but require stronger leadership and coordination.

Conclusions: Overcoming this "social fence" scenario requires identifying a viable initiator, creating incentives for leadership, and implementing robust governance structures. ECORE offers a European pilot framework for converting shared potential into coordinated action through structured stakeholder engagement and integrated planning. The integration of technology, finance, and policy must be synchronized to realize the vision of sustainable freight transport.

Limitations and future research directions: The study is in an early stage of exploring financial models and institutional designs. Future research should conduct in-depth scenario analysis of funding structures, refine stakeholder engagement strategies, and model the long-term economic and environmental impacts of ERS deployment across multiple corridors.

Keywords: Electric Road System (ERS), freight transport, sustainable governance, social fence, collective action dilemma

Why do People have Turnover Intentions in Hospitality? The Mediating Role of Digital Maturity

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Background and introduction: Research on the causes of turnover intention goes back decades and has examined the impact of a number of elements such as job involvement, job embeddedness, incentives, self-efficacy, job satisfaction, or leadership style. In recent years, the adoption of digital technologies in the hospitality industry has accelerated, including due to COVID-19, but their impact on turnover intention has not yet been studied.

Objective: The aim of the research is to investigate the impact of the digital maturity of hospitality businesses and hospitality workers on the turnover intention of employees. The question is: are more digitally mature workplaces more attractive to employees or, on the contrary, are they more likely to leave the workplace? On the other hand, the digital maturity of workers is not necessarily the same as the opportunities offered by the workplace and may be a cause of turnover intention.

Methodology: To answer the research questions, a research model was set up to investigate the effects of the following elements on turnover intention: job involvement, job embeddedness, incentives, self-efficacy, job satisfaction, leadership style, digital maturity of the workplace, digital maturity of the employee. A sample of 400 respondents collected in the county of Győr-Moson-Sopron is used to test the hypotheses. The results were tested using PLS-SEM model.

Results: Research has revealed the mediating effect of digital maturity on turnover intention. Workplaces with higher digital maturity have lower turnover intentions, whereas when the digital maturity of the workplace is below the employee's expectations, turnover intentions are significantly higher. In addition, it confirmed a number of relationships identified by some other research.

Conclusions: The research was the first to show the impact of digital maturity on turnover intention, which, in addition to its theoretical contribution, has practical relevance as it encourages workplaces to increase digital maturity.

Limitations and future research directions: The research opens up a new area for turnover intention studies, laying the groundwork for future research. The framework developed in this article is worth exploring in other geographical regions, as the research currently relies on the results of a study of a single region.

Keywords: job involvement, job embeddedness, incentives, self-efficacy, job satisfaction, turnover intention, leadership style

Willingness to Change Shopping Habits in Hungary: Consumer Preferences Amid Inflation and Sustainability Challenges

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Background and introduction: Recent global crises, including the COVID-19 pandemic and the 2022 inflationary surge, have significantly influenced consumer food purchasing behaviors in Hungary. Once seasonally limited goods are now widely available, yet growing awareness of sustainability and economic uncertainty challenge established patterns. This study explores how these external pressures shape preferences toward local and seasonal food consumption.

Objective: This study investigates Hungarian consumers' willingness to prioritize sustainability over convenience and cost during periods of inflation and economic crisis. It examines whether households favor domestically produced goods despite their seasonal availability and higher prices. The research also explores consumers' readiness to modify established shopping habits and identifies the key factors influencing purchase decisions, based on data from 674 respondents.

Methodology: The study employed a quantitative survey conducted between November 2022 and May 2023 among 674 Hungarian respondents. Data collection, executed by economics students through randomized interviews, used a structured, Likert-scale questionnaire. Responses were anonymous and GDPR-compliant. Statistical analysis was performed using SPSS to explore consumers' willingness to favor local, sustainable products despite inflation.

Results: The findings indicate that Hungarian consumers predominantly purchase food from discount stores (36.7%) and hypermarkets (30.2%), with only 18.3% opting for local markets or producers. While awareness of sustainability is increasing, it remains a secondary consideration compared to price and convenience. Products such as poultry and pork are selected primarily based on value for money. Even among those claiming to prioritize sustainability, many still choose large-scale retailers over local sour

Conclusions: This study reveals that while awareness of sustainability is increasing among Hungarian consumers, its impact on purchasing behavior remains limited. Only a minority regularly shop at markets or from local producers. Although some products, like home-style meats and wine, attract consumers prioritizing sustainability, price and convenience still dominate decisions. Economic factors continue to outweigh environmental considerations in shaping consumer habits.

Limitations and future research directions: Although the study offers relevant insights, limitations must be acknowledged. The sample was non-representative, skewed toward younger, urban, and educated respondents. Its cross-sectional design restricts causal inference and temporal analysis. Future research should adopt longitudinal methods and include focus group interviews to examine deeper motivations behind indifference to sustainability, especially regarding meat purchases. Broader samples would enhance generalizability.

Keywords: consumer behavior, sustainability, ethical purchasing, consumption

Women Entrepreneurs Driving Cyber-Physical Innovation

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Background and introduction: Women remain underrepresented in Europe's deep tech and Cyber-Physical Systems (CPS) startups, especially in leadership roles. Despite policies and funding, gender gaps persist due to structural, financial, and cultural barriers that limit women's participation and entrepreneurial engagement.

Objective: This study investigates how cascade funding mechanisms like DigiFed influence female participation in technical entrepreneurship and identifies supportive measures to mitigate risk aversion and increase engagement in cooperative projects.

Methodology: We analyse gender participation trends using quantitative and qualitative data collected across three DigiFed open calls conducted in 2020 and 2021, focusing on female leadership within cascade-funded CPS-focused projects. Our methodology includes tracking of application metrics, funding outcomes and implementation roles, complemented by insights from gender integration workshops and structured project monitoring.

Results: Results show that female involvement gradually increases, particularly in collaborative (Twin) projects, suggesting a link between cooperation and engagement. However, the proportion of women-led applications remains low. A consistent pattern of risk aversion and preference for partnership emerges, influencing proposal quality and participation behaviour.

Conclusions: Cascade funding encourages women's participation when fostering early cooperation. Extended application timelines and collaborative formats help mitigate risk concerns. However, increased proposal quality did not clearly translate into stronger implementation performance.

Limitations and future research directions: Findings are limited by sample size and project scope. Future research should explore earlier career interventions, structural funding reforms, and longitudinal impacts of cooperation-focused funding on gender balance in technical innovation ecosystems.

Keywords: cascade funding, gender balance, startups, women entrepreneurs

Women's Empowerment Dimensions and Child Undernutrition in Ethiopia: Evidence from Two Waves of Demographic and Health Surveys

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Background and introduction: Despite Ethiopia's considerable economic growth (9.1% annually between 2000-2017), child undernutrition remains a critical public health challenge. Drawing on Sen's capability approach and Kabeer's empowerment framework, we investigated how two distinct dimensions of women's empowerment—capabilities and decision-making authority—relate to child nutritional outcomes across Ethiopia's diverse regions.

Objective: By analyzing two consecutive nationally representative surveys, we address four interconnected research questions:

1. What is the association between women's fundamental capabilities, decision-making authority, and child stunting in Ethiopia?
2. How do capabilities and decision-making authority interact in relation to child stunting?
3. How do these associations vary across Ethiopia's regions and between rural and urban settings?

Methodology: We analyzed data from Ethiopia's Demographic and Health Surveys (2011 and 2016), constructing validated indices for women's capabilities (education, literacy, media exposure) and decision-making authority (healthcare, purchases, mobility). Factor analysis confirmed these as distinct empowerment dimensions with strong internal consistency. Using survey-weighted and hierarchical models, we examined associations between these empowerment dimensions and child stunting.

Results: Between 2011-2016, child stunting declined from 44.3% to 38.3%, while women's decision-making scores increased substantially (0.70 to 0.78) and capability scores remained stable (0.17 to 0.16). In multivariable models, the capability index showed a significant protective effect against stunting (β=-0.127, 95% CI: -0.191, -0.062), while the decision-making index showed no significant association (β=0.044, 95% CI: -0.006, 0.094). We observed substantial regional variations.

Conclusions: Women's capabilities demonstrate stronger and more consistent associations with child nutrition outcomes compared to decision-making authority alone. The substantial regional heterogeneity suggests the need for context-specific interventions that consider local sociocultural contexts.

Limitations and future research directions: Its cross-sectional design and observational data preclude any causal inference. While national sample sizes were substantial, regional subsamples varied considerably, limiting statistical power to detect smaller associations in certain areas. Future research should prioritize panel data approaches that follow the same households over time to better understand potential causal pathways linking empowerment dimensions to child nutrition.

Keywords: women's empowerment, child undernutrition, regional variation, Ethiopia, DHS

Women's Participation in Prostitution in Hungary

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Background and introduction: Though it's legality questionable, prostitution is a form of work that has a distinct presence in Hungary. It is a research area that requires unique solutions and approaches to study the phenomenon properly.

Objective: The aim of this paper is to carry out an exploratory research on prostitution in Hungary. The aim is to examine women's participation in prostitution. Where they do it, what types of activities they are open to. How long they have been participating in this type of work.

Methodology: We have taken a previous web scrapped database of a notable prostitution website commonly used in Hungary. Here we shall dive into the women partaking in prostitution work. We had access to not only the demographical data, but also their working times, and preferences in sexual activity.

Results: Currently it is evident that there is some level of racism amongst prostitutes, and there is a large presence of sexual deviance amongst participants.

Conclusions: Based on the preliminary results the majority of the prostitutes are heterosexual, however the presence of bisexuals is notable. The most discriminated against group from the prostitutes are the Roma whom, they do not wish to take on as clients.

Limitations and future research directions: This study is a preliminary research. We are currently working on an intensive longitudinal research, with a more complex scraping code. As well as an extended scope where the user's activities are also utilised.

Keywords: Hungary, prostitution, sociology of work, women

Youth at the Crossroads: Navigating Present Needs and Sustainable Aspirations Through Conscious Consumption

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Background and introduction: The United Nations defines sustainability as meeting the needs of the present without compromising the ability of future generations to meet their own needs. This leads to a complex dilemma confronting today's youth, who must navigate the tension between addressing immediate needs and pursuing long-term aspirations for a sustainable future. The young generation is aware of sustainability, it even may cause so-called anxiety among them, the pressure of choosing between personal or collective aims

Objective: The main aim of this research is to understand and structure what actions young people are ready to take for a more sustainable presence and future. Our focus is primarily on consumption habits because it is important to manage needs effectively given the scarcity of resources. After a broad literature review, two primary studies were conducted.

Methodology: We conducted qualitative research using 78 international semi-structured interviews and 58 Hungarian student diaries. Data were analyzed in NVivo14 with auto- and inductive coding. The interview data explored what participants would or wouldn't give up for a better future. The diaries captured reflections on sustainable habits. Coding identified key patterns and was compared with literature insights.

Results: Despite strong awareness of SDGs, actions focus mainly on environmental aspects like waste, transport, or food choices. Real-life sustainability involves trade-offs—comfort, safety, and finances often outweigh ideals. Emotional (empathy, self-image) and rational (cost, health) motives both influence actions. Four patterns—Change, Stop, Decrease, Start—show how individuals engage with sustainability at different levels of personal transformation.

Conclusions: Young people are increasingly aware and willing to act for sustainability, but compromises are inevitable. Their reflections reveal varied depths of engagement—from conscious, value-driven changes to occasional, rational choices. Sustainability must be seen as a complex, multifaceted concept that blends emotional commitment and practical action. True impact requires both mindset shifts and systemic support for sustainable lifestyles.

Limitations and future research directions: Our young, low-income sample may limit generalizability. Retrospective self-reporting risks social desirability bias, as respondents might overstate sustainable behaviors. Still, the method allowed rich reflection. Future research could use longitudinal or observational approaches to better capture sustainable practices and refine behavioral categories.

Keywords: sustainable precence, customer behaviour, collective needs, consumption habits