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Editors:

Ph.D. in Economics, Dr. **Olha Prokopenko**, Estonian Entrepreneurship University of Applied Sciences, Tallinn, Estonia

MA, **Anne Neroda**, Estonian Entrepreneurship University of Applied Sciences, Tallinn, Estonia

Reviewers:

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Ph.D. in Economics **Marina Järvis**, Department of Business Administration, Tallinn University of Technology, Tallinn, Estonia

The Conference Proceedings encompasses interdisciplinary research on the notion of future skills and their place in educational, economic, political, labor, and entrepreneurial processes in the digital age. The contributions emphasize the ways in which artificial intelligence (AI), innovative technologies, and sustainable development practices are redefining not just the competencies of professionals but also the ways in which societies adjust to uncertainty and the global challenges.

The former part looks into how education has changed with the adoption of AI and gamification, the development of adaptive learning experiences, and establishing lifelong learning as a cornerstone of human growth and economic stability. The second part deals with the cognitive and social elements of the technological change by examining the risks of disinformation, automation bias, and mental overload, and also by introducing AI-based tools that can assist in migrant integration and social inclusion.

The third part is devoted to finance, marketing, and digital business which shows how AI allows improving in a systematic manner the payment systems, risk management and personalization plans, but also provokes crucial questions of ethics, regulation, and security. The fourth section focuses on governance, policy and sustainability where innovative auditing, predictive analytics and corporate responsibility are addressed as some of the ways of enhancing accountability and resource efficiency.

The fifth part examines the transformation of the workforce, focusing on the increase in the significance of soft skills, cross-cultural communication, and digital literacy and the universal applicability of reskilling and upskilling in times of crisis, war, and ecological transition. The last part focuses on innovation and entrepreneurship and discusses digital communication in clusters, creative export-import strategies, and biotechnological solutions that highlight how different innovation practices can be.

In general, the events underscore that technology advancement should be extended in line with humanistic strategies. Future skills are not only efficiency tools, but also resiliency, inclusiveness and sustainable development bases.

Keywords: Future Skills; Artificial Intelligence; Education; Resilience; Finance; Governance; Workforce; Innovation; Sustainability; Lifelong Learning; Digital Transformation; Entrepreneurship Ecosystems; Cognitive Resilience; Disinformation; Soft Skills; Green Transition

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@ Authors

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INTRODUCTION

The twenty-first century is characterized by a more rapid rate of technological change, geopolitical and social change. Competencies, which were traditionally viewed as secondary, have become the primary elements of competitiveness, resilience, and sustainability of individuals, organizations, and countries as well. The name of this collection, *Skills for Future*, provides the flavor of the change: an urgency in rethinking, redefining, and reimagining the skills one needs to succeed in a digital and globalizing world. The pieces in this book demonstrate how the intersection of artificial intelligence, lifelong learning, digital literacy, soft skills, and innovation creates a holistic skillset that can not only transform the world of work, but also education, governance, entrepreneurship, and sustainable development.

The most important part of the debate is the realization that technological advancements are not enough to ensure prosperity. Advanced technologies (AI, automation, and other digital technologies) increase human capacity; however, unless ethical, cognitive, and social competences are considered, they may contribute to inequality and undermine resilience. The future skills are thus the point between the technological possibility and human based development. The contributions of the proceedings are located in six domains of interrelation with each other, which are education and lifelong learning, cognitive resilience and social adaptation, finance and digital business, governance and sustainability, workforce transformation, and innovation ecosystems, as well as the collective applicability of these domains to global discussions of the future of work, knowledge, and human development.

Education has been the key to equip societies to meet the needs of tomorrow. With AI being incorporated into both teaching and learning, these have created opportunities to personalize, gamify, and create new forms of interaction with students. Articles within this issue show that adaptive learning systems have the potential to boost motivation, lessen teacher workloads, and provide individualized access to students with diverse backgrounds. But with these opportunities come issues of equity, cultural sensitivity, and data protection.

Digital tools are not the future of education as such, but rather about building a mindset of life-long learning. There are donations to Ukraine, Pakistan and Europe that reveal that technological readiness should be accompanied by novel pedagogy, open access policies and inclusivity strategies. Critical thinking, collaboration, and creativity are also highlighted as some of the complements to technical expertise. The human development paradigm of lifelong learning makes education an ongoing process rather than a one-time event to make them adaptable and resilient in their lives. In this regard, the future ability is not holding on what to study, but, the ability to study in changing situations continuously.

The second theme deals with cognitive and social aspects of the future skills. Knowledge work has been revolutionized by generative AI, which has allowed people to create content and decision support as quickly as possible. However, this acceleration, as contributions note, is associated with great risks: disinformation, algorithmic bias, dependence on automation, and loss of independent critical thinking. The hidden costs of being over-dependend on machine intelligence are well illustrated by such concepts as cognitive debt and AI impostor syndrome.

The future is thus requiring not technical expertise but cognitive strength of the ability to be critical, fact-check, and weigh human judgment with the automated output. Media literacy, ethical judgment, and digital empathy are the skills that are highly important in the environment where deep fakes, synthetic media and biased algorithms can shape the opinion of people and their personal decision-making process. In addition, AI-controlled mechanisms of migrant integration and language learning paint a picture of the dual aspect of technology: it can both divide the communities or act as the means of inclusion. The future skills in this field

will, therefore, not be exclusively technical but also ethical and social, and will involve an interdisciplinary collaboration and effective administration to ensure that technology strengthens, not weakens, human abilities.

Another area that the future skills are indicative is in the area of economic transformation. Donations to the financial systems underscore the ways in which AI helps modernize payments, cross-border trading, detect fraud, and predictive analytics. The technologies lower the costs and increase stability, yet also require the expertise in compliance with regulations, risk mitigation, and ethical supervision. The financial literacy of the future will demand that people are familiar with AI-based tools, digital banking, and have some understanding of cyber-security with the background-level familiarity with accounting or investment.

On the same note, marketing and digital business are changing radically. Consumer interaction, brand strategies are being reinvented by personalization algorithms, generative creativity, and immersive technologies. Future marketer skills will involve using data to analyze, creatively using AI, and working in complicated ethical and legal environments. We are reminded that in order to gain competitive advantage, leadership and coaching are deemed as important complements to technological adoption rather than technologies alone. The larger point here is evident: Companies need to develop hybrid professionals, who also possess digital fluency with strategic, interpersonal and ethical competences.

The political aspect of the skills of the future is also important. Predictive analytics, strategic audit and performance-based planning are the potent tools introduced by digital transformation which can enhance accountability, transparency as well as policy efficacy. Nevertheless, the problem of inertia, misallocation of resources, and fragmented strategies is common to the institutions. The papers of this set present the idea of a strategic state, the variant of governance, in which the long-term planning and evidence-based decision-making take the place of reactive actions.

The digital skills, systems thinking, uncertainty-based policy design, and interpretation and communication of data-driven insights are all future skills of governance professionals. Besides, sustainability is not described as a marginal objective but as a guideline framework. The ecological reskilling, corporate sustainability reporting, and circular economy management skills show that governance and policy cannot be separated and set outside the wider sustainability agenda. In such a way, the set of skills required by a public administrator, policymaker, and corporate leader is united in the capability of bringing the digital transformation and sustainable development objectives together.

The shift of the labor markets creates an urgency to learn future skills and thus be employable and adaptable. Digitalization and automation subject workers to the pressure to keep reskilling and upskilling. Following research herein, there is an increased significance of soft skills like emotional intelligence, flexibility, cross-cultural communication and digital empathy. They are not peripheral, but the core of the competitiveness in fast changing labor markets.

Stories of different regions demonstrate various issues: ecological reskilling in France, supply chain upskilling in Georgia, and cultures of lifelong learning in Ukraine and Pakistan. It is further complicated by the state of war, where the ability to remain resilient, act as a crisis leader, and support change management are essential to survival. In all settings, the message is the same: there must be a combination of technical mastery with the social skills needed to facilitate team work, endurance and creation. Companies that lack the establishment of inclusive and lifelong learning economies risk being left behind in the process of transition into a green and digital future.

The last theme is connected with innovation and entrepreneurship as the drivers of economic and social development. These are not the only current skills that will be relevant in the field ahead, but also creativity, collaboration, and ecosystem building. Contributions show that digital communication promotes the

development of clusters, that export-import relations adjust to martial law, and that biotechnological innovations turn around the health and lifestyle industries.

Digital age entrepreneurship involves flexibility, risk-taking and strategic networking. Design thinking, art-based innovation, and the STEAM approach are examples of how creative thinking and interdisciplinarity contribute to entrepreneurial dynamism. Notably, the articles emphasize that innovation does not exist only in high-tech areas, but it parapets governance, health, education, and even lifestyle sectors. This supports the thesis that the resources of the future are flexibility and creativity.

Collectively, the articles in Skills for Future stress the point that digital transformation is a multi-faceted process, which has touched upon all spheres of society, including education, governance, business, labor, and culture. The denouement of the story is that technological change should be implemented in humanistic systems. Be it the sustainability promotion, the responsible introduction of AI in a classroom and financial system, or the creation of lifelong learning and soft skills, the driving philosophy remains constant, namely, innovation should be beneficial to resilience, inclusiveness, and sustainability.

The proceedings are not just an expression of the present scholarly research, but also a map of the future conversation. They persuade policy-makers, educators, entrepreneurs, and researchers to cross boundaries in field, geography and worldview. Identifying both the opportunities and the threats, the works here challenge proactive methods of changing the uncertainty into opportunity. Finally, the acquisition of skills in the future provides the ability of societies to be flexible, adapt, and thrive in difficult conditions across the world. These contributions serve to remind us in a digital and human world that efficiency and profit is not the real measure of progress but that it is rather the ability to build societies that are capable of learning, innovating, and surviving the complexity.

Editors,

Ph.D. in Economics, Dr. **Olha Prokopenko**, Estonian Entrepreneurship University of Applied Sciences, Tallinn, Estonia

MA, **Anne Neroda**, Estonian Entrepreneurship University of Applied Sciences, Tallinn, Estonia

Section 1. Future Skills in Education and AI Integration

ARTIFICIAL INTELLIGENCE IN TEFL: TRANSFORMATIVE POTENTIAL, ETHICAL CHALLENGES, AND STRATEGIC INTEGRATION

Amr Eladl

Turiba University

Latvia

amr.eladl@turiba.lv

Abstract

Objectives:

This study assesses the integration of Artificial Intelligence (AI) in Teaching English as a Foreign Language (TEFL), evaluating its capacity to enrich tutorial efficiency, personalization, and accessibility while tackling related ethical risks. It aims to provide educators with evidence-based strategies for responsible AI implementation.

Methodology:

An efficient analysis of 284 peer-reviewed studies (2019–2024) and experimental case studies was conducted. Quantitative data from EdTech reports, institutional trials (e.g., University of Barcelona, Japanese EFL programs), and AI tool effectiveness metrics were integrated. Qualitative visions from educator surveys and policy guidelines enhanced the review.

Key Findings and Results:

1. AI tools (e.g., ChatGPT, Twee) reduced lesson preparation time by 40% and automated assessments with 99% plagiarism detection accuracy (Winston AI).
2. Personalized AI platforms increased student engagement by 35% (Duolingo, 2024) and improved writing scores by 18% (University of Barcelona, 2023).
3. 78% of low-resource institutions required infrastructure for AI implementation, aggravating educational gaps.
4. 62% of AI-generated materials displayed cultural biases, and 89% of educators expressed data privacy fears.

Conclusions:

AI obviously enhances TEFL through task automation and adaptive learning. However, loose adoption risks causing biases, privacy violations, and digital inequity. This study encourages a “hybrid pedagogical model” wherein AI complements - not replaces - human tuition. Critical recommendations include:

- Obligatory checking of AI outputs,
- Institutionally managed AI tools to protect student data,
- Policy initiatives covering technological access gaps.

This study provides a framework for instructors, policymakers, and developers to employ AI’s potential while maintaining academic integrity in global language education.

Keywords: Adaptive Learning; AI in TEFL; Educational Equity; Ethical AI; Language Learning Technology

GAMIFICATION IN EDUCATION: ADAPTING LEARNING CONTENT TO PLAYER TYPES FOR FUTURE SKILLS DEVELOPMENT

Denis Krivosheev

Estonian Entrepreneurship University of Applied Sciences

Estonia

denis.krivosheev@eek.ee

Abstract

Objectives:

Nowadays learners belong to a generation that has been immersed in digital world: Internet, social media and video games. As digital natives, they are used to interactive, fast-paced, and personalized digital experiences that traditional education often finds difficult to match. This research aims to explore the effective application of gamification contexts to equip learners with future-oriented skills. The objective is to analyze how implementing gamification in education as well as adapting study experience to different learner profiles might increase learners' motivation and improve learning outcomes.

Methods:

This research is based on comprehensive and systematic review of existing literature, case-studies, and research articles on gamification, player types and the use of digital tools in education. By analyzing Bartle's player types, the research demonstrates how educational content can be adjusted to individual motivational profiles to increase learners' engagement, motivation and improve learning outcomes. This research also examines an existing practical example from various higher education institutions where gamification aspects were adapted to different Bartle's player types ("Explorers", "Socializers", "Achievers", and "Killers").

Results:

The study results show that tailoring and adjusting content to individual motivational factors significantly increases engagement, critical thinking and collaborative skills as well as promotes learners' sustained interest in lifelong learning. As a part of this research, the existing matrix of player types was adapted to educational purposes and enhanced with recommended gamification features developed for each player type. The study also shows how integrating digital emerging tools and technologies, such as virtual and augmented reality (VR/AR) and artificial intelligence (AI), can further personalize a learning process and adapt to learners' needs.

Conclusion:

The study highlights that gamification in education is an effective and useful method for gaining learners active involvement. When tailored to player types and enhanced by VR/AR and AI, gamification offers immersive and adaptive approach to education. Personalized engagement improves learners' motivation and fosters the development of crucial future competencies such as critical thinking, collaboration and digital literacy.

Keywords: Gamification, Player Types, Adaptive Learning, VR/AR, AI in Education, Future Skills

ENSURING UKRAINE'S ECONOMIC RESILIENCE THROUGH THE USE OF AI IN EDUCATION AND STUDYING

Yuliia Horiashchenko

*University of Customs and Finance
Ukraine*

julia.goryaschenko@gmail.com

Oleksandr Harmash

*University of Customs and Finance
Ukraine*

kafedrep@gmail.com

Roman Kutsyi

*University of Customs and Finance
Ukraine*

goryaschenko@umsf.dp.ua

Abstract

Objectives:

The active use of Emerging Technologies in education and training is a key condition in combating depletion and rebuilding socio-economic life of the country.

Methodology:

The main research methods are analysis, comparison, and generalization.

Key Findings and Results:

The integration of artificial intelligence into the educational practice of universities is necessary due to the urgent need to develop the innovation ecosystem of Ukraine, geopolitical changes and the demands of the time, adaptation to changes and using uncertainty as an opportunity for students, teachers and all stakeholders. This initiative to integrate artificial intelligence into educational practice is fully consistent with the goals of Ukraine and the EU to strengthen the entrepreneurial potential of students at the university level and overcome barriers to scaling Ukrainian startup ideas. The main goals of integrating artificial intelligence are considered to be improving scientific research, developing open innovations, increasing the level of cooperation with international partners, and systemic institutional transformation. However, such goals are accompanied by a number of ethical and socio-psychological problems associated with the use of artificial intelligence tools in education. The relative advantage is that this industry does not require a large number of labor, which, unfortunately, is lacking in Ukraine today. Neural networks are now embedded in all socio-economic processes of society. The main recommendation from the UNESCO Guidelines on Generative Artificial Intelligence in Education (2023–2024) is to promote equity and digital access, and the use of AI tools is relevant for students of all majors. We also refer to the fact that, according to recent UNESCO and EU policies, institutions should integrate AI into curricula and research. In particular, AI in business, first of all, promotes lean innovation and automation, and a critical factor that determines whether a business with AI solves a real market problem is the customer's willingness to pay for the solution. The most useful tools to use during training are Elicit, ChatGPT, Leonardo, Copy.ai, Midjourney, Notion AI, Power BI, RemOnline, SendPulse Chatbots, Plerdy, Botkeeper, HubSpot, Brand24, Surfer SEO, Klaviyo, Chatfuel, Albert.ai.

For faster adaptation of AI in education, it is proposed to develop student projects using artificial intelligence tools and tasks for each specialty. Examples of innovative projects in the field of business and administration can be individual customer research and/or market research.

Conclusions:

The integration of AI into teaching can be expected to increase students' motivation to study, research, and work in their specialty, as well as increase incentives for developing their own business ideas and creating startups.

Keywords: AI; Economic; Education; Entrepreneurship; Trade; Studying

LIFELONG LEARNING: A NEW PARADIGM OF HUMAN DEVELOPMENT

Viktoriia Ilchenko

University of Customs and Finance

Ukraine

vikusijzajac@gmail.com

Bohdan Tsymbaliuk

University of Customs and Finance

Ukraine

bogdants123@gmail.com

Abstract

Objectives:

The study explores lifelong learning as a critical paradigm for human development in the 21st century. It aims to analyze how continuous education supports adaptability, competitiveness, and resilience in the face of rapid scientific, technological, and social change. The research also highlights the importance of motivation, balance, and individualized approaches in sustaining lifelong learning.

Methodology:

The paper applies a conceptual and analytical approach, synthesizing insights from cognitive science, education theory, and modern learning practices. It distinguishes three categories of knowledge - basic, compulsory, and voluntary - and evaluates their role in lifelong development. Comparative observations of evolving educational models in developed countries are also considered to identify effective strategies for fostering engagement.

Key Findings and Results:

Lifelong learning is increasingly essential as automation and artificial intelligence transform labor markets. Voluntary, interest-driven learning proves to be the most sustainable and effective form of knowledge acquisition. The study emphasizes that excessive workload reduces efficiency, while balanced approaches - such as alternating learning with rest and using methods like the Pomodoro technique - help maintain long-term productivity and health. Furthermore, interconnected learning domains create a “domino effect,” encouraging broader intellectual growth.

Conclusions:

Lifelong learning has become indispensable for personal and professional success in a rapidly evolving world. To maximize its benefits, education should be flexible, engaging, and aligned with individual interests. Maintaining balance between intellectual activity and rest ensures both high performance and long-term well-being. Lifelong learning is thus not a privilege but a necessity for continuous development and social participation.

Keywords: Lifelong Learning; Human Development; Personal Growth; Knowledge Acquisition; Adaptability; Intellect

BARRIERS TO LIFELONG LEARNING IN PAKISTAN

Kamran Khan

Pakneftegaz, Islamabad

Pakistan

kamrankhan.azerbaijan@gmail.com

Abstract

Objectives:

Lifelong learning means continuing to learn new skills and knowledge throughout life. It helps people stay updated, grow in their careers, and improve their quality of life. Lifelong learning is difficult for many people in Pakistan. This research aims to explore the major barriers that prevent adults from engaging in lifelong learning. A special focus is given to how public resources, like university libraries, support or block this process.

Methods:

This research used a combination of literature review, interviews, and surveys. Data was collected from urban and rural areas across Pakistan. Participants included adult learners, educators, researchers, engineers, library users and education experts. The research examined physical access to learning centers, financial barriers, public attitudes, and the role of digital and library resources in supporting lifelong learning.

Key Findings and Results:

The findings show that many adults in Pakistan face serious challenges when trying to continue learning. A major barrier is poor access to library facilities, especially in rural regions. Cost is another problem. Many people cannot afford tuition, books, or transport. Digital learning is growing, but internet access remains weak in many areas. A key issue identified in this research is the limited access to university libraries. Pakistan has 255 universities. Pakistan has 150 public and 105 private universities. Only enrolled university students have the access to libraries. If a researcher or professional wants to use the university library facilities for upskilling, reskilling, or research purpose, their request is declined. Allama Iqbal Open University is the largest distance learning university in Pakistan which follows the same policy. These libraries are also not age friendly. The university libraries are not accessible in a country where the literacy rate is only 60%. This lack of support discourages many adults from continuing their Continuous Professional Development activities.

Conclusion:

Lifelong learning in Pakistan is held back by poor access, high costs, weak infrastructure, and unsupportive public institutions. Library policies need urgent reform to support all learners and not just enrolled students. University libraries should be open, inclusive, and age friendly. Government and educational institutions must promote a culture of continuous learning. Improvements in internet access, library staff training, and awareness campaigns are also needed. With better support systems, more people in Pakistan can benefit from lifelong learning opportunities and contribute to national progress.

Keywords: Barriers to Learning; Lifelong Learning; Library Access

PERSONAL KNOWLEDGE CAPITAL: INFLUENCE OF LIFELONG LEARNING ON FINANCIAL DECISIONS

Viktoriya Kulyk

*National University “Yuri Kondratyuk Poltava Polytechnic”
Ukraine
feup.Kulyk@nupp.edu.ua*

Alina Kudinova (Chaikina)

*National University “Yuri Kondratyuk Poltava Polytechnic”
Ukraine
alinachaikina@ukr.net*

Abstract

Objectives:

The study explores the influence of personal knowledge capital - comprising education, experience, and critical thinking - on financial decision-making. It aims to demonstrate how lifelong learning enhances financial literacy, adaptive thinking, and responsible planning, ultimately leading to more informed and sustainable financial choices for both individuals and organizations.

Methodology:

The research employed a mixed-method approach combining qualitative and quantitative techniques. Educational sessions with 150 university students were conducted within the Erasmus+ Jean Monnet project “Formation of the Personality Development Strategy in the Digital Educational Space: Ukraine-EU”. Observations, structured interactions, and participant feedback were collected to measure improvements in financial literacy and decision-making. Additional training with managerial staff from leading enterprises in the Poltava region assessed the impact of lifelong learning on corporate financial planning.

Key Findings and Results:

The student sessions confirmed measurable improvements in budgeting, goal setting, investment awareness, and risk evaluation. Post-training assessments indicated significant gains in theoretical understanding and applied financial skills. Among enterprise managers, lifelong learning models contributed to enhanced staff capacity in financial planning and strategic decision-making. Overall, the findings highlight lifelong learning as a driver of both personal and organizational financial resilience in the digital era.

Conclusions:

Structured lifelong learning initiatives, especially when integrated into digital educational frameworks, significantly enhance personal knowledge capital and improve the quality and confidence of financial decisions. By linking academic, corporate, and practical perspectives, the study demonstrates that financial literacy evolves as a dynamic, lifelong skillset, fostering adaptability to changing economic conditions and strengthening decision-making at both individual and institutional levels.

Keywords: Decision-Making; Financial Literacy; Human Capital; Knowledge Economy; Lifelong Learning

ARTIFICIAL INTELLIGENCE IN TRAINING ACCOUNTING AND TAXATION SPECIALISTS: OPPORTUNITIES AND CHALLENGES

Alla Lysenko

Central Ukrainian National Technical University

Ukraine

lysenkoalla2015@gmail.com

Abstract

Objectives:

The study aims to systematize the opportunities and challenges of applying artificial intelligence (AI) in the training of accounting and taxation specialists. It addresses the mismatch between traditional curricula and the demands of the digital economy, highlighting the need for digital literacy, critical thinking, and ethical awareness among future professionals.

Methodology:

The research is based on the analysis of scientific publications related to accounting digitalization and educational innovation. A systematic approach was applied to examine AI as a multifunctional tool for professional training, curriculum development, and labor market transformation. The study also reviews practical experiences in developing accounting and taxation programs to identify opportunities and risks associated with AI integration.

Key Findings and Results:

AI provides broad opportunities for improving training:

- automation of routine tasks such as generating cases and tests;
- individualized learning through adaptive intelligent systems;
- development of analytical and critical thinking, particularly in tax planning;
- acquisition of big data competencies for decision-making in accounting and taxation.

Challenges include risks to academic integrity, reduced critical thinking due to over-reliance on AI, insufficient digital competencies among educators, and the lack of ethical and legal regulation of AI use in accounting education.

Conclusions:

The study concludes that integrating AI into accounting and taxation education is essential for preparing competitive specialists. Curricula must be modernized to combine traditional and digital competencies, foster digital literacy, and address ethical concerns. Practical implications include the modernization of educational programs and enhanced readiness of graduates to operate in automated accounting and taxation environments.

Keywords: Artificial Intelligence in Accounting; Digital Transformation; Professional Competencies; Taxation

Section 2. Future Skills for Cognitive Resilience and Social Adaptation

EVOLVING CHALLENGES POSED BY GENERATIVE AI IN DISINFORMATION AND FACT-CHECKING

Najeebullah Rahmati

*English and Foreign Languages University
India*

najeebullahphdmandc24@efluniversity.ac.in

Abstract

Objectives:

This paper investigates the evolving challenges posed by generative artificial intelligence (AI) in the spread of disinformation and the practice of fact-checking. It focuses on how generative AI, including natural language processing and deepfake technologies, can be exploited to create misleading narratives, synthetic media, and false news at scale. The study also aims to assess the vulnerabilities of current fact-checking mechanisms and to identify emerging countermeasures.

Methodology:

The research is based on a comparative analysis of case studies and existing literature on generative AI, disinformation campaigns, and fact-checking strategies. A critical examination of technical, institutional, and regulatory responses is conducted to evaluate their effectiveness against AI-enabled deception.

Key Findings and Results:

Generative AI significantly amplifies the risks of disinformation by enabling the production of realistic and scalable false content. Current fact-checking systems face limitations such as detection latency, verification scalability, and algorithmic bias. However, promising countermeasures are emerging, including AI-assisted fact-checking tools, watermarking, provenance tracking, and the development of regulatory frameworks. The findings highlight that no single solution is sufficient and that combined approaches are necessary to safeguard information integrity.

Conclusions:

The study underscores the urgent need for interdisciplinary collaboration and ethical governance to address the multifaceted risks of generative AI. It emphasizes the importance of adapting technological, institutional, and societal strategies to strengthen resilience against disinformation and to preserve truth in the digital era.

Keywords: Artificial Intelligence (AI); Generative AI; Fact-Checking Tools; Watermarking; Provenance Tracking; Regulatory Frameworks

THE 21st CENTURY PARADOX: HOW MENTAL PERFORMANCE ERODES DUE TO THE TECHNOLOGICAL PROGRESS

Vladyslav Logos

Tarleton State University

USA

vladyslav.logos@go.tarleton.edu

Yuliia Kramar

D. F. Chebotarev Institute of Gerontology of the

National Academy of Medical Sciences of Ukraine

Ukraine

dr.julia.kramar@gmail.com

Abstract

Objectives:

This research aims to critically examine the long-term cognitive consequences of over-reliance on generative artificial intelligence (GenAI). The aim of this study is to differentiate the long-term negative consequences of over-reliance on GenAI and to outline evidence-based strategies for promoting a healthier and more balanced human-AI interaction. We introduce and define three novel concepts to explain the multifaceted impact on mental performance and well-being: “cognitive debt”, the “performance-learning trap”, and “AI impostor syndrome”.

Data and Methods:

This study employs a systematic review and synthesis of emerging multi-disciplinary literature. We analyze and integrate findings from recent peer-reviewed studies on the human-AI interaction, industrial-organizational psychology, cognitive science, and human-computer interaction published in reputable scientific journals (i.e., Q1/Q2) in the United States, Europe, and worldwide within the last four years. The methodology focuses on identifying convergent evidence for the effects of AI on the mental performance, synthesizing disparate findings into a coherent theoretical model that explains the underlying psychological mechanisms and their impact.

Key Findings and Results:

Our synthesis reveals that two core psychological mechanisms – a deep-seated tendency toward cognitive offloading and a pervasive, plausibility-driven automation bias – lead to a significant “cognitive debt”. This is manifested by measurable deficits, including impaired memory consolidation, diminished critical thinking, and a notable homogenization of creative output. Furthermore, our analysis establishes the “performance-learning trap”, a phenomenon where AI-driven boosts in immediate task performance mask a failure to acquire underlying skills. This contributes to “AI impostor syndrome”, a novel psychological toll characterized by a crisis of authorship and diminished self-efficacy.

Conclusions:

The uncritical, passive use of GenAI (i.e., large language models) poses a significant risk to long-term cognitive vitality and mental performance. A paradigm of cognitive stewardship is needed to mitigate these risks. We conclude that a multi-pronged strategy – encompassing human-centric AI design, reformed educational and workplace policies, and a commitment to longitudinal research – is essential. This approach is vital to fostering a healthy, symbiotic relationship that ensures technology augments, rather than atrophies, human cognitive capacity for generations to come. The authors believe that the results of our study and a strategic call to action will shed alternative opinions into the discourse on the impact of AI on the future of

work, education, and policies, while providing the clear path to implementing emerging technologies into our lives in a mental health-oriented and mental performance-enhancing ways.

Keywords: Artificial Intelligence; Cognitive Performance; Generative AI; Mental Performance; Human-AI Interaction.

AI HYPE, VESTED INTERESTS, AND THE FUTURE OF JOBS: AN INDUSTRY PRACTITIONER'S PERSPECTIVE

Anurag Mittal

Estonian Entrepreneurship University of Applied Sciences

Estonia

anurag.mittal@eek.ee

Abstract

Objectives:

The paper challenges the widespread narrative that artificial intelligence (AI) will inevitably lead to mass job redundancy across all sectors. Drawing on extensive industry, consulting, and international development experience, it examines how vested interests - Big Tech, consulting firms, and policymakers - strategically promote AI hype to push compliance frameworks and new technologies. The study aims to demonstrate that AI is more likely to complement and supplement existing jobs rather than replace them.

Methodology:

An innovative, practice-based approach is employed, grounded in the author's professional experience in multinational banks, consulting firms, and international development projects (IFC–World Bank, ILO–UN). This perspective is supplemented with comparative analysis of global skills and AI policy reports, including OSKA, Coursera, World Economic Forum Skills Reports (2025), EU and U.S. AI action plans, and initiatives from Finland, Estonia, and ANZ.

Key Findings and Results:

The research indicates that the AI hype is being strategically amplified by vested interests to justify new governance and compliance frameworks. However, historical parallels with the introduction of computers suggest that incremental upskilling, rather than wholesale job replacement, is the likely trajectory. Reports and case studies confirm that AI enhances productivity and efficiency but does not eliminate the need for human expertise across public, private, nonprofit, and international development sectors.

Conclusions:

AI should be understood as a complementary force in the labor market, requiring systematic workforce development and upskilling. Incremental approaches - similar to past technological transitions - are the most realistic and sustainable way forward. The paper highlights the importance of adult learning, digital transformation strategies, and entrepreneurship in ensuring resilience in evolving job markets.

Keywords: Adult Learning; Digital Transformation; Estonia; Future Skills; Workforce Development

AI-DRIVEN TOOLS AS AN ALTERNATIVE INTEGRATION-RELATED SOLUTION IN THE CONTEXT OF MIGRATION CRISIS

Larysa Kupriianova

*KROK Academy by Dr. Kupriianova, National Agency for Higher Education Quality Assurance of Ukraine
Italy,
ara_kupriyanova@ukr.net*

Daryna Kupriianova

*DAR for Peace and Equality, One Young World Ambassador
Italy
darina.kupriyanova@ukr.net*

Abstract

Objectives:

The study explores the potential of AI-driven tools, particularly ChatGPT, as alternative solutions for supporting integration and language learning among migrants, refugees, and forcibly displaced persons. It seeks to demonstrate how such tools can address the lack of timely linguistic assistance and mitigate psycho-emotional barriers to social inclusion in host societies.

Methodology:

The research applies case study and observational approaches. Data were collected from 18 participants of diverse cultural, social, and national backgrounds through anonymous questionnaires. The analysis considered displacement-related disorders, limited access to language programs, and psycho-emotional constraints. ChatGPT was tested as a tool for designing tailored individual study programs, adjusted to learners' specific needs and conditions.

Key Findings and Results:

The findings show that AI-driven tools can generate personalized, sustainable, and motivating learning pathways by leveraging free digital resources. Within 4–6 months, participants achieved conversational competence in host-country languages, improved their ability to manage daily needs, and reported notable psycho-emotional improvements. Approximately 80% of participants indicated relief from symptoms of migrational nomadism and healing amnesia. The motivational feedback and adaptive responses of ChatGPT proved to be crucial in sustaining engagement.

Conclusions:

While often criticized for undermining socialization, AI-driven tools can, when properly applied, support integration processes for migrants and refugees by bridging gaps in language support. This approach provides an accessible, low-cost, and personalized solution to overcome bureaucratic delays and psychological challenges, ultimately reducing the risk of long-term social isolation.

Keywords: AI-Driven Tools; ChatGPT; Migrants; Refugees; Forcibly Displaced Persons; Migration Crisis

Section 3. Future Skills for Finance, Marketing, and Digital Business

ARTIFICIAL INTELLIGENCE AS THE CORNERSTONE OF FUTURE FINANCIAL INFRASTRUCTURE

Artem Koldovskiy

*Zhytomyr Economic and Humanitarian Institute, University “Ukraine”
Ukraine*

akoldovskiy.pa@gmail.com

Kateryna Shafranova

*Zhytomyr Economic and Humanitarian Institute, University “Ukraine”
Ukraine*

akoldovskiy.pa@gmail.com

Abstract

Objectives:

AI is transforming the financial systems automating the processes, improving risk management, and facilitating the use of the data in making decisions. Financial infrastructure modernization is essential in achieving stability, resilience and innovation in a fast-changing global economy. The goal of the research is to analyze the way AI is becoming the foundation of the future financial infrastructure with its revolutionary nature in efficiency, security, and inclusivity.

Methods:

The research uses a mixed-methodology that incorporates econometric modelling, literature review and case study of international financial institutions. The sources of data will be the reports on finances globally, the index of AI adoption, and regulatory documentation. The study concentrates on the application of AI in payment systems, fraud detection, digital banking, and cross-border transactions, as well as on how regulatory loopholes, ethical risks, and cybersecurity vulnerabilities are obstructive.

Key Findings and Results:

Results show that the use of AI enhances the financial infrastructure through its efficiency in operations, minimization of systemic risks, and predictability of the financial stability through predictive analytics. Econometric model (2019-2024 panel data in the USA, EU, China, and Ukraine) indicates that a 1 per cent increase in the investment in the AI affects the efficiency of the payment system by 0.45 per cent (p less than 0.01) and the cost of the transactions by 0.32 per cent (p less than 0.05). Artificial intelligence fraud detection was found to increase the accuracy rates of the European banks up to 94 percent and the cross-border settlement speed reduced T+2 to nearly real time (T+0.2) in pilot CBDCs in China and Singapore. According to central bank reports, AI-improved credit scoring is found to have led to financial inclusion (12-15 percent) in the emerging ecologies. Nonetheless, there are still hurdles, such as high implementation costs (on average USD 15-20 million per institution) and algorithmic bias was calculated to raise default prediction error by up to 7% in emerging market settings.

Conclusion:

AI is a core component of the future of financial infrastructure, and it has a chance to build resilience, efficiency, and inclusiveness in global finance. In order to make the most of this, governments, regulators, and financial institutions should focus on dealing with ethical issues, standardization of regulatory methods and

spending on cybersecurity. The main elements to deliver AI-driven financial infrastructure to support sustainable global economic development are international cooperation and clear governance.

Keywords: Artificial Intelligence; Financial Infrastructure; Digital Banking; Risk Management; Future of Finance; CBDC; Financial Stability

ARTIFICIAL INTELLIGENCE AS A TOOL FOR TRANSFORMING MODERN MARKETING

Viktoriya Nabok

*State University of Trade and Economics
Ukraine*

nabok.vika12@gmail.com

Viktoriya Khmurova

*State University of Trade and Economics
Ukraine*

v.khmurova@knute.edu.ua

Abstract

Objectives:

The purpose of the study is to analyze the opportunities and challenges that the use of artificial intelligence (AI) in marketing activities opens up. Particular attention is paid to how AI provides automation of business processes, personalization of communications with consumers and the development of innovative promotion strategies.

Methodology:

The study used an analytical approach based on the study of scientific literature, examples of the use of AI in leading companies (Amazon, Coca-Cola, Sephora) and government institutions (MFA of Ukraine). Methods of system analysis, forecasting and generalization of practical cases were applied.

Key Findings and Results:

- AI allows to automate routine marketing tasks, accelerates decision-making and provides more accurate audience segmentation.
- The use of personalization algorithms (Amazon, Sephora) increases the efficiency of interaction with consumers.
- Generative AI opens up new horizons for creativity (Coca-Cola example) and information communication (AI avatar of the Ministry of Foreign Affairs of Ukraine).
- A gradual but rapid increase in the level of personalization and integration of AR/VR, virtual assistants and neural interfaces into marketing is expected by 2035–2040.
- Challenges are associated with the ethical, legal and economic aspects of integrating AI into business processes.

Conclusions:

Artificial intelligence is a strategic tool for marketing transformation, combining human and digital resources to create more effective business models. Its implementation provides automation, personalization and improved analytics, while requiring a responsible approach to regulation and ethics. In the future, AI will become not only an assistant, but also a strategic business partner, shaping a new quality of interaction with consumers.

Keywords: Artificial Intelligence; Marketing; Personalization; Automation; Digital Transformation; Consumer Communications; Innovative Strategies

LEADERSHIP AS A FACTOR INFLUENCING THE FORMATION OF COMPETITIVE ADVANTAGES IN BUSINESS DIGITALIZATION

Svitlana Breus

European University

Ukraine

breus.sv21@gmail.com

Mykola Denysenko

Volodymyr Vynnychenko Central Ukrainian State University

Ukraine

profden3@gmail.com

Oleksandr Siruk

European University

Ukraine

osiruk@gmail.com

Abstract

Objectives:

The study examines the role of leadership in shaping competitive advantages for businesses undergoing digital transformation. It seeks to demonstrate that technological implementation alone does not guarantee competitiveness; instead, leadership that fosters human capital development and employee adaptability is decisive in creating long-term strategic advantages.

Methodology:

The research applies a comprehensive analytical framework, integrating leadership theory, competitive advantage models, and the concept of discovery commerce. STEP, SWOT, and cluster analyses are used within the automotive maintenance and repair market to assess internal and external factors influencing competitiveness. This methodological approach establishes a systemic foundation for evaluating leadership's role in digital strategies.

Key Findings and Results:

The findings reveal that leadership enables the integration of human capital into digital strategies by cultivating new skills, mindsets, and professional competence. Three key vectors of competitive advantage are identified: Technological differentiation – enabling high-tech, unique service offerings.

Customer experience optimization – strengthening trust and communication with clients.

Efficiency and transparency – streamlining processes, automating routine tasks, and ensuring reliable service models.

Together, these vectors support the transition from reactive to proactive business models aligned with the discovery commerce concept.

Conclusions:

The study concludes that competitive advantages are primarily driven by leadership that empowers workforce transformation within digitalization processes. Adaptability, supported by innovative strategies and human-centered digital integration, creates advantages that are resilient and difficult for competitors to replicate. This approach transforms businesses from simple service providers into trusted partners, accelerating long-term competitiveness in a globalized digital economy.

Keywords: Digitalization; Discovery Commerce; Competitive Advantages; Leadership; Workforce Transformation

STRATEGY AND COMPETITIVE PRIORITIES OF THE ENTERPRISE IN CURRENT MARKET CONDITIONS

Oleg Tomashivskuj

*Lviv Institute Interregional Academy of Personnel Management
Ukraine
tomashivsky@gmail.com*

Matviy Tomashivskuj

*Lviv Institute Interregional Academy of Personnel Management
Ukraine
matviy.tomashivskiy@gmail.com*

Yurij Tomashevskiy

*Lviv National University of Environmental Management
Ukraine
tomashum@gmail.com*

Abstract

Objectives:

The article aims to analyze the role and development trends of enterprise operational strategies in modern market conditions. It explores the relationship between operational strategy and corporate strategy, identifies key functional priorities, and evaluates how production strategies contribute to competitiveness at the international level.

Methodology:

The research employs a conceptual and analytical approach, reviewing theoretical perspectives on operational and corporate strategies. Comparative analysis of functional strategies - financial, operational, marketing, logistics, information, and human resource management - is conducted to show their interconnectedness and parity. Case-based analysis of production strategies under conditions of global competition is also included.

Key Findings and Results:

The study highlights that effective operational strategies must integrate closely with corporate strategy to ensure enterprise competitiveness. Production strategies gain importance in conditions of international competition through principles such as just-in-time production, comprehensive quality control ("do it right the first time"), and preventive maintenance. The findings emphasize that aligning production strategies with customer needs significantly enhances organizational performance. Furthermore, the research stresses the relevance of operational strategies in the service sector, showing their role in building process strategies and sustaining competitiveness at the corporate level.

Conclusions:

Operational strategies are a vital functional component of corporate strategy, ensuring enterprise adaptability and competitiveness in dynamic market conditions. Their effectiveness depends on close integration with other functional strategies and responsiveness to international competition. The study provides both theoretical insights and practical significance by outlining approaches that enterprises can adopt to strengthen competitiveness and improve strategic management.

Keywords: Competition; Competitiveness; Operational Strategy; Production Priorities; Enterprise Strategy

COACHING AS A TOOL FOR ENHANCING PERSONNEL MANAGEMENT IN ORGANIZATIONS

Marta Olikhovska

*Lviv Institute of Interregional Academy of Personnel Management
Ukraine*

olih.marta@gmail.com

Volodymyr Olikhovsky

*Lviv Institute of Interregional Academy of Personnel Management
Ukraine*

olihovskyiv@ukr.net

Objectives:

The article aims to define and substantiate the essence of the concepts “coaching” and “coach” while analyzing their interdisciplinary origins in management, philosophy, psychology, pedagogy, and sports. It also seeks to explore the potential applications of coaching methodology in enterprise personnel management, with emphasis on employee development, efficiency, and organizational performance.

Methodology:

The research employs a conceptual and comparative analysis of the term “coaching” across different disciplines. Chronological and contextual approaches are used to trace the origin and development of the term. The study integrates theoretical perspectives with practical considerations of coaching as a management technique, method, and mindset in the workplace.

Key Findings and Results:

The study demonstrates that coaching reveals individual potential, enhances productivity, and supports creative and adaptive thinking. Coaching allows individuals to learn actively rather than passively receive knowledge, making it a dynamic tool for personnel management. Its application fosters structured goal-setting, motivates experimentation, and strengthens employee engagement. As a result, coaching contributes to improving organizational performance and competitiveness by individualizing employee development and aligning it with strategic goals.

Conclusions:

Coaching is confirmed as an effective management tool that improves both individual and organizational outcomes. It facilitates personal growth, enhances efficiency, and strengthens management systems. The study highlights prospects for further research, including the integration of modern coaching methods into personnel management systems, and cross-cultural examination of coaching practices to enhance workforce development and organizational productivity.

Keywords: Coaching; Coach; Personnel Management; Consultant; Mentor; Trainer; Productivity

FINANCIAL ANALYSIS AND FUTURE SKILLS: INNOVATIVE LEARNING AND COMPETENCIES FOR SUSTAINABLE DEVELOPMENT

Svitlana Zhukevych

West Ukrainian National University

Ukraine

sveta.zyke@gmail.com

Abstract

Objectives:

The study aims to substantiate the methodological foundations for integrating financial analysis with innovative learning processes to foster future skills and digital competencies. It seeks to prepare analysts and managers to address the challenges of sustainable development, digital transformation, and labor market evolution.

Methodology:

An interdisciplinary approach was applied, combining systems and comparative analysis with rational and behavioral models. Techniques of skill forecasting in the digital economy were also used to evaluate the integration of financial analysis with educational strategies and professional upskilling.

Key Findings and Results:

The results confirm that the effectiveness of financial analysis increases significantly when combined with innovative learning models. Financial analysis serves not only as a tool for evaluating economic processes but also as a methodological platform for professional training. Key integration directions include the use of artificial intelligence and blockchain technologies in analytics and education, cloud computing for lifelong learning, and the development of digital competencies as a basis for inclusive growth. These approaches contribute to forming “future-ready analysts” capable of responding to structural labor market changes.

Conclusions:

Innovative learning models strengthen the role of financial analysis as a strategic tool for forecasting and managing socio-economic processes. The synergy of analytical approaches and future skill development enhances professional capacity, enabling analysts and managers to ensure a balance between economic efficiency, social equity, and technological innovation in the context of sustainable development.

Keywords: Digital Competencies; Financial Analysis; Future Skills; Innovative Learning; Lifelong Learning; Sustainable Development

Section 4. Future Skills for Governance, Policy, and Sustainability

INNOVATIVE APPROACHES TO PUBLIC AUDIT AND STRATEGIC PLANNING FOR IMPROVING GOVERNANCE QUALITY AND DEVELOPING NATIONAL RESOURCES

Lyazzat Sembiyeva

L.N. Gumilyov Eurasian National University

Kazakhstan

lyazzat.sembiyeva@gmail.com

Zamira Bashu

“Center for Research, Analysis and Evaluation of Effectiveness” LLP

Kazakhstan

zamirabashu@gmail.com

Abstract

Objectives:

The study investigates how innovative approaches in public audit and strategic planning can strengthen governance quality and support sustainable development of national resources. It aims to identify shortcomings in current governance systems and to evaluate how the integration of strategic auditing and modern planning innovations can enhance accountability, efficiency, and long-term policy effectiveness.

Methodology:

The research applies analytical and comparative methods, reviewing normative documents, case evidence from Kazakhstan, and international best practices. It examines the interaction between audit processes and strategic planning frameworks, with a focus on performance-oriented (strategic) audits, risk-informed policy design, and monitoring and evaluation mechanisms.

Key Findings and Results:

The findings reveal persistent weaknesses in governance systems, including resource dissipation and misalignment between strategic plans and actual needs. The adoption of strategic audits improves transparency and accountability by linking expenditures with development goals and providing critical feedback on government program implementation. Innovations in strategic planning - such as integrated long-term planning and continuous monitoring - support adaptability and results-focused governance. Kazakhstan's reforms and international experience confirm that strengthening the nexus between audit and planning improves governance outcomes and optimizes national resource management.

Conclusions:

Innovative approaches to state audit and strategic planning contribute to building a “strategic state” paradigm. The combination of performance-oriented audits and modern planning ensures efficient resource use, alignment of policies with societal needs, and sustainable development. The research has both theoretical significance, by expanding the conceptual understanding of governance innovations, and practical relevance, by informing reforms such as digital audit tools and enhanced legal frameworks.

Keywords: Governance; Innovation; Public Audit; Strategic Planning; National Resources; Sustainable Development

PREDICTIVE ANALYTICS IN THE ASSESSMENT OF GOVERNANCE QUALITY AND EFFECTIVE USE OF NATIONAL RESOURCES IN THE CONTEXT OF DIGITAL TRANSFORMATION

Aliya Shakharova

*L.N. Gumilyov Eurasian National University
Kazakhstan*

[*shakharova_aye@enu.kz*](mailto:shakharova_aye@enu.kz)

Anar Zhumatayeva

*Center for Research, Analysis and Efficiency Assessment
Kazakhstan*

[*a.k.zhumatayeva@gmail.com*](mailto:a.k.zhumatayeva@gmail.com)

Abstract

Objectives:

The study aims to conceptualize the integration of predictive analytics into public audit systems for assessing governance quality and the effective use of national resources in the context of digital transformation. It seeks to design a proactive, data-driven paradigm that aligns with principles of sustainable development and supports future-ready professional competencies.

Methodology:

The research employs comparative policy analysis, international case study review, and expert interviews with state auditors and data specialists. Pilot testing of forecasting models was conducted using open government data on public expenditures and resource management. Analytical tools included machine learning algorithms, predictive performance indicators, and automated visualization systems.

Key Findings and Results:

The findings show that predictive analytics enhances audit accuracy, timeliness, and strategic relevance. Pilot testing identified risk-prone areas and predicted potential violations before their occurrence, demonstrating the preventative potential of forecasting models. A conceptual integration model was developed for embedding predictive analytics into public audit practices. Additionally, the study defines core digital competencies for auditors, including data literacy, risk modeling, and interpretation of algorithmic results.

Conclusions:

Predictive analytics plays a strategic role in strengthening transparency, accountability, and proactive governance. By shifting from retrospective to forward-looking audit approaches, inefficiencies can be detected earlier and systemic failures prevented. The proposed model, the first of its kind in Kazakhstan, provides a framework for modernizing national public audit systems while advancing global goals of digital workforce upskilling and governance innovation.

Keywords: Predictive Analytics; Governance Quality; Public Audit; Digital Skills; National Resources

THE AGE OF SUSTAINABLE DEVELOPMENT

Vita Andrieieva

KROK University

Ukraine

AndrieievaVA@krok.edu.ua

Abstract

Objectives:

The study examines the concept of sustainable development as a guiding principle for balancing economic growth, environmental preservation, and social equity. It seeks to analyze the historical evolution of the idea, its global institutional foundations, and the limitations imposed by technology, social organization, and environmental resources. The objective is to highlight the interconnection between poverty, inequality, and environmental degradation, and to underscore the role of sustainable development in shaping long-term resilience.

Methodology:

The research adopts a descriptive and exploratory design, combining qualitative, quantitative, and mixed-method approaches. Historical review, conceptual analysis, and synthesis of global policy frameworks are employed to trace the origins of sustainable development and evaluate its modern implications.

Key Findings and Results:

The findings emphasize that sustainable development requires societies to meet present needs without jeopardizing the ability of future generations to meet theirs. Environmental degradation is shown to both result from and hinder economic development, creating a cycle of poverty and inequality. Case evidence from global trends demonstrates that affluent societies must adapt consumption patterns, particularly in energy use, to remain within ecological limits. Population growth, if unbalanced with ecosystem productivity, can further strain resources and hinder sustainable progress.

Conclusions:

Sustainable development represents a dynamic approach to organizing society for long-term survival and prosperity. It integrates environmental, social, and economic dimensions, highlighting the need for responsible lifestyles, equitable policies, and coordinated global action. The concept underscores that sustainable development is not a fixed endpoint but a continuous process of adaptation to global challenges.

Keywords: Human Activities; Sustainable Development; Environmental Resources; Economic Growth; Global Equity

INNOVATIVE TREND OF SUPPORTING EDUCATION IN CORPORATE SUSTAINABILITY REPORTS

Vasyl Pyvovarov

Yaroslav Mudryi National Law University

Ukraine

v.pyvovarov@ukr.net

Abstract

Objectives:

The assessment of sustainable development reports of enterprises (corporations) of Ukraine on education issues in accordance with the goals of sustainable development is an innovative trend. In Ukraine, requirements for sustainable development reports of enterprises are being strengthened with the criterion of the number of employees, which will become mandatory in the coming years. 2025, some enterprises did this for the first time.

Methodology:

The analysis of public sustainable development reports of enterprises was carried out through content analysis with determination of the density of reporting on the topic of education support per page of the report and qualitative analysis of priority issues of the results of supporting the quality of education in the context of the SDGs.

Key Findings and Results:

The preparation of the first annual Report on the achievement of the SDGs by the large agricultural group "Nibulon" (Report, 2024) is an affirmative result of the innovative trend of supporting education as part of ESG aspects. For 2025-2027, educational events on inclusion for personnel and cooperation with partner organizations are planned. The priority goal is to attract young people to the agricultural sector and form responsible leadership. The large telecommunications group Vodafone Ukraine already has experience in compiling Sustainable Development Reports for 5 years from 2020 to 2024, of which there were four. One year of martial law was missed, but in the meantime, taking into account the density of mentions of the topic of education, it was 2023 that had the best result in terms of the innovative trend in supporting education. In conditions of martial law, the group continues to develop digital infrastructure, which is the main element of access to information, medicine, education and digital services. It provides free Wi-Fi coverage in bomb shelters and shelters. In partnership with KSE, it helps to form an innovative educational ecosystem that provides higher education students with access to the most modern knowledge and technologies and is aimed at creating a strong scientific and technological potential of Ukraine. Achieving SDG 4 is part of the areas that complement the systemic innovative contribution of both Groups to the formation of a responsible and sustainable business environment in Ukraine.

Conclusions:

Analysis of public reports has shown that the tasks set by both the «Nibulon» Group and the Vodafone Ukraine Group are innovative in nature, which indicates a responsible attitude towards the implementation of tasks to achieve the SDGs, in particular, SDG 4 on innovative and high-quality education. These Groups are purposefully engaged in the formation of solutions to achieve the SDGs, and their sustainable development reports can be an important experience for other enterprises that will have to do this for the first time in the coming years.

Keywords: Content Analysis; Education; Innovation; Sustainable Development Report

AN INNOVATIVE APPROACH TO ASSESSING INTEREST IN HEALTHCARE

Oleksandr Pyvovarov
Kharkiv National Medical University
Ukraine
ov.pyvovarov@knmu.edu.ua

Abstract

Objectives:

The current level of interest in the issue of health care is increasing in line with the growing risks in the world. Gradually, all countries of the world are carefully measuring risks in various spheres of life. The development of an innovative society poses the task of finding new technologies for analyzing information, in particular, the interest of Google users in the topic of health care. The analysis of foreign and domestic scientific sources indicates that modern approaches are being actively implemented in health care practice. The Google Trends search engine has wide opportunities for determining the level of user interest in the main trends in health care and other spheres of public life. To use an innovative approach to assessing interest in the topic of health care.

Methodology:

To conduct a study on the search for innovative approaches to risk assessment to ensure life safety in an innovative society through assessing the awareness of subjects on these issues, information resources of the online search engine Google Trends were used, which allows you to determine the interest of Google users and target groups, analyze search activity in a certain direction, track trends, and estimate the number of queries in Google from different regions of the world by keywords and topics in certain periods of time. A priority feature of Google Trends is to provide users with both quantitative and qualitative indicators. The level of requests is measured in relation to the total mass of queries in Google by different countries of the world, which allows you to isolate the international component of queries from the state of interest in the development of an innovative society.

Key Findings and Results:

In the study, to determine interest in the topic of health preservation, a comparative analysis of search queries in Ukraine and the world for the entire fixation period from 2004 to 2025 was performed using Google Trends technology. The applied Google Trends technology is a modern convenient tool for determining the interest and assessing the interest of Google users in different countries of the world in relevant aspects of life. It was established that the average trend of interest in the topic of health care in countries of the world tends to grow, especially there has been an increase in interest in Ukraine, which requires further scientific research.

Conclusions. The study applied an innovative approach to assess interest in the topic of health care in Ukraine and other countries of the world using Google Trends technology. A comparative assessment of interest in health care over time was performed. The average trend of interest in the topic of health care in countries of the world tends to grow, especially in the last 5 years there has been an increase in interest in Ukraine, which requires further scientific research.

Keywords: Assessment of Interest; Google Trends; Health Care; Innovative Approach

Section 5. Workforce and Future Skills for Market Transformation

THE ROLE OF SOFT SKILLS IN ENSURING THE COMPETITIVENESS OF FUTURE ECONOMICS GRADUATES IN THE LABOR MARKET

Kotko Ya.M.

*State Biotechnological University, Faculty of Economic Relations and Finance
Ukraine
kotkoyana@ukr.net*

Levkina R.V.

*National University «Odessa Polytechnic», Institute of Economics and Management
Ukraine
levkina@3g.ua*

Levkin A.V.

*State Biotechnological University, Institute of Cyberport
Ukraine
dimalevkin23@gmail.com*

Abstract

Objectives:

The study investigates which soft skills will define the competitiveness of economics graduates in the labor market by 2025. It focuses on how globalization, digital transformation, and the dynamic nature of modern labor markets shift the emphasis from purely professional knowledge to a balanced integration with universal social and cognitive skills.

Methodology:

The research is grounded in an analysis of international labor market forecasts, expert assessments, and scientific works in management and labor economics. A comparative method was applied to explore the relationship between professional competencies and soft skills, while a structural-analytical approach identified the most relevant skill groups required for future economists.

Key Findings and Results:

The findings confirm that by 2025, the most in-demand soft skills for economists will include emotional intelligence (EQ), adaptability and resilience, cross-cultural communication, digital empathy, as well as systematic and critical thinking. The integration of these skills with professional economic knowledge was shown to be essential for successful employment, career growth, and effective professional performance in a globalized and technologically evolving labor market.

Conclusions:

Soft skills are expected to transform from complementary attributes into strategically vital components of professional competence. Their development should be embedded in the educational process of economics students alongside the acquisition of theoretical knowledge and technical expertise. This integrated approach will prepare graduates to compete successfully in the global market, adapt to digital transformation, and sustain high levels of professional effectiveness in conditions of uncertainty and change.

Keywords: Soft Skills; Economic Specialties; Professional Competencies; Emotional Intelligence; Adaptability; Cross-Cultural Communication; Digital Empathy; Critical Thinking

WORKFORCE TRANSFORMATION AND FUTURE SKILLS IN DIGITAL SUPPLY CHAINS: UPSKILLING AND RESKILLING IN GEORGIA'S FMCG RETAIL SECTOR

Maria Kldiashvili

*Georgian National University SEU
Georgia
m.kldiashvili@seu.edu.ge*

Ia Nadirashvili

*Caucasus International University
Georgia
ia.nadirashvili@ciu.edu.ge*

Irina Aleksishvili

*Caucasus International University
Georgia
irina.aleksishvili@ciu.edu.ge*

Abstract

Objectives:

The study investigates workforce transformation in Georgia's FMCG retail supply chains in the context of digitalization. It aims to identify key barriers to digital transformation, with a focus on small and medium-sized enterprises (SMEs), and to explore how upskilling and reskilling can enhance competitiveness and support sustainable sectoral growth.

Methodology:

A mixed-method approach was employed, combining literature review, case analysis, and qualitative data from semi-structured interviews with industry experts and digital transformation consultants in Georgia's FMCG sector. This framework enabled an in-depth assessment of workforce readiness, organizational constraints, and industry–education collaboration.

Key Findings and Results:

The results highlight that SMEs face significant barriers, including resistance to organizational change, declining employee loyalty and retention, low awareness of digital trends, and limited collaboration with educational institutions. Employees require not only basic digital literacy but also advanced competencies in data analytics, digital communication, and process automation. The mismatch between workforce skills and industry needs has slowed digital adoption in supply chains.

Conclusions:

To accelerate digital transformation, a holistic workforce strategy is needed. Businesses must strengthen upskilling and reskilling initiatives, foster organizational cultures of innovation, and adopt coaching and mentoring approaches. Training providers should align short-term programs with company goals, while business associations and the state must support workforce transformation strategies and industry–education partnerships. Addressing these barriers will enable Georgia's FMCG sector to integrate digital technologies more effectively, improve SME competitiveness, and achieve sustainable growth.

Keywords: Future Skills; Workforce Transformation; Upskilling; Reskilling; Digital Supply Chains; FMCG Sector

RESKILLING FOR ECOLOGICAL TRANSITION IN FRANCE

Viktoriya Onegina

*Clermont School of Business
France*

viktoriya.onegina@clermont-sb.fr

Marina Bourgain

*Clermont School of Business
France*

marina.bourgain@clermont-sb.fr

Abstract

Objectives:

The study assesses the extent to which French companies engage in employee training related to ecological transition. It examines the role of company size in determining involvement in reskilling efforts, with the aim of evaluating preparedness for the European Green Deal and related sustainability regulations.

Methodology:

The research employs a quantitative methodology using official 2022 EU survey data collected by CEREQ (Centre d'études et de recherches sur les qualifications) from 12,699 representative companies of varying sizes across France. Data processing and statistical analysis were conducted using MS Excel and SPSS to evaluate training initiatives in three ecological domains: awareness, regulatory compliance, and adaptation of technical processes.

Key Findings and Results:

The findings indicate that:

4.5% of companies (7.2% of training companies) provided reskilling on ecological awareness.

5.7% (9.2%) offered training on environmental regulations, standards, and products.

6.1% (9.9%) addressed adaptation of technical aspects of production.

In all areas, company size significantly influenced training involvement. Large enterprises (over 250 employees) were more engaged in ecological reskilling, while micro, small, and medium-sized enterprises showed lower levels of participation.

Conclusions:

In 2021, the percentage of French companies investing in ecological training remained relatively low. Achieving the goals of the European Green Deal requires broader engagement in employee reskilling for sustainability, particularly among smaller enterprises. Strengthening ecological training will be critical for supporting green transformation and ensuring long-term competitiveness.

Keywords: Green Transformation; Reskilling; Sustainability; Training; France

BIBLIOMETRIC ANALYSIS OF LABOR MIGRATION IN THE IMPLEMENTATION OF THE SUSTAINABLE DEVELOPMENT GOALS (“DECENT WORK AND ECONOMIC GROWTH”)

Leonid Taraniuk

*Vilnius Gediminas Technical University
Lithuania
lnt@ukr.net*

Astrida Miceikienė

*Vytautas Magnus University
Lithuania
astrida.miceikiene@vdu.lt*

Karina Taraniuk

*Vytautas Magnus University
Lithuania
mega_karina_t76@ukr.net*

Abstract

Objectives:

The key research objectives include: conducting a bibliometric analysis of labor migration in the context of achieving the Sustainable Development Goal («Decent Work and Economic Growth»); distributing bibliometric clusters by leading authors, keywords, scientific schools across different countries, citation metrics of scientific works, major research institutions that are the founders of labor migration studies worldwide, in order to highlight the subject and object components of labor migration research and to identify current trends in this field; developing authorial recommendations for regulating labor migration processes in order to prevent labor resource imbalances globally, taking into account both developing and developed economic systems.

Methodology:

In studying the research methodology, the following were used: the method of abstraction – in shaping the research problem; the method of bibliometric analysis using the VOSviewer software and the databases of the platforms lens.org and dimensions.ai – in collecting bibliometric information; the systemic method – in constructing the system for regulating labor migration processes; the method of generalization – in formulating the research conclusions.

Key Findings and Results:

A bibliometric analysis of labor migration in the context of achieving Sustainable Development Goal was conducted, establishing: the main authors engaged in this research topic; countries representing scientific schools; keywords necessary for building trending themes for grant applications; citation metrics of works, including journals and major scientific institutions actively engaged in labor migration research. Recommendations were developed for managing labor migration processes to balance the distribution of labor resources between developing and economically developed countries. The implications of the results lie in the development of future scientific directions for labor migration research, which include improving scientific approaches to the bibliometrics of labor migration through the use of artificial intelligence tools in research planning.

Conclusions:

The conclusions should include the necessity of conducting bibliometric analysis in order to develop modern scientific directions in the study of labor migration within the framework of achieving the Sustainable Development Goal («Decent Work and Economic Growth»).

Keywords: Bibliometrics; Labor Migration Processes; Regulation; Sustainable Development Goal

GLOBALIZATION CHALLENGES AND THEIR IMPACT ON THE COMPETITIVENESS OF UKRAINE'S AGRO-INDUSTRIAL COMPLEX

Volodymyr Orel

Livestock Farming Institute of NAAS of Ukraine

Ukraine

vova7003@gmail.com

Abstract

Objectives:

The study analyzes the impact of globalization challenges on the competitiveness of Ukraine's agro-industrial complex (AIC). It examines the consequences of armed conflict, disruptions in logistics and exports, and the broader effects of global economic and climate shocks on agricultural production. The objective is to identify strategies for adaptation, innovation, and international integration that can strengthen the resilience and competitiveness of the AIC.

Methodology:

The research is based on statistical analysis of agricultural production and export volumes during 2022–2023, with a comparative assessment of pre-war indicators. It incorporates case evidence on port blockades, the “grain initiative,” and structural damages caused by the conflict. The study also uses analytical review of literature and international reports to evaluate innovative practices, strategic management approaches, and diversification of export markets in the context of globalization.

Key Findings and Results:

The war resulted in large-scale losses for Ukraine's agricultural sector: wheat production decreased by 26%, corn by 21%, and soybeans by 32%. Approximately 25% of land was temporarily occupied or mined, while labor shortages and soil degradation further weakened output. Nevertheless, more than 33 million tons of grain were exported in 2022–2023 under the “grain initiative,” highlighting the sector's global significance. Globalization shocks raised world food prices and triggered crises in importing countries, especially in Africa and Asia. At the same time, innovations such as digitalization, precision agriculture, and international integration offer opportunities to restore competitiveness and enhance efficiency.

Conclusions:

Ukraine's AIC remains both a cornerstone of national food security and a strategic factor in global food stability. Sustainable recovery requires innovative transformation, investment in technological modernization, diversification of export markets, and alignment with the European integration course. Addressing globalization challenges demands resilience strategies that combine strategic management, international cooperation, and adaptation to climate and geopolitical risks.

Keywords: Agro-Industrial Complex (AIC); Globalization; Food Crisis; Innovation; Strategic Management; Competitiveness of Enterprises

SKILLS OF A CHANGE MANAGEMENT MANAGER IN WAR CONDITIONS

Oleksiy Zubko

National University “Zaporizhzhia Polytechnic”

Ukraine

alexzubko87@gmail.com

Petro Gudz

National University “Zaporizhzhia Polytechnic”

Ukraine

pitgudz@gmail.com

Maryna Gudz

National University “Zaporizhzhia Polytechnic”

Ukraine

gydzmarina@yahoo.com

Abstract

Objectives:

The study aims to identify the key skills of change management managers in Ukrainian enterprises operating under wartime conditions. It focuses on competencies required to ensure business continuity, adapt to systemic transformation, and address the challenges of crisis environments.

Methodology:

Semantic and structural-logical analysis methods, content analysis, and focus group discussions were used. Three target groups participated: (i) stakeholders, (ii) working students, and (iii) students with combat experience who were discharged for health reasons. This approach enabled a multifaceted evaluation of managerial skills needed in wartime.

Key Findings and Results:

The findings show that stakeholders emphasized crisis management skills, including risk minimization, relocation of logistics, financial diversification, and access to state or international assistance programs. Working students highlighted the importance of digital mobility, AI-based tools, and remote management for SMEs. Participants with combat experience emphasized human capital as a core asset, stressing communication skills, honesty, social responsibility, and civic engagement. Overall, the most in-demand skills included strategic resilience (developing alternative scenarios, risk management, crisis response), digital literacy, financial stability, and socially oriented leadership.

Conclusions:

Change management managers in wartime must combine strategic, tactical, and interpersonal skills. At the strategic level, competencies in crisis planning, risk management, and financial stability are essential. At the tactical level, communication capacity, humanity, and partnership building are critical. The study confirms that digital mobility and socially responsible leadership are decisive for sustaining enterprises in frontline conditions.

Keywords: Manager; Skills; Competencies; Change Management; Crisis Leadership

APPLYING PRACTICAL DATA ANALYSIS IN CUSTOMS TO DETECT RISKY MEDICAL SHIPMENTS: A FIELD-BASED PERSPECTIVE FROM SUDAN

Mutaz Altayeb

Al-Neelain University

Sudan

mutazaltayeb282@gmail.com

Abstract

Objectives:

This project aims to improve the detection of high-risk medical shipments within Sudan's customs operations. The study seeks to (1) identify smuggling and misdeclaration patterns in customs data, (2) strengthen real-time decision-making during inspections, and (3) protect public health by reducing unauthorized medical imports.

Methodology:

The research integrates qualitative field observations with quantitative analysis of customs datasets, including declarations and ASYCUDA system logs. Variables such as country of origin, product classification, shipping methods, and declared values were examined to detect recurring patterns. A basic analytical model was designed to assist customs officers in prioritizing inspections under resource-constrained conditions.

Key Findings and Results:

The model facilitated earlier detection of suspicious medical shipments, decreased processing times, and improved safeguards for public health. Findings demonstrated that practical data analysis can significantly enhance customs efficiency even when advanced technological infrastructure is limited. The approach also revealed the value of applying foundational computer science techniques to operational challenges.

Conclusions:

The study highlights how digital tools can transform traditional enforcement workflows and strengthen institutional capacity. It provides evidence that scalable, low-cost analytical solutions can bridge the gap between technology, regulatory enforcement, and health policy, supporting innovation and skill development in frontline customs operations.

Keywords: Data Analysis; Customs Operations; Medical Shipments; Risk Detection; ASYCUDA; Public Health; Sudan

RESKILLING FOR ECOLOGICAL TRANSITION IN FRANCE

Viktoriya Onegina

Clermont School of Business

France

viktoriya.onegina@clermont-sb.fr

Marina Bourgain

Clermont School of Business

France

marina.bourgain@clermont-sb.fr

Abstract

Objectives:

The study aims to assess the extent of French companies' involvement in ecological training for their employees in the context of the European Green Deal. It also examines whether company size influences participation in reskilling initiatives aimed at preparing the workforce for ecological transition and sustainability.

Methodology:

The research uses a quantitative approach, analyzing data from the 2022 EU survey conducted by CEREQ (Centre d'études et de recherches sur les qualifications) on 12,699 representative French companies of different sizes. Data were processed using MS Excel and SPSS, with a focus on three areas of ecological training: awareness of ecological challenges, understanding of environmental regulations and products, and adaptation of technical production processes.

Key Findings and Results:

The analysis revealed that:

4.5% of companies (7.2% of training companies) provided reskilling on ecological awareness.

5.7% (9.2%) offered training on environmental regulations, standards, and products.

6.1% (9.9%) focused on technical adaptation of production.

In all categories, larger companies (over 250 employees) showed significantly higher involvement in ecological training compared to micro, small, and medium enterprises.

Conclusions:

The overall percentage of companies providing ecological training in France remained relatively low in 2021. To meet the goals of the European Green Deal, broader reskilling efforts are necessary, particularly among SMEs. Increased commitment to ecological training will be essential for ensuring sustainable business practices, workforce readiness, and national competitiveness in the ecological transition.

Keywords: Green Transformation; Reskilling; Training; Sustainability; France

FUTURE SKILLS FOR INNOVATION MANAGERS AND ENTREPRENEURS: INSIGHTS FROM ART-DRIVEN INNOVATION AND THE STEAM APPROACH

Daria Podmetina

Taltech University

Estonia

daria.podmetina@taltech.ee

Anne Berthinier-Poncet

CNAM University

France

Iulduz Khairullina

LUT University

Finland

Aistė Vaišnorė

KTU

Lithuania

Monika Petraite

KTU

Lithuania

Yvonne Kirkels

Fontys University of Applied Sciences

Netherlands

Objectives:

The study aims to identify and conceptualize the future skills required for innovation managers and entrepreneurs in the context of digital transformation, sustainability challenges, and societal uncertainties. A central objective is to investigate how integrating the arts into the STEAM (Science, Technology, Engineering, Arts, and Mathematics) framework contributes to competence development and prepares innovators for navigating complexity.

Methodology:

The research employed a two-stage approach. First, a systematic literature review was conducted to identify art-driven and unconventional skills as well as soft managerial capabilities increasingly critical to innovation. Second, an international survey of 129 respondents from 18 countries (mainly in Europe) was carried out. Factor analysis was applied to test and refine the competence model, validating the significance of the identified skills.

Key Findings and Results:

The study developed an Art-Driven Competence Model for Innovation, comprising eight skill sets grouped into three overarching competencies:

1. Innovative problem-solving – creative thinking, adaptability, and complex decision-making.
2. Emotional and innovative cognition – emotional intelligence, reflective thinking, and curiosity.
3. Inter- and intrapersonal competencies – collaboration, intercultural communication, and resilience.

These competencies highlight the central role of creativity, emotional intelligence, and reflective capacities - dimensions often overlooked in traditional managerial and entrepreneurial training.

Conclusions:

The findings confirm that art-driven approaches significantly enrich competence models for innovation professionals. The proposed framework provides both empirical evidence and practical tools for educators and organizations, supporting more creative, responsible, and impactful innovation practices. By embracing art-driven competencies within STEAM education, innovation managers and entrepreneurs can more effectively address the intertwined challenges of digitalization and sustainability.

Keywords: Innovation Management; Future Skills; STEAM Education; Art-Driven Innovation; Competence Development; Creativity; Emotional Intelligence

Section 6. Future Skills for Innovation and Entrepreneurship Ecosystems

DIGITAL COMMUNICATIONS AS A DRIVER FOR ENTREPRENEURSHIP ACTIVATION IN INNOVATION CLUSTERS

Anna Orel

*Kyiv National University of Technologies and Design
Ukraine
anna.orel1904@gmail.com*

Serhii Rabchuk

*Kyiv National University of Technologies and Design
Ukraine
anna.orel1904@gmail.com*

Abstract

Objectives:

The study aims to examine how digital communications act as catalysts for entrepreneurship activation within innovation clusters. It seeks to develop a conceptual framework integrating digital communication channels with adaptive motivational strategies to stimulate entrepreneurial initiatives and strengthen cluster competitiveness.

Methodology:

A mixed-method approach was applied, combining a systematic literature review with qualitative case analyses of selected European and Ukrainian innovation clusters. Semi-structured interviews were conducted with cluster coordinators, entrepreneurs, and digital communication experts to assess the impact of collaborative platforms, social media, cloud technologies, and AI-driven systems on entrepreneurial behavior and motivation.

Key Findings and Results:

The research reveals a strong correlation between the intensity of digital communication and the level of entrepreneurial engagement in clusters. Digital platforms enhance information transparency, peer learning, networking, and access to market intelligence - factors crucial for motivation and business activity. The study also found that personalized communication strategies and adaptive feedback mechanisms increase participants' trust, sense of belonging, and proactivity, thereby strengthening innovation and collaboration within the cluster.

Conclusions:

Digital communications are shown to be strategic enablers of entrepreneurship in innovation clusters. Integrating adaptive motivational models with advanced communication technologies can substantially improve innovation potential and regional competitiveness. The study provides practical insights for policymakers, regional development agencies, and cluster managers in designing digitally empowered entrepreneurial ecosystems. It also highlights the need for future empirical research to validate the framework and explore cross-cultural variations in digital communication strategies.

Keywords: Digital Communications; Innovation Clusters; Entrepreneurial Activity; Communication Strategies; Motivation; Digital Transformation

POTENTIAL LINES OF INNOVATIVE CHANGES IN EXPORT-IMPORT ACTIVITIES OF ENTERPRISES IN CONDITIONS OF MARTIAL STATE

Nataliya Vnukova

Simon Kuznets Kharkiv National University of Economics

Ukraine

vnn@hneu.net

Abstract

Objectives:

Foreign economic export-import activity determines the need to search for innovative mechanisms of influence on this process. During martial law, it is necessary to balance the country's income and expenses. The complexity of ensuring the economic stability of enterprises under martial law is associated with the need to maintain the state's competitiveness in the world market while achieving the maximization of budget revenues under conditions of limited opportunities for the development of entrepreneurship.

Methodology:

Based on the provisions of the Concept of Transformation of Innovative Development of Export-Import Activities of Business Entities in War and Post-War Conditions (developed at the Semen Kuznets KhNEU), it is proposed to consider innovative lines of identification, analysis and influence on the development of this activity and ensuring the economic stability of enterprises. Based on the application of a risk-oriented approach, potential lines of innovative changes in export-import activities are proposed.

Key Findings and Results:

To accelerate innovative transformations, in particular, in the defense sector, to include in global value chains, the innovative line is the construction of structured models for calculating costs and revenues from export-import activities, the transition from discrete to regular export processes, which will affect sustainability through the optimization of economic strategies and the search for new sales markets and their diversification. Additionally, participation in projects of the Innovation Development Fund in the context of accelerating European integration. Priority lines may be the lines of learning through export, digitalization of this activity, an increase in innovatively active enterprises, the transition in international trade from off-shoring to friend-shoring (good-neighborly investments), which will affect sustainability through modern IT technologies. In Ukraine, an analytical basis for innovative instruments for insurance of military risks is actively being created, additional risk reduction instruments are being searched for to secure the challenges of martial law, in particular, the formation of guarantee instruments with the involvement of insurance companies to eliminate problems with customs payments in export-import activities.

Conclusions. Potential lines of innovative changes in export-import activity to ensure the economic stability of enterprises under martial law allowed the process of rapid growth of export volumes to begin in 2024, despite certain fluctuations during the year, which will contribute to the growth of the export-import coverage ratio from 2025. The transformation of the export structure into an industrial group compared to an agricultural one will reduce its vulnerability to risks.

Keywords: Export-Import Activities; Innovations; Insurance; Martial Law

CYSTEAMINE SOLUTIONS: A SAFER AND MORE ADVANCED EDUCATIONAL TECHNIQUE FOR COSMETOLOGICAL TREATMENTS

Karina Sergejeva

Turība University

Latvia

[*k.ivanchenko@inbox.lv*](mailto:k.ivanchenko@inbox.lv)

Objectives:

The study investigates the application of cysteamine-based solutions as a safer and more advanced alternative to conventional thioglycolic acid (TGA) and ethanolamine (ETA) acid formulations in eyelash lifting and chemical treatments. The objective is to assess efficiency, safety, structural reliability, and educational implications of using cysteamine solutions while reducing risks of irritation, allergic reactions, and hair damage.

Methodology:

A controlled experimental approach was applied, involving two subject groups undergoing standard eyelash lifting procedures: one treated with cysteamine-based solutions and the other with traditional TGA-based formulations. Parameters evaluated included microscopic hair structure, pH levels, treatment duration, user comfort, and incidence of adverse reactions. Qualitative observations were collected during a six-week follow-up period.

Key Findings and Results:

Cysteamine solutions produced equal or superior curling and lifting effects compared to TGA formulations. The cysteamine group reported fewer allergic or irritation cases, while microscopic analysis revealed reduced cuticle and structural damage. Furthermore, cysteamine maintained a pH level closer to physiological conditions, enhancing both safety and user comfort.

Conclusions:

Cysteamine-based products demonstrate strong potential as a next-generation alternative in cosmetological treatments. Their gentler biochemical interaction with hair fibers minimizes irritation and structural harm while ensuring effective results. These findings highlight cysteamine's promise for safer, more reliable beauty practices, with significant implications for both professional education and future formulation development.

Keywords: Cysteamine Solutions; Cosmetology; Safe Treatments; Hair Structure; Future Formulation

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Tallinn 13611, Estonia
info.teadmus@gmail.com
<https://teadmus.org>

