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THE ROLE OF EDTECH IN SHAPING ECONOMIC SECURITY BASED ON EUROPEAN VALUES

In academic research, economic security is traditionally examined through a multidimensional approach that integrates state, corporate, and human dimensions. At the macro level, it is interpreted as the state’s ability to ensure sustainable socio-economic development, protect national interests, and maintain the economy’s adaptability to internal and external threats. Within the corporate approach, the emphasis is placed on the financial stability of enterprises, the protection of resources, competitiveness, and effective risk management. At the same time, the human dimension of economic security - which becomes particularly significant in the context of the knowledge economy - is associated with the development of human capital, the provision of employment, professional mobility, and the capacity for lifelong learning.

In the context of the knowledge economy, EdTech is primarily viewed as a tool for scaling the processes of knowledge creation, dissemination, and renewal. Educational technologies help reduce barriers to access to education, foster the development of new competencies, and enhance the quality of human capital, which directly affects long-term economic resilience. At the same time, within this approach, EdTech is predominantly interpreted as an auxiliary factor of economic growth, without its explicit inclusion in the security discourse.

From the perspective of the digital economy, EdTech emerges as a component of digital infrastructure that facilitates the transformation of the labor market, the emergence of new forms of employment, and increased flexibility of economic processes. Digital learning platforms, data analytics, and personalized learning pathways are viewed as means of enhancing the economy’s adaptability to technological change. At the same time, the dominance of a technological approach

leads to a focus on innovation and efficiency, leaving issues of value orientations, trust, and long-term security implications outside the analytical spotlight.

Within security studies, education is traditionally perceived as an element of "soft security" that indirectly contributes to social stability and risk reduction. However, in this context, EdTech is rarely analyzed as an independent object of research and is more often considered merely as an instrument for implementing educational policy, which limits the possibilities for a comprehensive assessment of its role in shaping the resilience of economic and social systems.

The limitations of traditional approaches lie in the perception of EdTech exclusively as an auxiliary tool for educational modernization rather than as an element of the institutional and infrastructural foundations of economic security. In the absence of a systemic value-based and security framework, the implementation of educational technologies may not only fail to reduce risks but may also generate new challenges related to digital inequality, the fragmentation of learning trajectories, and a decline in trust.

Thus, the existing gap between established approaches to the interpretation of economic security and the actual role of EdTech highlights the need to reconceptualize educational technologies as a component of its infrastructure, integrated with economic, digital, and value-based factors.

The formation of economic security in the context of European integration is increasingly based not only on financial and economic instruments but also on shared values that perform stabilizing and institutional functions. In European Union policy documents, education is regarded as a strategic factor in ensuring social cohesion, competitiveness, and economic resilience. In particular, the European Pillar of Social Rights [1] enshrines the right to quality and inclusive lifelong education, while the European Education Area and the Digital Education Action Plan (2021–2027) [2] define digital education as a key instrument for adaptation to structural changes and crisis challenges. At the same time, the Council Recommendation on Micro-credentials for Lifelong Learning and Employability [3] establishes an approach to the recognition of learning outcomes as an element of mobility and economic resilience.

In this context, EdTech acts as a channel for translating European values into practical implementation, in particular by ensuring equal access to education, fostering digital trust, supporting learning mobility, and upholding the principles of academic integrity. Digital learning platforms and micro-credentials create conditions for engaging broad segments of the population in human capital development processes, thereby reducing the risks of social marginalization and skills shortages.

Value-oriented EdTech development exerts a comprehensive impact on economic security by enhancing workforce adaptability, reducing socio-economic imbalances, and creating the prerequisites for long-term economic resilience. At the same time, neglecting the value dimension in the implementation of educational technologies may lead to the intensification of digital inequality and a decline in trust in educational and certification mechanisms.

At the level of national practices, European experience demonstrates the successful integration of EdTech into education systems and economic security governance. For example, Estonia has implemented the full digitalization of educational processes, which is organically integrated with e-government. This ensures transparency in educational and administrative procedures, reduces transaction costs, and strengthens the state's institutional resilience, thereby creating a solid foundation for economic security. In Finland, digital learning platforms are actively used for reskilling and upskilling, in particular through modular programs and personalized learning pathways. Special attention is paid to the development of critical thinking and interdisciplinary competencies, which enhances workforce adaptability and facilitates rapid responses to structural and technological changes in the economy.

In Ukraine, positive practices in the application of EdTech are also observed, contributing to the strengthening of economic security and the integration of European values. In particular, state digital education platforms have been established, providing school pupils, students, and teachers with access to online courses, learning materials, and assessments. This makes it possible to maintain the continuity of the educational process even under crisis conditions and enhances the education system's preparedness for emergencies. Online platforms for upskilling and reskilling are also widely used,

such as Prometheus, EdEra, and local representations of Coursera, which offer opportunities to acquire up-to-date competencies in digital technologies, management, and entrepreneurship. This contributes to workforce adaptability and reduces the risks of structural unemployment. Some universities are introducing digital certification systems and online modules for monitoring academic integrity, which increases the transparency of assessment, strengthens trust in educational outcomes, and reduces the risks of qualification falsification in the labor market.

Alongside positive practices, Ukraine continues to face certain challenges related to uneven access to digital resources across regions and limited infrastructure in rural areas. In addition, there is a need for a more systematic integration of educational technologies with state economic security strategies, as well as for the alignment of certification standards and micro-credentials with international requirements. These factors partially constrain the potential of EdTech to foster full workforce adaptability and institutional resilience at the national level.

Under current conditions of systemic risk, EdTech functions as a mechanism for building the adaptability of economic systems. Its impact is realized through the development of security-related competencies, the advancement of human capital under conditions of uncertainty, the capacity of education systems to respond rapidly to economic threats, and the support of resilience in enterprises and public institutions. In general terms, these mechanisms can be presented as an interconnected chain:

Digital educational tools → Relevant competencies → Human capital adaptability → Organizational resilience → Reduction of systemic economic risks

The study allowed for the systematization of EdTech's security effects at both macro and meso levels and substantiated its role as a component of economic security infrastructure integrated with European values and institutional mechanisms. At the macro level, EdTech strengthens state institutional capacity, supports the effective reproduction of human capital, and helps reduce socio-economic imbalances, while at the meso level, it enhances organizational resilience through competency development, knowledge management, and preparedness for crises and transformational challenges.

The findings demonstrate that systemic EdTech implementation can form a holistic economic security ecosystem by integrating digital solutions with risk management, fostering transparency, trust, social inclusion, and workforce mobility. They also highlight directions for further research, including evaluating EdTech's effectiveness across sectors, exploring its integration with state and corporate risk strategies, and examining the influence of value-based foundations on long-term economic resilience, as well as potential risks arising from insufficient adherence to principles of inclusion, academic integrity, and digital trust. Overall, the results provide a foundation for developing methodological and practical approaches to embedding EdTech within economic security systems, supporting policy design that ensures resilient and adaptive economic structures.

References

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