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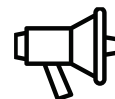


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INSTITUTIONAL AND ECONOMIC MECHANISMS FOR DEVELOPING KNOWLEDGE AND COMPETENCIES IN REGIONAL HUMAN CAPITAL DEVELOPMENT.

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Abstract. This article examines the role of institutional and economic mechanisms in the development of knowledge and competencies within regional human capital systems. It analyzes how governance structures, financing models, and innovation-driven policies contribute to improving the quality and relevance of education and training. Special attention is given to the diversification of funding sources, public–private partnerships, and the integration of digital technologies in education. The study also explores the impact of these mechanisms on labor market outcomes, productivity, and regional competitiveness. The findings suggest that effective institutional frameworks combined with sustainable economic instruments significantly enhance the formation of human capital and strengthen long-term regional development.

Keywords: human capital, knowledge development, competencies, institutional mechanisms, economic mechanisms, regional development, education system, innovation, labor market, competitiveness

INTRODUCTION

In the context of globalization and rapid technological change, the development of human capital has become a key determinant of sustainable economic growth and regional competitiveness. Regions increasingly rely on the quality of their workforce, particularly the level of knowledge and competencies, to adapt to evolving economic conditions. In this regard, education systems and training institutions play a critical role in shaping human capital. The formation of knowledge and competencies is not only a pedagogical issue but also an institutional and economic one. Effective governance structures, regulatory frameworks, and financing mechanisms are essential for ensuring that education systems respond to labor market demands and technological advancements. Moreover, the integration of innovation, digitalization, and new learning models has transformed traditional approaches to human capital development. Despite significant progress in educational reforms, many regions still face challenges related to inefficient resource allocation, limited access to quality education, and weak linkages between education and employment. Therefore, there is a growing need to analyze and improve institutional and economic mechanisms that support the development of knowledge and competencies. The purpose of this study is to investigate these mechanisms and propose recommendations for enhancing regional human capital development.

LITERATURE REVIEW

The concept of human capital has been extensively studied in economic theory. Gary Becker emphasized the importance of education and training as investments that increase productivity and earnings [1]. His work laid the foundation for understanding the economic value of knowledge and competencies. Innovation-driven development has also been highlighted by Joseph Schumpeter, who argued that innovation is a key driver of economic progress and competitiveness [2]. In the context of education, this perspective underscores the importance of integrating new technologies and teaching methods. Recent studies by the OECD indicate that education systems must focus on developing competencies such as critical thinking, problem-solving, and digital literacy to meet modern labor market demands [3]. Similarly, the World Bank highlights the role of institutional quality and financing mechanisms in improving learning outcomes and human capital formation [4]. Furthermore, contemporary research emphasizes the importance of regional approaches to human capital development, where local institutional frameworks and economic conditions shape education outcomes [5].

These studies suggest that a combination of institutional reforms and economic incentives is essential for effective knowledge and competency formation.

RESEARCH METHODOLOGY

This study employs a mixed-method approach combining qualitative and quantitative analysis. The research is based on the following methods:

Comparative analysis of regional education systems and institutional frameworks;

Statistical analysis of indicators related to human capital, education quality, and labor market outcomes;

Econometric modeling to assess the relationship between institutional mechanisms and competency development;

Expert evaluation to identify key challenges and opportunities in regional human capital development.

Data sources include international reports, national statistics, and academic publications. The methodological framework allows for a comprehensive assessment of how institutional and economic mechanisms influence the formation of knowledge and competencies.

ANALYSIS AND RESULTS

Market transformations in the national economy have affected all spheres of social life. The reforms, in particular, have had a significant impact on the country's education system. A key condition for increasing the country's political and economic role in the global economy, as well as improving the welfare of its population, is ensuring economic growth and competitiveness. In today's globalizing world, the ability to quickly adapt to international competitive conditions is becoming one of the most important factors for sustainable and successful development. At the same time, the main competitive advantage of any country is closely linked to its ability to develop human potential, which largely depends on the state of the education system. The source of sustainable economic growth in the medium and long term lies precisely in this sphere. The use of effective mechanisms in educational activity not only ensures the country's competitiveness at the global level but also enables it to achieve leading positions in key sectors of the economy, including textile production, energy, and construction. This is impossible without a strong education system, which serves as the main source of human resources necessary for the development of labor-intensive, energy-intensive, and knowledge-intensive industries in the national economy. Alongside the formation of a lifelong education system, it is essential to focus on creating appropriate structures that encourage self-development and the realization of individuals' scientific and innovative potential at all stages of education. This will ensure the sustainable reproduction of highly qualified personnel within the scientific, educational, and innovation environment. Achieving this goal requires sufficient resources, effective methods and tools for solving existing problems, and continuous monitoring of the quality and outcomes of education and scientific activities. To accomplish this, it is necessary to introduce new organizational and economic mechanisms in the education and science system that ensure efficient use of available resources and attract additional funding. Furthermore, improving the quality of education through the modernization of its structure, content, and teaching technologies, attracting highly qualified specialists to the education sector, and enhancing its innovation potential and investment attractiveness are of critical importance (Table 1).

Table 1. Key Challenges and Mechanisms for Developing the Education System and Ensuring Economic Security¹

Key Issues in the Education System	Description	Proposed Institutional and Economic Mechanisms	Expected Outcomes
Insufficient funding	Limited financial resources for educational institutions	Diversification of funding sources, public-private partnerships	Improved financial sustainability
Decline in teaching profession prestige	Low wages and social status of teachers	Incentive systems, salary reforms, professional development programs	Increased attractiveness of teaching profession
Brain drain from education sector	Qualified personnel moving to other sectors	Retention policies, career growth opportunities	Stabilization of human resources

¹ Author's development

Weak link between education and labor market	Mismatch of skills and labor market needs	Curriculum modernization, industry collaboration	Better employment outcomes
Low level of innovation in education	Limited use of modern technologies	Digitalization, внедрение AI and e-learning systems	Enhanced education quality
Inefficient resource utilization	Poor management of available resources	Institutional reforms, performance-based funding	Increased efficiency
Limited access to quality education	Regional disparities in education access	Development of lifelong learning systems, inclusive policies	Equal educational opportunities

To achieve the strategic goal of reforming the education system, it is necessary to address a set of complex strategic objectives aimed at implementing the priority directions of national education system development. The achievement of these strategic objectives is ensured through the implementation of program-based measures aligned with the priority areas of education system development. In particular:

- improving the content and technologies of education service delivery;
- enhancing the quality of education services;
- increasing the efficiency of management within the education system;
- developing mechanisms to ensure the economic security of education service provision in the market;
- improving economic mechanisms in the education sector, among others (Figure 1).

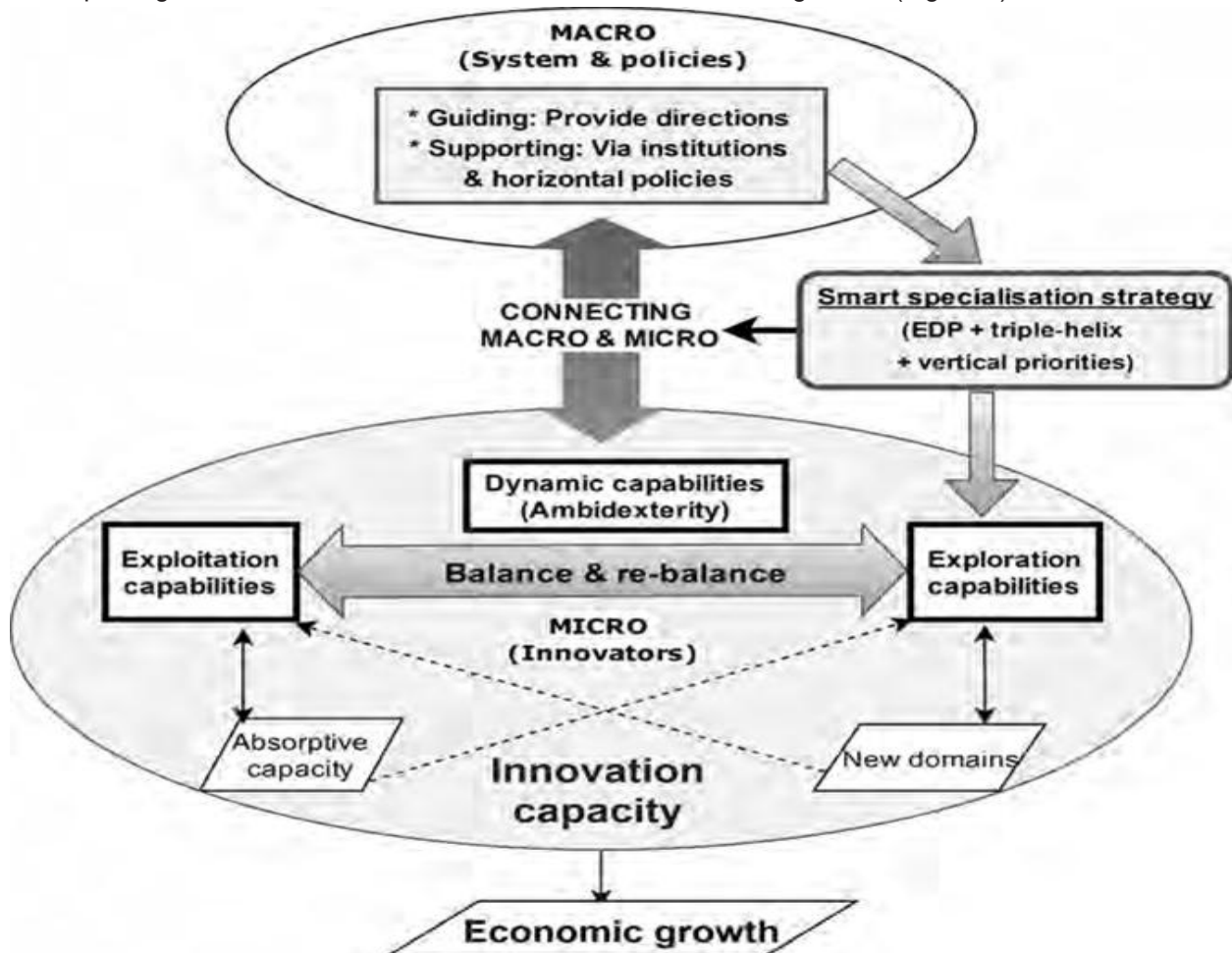


Figure 1. Mechanisms of Knowledge and Competency Development in Human Capital²

2 Author's development

Additional sources of funding for public educational institutions may also be applied to non-state, including private, educational institutions. The procedure and conditions for the use of funds obtained by non-state, including private, educational institutions from sources not prohibited by the legislation of the Republic are determined in accordance with the charter and other founding documents of the respective institution. State authorities or local government bodies may provide financial support to non-state educational institutions that have passed state accreditation, within the framework of covering the costs associated with the training of students.

CONCLUSION AND RECOMMENDATIONS

In conclusion, the development of institutional and economic mechanisms for forming knowledge and competencies plays a decisive role in strengthening regional human capital. The study confirms that an effective education system, supported by sustainable financing, modern governance, and innovation-driven approaches, significantly contributes to economic growth and competitiveness. The analysis demonstrates that improving the quality of education services, enhancing management efficiency, and introducing diversified funding mechanisms are essential for ensuring the economic security of the education sector. Moreover, the integration of digital technologies and the development of lifelong learning systems create favorable conditions for continuous human capital formation and adaptation to changing labor market demands. At the same time, existing challenges such as insufficient funding, disparities in access to quality education, and weak coordination between education and industry highlight the need for comprehensive reforms. Addressing these issues requires the implementation of new institutional frameworks, increased investment in education, and the promotion of public-private partnerships. Therefore, strengthening institutional capacity, improving economic mechanisms, and fostering innovation in the education sector are key priorities for achieving sustainable regional development. These measures will not only enhance the quality of human capital but also ensure long-term economic security and global competitiveness.

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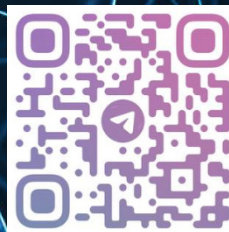
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