таланту, що володіють потенціалом створення робочих місць і добробуту за допомогою виробництва й експлуатації інтелектуальної власності. Виділено низку позитивних впливів від розвитку креативних індустрій (економічних, соціальних, культурних, інноваційних), які дають змогу гнучко вбудовуватися в нову економічну реальність і сприяють реалізації механізмів генерації креативного потенціалу міст і регіонів. Розвиток креативних індустрій забезпечує виявлення творчого, інтелектуального та інноваційного потенціалів, адаптуючись до глибоких та динамічних змін у сучасному суспільстві.

Ключові слова: креативні індустрії, інтелект, творчість, інновації, регіональна економіка, цифрова економіка.

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EVALUATION OF THE INNOVATION-INVESTMENT FACTOR FOR AUGMENTING THE COMPETITIVENESS OF CONSTRUCTION ENTERPRISES

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Abstract. This article delves into the multifaceted realm of innovation and investment processes, shedding light on their intrinsic nature, economic ramifications, and pivotal roles in fostering resource efficiency. The study meticulously examines investment policies, delving into the imperative factors that drive investments in innovations, thereby necessitating the enhancement of management systems. The crux of the narrative emphasizes the profound significance of integrating innovations and investments to optimize resource utilization effectively. The exploration begins by scrutinizing the economic landscape during the initial years of the Republic of Azerbaijan's independence. It dissects the strategic steps taken to reconstruct the economy, highlighting the pivotal role played by state investment programmes. Special attention is devoted to the nuanced analysis of investments in the construction industry. This scrutiny extends to the impact of the landmark "Agreement of the Century" and the strategic development of the construction sector of Azerbaijan. Utilizing data from 1995 to 2021, the research analyzes the growth trends of fixed assets and investments in fixed capital in the construction sector. Despite a setback in 2020 due to the COVID-19 pandemic, the sector demonstrated resilience, rebounding in 2021. The findings reveal a substantial increase in both fixed assets and investments over the studied period, underscoring the sector's pivotal role in the country's economic development. The research recommends a dual-perspective consideration of innovation and investment activities - both as internal management processes and as fields for capital application for potential investors. The importance of effective dynamic management of investment needs and resources is emphasized, especially in the early stages of innovative projects. The study also explores the correlation between the share of construction in investments in fixed capital and the degree of economic openness in Azerbaijan. The article suggests the necessity of adapting the management structure of construction enterprises to innovation and investment activities, involving the creation of specialized units within construction enterprises. This extended exploration underscores the intricate relationship between innovation, investment, and economic dynamics, portraying them as

symbiotic elements crucial for the sustainable growth of construction enterprises. The research contributes valuable insights into the economic dynamics of Azerbaijan's construction sector, offering recommendations for policymakers and industry stakeholders to foster sustained growth and competitiveness.

Key words: investments, innovations, competitiveness, efficiency, innovative management, fixed assets, economic development, management system, construction enterprises.

Statement of a problem. In the current stage of Azerbaijan's economic development, effective management of innovation and investment issues holds significant importance for optimizing the utilization of existing structural units within various sectors of economic activity [1; 2; 5]. The innovation-investment process encompasses activities aimed at ensuring the quality of produced goods and living conditions in line with contemporary requirements. The societal significance of the effectiveness of all types of innovations is broad, given their inherent nature. Creating investment attractiveness for investors by construction company managers is a factor influencing the escalation of the enterprise's innovative and investment activities.

While the country's existing natural resources create a competitive environment, the active utilization of these resources leads to their rapid depletion. Consequently, society's potential in irreversible natural resources diminishes due to the constantly growing dynamics of consumption, with a continuous demand for scientific advancement. In economically developed countries relying on innovative technologies, this process evolves more rapidly. Science now exerts increasing efforts towards the development of innovative technologies across all spheres of global industrial and economic activities.

In the modern development stage of the advanced countries, innovations are regarded as a pivotal factor for the development of construction organizations more than ever before. The implementation of innovations in the conditions of a market economy has a substantial impact on enhancing competitiveness in the global economic system. This further intensifies entrepreneurs' desire to achieve competitive advantages by employing innovative technologies, the products derived from these technologies, and the organization of production.

The primary factor in increasing the efficiency of a construction company in a market economy is the augmentation of profits, revenues from works and services, and profitability. With the positive impact of innovation implementation on cost reduction, the competitiveness of the construction business rises, leading to increased volumes of product sales, profit, and business profitability. This, in turn, expands the boundaries of market activity, ultimately creating conditions for the enterprise's value growth.

Innovations constitute one of the fundamental factors for enhancing the efficiency of construction and the development of economic systems. Enterprises striving to maintain their market positions consistently utilize various resources, including innovations. The innovation-investment process facilitates the improvement of production based on enhancing the quality of utilized resources, measured by the indicator of resource profitability.

Analysis of recent researches and publications. In enterprise management, the foremost objective is to optimize the composition of construction products, production volumes, quality, and the synergy of all resources. Research indicates that the beneficial outcomes of technological innovations hold particular significance when introducing new construction technologies or refining existing ones. This results in a reduction of specific costs for essential resources and an increase in the resource profitability of the enterprise. Consequently, production costs decrease, and profits increase when other factors remain constant. The innovative and investment activities of a construction company in product improvement manifest in the enhancement of construction quality and the increase in the volume of ongoing projects. Recent innovative processes aim to improve the quality of construction products, allowing for an increase in the prices of construction organizations' work and services, thereby boosting sales revenue [4].

Furthermore, the most qualitatively executed construction projects contribute to the organization's profit by expanding sales volumes, ultimately leading to increased orders for the construction company. Research indicates that innovative and investment processes reduce raw material processing times and improve labor efficiency, thereby shortening production periods and increasing production efficiency. Technological innovation processes are accompanied by the improvement of manufacturing equipment quality and a reduction in production space, leading to a decrease in capital expenditure and an increase in production profitability.

Comprehensive improvements in construction production are incomplete without innovative and investment processes in organization of construction enterprise management. Organizational innovations encompass improvements that optimize flow processes in production logistics, promoting the development of the construction company and enhancing competitiveness [5]. The motivation for innovation development and implementation in construction expresses the desire of private organizations to maintain a sustainable advantage over competitors or, at the very least, to remain at a similar developmental level. Considering governmental, municipal, and societal organizations, their motivation for innovation implementation naturally revolves around satisfying societal needs within the normalization of budgetary resources. This desire varies, primarily driven by a purposeful search, creation, and implementation of innovative development paths to gain significant benefits in the long run. The secondary motivation involves changing existing market conditions in response to external influences [2; 5].

Innovation and investment activities, along with the investment process itself, are considered from two perspectives. On the one hand, innovation and investment activities are viewed as a process requiring internal management within the company, including risk management and the allocation of specialized infrastructure and resources. On the other hand, the enterprise's innovation and investment activities constitute a field of capital application for investors, who may become the company itself. The management system of innovation and investment activities involves two different control movements over the object. One is the direct management impact on the object, managing each phase of innovation and investment activities. Resources necessary for the "input" - i.e., innovation and investment activities – are allocated for the development and management of these activities. The innovation and investment activity is characterized by an investment stage requiring significant financial investments in the early stages of the process. Projects only reach the breakeven point after a substantial increase in sales of the innovatively produced goods. Therefore, effective dynamic management of investment needs and resources is a primary task for managing the efficiency of innovation and investment activities [4, 5].

Enhancing the management system of innovation and investment processes in construction enterprises and organizations at the regional level involves elevating the adaptability level of enterprises to a dynamically evolving global competitive environment. This implies that the process of improving the management system in the construction industry is based on adapting the management structure to the implementation of innovation and investment activities. This is reflected in the formation and regulation of innovation and investment potential through the creation of a separate structure. One of the fundamental conditions in the organizational structure of the enterprise is the placement of an element in the financial management block, in the form of an innovation management unit and a specialized unit responsible for investing funds allocated for innovation processes. A crucial issue for refining the specifics of all elements involved in implementing innovation and investment processes is regulating the tasks of functional subsystems for implementing innovation processes within the development of the innovation and investment process management system.

In conclusion, employing the market adaptation principle in construction enterprises, it is noteworthy that the impact of the management system on innovation and investment processes should be viewed as the result of regulating the implementation of these processes. The system involves the management of various methods used in managing other processes executed as part of the construction company's activities.

The formulation of the article objectives. The primary aim of this article is to assess the impact of innovation and investment processes on construction enterprises, specifically focusing on their role in enhancing competitiveness. The study delves into the management systems of innovation and investment activities within construction enterprises, examining their influence on production efficiency, cost reduction, and overall profitability. The research aims to provide insights into the adaptation of construction enterprises to a dynamic global competitive environment through improved management of innovation and investment processes.

Statement of the main material in the research. The Republic of Azerbaijan, which experienced an economic downturn in the early years of independence, played a pivotal role in the reconstruction and development of the country during the transitional economy period, with the implementation of the "Agreement of the Century" [1]. This

agreement, developed and approved on September 20, 1994, under the leadership of the national leader Heydar Aliyev, held special significance for the country's economic revitalization.

Starting from 1995, a series of measures were initiated within the framework of state programmes and development strategies aimed at the reconstruction and development of the construction sector, mirroring efforts across various sectors of the economy. From that point forward, investments in fixed capital and the growth rates of the value of commissioned fixed assets witnessed an upward trend in the construction sector as part of the aforementioned deal. The diagram resulting from research conducted in this field is presented below (Fig. 1).

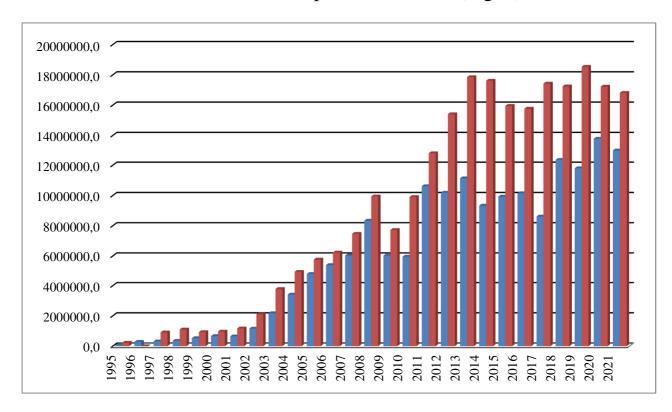


Fig. 1. Cost of fixed assets and investments in fixed capital introduced in construction in the Republic of Azerbaijan from 1995 to 2021, in thousands manats.

- Value of commissioned fixed assets, in thousands manats.
- Investments in fixed capital, in thousands manats.

 Compiled by the author based on the source data from [6]

As evident from the graph, the cost of fixed assets commissioned into operation in the Republic of Azerbaijan from 1995 to 2021, in line with investments in fixed capital, exhibited a growing trend from 1995 to

2008. In 2009, the volume of investments in fixed capital decreased by 22.3 % compared to 2008, amounting to 7,724,944.8 thousand Azerbaijani manats. The cost of the provided fixed assets in operation decreased by 27.7 %, totaling 6,032,292.8 thousand manats. Although this reduction continued into 2010, the volume of investments in fixed capital increased in 2010 by 1.3 times compared to 2009, reaching 9,905,666 thousand manats. In 2019, investments in fixed capital increased, totaling 18,539,476.5 thousand manats, while the cost of fixed assets reached 11,803,178.7 thousand manats, marking the highest value over the entire studied period.

Over this period, the cost of commissioned fixed assets into operation increased by 156 times compared to 1995, and investments in fixed capital increased by 81.3 times. Due to the COVID-19 pandemic in 2020, this indicator decreased, but in 2021, there was a growth compared to the previous year. The cost of fixed assets commissioned into operation in the Republic of Azerbaijan from 1995 to 2021 amounted to 167.1 billion manats, and the sum of investments in fixed capital reached 245.84 billion manats. The share of state ownership in the cost of fixed assets commissioned into operation in the Republic of Azerbaijan from 1995 to 2021 was 47.5 %, and for investments in fixed capital, it was 40.9 %. Overall, in the Republic of Azerbaijan, the proportion of construction works in investments in fixed capital for basic construction from 1995 to 2021 was higher compared to other industries. This is described more clearly in the following graph (Fig. 2).

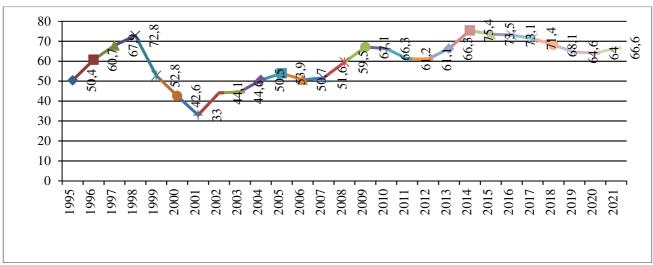


Fig. 2. Share of Construction and Installation Works in the Composition of Investments in Fixed Capital for Construction in the Republic of Azerbaijan for 1995-2021, %

Compiled by the author based on the source data from [6].

As evident from the chart, the share of construction and installation works in the composition of investments in fixed capital in the Republic of Azerbaijan fluctuated within the range of 33% to 72.8% between 1995 and 2021.

The implementation of activities outlined in the State Programme for the Development of the Fuel and Energy Complex of the Republic of Azerbaijan for 2005-2015 in the oil sector became a pivotal factor in the development of other sectors of the economy, laying the foundation for Azerbaijan's economic growth. Recent socio-economic events in the global economy, tensions observed in certain countries, instability in oil prices, and a decrease in demand on global markets for these natural resources, including challenges induced by the COVID-19 pandemic, have significantly influenced the level of economic development and international relations. The development level of balanced foreign economic relations under conditions of uncertainty is heavily dependent not only on the oil factor but also on the development of the construction sector.

The degree of economic openness fundamentally impacts all spheres of economic activity. It is well-established that countries striving for full external trade face challenges due to their dependency on foreign economic activities, import-export operations to expand business connections, efficiently utilize available natural resources, satisfy material and moral demands of the population, and foster a competitive economic environment, thereby influencing the global economic system.

Balanced foreign economic activity plays a crucial role in the development of all sectors of the economy [4]. An examination of the development of foreign economic relations in the Republic of Azerbaijan reveals that the country's favorable geographical position between Asian and European nations played a crucial role in integrating Azerbaijan into the global economy in the post-Soviet era.

It is noteworthy that since the return of Great Leader Heydar Aliyev to political power in 1993 and subsequent stages in the restructuring of our economy, along with the implementation of reformist and developmental programmes led by President of the Republic of Azerbaijan Ilham Aliyev, such as "Azerbaijan 2030: National Priorities for Socio-Economic Development", our country's effective integration into the global economic system has been the cornerstone. Simultaneously, starting from 1995, the implementation of an effective economic policy, the signing of strategically

important agreements, and our country's membership in various international organizations accelerated the foreign economic activity of the country, ensuring a resilient and sustainable economy that led to increased investment inflows into the country. The growth of overall investments influenced the development of all sectors of the economy, creating conditions for an increased share of investments in the construction sector.

As the share of foreign investments in overall investment has significantly changed, this creates important conditions for increasing the share of domestic investments within the country, particularly in the non-oil sector of the economy, including construction. The following chart highlights the results of a correlation-regression analysis between the share of construction and the degree of economic openness in investments in fixed capital for construction in the Republic of Azerbaijan, based on statistical data from 2012 to 2021.

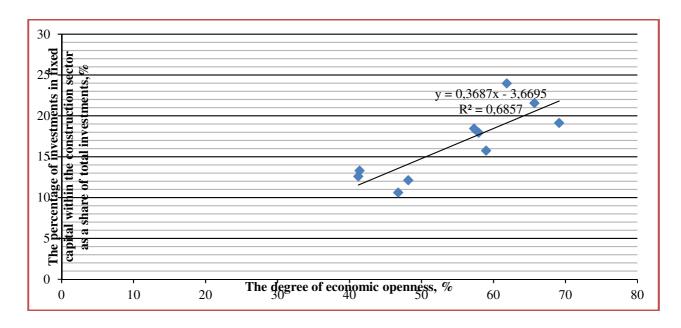


Fig. 3. Relationship between the Share of Construction and the Degree of Economic Openness in Investments in Fixed Capital for Construction in the Republic of Azerbaijan.

Prepared by the author based on the source's original data [6] using MS Excel.

As evident from the constructed graph, there is a high correlation between the share of construction in investments in the primary capital for construction in the Republic of Azerbaijan and the degree of economic openness, expressed by the linear regression equation y = 0, 3687 * X - 3,6695, with a a high correlation between the linear regression and the correlation coefficient, given by $r = \sqrt{0,6857}$ =0,828070045. According to the determination factor, the degree of economic openness, serving as the explanatory variable in the linear regression model, explains 68.6% of the effective factor in the corresponding regression model.

In Fig. 3, one can calculate the elasticity coefficient based on the linear regression feature y = 0.3687 * X - 3.6695, representing the relationship between the share of construction and the degree of economic openness in investments in the primary capital for construction in the Republic of Azerbaijan. The elasticity coefficient determines the percentage by which variables change, reflecting the outcome factor. This coefficient is computed using the following formula [3]:

$$E = \frac{\alpha \times \overline{x}}{\overline{y}},$$

where α - correlation coefficients;

 \overline{x} - average cost of causal factors during the studied period;

 \overline{y} - mid-value of the result factor calculated over the studied periods [3, 4].

Calculating the elasticity coefficient according to the linear regression equation y = 0.3687 * X - 3.6695, expressing the relationship between the share of construction and the degree of economic openness in investments in the primary capital for construction in the Republic of Azerbaijan:

$$E = \frac{54,85 \times 0,3687}{16,553} = 1,222.$$

The conducted assessments indicate that a 1% increase in the level of economic openness leads to a 1.22% increase in the share of construction in investments in the primary capital for construction in the Republic of Azerbaijan.

Conclusion. The article emphasizes the importance of effective dynamic management of innovation and investment needs and resources, considering the unique challenges faced by construction enterprises. It recommends enhancing the management system to adapt to the evolving global competitive environment, involving the creation of specialized

units for innovation management and investment processes. The findings underscore the pivotal role of innovation and investment activities in shaping the competitiveness of construction enterprises. The study contributes to the understanding of the economic dynamics in Azerbaijan's construction sector and provides valuable insights for policymakers and industry stakeholders.

References

- 1. Order of the President of the Republic of Azerbaijan on approval of "Azerbaijan 2030: National Priorities for Socio-Economic Development". President of the Republic of Azerbaijan Ilham Aliyev [Electronic Resource]. President.az. 02 February 2021. Retrieved from: https://president.az/az/view/50474
- 2. Bochko O., Buhaiets A. Trends of investment attractiveness of the construction industry: before and during the COVID-19 pandemic. *Eastern Europe: economy, business and management.* 2021. Vol. 6 (33). P. 76–82.
- 3. Yadigarov T.A. Operations Research and Econometric Problem Solving in MS EXCEL and EVIEWS Software Packages: Theory and Practice. Baku: "Europe" Publishing House, 2020. 352 p.
- 4. Yadigarov T.A. Customs Statistics and Modern Information Technologies. Monograph. Baku: "Europe" Publishing House, 2020. 520 p.
- 5. Aliyeva N.R. Innovation Management. Textbook. Baku: AGPU, 2016. 183 p.
- 6. The State Statistical Committee of the Republic of Azerbaijan [Electronic Resource]. Retrieved from: www.azstat.org.

ОЦІНКА ІННОВАЦІЙНО-ІНВЕСТИЦІЙНОГО ФАКТОРА ПІДВИЩЕННЯ КОНКУРЕНТОСПРОМОЖНОСТІ БУДІВЕЛЬНИХ ПІДПРИЄМСТВ

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Анотація. Ця стаття присвячена всебічному вивченню інноваційних та інвестиційних процесів, розкриваючи їхню внутрішню природу, економічні наслідки та ключову роль в забезпеченні ефективного використання ресурсів. Дослідження ретельно аналізує стратегії інвестування, детально висвітлюючи ключові фактори, які стимулюють інвестування в інновації, тим самим зумовлюючи необхідність вдосконалення систем управління. Основний акцент зосереджений на глибокому значенні інтеграції інновацій та інвестицій для ефективної оптимізації використання ресурсів. У дослідженні проведено аналіз економічного середовища з початку перших років незалежності

Республіки Азербайджан. Розглядаються стратегічні кроки з реконструкції економіки, зокрема ключова роль державних інвестиційних програм. Особлива увага приділяється аналізу інвестицій в будівельній індустрії. Цей розгляд охоплює вплив історичного "Договору століття" та стратегічного розвитку будівельного сектора Азербайджану. Використовуючи дані з 1995 по 2021 рік, дослідження аналізує тенденції зростання обсягів основних коштів й інвестицій в основний капітал у будівельному секторі. Незважаючи на спад у 2020 році через пандемію COVID-19, сектор проявив стійкість, відновившись у 2021 році. Результати свідчать про значний приріст як у основних фондах, так і в інвестиціях протягом вивченого періоду, підкреслюючи визначальну роль сектора в економічному розвитку країни. Дослідження рекомендує розгляд інноваційно-інвестиційних процесів з двох поглядів: як внутрішніх процесів управління та як сфери використання капіталу для потенційних інвесторів. Акцентується увага на важливості ефективного динамічного управління потребами та ресурсами в інвестиціях, особливо на ранніх етапах інноваційних проєктів. Дослідження також розглядає взаємозв'язок між часткою будівництва в інвестиціях в основний капітал та ступенем економічної відкритості в Азербайджані. Стаття вказує на необхідність адаптації структури управління будівельних підприємств до інноваційно-інвестиційних процесів, включаючи створення спеціалізованих підрозділів у межах будівельних підприємств. Це дослідження підкреслює наявну взаємодію між інноваціями, інвестиціями та економічною динамікою, зображаючи їх як симбіотичні елементи, важливі для стійкого розвитку будівельних підприємств. Робота розкриває важливі відомості щодо економічної динаміки будівельного сектора Азербайджану, що може служити корисним підтрунтям для розробки рекомендацій політикам та учасникам галузі з метою сприяння стійкому зростанню і підвищенню конкурентоспроможності.

Ключові слова: інвестиції, інновації, конкурентоспроможність, ефективність, інноваційне управління, основні засоби, економічний розвиток, система управління, будівельні підприємства.