ECONOMIC ESSENCE OF INVESTMENT-CONSTRUCTION PROCESSES, MANAGEMENT FEATURES AND MODERN APPROACHES

Abduvaliyev Bekzod Mukhiddin o‘g‘li
PhD student at Samarkand State University of Architecture and
Civil Engineering named after Mirzo Ulugbek
bekzodabduvaliyev9191@gmail.com

Abstract
This article analyzes the economic and organizational and legal essence of investment and construction processes, their structural stages, participants, and modern approaches to their management on a scientific-theoretical and practical basis. The long-term nature, capital intensity, technological complexity, and high risks of construction projects indicate the need to form an effective management system in this area. The study highlights management systems based on international methodologies (PMBOK, PRINCE2, BIM), considers existing problems in Uzbekistan, and measures to eliminate them. The article also substantiates the economic efficiency of investment projects, functional relationships between stakeholders, and the advantages of digitalization principles.

Keywords: investment-construction process, project management, PMBOK, BIM technology, capital investments, economic efficiency, tender process, monitoring, risks .

Introduction

In the global economy, investment is recognized as a key factor in socio-economic growth. In particular, capital-intensive sectors - infrastructure, energy and industrial construction - play an important role in the modernization of the modern economy. International practice shows that in developed countries, up to 20-25 percent of gross domestic product (GDP) is created through construction investments, which directly affects economic stability and social well-being [5].

Investment and construction processes are not a simple technical process, but a combination of complex economic, legal, financial and management elements. They perform many social and economic functions, such as creating the material and technical base of society, creating new jobs, managing urbanization and improving the living environment. Effective organization and management of this process requires the adoption of economic decisions at the strategic level.

Currently, in the Republic of Uzbekistan, based on the New Uzbekistan Development Strategy for 2022-2026, as well as the Presidential Decree No. PQ-228 dated June 21, 2024, important measures are being implemented to improve the investment climate, ensure targeted and

effective direction of capital investments, reduce corruption factors, and strengthen project monitoring. In such conditions, a deep scientific study of the essence, structure, relationships between participants, and management strategies of investment and construction activities is of urgent importance.

Moreover, in today's era of globalization and digital transformation, the use of competitive project management systems (PMBOK, PRINCE2, BIM) can significantly increase efficiency in the construction industry. At the same time, the high level of risk in investment processes, the increase in resource costs, and the problems of financial transparency require a strategic approach to this area.

Therefore, this article aims to provide an in-depth coverage of the economic, organizational and legal essence of investment and construction processes, the specific features of their effective management, modern trends and their significance in the conditions of Uzbekistan on a scientific, theoretical and practical basis.

Analysis of literature on the topic

In-depth scientific study of investment and construction processes has become one of the leading topics in economic management, financing, project management, and public policy in recent decades.

Classical theoretical approaches to the role of investment in economic growth are based on the models of P. Samuelson [3], JM Keynes [1], and R. Harrod-Domar [2], who believe that investment is the main factor driving the economic cycle. In particular, Keynes considers investment as a force that increases aggregate demand, while Harrod justifies the balanced volume of investment for sustainable growth.

Uzbek scientist AA Mirakmalov identifies investments as a means of accelerating structural changes in the national economy and pays special attention to the ratio of "capital investment - final product" in determining their effectiveness [8].

to project management are the PMBOK Guide and PRINCE2 systems. PMBOK suggests managing the process through 5 phases (initiation, planning, execution, monitoring, closure). These approaches allow for risk analysis, time reduction, and resource optimization in construction projects.

on BIM (Building Information Modeling) technology emphasize the need to coordinate every element from the design stage to commissioning through digital modeling. This reduces quality, cost overruns, and construction defects [6].

International experience has shown that the main risks encountered in the construction sector are price volatility, political instability, lack of infrastructure and contractual irregularities. UNIDO studies recommend the use of “Monte Carlo simulation”, “NPV” and “IRR” methods in assessing project risks [7].

Local scientists Q. Kh. Khudoyberdiev proposes approaches based on discounted cash flows (DCF) to determine the financial efficiency of construction investments in Uzbekistan, proving that this method can determine the real profitability of projects [9].

in recent years - in particular, the Law "On Public Procurement", the Construction Code, and Presidential Decree No. PQ-228 - serve to regulate investment and construction activities, ensure transparency in tender processes, and effectively organize project management [10].

The analysis shows that the existing legislation requires the introduction of modern management tools such as digitalization, auditing, monitoring and public oversight. It is also relevant that project management complies with international standards when working with international financial institutions (World Bank, EIB, ADB).

Research methodology

multifaceted analysis of the economic content, management mechanisms and practical features of investment and construction processes. The study is based on classical economic theories, project management concepts, and methods of risk and efficiency analysis.

is built on an interdisciplinary (economics, management, finance, law) basis, using the method of systematic analysis, comparative analysis, empirical analysis methods, economic-mathematical modeling, expert assessment, and SWOT analysis.

Analysis and results

Investment and construction processes are of crucial importance in the economic development of any country, especially in infrastructure modernization. These processes are not just a set of technical and practical actions, but a multi-stage and multi-participatory systematic activity that includes in-depth economic analysis, planning, financing and monitoring.

As for the essence and systematic approach of the process , the investment-construction process is a set of activities aimed at creating, reconstructing or expanding objects that have economic value. In international practice, this process is called CAPEX (Capital Expenditure) projects, since they are long-term investment activities that require a significant amount of financial resources.

Any investment and construction project consists of the following main stages:

1. Investment stage

This stage includes the formation of a project initiative, assessment of economic efficiency, determination of the volume of capital investments and formation of financial resources. The following work is mainly carried out:

– develop a project initiative;
– feasibility study;
– preparation of preliminary estimates and financial models;

– making investment decisions and attracting investment.

2. Construction phase

At this stage, technical and implementation aspects prevail. Design, construction and contracting work and technical supervision are carried out. The quality and sequence of this stage determine the main indicators of the project results. In practice, the following are carried out:

– development of working project documentation (architecture, engineering, construction);

– selection of contractors and subcontractors (often based on tenders);

– construction and installation works and technical supervision;

– environmental impact assessment and monitoring of compliance standards.

3. Operation phase

This stage ends with the commissioning of the completed facility, its operation, and analysis of financial and social efficiency. In this process, the following is performed:

The investment-construction process is a multi- participatory system, each subject has its own functional role. Their interaction and coordination ensure the success of the process. The table below shows the main participants and their functions:

Table 1 **Participants in the investment and construction process and their functions**

Participant	Main function
Investor	Financial allocation, economic analysis, performance monitoring
Customer (client)	Initiating, organizing, and implementing a project
Project organization	Development of an architectural and engineering project, preparation of an estimate
Contracting organization	Direct implementation of construction and installation works
Technical consultant	Quality control, project management, graphic analysis, audit
State control body	Control of technical and legal compliance based on standards

The interaction and exchange of information between these participants is essential for quality project management. According to the PMBOK methodology, the level of "stakeholder engagement" of each participant directly affects the overall effectiveness of the project.

International practice emphasizes the importance of integrating all stages of multi-stage construction processes using BIM (Building Information Modeling) technology. This technology allows project participants to work in a single digital environment, ensuring accuracy and efficiency in decision-making.

In Uzbekistan, this process is often carried out based on traditional (paper) document exchange and manual control, which leads to problems such as project delays, budget overruns, and resource waste. Also, the lack of clear definition of legal and technical responsibilities between the customer and the contractor is seen as a source of problems.

Construction investments are one of the most capital-intensive and complex forms of investment in the economy, and their management requires specific methodological and technological approaches. The uniqueness of the construction industry lies in the multi-stage nature of the processes taking place there, the influence of variable external factors, the large number of participants, and the long-term realization of results.

Construction projects differ from investments in other sectors in the following key aspects:

– Long-term – construction projects often take 2–5 years or more to complete. During this period, changes in macroeconomic conditions, technologies, prices, and legislation may occur, which poses a threat to the sustainability of the project.

– Capital intensity – construction projects require large amounts of capital, materials, and labor. Construction costs typically account for 30–60% of the total investment. Financing sources are often diversified (state budget, private investment, loans).

– consist of various technological stages (design, geological exploration, installation, improvement) , each stage requires a separate set of skills, standards and technical means, which makes project management technologically complex.

– High risks – prices in the construction sector are volatile, especially due to the dependence on imported materials, and currency fluctuations put the project at financial risk. Changes in human resources, weather, logistics, permit processes, and the political environment also pose risks.

– Corruption risk – corruption can occur at the stages of construction tenders, estimate preparation, material procurement, and subcontracting. According to OECD data, the construction sector is one of the most corrupt sectors in the world. This requires the organization of a management system based on the principles of transparency, auditing, and digitalization.

-mentioned complexities of construction projects require their management through management approaches based on special methodologies. Today, the following project management systems are widely used in international practice:

PMBOK (Project Management Body of Knowledge) – This methodology, developed in the USA and proposed by the Project Management Institute (PMI), proposes to manage the project life cycle based on 5 phases (initiating, planning, executing, monitoring and closing). In construction projects, separate processes and indicators are defined for each phase .

PRINCE2 (Projects in Controlled Environments) – This approach, developed in the UK, is based on the concept of conducting a project in a "controlled environment." Its main advantage is the flexibility and the presence of a continuous control system in accordance with user requirements.

Although this approach was originally designed for IT projects, it has also been used in the construction industry in recent years. In the Agile model , a project is implemented in parts through iterations, which allows for alternative and flexible decision-making.

BIM (Building Information Modeling) – The most innovative approach to construction projects, based on 3D and 4D modeling technologies. With the help of BIM technology, project participants work on the project in real time through a single digital platform. The World Bank's 2023 report noted that projects implemented with BIM technology have achieved savings of up to 15–25% and a reduction in construction time of up to 30%.

Uzbekistan, the systems for tendering, estimating, contract execution, and control of construction projects based on government orders are not yet fully digitalized and the level of coordination is low. This leads to financial inefficiency, delays, and low-quality results in projects.

Therefore, the following measures need to be implemented at a strategic level:

- construction management specialists (project managers, technical experts, estimators);
- digitization of public procurement and construction contracts;
- implementation of special platforms based on BIM and PMBOK;
- strengthening anti-corruption safeguards, independent audit, and public oversight systems.

Construction project management is not a simple set of technical functions, but a complex, multi-layered and multi-participatory system that requires a scientifically based approach that meets international standards. By introducing modern methodologies and adapting them to national practice, it is possible to increase the financial, economic and social efficiency of projects. In the conditions of Uzbekistan, a complete transformation of this process is an important factor in increasing the attractiveness of the national investment environment and achieving economic stability.

Conclusion

the conducted research and theoretical and practical analysis, it can be said that the investment-construction process is one of the most complex, capital-intensive and strategic directions of the economy, the effectiveness of which is directly related to macroeconomic stability, the level of regional infrastructure and social development in the country. This process is characterized by its multi-stage structure, multi- participation structure and high level of technological complexity.

The research results allowed us to formulate the following main scientific and practical conclusions:

1. Investment and construction processes are not just a set of construction works, but a complex of economic, organizational and legal components, the effective management of which can lead to sustainable growth in the national economy, job creation, and reduction of regional inequality.
2. Construction investments are distinguished from other types of investments by their long-term nature, high capital requirements, and high risk. In such conditions, project management requires special knowledge and approaches.
3. Modern management methodologies – PMBOK, PRINCE2, Agile Construction and BIM – serve as important tools for ensuring efficiency, coordination and transparency at every stage of construction projects. In particular, the implementation of BIM technology allows for digital control of the project life cycle, reducing costs and optimizing construction time.
4. Uzbekistan, the system of investment and construction project management is still based on traditional approaches. Openness of tenders, transparency of project documentation, coordination between stakeholders, digitalization and quality control systems need to be developed.
5. Recent legal and regulatory documents adopted by the state , in particular Presidential Decree No. PQ-228 (2024), the Law on Public Procurement, and the Construction Code, serve as an important milestone in reducing the risk of corruption, increasing transparency, and improving governance in this system.

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