

MAIN METHODS OF FINANCIAL AND ECONOMIC EVALUATION OF
INVESTMENT PROJECTS

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Abstract: This paper outlines the main methods for evaluating investment projects, discussing their essence and practical relevance. Key evaluation indicators used in making investment decisions—such as Net Present Value (NPV), Internal Rate of Return (IRR), Profitability Index (PI), and Discounted Payback Period (DPP)—are analyzed. The advantages and limitations of these evaluation methods, their application in real-life projects, and mechanisms for incorporating risk are also examined.

Keywords: investment project, evaluation methods, NPV, IRR, PI, payback period, economic efficiency, investment decision, risk, analysis.

Relying solely on individual indicators that reflect certain aspects of investments is insufficient for determining their overall effectiveness. Therefore, a combination of several methods and a system of indicators is used to assess the efficiency of investment projects.

There are five primary methods widely used for evaluating investment projects. These can be categorized into two groups:

1. Methods based on the concept of discounting:
 - Net Present Value (NPV) method;
 - Profitability Index (PI) method;
 - Internal Rate of Return (IRR) method.
2. Methods not based on the concept of discounting:
 - Payback Period (PP) method;
 - Accounting Rate of Return (ROI) method.

Before analyzing these methods, it is important to note that each method is considered a way to determine the *absolute effectiveness* of an investment. That is, the evaluation assumes that implementing one investment project does not affect the company's ability to invest in other projects.

This assumption is made because, in practice, the implementation of many investment projects limits or entirely prevents the realization of other projects. Such projects are called mutually exclusive (conflicting) projects. These include projects that offer different paths toward achieving the same final objective of a firm.

The primary reason for project conflict lies in the limited financial resources of the company. Companies evaluate and choose projects not only based on absolute efficiency but also considering potential losses from being unable to implement alternative projects due to budget constraints. In other words, firms often select projects based on *relative efficiency* criteria.

Another important condition to be considered before delving into evaluation methods is that all costs and revenues associated with the project are assumed to be in monetary terms.

As the President of the Republic of Uzbekistan, Sh.M. Mirziyoyev, emphasized: "Many enterprises have gone bankrupt due to the lack of thoroughly calculated project plans and the absence of private investments in project implementation. As a result, commercial banks, which were tasked with rehabilitating these enterprises, also suffered substantial losses. Therefore, starting from this year, the practice of transferring bankrupt enterprises to the balance sheets of

banks has been discontinued. Because of superficial economic analysis, projects were found ineffective even after being commissioned — due to lack of raw materials, energy, or gas supply, or simply because of economic inefficiency — which led to the failure of production to commence."

One of the major reasons behind these failures is the poor preparation of the technical and economic feasibility studies (TEFS) of investment projects, the lack of reliable market research, and the underdeveloped methodologies for identifying and assessing risks in advance. Furthermore, there is a strong need to create favorable conditions for attracting foreign investments, ensure both public and individual approaches in evaluating the financial and economic efficiency of investment projects, and eliminate bureaucracy, formalism, and delays in project assessment. It is also crucial to increase the accountability of officials responsible for expert evaluations.

The challenges of evaluating and monitoring investment project efficiency have always attracted the attention of both domestic and foreign economists. Western economists such as A. Smith, D. Ricardo, J. Keynes, A. Marshall, P. Samuelson, L. Alfaro, B. Friedman, L. Abalkin, A. Dedikov, L. Grigoryev, G. Birman, S. Schmidt, I.I. Mazur, V.D. Shapiro, and N.G. Olderogge have all addressed these issues in their scientific works. Similarly, Uzbek scholars such as B. Berkinov, D. G'ozibekov, E. Mahmudov, Sh. Yuldashev, Sh.Kh. Nazarov, N.N. Oblomurodov, A.A. Sobirov, Sh. Mustafakulov, B. Muminov, and others have explored different aspects of investment processes, mechanisms for their activation, and ways to improve investment efficiency across regions.

The reliability and accuracy of all indicators and calculations of investment projects must be verified. Unfortunately, there is still a lack of in-depth and scientifically grounded research aimed at improving the competitiveness of investment projects. This demonstrates the importance of continued research on this topic.

In their scientific works, V.V. Berents and P.M. Khavranek have extensively studied the UNIDO methodology for assessing the efficiency of investment projects. This method plays an important role in project analysis. It is particularly relevant in making investment decisions and comparing the efficiency of capital investments through international best practices.

This approach covers various aspects such as market analysis and questions raised in the technical and economic justification of projects, including:

- Evaluation of the raw material base;
- Selection of construction sites;
- Project design and technology selection;
- Financing investment projects using both investors' own funds and external funding sources;
- Assessing financial and economic efficiency using Net Present Value (NPV), Internal Rate of Return (IRR), and other indicators.

According to the UNIDO methodology, the financial analysis involves:

- Key criteria for investment decisions;
- Evaluation of investment returns and project payback;
- Project life cycle and planning horizon;
- Risk and uncertainty management, among others.

Even if an investment project has numerous advantages, it may not be feasible if the following conditions are not met: – Revenues from product sales are insufficient to recover the investment costs; – The investment payback period does not align with the firm's planning horizon. The existence of such factors necessitates the development of specialized methods for evaluating investment projects that minimize potential losses. According to UNIDO recommendations, the financial analysis of investment projects should be based on the following documents:

- Balance sheet of the enterprise;
- Income statement;
- Cash flow statement;
- Statement of changes in equity;
- Data on total capital investments;
- Working capital requirements;
- Total production costs;
- Information on sources of project financing.

Based on this data, it is possible to determine the liquidity, financial stability, and profitability of the production. Investment decision-making is a complex task for any investor or business entity, where the main criteria include increasing shareholder wealth and enhancing the value of the enterprise. These criteria are influenced by income growth, reduced financial and production risks, and improved efficiency of the enterprise.

Considering international experience and UNIDO recommendations, investment project efficiency is evaluated using two main approaches:

- **Financial Evaluation**, which assesses the project's liquidity and the company's ability to fulfill its financial obligations;
- **Economic Evaluation**, which determines the project's benefits for the national economy.

Commonly used financial indicators in evaluation include:

- Net Present Value (NPV);
- Internal Rate of Return (IRR);
- Discounted Payback Period (DPP);
- Profitability Index (PI).

These indicators help determine the profitability, safety, and feasibility of investment projects. Moreover, it is crucial to assess risk factors and uncertainties affecting projects. Doing so improves the accuracy of projections and enhances the quality of investment decisions.

In conclusion, the correct selection and effective application of investment project evaluation methods are key to the project's success and contribute to the overall stability of the investment climate. Therefore, each investment project must be thoroughly analyzed and evaluated using appropriate methods.

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