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MODERN APPROACHES TO ASSESSING THE IMPACT OF INVESTMENT PROJECTS ON THE SOCIO-ECONOMIC SYSTEM OF THE REGION

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Abstract

The issues of socio-ecological and economic interaction of society, nature and business, the consequences of the implementation of investment projects on the socio-economic system of the region are considered. The concept of the socio-ecosystem of regions and business entities of the region is revealed. A critical review of approaches to the socio-economic assessment of investment projects in the following areas is presented: scientific-theoretical, regulatory, practical. The importance of making decisions on providing support for the implementation of investment projects, taking into account the criterion of social responsibility of the initiator of the project, is substantiated. The characteristic of the social responsibility of the initiator of the investment project is given. The development of new approaches to the definition and assessment of the social and environmental impact of the implementation of an investment project on the economy of the region is proposed, which, unlike existing approaches, will allow us to assess both the potential losses from the project for the socio-ecosystem of the region and the contribution to improving the welfare of society.

Keywords: investment project, corporate social responsibility, socio-ecosystem, socio-economic assessment, sustainable socio-economic development.

СОВРЕМЕННЫЕ ПОДХОДЫ К ОЦЕНКЕ ВЛИЯНИЯ ИНВЕСТИЦИОННЫХ ПРОЕКТОВ НА СОЦИОЭКОСИСТЕМУ РЕГИОНА

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Реферат

Рассмотрены вопросы социально-эколого-экономического взаимодействия общества, природы и бизнеса, последствия реализации инвестиционных проектов на социоэкосистему региона. Раскрыто понятие социоэкосистемы регионы и субъектов хозяйствования региона. Представлен критический обзор подходов к социально-экономической оценке инвестиционных проектов по следующим направлениям: научно-теоретический, нормативно-правовой, практический. Обоснована важность принятия решений по предоставлению поддержки при реализации инвестиционных проектов с учетом критерия социальной ответственности инициатора проекта. Дана характеристика социальной ответственности инициатора инвестиционного проекта. Предложена разработка новых подходов к определению и оценке социального и экологического влияния реализации инвестиционного проекта на экономику региона, что, в отличие от существующих подходов, позволит оценить как потенциальные потери от проекта для социоэкосистемы региона, так и вклад в улучшение благосостояния общества.

Ключевые слова: инвестиционный проект, корпоративная социальная ответственность, социоэкосистема, социально-экономическая оценка, устойчивое социально-экономическое развитие.

Introduction

The issue of socio-ecological and economic interaction between society, nature and business is currently relevant for a number of reasons. The need for continuous economic development and economic efficiency generates negative consequences for the environment, leads to its degradation, reduction of the area of natural ecosystems, depletion of the ozone layer and other limited resources, often even irreplaceable in the foreseeable future.

The relevance of the problems of socio-ecological and economic contradictions, the need to ensure the unity of the economic, environmental and social dimensions of sustainable development of the state and its regions, and the problems of nature management economics are confirmed by domestic scientists E. E. Vasilyeva, E. B. Dorina, S. V. Dorozhko, M. V. Myasnikovich, V. S. Fateev, A.V. Neverov, O. S. Shimova, O. V. Kolesnikov, and others. N. Lopachuk and others [1, 2, 3, 4, 5, 6, 7, 8].

Solving this problem is one of the priorities of public policy in many countries. Thus, O. S. Shimova notes in her writings that at the UN conference in 1992, concern about the state of the planet's biosphere was raised to the political level, and environmental management was declared an integral responsibility of the governments of all countries [9].

Currently, the Republic of Belarus has developed a National strategy for Sustainable Socio-economic development of the Republic of Belarus until 2030. The Belarusian model of sustainable development takes into account the UN Sustainable Development Goals, national interests and peculiarities of the Belarusian economy. The main characteristics of the model include: strong effective state power, participation of civil society in solving problems of sustainable development, effective state and public support for socially vulnerable groups of the population, environmentally sound state policy, and others [10].

Regional concepts of sustainable development have been adopted at the regional level, aimed at achieving a reasonable balance in solving social, economic and environmental problems of the region, meeting people's needs for material and spiritual well-being, and a favorable state of nature, based on mechanisms for implementing these requirements and monitoring their implementation [11].

A socio-ecological and economic system (socioecosystem) is a dynamic system that includes an ecosystem, physical and geographical environment, population, economy, culture, and politics. The components of the system are characterized by a certain commonality: the unity of the territory, close interaction with each other, and the integrity of the functions performed.

Economic entities of the region are private, state-owned and other enterprises engaged in the production, purchase and sale of goods, performance of works, provision of services, engaged in production activities independently on a certain territory within the administrative borders [31].

The enterprise operates in the territory of its presence – a region that also represents a complex socio-economic system, includes elements of a certain territory of a natural, industrial, demographic, social and institutional nature, as well as many direct and inverse relationships between these elements [32].

The issues of assessing the impact of investment projects on the region, its ecological and social system are attributed to the prerogatives of the institute of expertise (public environmental expertise, state environmental expertise, etc.) and thus do not allow for a complete study of projects in these aspects. In addition, existing project assessment methodologies do not allow us to determine the potential impact on the region as a territory of sustainable development and to answer the question of whether this investor is involved in achieving territorial development goals.

A critical review of approaches to socio-economic assessment of investment projects should be carried out in the following areas: scientific and theoretical, regulatory and legal, practical.

Scientific and theoretical direction

Public performance indicators take into account the socio-economic consequences of an investment project for society as a whole, including both direct results and costs of the project, as well as external ones: costs and results in related sectors of the economy, environmental, social and other non-economic effects.

External effects are recommended to be taken into account in quantitative form if appropriate regulatory and methodological materials are available for their assessment. In some cases, when these effects are very significant, in the absence of these documents, it is allowed to use the estimates of independent qualified experts. If external effects do not allow for quantitative accounting, it is recommended to conduct a qualitative assessment of their impact, which is indicated by economists [12].

Economic scientists point out that special coefficients of transition from market prices to shadow prices are used to assess the public effectiveness of projects. For our country, such coefficients or at least approximate methods for constructing shadow prices have not yet been developed. Social efficiency is assessed using a special social discount rate. The lower this rate, the more projects will be evaluated as effective, and the more they will qualify for state support. Therefore, it is clear that such a standard should be formed simultaneously with the approval of the state budget, but the methods of its formation are still unclear [13].

In the economic literature, there are a number of methods and proposals for analyzing an investment project from the point of view of various goals and users of the analysis. For commercial investors (including banks), it is customary to analyze economic efficiency, state authorities assess budget efficiency (methods described in [14] and others) and the return on state support, but they are not fully provided with assessment methods for applying regulatory measures in the region. According to the Russian researcher E. V. Zaitseva, when analyzing the possibilities of applying foreign experience in implementing state investment policy, "the use of fiscal incentives for investment activity should be purposeful, taking into account as much as possible not only the macroeconomic situation, but also regional development features" [15, p. 34].

One of the central places in the assessment of socio-economic efficiency is the assessment of environmental parameters of the project. The environmental factor in project and investment analysis is considered by Belarusian authors L. N. Moroz, A.V. Neverov, I. P. Usova, O. S. Shimova, Russian authors A. K. Borlakova, G. A. Makhovikova, I. P. Nuzhina, E. V. Ryumina and others [16, 17].

The environmental result of the investment project implementation includes changes in the quality of the environment, development of natural resources, improvement of the environmental situation due to the modernization of production, introduction of environmental technologies, meeting the environmental needs of society from the perspective of a decent life, etc. When calculating the environmental impact of any investment project, the maximum possible preservation of the useful properties of the natural environment for society is taken into account. Negative environmental consequences entail costs for compensation of economic damage and prevention of pollution.

The authors note that environmental analysis is carried out by checking the availability of valid permits for project financing and implementation issued by authorized bodies in the field of state environmental expertise. At the same time, the authors point out that *at the pre-investment stage*, the environmental efficiency indicators of the project include the presence of an environmental protection program in the project documentation, indicators for reducing harmful emissions into the atmosphere and reducing noise, and others. In general, environmental impact assessment as a result of the implementation of planned activities is focused on determining and verifying qualitative indicators, expressed in kind, reflecting the impact on environmental components (intensity (input of pollutants per unit of time, per unit area, to the population); scale of impact distribution; frequency of impact over time (single, discrete, continuous); duration (duration) of the impact; spatial boundaries of the impact; significance of the impact. In our opinion, the disadvantage is the complexity of determining the cost indicators of potential damage at the pre-project stage, which does not allow us to assess the scale of consequences, and, consequently, effectively manage environmental risks.

Another important area of assessment of socio-economic efficiency is the assessment of social impact. The social result of the investment project implementation achieved within the project includes a system of decent remuneration, professional development, additional development of employees, provision of social guarantees, and others, while the external impact is an increase in the level of employment, life of the population, changes in morbidity, reduction of social tension in society, ensuring social stability, and others. The social component of investment projects is represented in the works of Belarusian authors I. M. Babuk, B. I. Gusakov, I. N. Kuropatenkova, Russian authors A. S. Bogdanova, A. I. Zimin, T. G. Kasyanenko, E. N. Sindyashkina and others [18, 19, 20, 24].

In the methodology proposed by E. M. Sindyashkina, considerable attention is paid to the assessment of certain types of socio-economic effects of investment projects. However, the assessment of integral socio-economic efficiency is more formalized, since it mostly characterizes only the components of the social effect, and not their cost assessment.

Russian researcher O. S. Nagaeva in her work "Assessment of the socio-economic efficiency of regional investment projects" provides a fairly complete list of factors affecting the region of investment projects, classifying the types of impact on economic, environmental, social and financial, offering a methodology for assessing the compliance of the project indicator with the target parameters of the region. At the same time, two variants of the project are evaluated – with state support and without support, and the forecast of resource development of the region is taken into account. This approach is based on classical indicators of investment efficiency and does not allow us to measure the social effect objectively [21].

T. S. Novikova, when presenting the methodology for assessing the public effectiveness of innovative projects, proceeded from the principles and approaches used by most authors – comparing the costs and results of the indirect impact of projects on society. However, this method involves the use of subjective expert assessment in many parameters and does not allow us to measure the social effect reliably. Despite an attempt to systematize and quantify the socio-economic effects of investment projects, it is necessary to point out a number of significant shortcomings of this methodology: the proposed indicators do not cover all socio-economic effects of investment projects, a group of environmental performance indicators is not identified, the methodology does not take into account the negative socio-economic consequences of investment projects, as well as indirect effects. In addition, separate measurement of social and environmental effects does not allow us to give a comprehensive assessment of the impact of the project on the region and assess the degree of this impact [22].

V. N. Livshits, S. A. Smolyak, T. S. Novikova, P. L. Vilensky and other authors use the same methods and indicators for assessing the public effectiveness of a project as for commercial effectiveness: net discounted income, discounted payback period, yield index and internal rate of return. At the same time, the project's cash flows, based on which its commercial effectiveness is estimated, are adjusted for shadow prices, redistributive, external and indirect effects. However, it seems that the assessment of commercial efficiency and the assessment of socio-economic efficiency of the project have different goals. The commercial efficiency assessment is

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designed to assess the return on investment for the private investor, while the socio-economic efficiency assessment should assess the economic, social and environmental impact of the project on the territory. In this regard, the assessment of these two types of effectiveness should be carried out using different methods.

N. N. Mikheeva, T. S. Novikova, and V. I. Suslov suggest evaluating investment projects based on a set of inter-industry interregional models. However, while the methodology allows evaluating the commercial effect at the meso - and macro-level, it does not sufficiently take into account the social effect of the investment project implementation. Applying the methodology in one direction gives a fairly extensive result on the role of the project in the economy, but the question remains whether the project does not have a large-scale negative impact on the implementation area and society [23].

Summarizing the results of scientific research by these authors, we can distinguish the following ways to take into account environmental and social factors when evaluating investment projects:: 1) determining the amount of damage prevention as the sum of costs for its elimination and adding it to the calculated amount of net discounted income; 2) direct accounting of the cost assessment of social and environmental consequences (results) in calculations.

The disadvantages of methods for taking these factors into account when evaluating projects include:

1) inaccuracy and inability to calculate environmental impacts at the stage of business planning, so the economic damage (damage) from environmental degradation is calculated already during the project implementation;

2) determining the value of the total losses caused by environmental degradation as a result of the implementation of an investment project in most cases in the form of expert assessments, i. e. it is subjective in nature;

3) difficulty in identifying public benefits, which often cannot be measured not only in terms of money, but also in terms of quantity.

In connection with the above, further development of methodological approaches to assessing the socio-economic efficiency of investment projects for the region of their implementation is required.

Despite the inclusion of social and environmental parameters for the assessment of investment projects in the project-investment analysis, it should be noted that they are focused on points, the calculation of individual indicators of identified risks. Ensuring the complexity of socio-economic assessment is possible if a system of indicators is developed based on a systematic approach. The methodological basis for developing a system of indicators, according to the author, can be the principles of social corporate responsibility, since non-financial activities of the organization and interaction with interested parties increasingly affect the competitiveness of products in domestic markets and abroad, the effective use of resources, the investment attractiveness of the company, its market value. The concept of CSR is generally accepted in the global business-community, has an interdisciplinary nature, and combines theoretical and practical aspects.

Regulatory and legal direction

Investment projects implemented on the territory of the country's regions fall under the unity of criteria for their evaluation through a unified approach to methodological support for business planning and evaluation of the effectiveness of investment projects, regulated by the Rules for the Development of Business Plans approved by Resolution No. 158 of the Ministry of Economy of the Republic of Belarus of 31.08.2005. The main methods of project efficiency from the investor's perspective are net discounted income, discounted payback period, internal rate of return, and return on investment index are considered.

The business plan includes an assessment of the project's external environment through PEST analysis, which consists in identifying and evaluating the impact of macro-environmental factors (political, economic, social, and technological) on the results of project activities. The analysis of these factors is carried out on the basis of an expert assessment of qualitative indicators. This approach has a number of difficulties: identifying factors that have the greatest impact on the project when covering a large amount of data; interpreting the results of the analysis; taking into account the mutual influence of environmental factors. The disadvantages of PEST analysis include: subjectivity of assessment; short-term orientation in the analysis, which does not give a significant effect in strategic planning; complexity of analysis for a diversified project activity. Only political, economic, social, and technological factors of the organization's external environment that affect the project are evaluated, and the project's impact on the external environment is not disclosed.

It should be noted that according to a number of authors B. I. Gusakov, D. G. Matveev, A. S. Golikova [24, 25, 26, 27], the applied methodology for evaluating the effectiveness of investment projects presented in this methodological document has a number of shortcomings: the categories of object, subject and subject of investment efficiency assessment are not specified; a mixed approach is presented approach to calculating performance indicators: combining elements of economic and financial analysis of an investment project; it does not contain an assessment of the public significance of the project, as well as the procedure for evaluating the Pareto-effectiveness of the project for society and stakeholders, or evaluating other types of efficiency.

A. P. Smolsky points out in his works that the analysis of the main parameters of business plans for investment projects of individual business entities carried out during the expert examination revealed a number of serious shortcomings in planning. Thus, the author notes that the planned actions for the use of state support funds in the implementation of an investment project were indicated in business plans and other documents, but when planning technical re-equipment, the issues of determining specific equipment models and opportunities for its use were not worked out in detail [28]. Mistakes in planning lead to inefficient work on project implementation in the future.

In our opinion, the results of project analysis, especially when attracting state support, should reflect not only compliance with legal requirements, but also allow identifying projects with high social and environmental risks and projects of socially responsible orientation.

The obligation to separately disclose the social and environmental effects (losses) of a project, resource efficiency, and other components of socially responsible investment is not provided for in the rules for developing business plans. Thus, in the system of criteria for evaluating commercial investment projects, the social and environmental factor is defined as an additional criterion, depending on the specifics of the project (scale, significance, type of state support). Environmental and social factors are related to external effects, which makes it difficult to determine the impact of such factors on the environment and society. Not all indicators can be quantified. Therefore, the requirements for taking into account social and environmental impacts *are not sufficiently* specified in the methodological recommendations for developing business plans and evaluating the effectiveness of investment projects.

At the regional level, based on the Rules for developing Business Plans for investment projects, local governments form their own requirements for the content of the business plan within the framework of the investment policy of the region. For example, in the Brest region, as **anaddition to the content of the section of the business plan "Characteristics of the organization and its development strategy", it is indicated that** when describing the organization from indicators that reveal the social and environmental aspects of the project, it should reflect "social facilities in the organization's infrastructure, their share in the cost of fixed assets", and when describing the strategy for the development of the organization, conduct an environmental assessment of the project – an analysis of the impact of future production on the environment, the volume of waste, the intended places of their disposal, processing [29].

Practical application

Social and environmental requirements for investment projects are included in the guidelines of the World Bank and other world development banks, and are the basis for making investment decisions according to the methodology of the BMF Group, UNIDO and others.

In international practice, investment performance assessment is not strictly regulated. Based on the recommendations and key principles of evaluation of international structures, individual countries develop national methodologies for evaluating the effectiveness of investment projects, which provides a unified methodology and allows comparing the results of evaluations obtained in different countries. The most well-known foreign methods that have become widely used in the theory of investment management and in practice are: the methodology of Goldman, Sachs&Co; the methodology of Ernst&Young; the methodology of the European Bank for Reconstruction and Development (EBRD); the approaches of the World Bank (the World Bank for Reconstruction and Development (IBRD), the International Bank for Reconstruction and Development (IBRD)). International Finance Corporation (IFC) method; cost-benefit method; UNIDO (United Nations Industrial Development Organization) method; Little-Mirlis method. At the same time, certain methodologies (such as those of UNIDO, the EBRD, the IBRD, and others) provide for determining the public effectiveness of an investment project along with evaluating its commercial effectiveness. The development of Russian methods for evaluating the effectiveness of an investment project, based on borrowing foreign experience, has led to the addition of a section on calculating public efficiency.

In 2003, commercial banks developed the Equator principles based on environmental and social standards applied by the International Finance Corporation (IFC) (a private sector member of the World Bank Group). The principles are adopted by large international banks, which make up about 80% of the global financial market, to assess environmental and social risks and are applied globally for loans in the field of bank project financing with a total capital expenditure of at least 50 million US dollars [30].

After a critical analysis of approaches to assessing socio-economic (public) effectiveness, it should be noted the following:

– To date, ensuring only the commercial efficiency of investment projects does not meet the requirements of sustainable development of society and requires compliance with the socio-economic efficiency of projects. Regulatory support and practical application of investment project assessment do not sufficiently take into account the social and environmental consequences of investment decisions, and there is no systematic approach to their assessment.

– Scientific research on the assessment of social and environmental impacts of investment projects is carried out mainly in the direction of their qualitative assessment due to the complexity, complexity and specificity of quantitative assessment. Certain scientific developments that allow applying quantitative assessment to determining the results of investment implementation in the socio-economic system make a significant contribution to the development of the theoretical foundations of investment analysis, but do not allow us to assess the potential harm or determine the contribution of a particular investor to the regional economy in value terms.

– Methodological support for the evaluation of investment projects, which includes indicators of economic efficiency, parameters of the effectiveness of participation in the project for individual participants, elements of assessing public significance, budget payback, and others, does not allow us to assess the contribution of a particular project initiator to the socio-economic system of the region. The development of methodological support for assessing social responsibility would reveal aspects of the project's impact on the socio-ecological system and, consequently, show the importance of applicants for local government support for the region.

The development of new approaches to determining and assessing the social and environmental impact of an investment project on the regional economy, in contrast to the existing ones, makes it possible to assess the potential losses from the project for the socio-economic system of the region or, on the contrary, the contribution to improving the welfare of society. It is proposed to use the initiator's social responsibility profile as a criterion for selecting investment projects for priority financing and other forms of investment support. Social responsibility of the initiator of an investment project (SOIP) characterizes the ability and readiness of business entities within the investment project to meet the requirements and norms of not only domestic standards on social responsibility, but also international ones, to be responsible for the consequences of their actions and to contribute to the development of the social and environmental sphere.

Conclusions

The study of various approaches to assessing the socio-economic efficiency of investment projects allows us to conclude that at the present stage of regional development, the social and environmental aspect is becoming increasingly important in the process of making effective management decisions. In order to maintain a favorable socio-economic environment, regional government bodies are forced to take levers of influence on financial, investment, production and other areas. One of the ways to reduce the negative consequences of the activities of unscrupulous business entities is to introduce the principles of social responsibility at the stage of launching new enterprises and implementing investment projects. Thus, to solve social and environmental problems, developed countries are implementing sustainable development strategies at the macro and meso levels, and standards of corporate social responsibility (CSR) are being implemented at the micro level. The application of social responsibility standards should cover all activities of the enterprise, including investment. The CSR concept is of a strategic nature, and the integration of CSR into the investment project evaluation system ensures the development of economic, managerial and organizational solutions that take into account the interests of stakeholders. The involvement of investment entities in the implementation of investment projects, taking into account the provisions of CSR, and the assessment of their implementation will improve the tools for motivating responsible behavior of investors, increase the validity of decision - making on regulating investment projects of destructive content, maintain a favorable investment climate and encourage the attraction of responsible investments to the regional economy.

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