IMPROVEMENT OF STATE SUPPORT FOR REGIONAL INVESTMENT PROJECTS

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ABSTRACT

This article presents the findings of a study on the mechanisms of state support for regional investment projects. A critical analysis was conducted on existing policy instruments and mechanisms of governmental support, the investment potential and associated risks across regions and cities of republican significance in Qazaqstan were calculated. The results revealed a spatial asymmetry. Alongside with this it was revealed that state authorities do not use a systematic, portfolio-based approach to the selection of regional projects, there is insufficient risk-sharing between the state and investors and have a weak monitoring–recalibration cycle. In response to these limitations, the author proposes a model based on a hierarchical approach, which envisages the project assessment process around four key criteria blocks (regional development priorities, financial indicators, impact on regional development, and quality of management).

Keywords*: State Support, Investment Projects, Investment Potential, Investment Risk, IP–IR matrix, Qazaqstan.*

INTRODUCTION

In the current era, the development of national economies faces numerous challenges. The slowdown of growth in many major economies, stagnation in global trade, and the most stringent lending conditions for developing economies in recent decades have negatively affected investment flows, supply chains, and prices. At the same time, the Covid-19 pandemic delivered a significant blow to national economies. It exposed major weaknesses in public governance systems, particularly in areas such as planning, forecasting, and crisis management (ACSH, 2020; OECD, 2020).

In this regard, Qazaqstan, which belongs to the category of newly established states, is confronted with significant challenges in its development. In addition, the spatial-structural heterogeneity of regional economies remains a complex issue that has not been resolved since independence. Cluster-based and sectoral approaches, as well as the focus on 'growth points' implemented within the framework of the country's territorial-spatial development, have failed to ensure balanced regional development (Al'zhanova et al., 2020; Asylbaev, 2017; OECD, 2020a). Industrialisation programmes have not succeeded in diversifying the national economy (Schetnyj komitet, 2022). Extractive industries still remain the main source of economic growth in the regions.

In order to boost the economies of Qazaqstan's regions, the government has been implementing an approach that involves investing in regional projects through public and other financial sources. The success of this approach depends on numerous factors, including the extent and quality of state support.

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This article calculates integrated indices of investment potential (IP) and investment risk (IR) for all regions of the country and substantiates the relevance of managing regional projects through a portfolio-based approach. In addition, the article proposes the establishment of dedicated management centres to support regional projects.

ON STATE SUPPORT FOR REGIONAL INVESTMENT PROJECTS

In global practice, several approaches to regional development have been established (Simion et al., 2018). One such approach is the implementation of investment projects – a system of interrelated activities aimed at developing the region's business sector, infrastructure, and social facilities. These projects can be classified into three categories:

- Projects aimed at generating profit;
- Projects in the social sector (such as the construction of schools, hospitals, and other social facilities);
- Projects related to the construction of infrastructure facilities (including road construction, water supply systems, power lines, and gas pipelines) (Malyshev, 2012).

Regional projects may be aimed at a single sector or designed for the comprehensive development of the respective region. These projects are funded through various sources.

The system of state support for regional investment projects is particularly relevant for certain regions that possess high economic potential but underdeveloped infrastructure, especially in the context of ensuring continuous socio-economic growth.

In Qazaqstan, the state support for investment projects is implemented in a centralised manner. At the same time, the provision of support measures and the determination of overall directions for regional development are established by republican (national-level) authorities, while the management of development programmes and specific projects is carried out by local state administration bodies.

State support measures take account of the socio-economic and geographical characteristics of the regions. This principle of regional development is fundamental, as significant differences in levels of socio-economic development, economic structures, and the availability of market opportunities require the application of distinct support tools across various regions. In view of this factor, the policy envisions the establishment of areas with special conditions for entrepreneurial activity to attract private investors. It is recommended that regional strategies be employed in the formation of regional investment project portfolios, and that a project-based investment management system be developed at the regional level.

Taking the aforementioned into consideration, an analysis of the state support mechanism for regional investment projects was conducted. As a result, the following shortcomings were identified:

- Which projects to support and in what manner is decided by central government authorities. In such cases, to what extent are the views of local governing bodies taken into account?

- There is no systematic approach applied in managing the portfolio of regional investment projects. The current system prioritizes support for the most economically efficient projects. In such cases, the size of projects significantly influences the assessment of their effectiveness and efficiency.

- None of the reviewed methodologies for assessing the effectiveness of regional

investment projects provides a comprehensive framework for evaluating risks. In the component involving direct state financing, the current system of governmental support for regional investment projects is structured in such a way that risks are distributed disproportionately between the state and the implementing entity. In this regard, the risks are indicated only in the part of the project's commercial viability.

– The current mechanisms for state support of regional investment projects do not provide for a comprehensive monitoring system or tools for managing deviations from target parameters during project implementation. In some cases, an assessment of the targeted use of allocated budgetary funds is carried out, however, in our view, such measures are insufficient to ensure the achievement of the planned performance indicators of the projects.

– Taking account of the identified problems in the mechanism of state support for regional investment projects, it is both important and appropriate to consider the investment potential and investment risks of individual regions when determining the directions, types, and methods of support. Analysing the shortcomings of the current system, we believe that the effectiveness of investment support can be significantly enhanced by aligning support measures with each region's specific investment potential and associated risk profile.

THE INVESTMENT POTENTIAL AND INVESTMENT RISKS OF THE REGIONS

The development and implementation of investment business projects and social projects require consideration of the investment potential of the regions, as well as the investment risks. There are numerous methodologies for assessing investment potential (Klimova, 2020), as well as for evaluating investment risks (Pike et al., 2017; Litvinova, 2014). Based on the methodology proposed by local reseachers (Shaldarbekov et al., 2018), the indicators of investment potential and investment risk of Qazaqstan's regions were calculated.

For each region, relevant indicators characterising the level of its potential were selected, and calculations were conducted for the period from 2021 to 2022. The main indicators used for assessing individual types of potential are presented in Table 1. A total of 23 indicators used to assess the investment potential of the regions are grouped into eight categories.

Table 1. Indicators Determining the Investment Potential of the Regions.

Potentials	Indicators Characterizing the Level of Potential
Natural Resource Potential	- Area of the territory, thousand square kilometers - Area of agricultural land, thousand square kilometers - Per capita expenditure on environmental protection, thousand KZT
Industrial Potential	Gross Regional Product (GRP) per capita, thousand KZT - Volume of industrial output per capita, million KZT - Volume of agricultural output per capita, million KZT - Volume of exports per capita, million KZT - Volume of commissioned residential housing per 1,000 people, square meters - Value of fixed assets per capita, thousand KZT - Volume of construction works per capita, million KZT

Infrastructure Potential	- Density of railways per 1,000 km²
	- Density of motor roads per 1,000 km²
	- Volume of electricity produced per capita, thousand kWh
	- Volume of average daily water supply per capita, liters
Labor Potential	- Share of employed population, %
Financial Potential	- Volume of investment per capita, million KZT
	- Volume of investment in environmental protection per capita, million KZT
	- Volume of investment in residential construction per capita, thousand KZT
	- Pre-tax profit of enterprises, million KZT
Consumer Potential	- Consumer spending level per capita, million KZT
Innovative Potential	- Volume of innovative products produced per 1,000 people, million KZT
	- Level of innovation activity among enterprises, %
Social Potential	- Average monthly nominal income per capita, KZT

A system of five indicators is used to assess investment risk: economic, financial, social, environmental, and crime. The list of these indicators is presented in Table 2.

Table 2. Indicators Determining the Investment Risk of the Regions.

Categories	Indicators Determining Investment Risk
Economic	- Volume of imports per capita, thousand USD
Financial	- Volume of debt liabilities
Social	- Unemployment rate, %
	- Number of people with consumption income below the minimum subsistence level, thousand persons
	- Share of the region's poor in the total number of poor people in the Republic of Qazaqstan, %
Environmental	- Emissions of harmful substances into the air, thousand KZT
	- Presence of hazardous industrial waste at enterprises, thousand KZT
	- Number of hazardous natural phenomena, units
Criminal	- Number of registered crimes per 1,000 people, units

In economic research, various methods for measuring the investment potential and risk level of regions are widely analysed. In the course of this study, we chose to apply a normalisation method that scales all selected indicators within the range from 0 to 1, as we believe that each of them holds equal importance in assessing regional investment potential. This approach facilitates a more flexible representation of economic, social, financial, and other dynamics through a set of indicators. Each indicator is normalised according to the following formula:

$$L_k = \frac{(A_i - A_{min})}{(A_{max} - A_{min})} \qquad (1)$$

Where: A_i - the value of the k-index for the i-region (i=1,2….n);

A_max , A_min - the maximum and minimum values of the k-index, respectively.

The closer the value of the calculated index is to 1, the better the value of that index.

The complex index A_kom for each individual potential is calculated by the formula:

$$L = \frac{\sum L_k}{N} \qquad (2)$$

Where: N represents the number of indicators included in each index.

The composite level of investment potential is calculated as the sum of all individual indices:

$$К_{инт} = \sum L_{ком} \qquad (3)$$

The higher this indicator, the greater the level of investment potential in the corresponding region. Based on the interval thresholds characterising the levels of investment potential and investment risk, as presented in Table 3 below, we conducted a classification of the positions of Qazaqstan's regions.

Table 3. Interval Thresholds for Determining Levels of Investment Potential and Risk.

Investment Potential Intervals			Investment Risk Intervals		
Very Low	IP$_1$	0,0 - 0,578	Minimal Risk	IR$_1$	0 - 0,768
Reduced	IP$_2$	0,579 - 1,157	Moderate risk	IR$_2$	0,769 - 1,537
Low	IP$_3$	1,158 - 1,736	Medium	IR$_3$	1,538 – 2,306
Medium	IP$_4$	1,737 - 2,315	High	IR$_4$	2,307 - and above
High	IP$_5$	2,316 - 2,894			
Maximum	IP$_6$	2,895 - and above			

According to the results of the conducted classification, six regions demonstrate a very high (maximum) level of investment potential (IP6). These include Atyrau Region, Qaragandy Region, North Qazaqstan Region, East Qazaqstan Region, as well as the cities of Astana and Almaty. Notably, Qaragandy and North Qazaqstan regions are characterised by a consistently moderate level of investment risk, whereas Atyrau Region, East Qazaqstan Region, and the city of Astana exhibit a medium risk level. In contrast, the city of Almaty stands out with a high level of investment risk in the context of regional investment projects.

Seven regions — Abai, Aqmola, Aqtobe, Almaty, Qostanai, Mangystau, and Turkistan — possess a high level of investment potential (IP5) and are characterised by a medium level of investment risk (IR2).

Four regions exhibit an average level of investment potential (IP4): Jambyl, Jetisu, Pavlodar, and Qyzylorda. Among these, the investment risk levels vary across the regions. Notably, Qyzylorda Region stands out as the only region with a low level of investment risk.

Two regions fall under the category of low investment potential (IP3): West Qazaqstan Region and the city of Shymkent. Both are characterised by a medium level of investment risk (IR2).

Additionally, Qaragandy and North Qazaqstan regions exhibit a moderate level of investment risk, while Atyrau Region, East Qazaqstan Region, and the city of Astana also fall within the

medium-risk category. The city of Almaty, however, is distinguished by a high level of investment risk in the context of regional investment projects.

Seven regions—Abai, Aqmola, Aqtobe, the city of Almaty, Qostanai, Mangystau, and Turkistan—demonstrate a high level of investment potential (IP5) and are characterised by a medium level of investment risk (IR2).

In addition, four regions exhibit an average level of investment potential (IP4): Jambyl, Jetisu, Pavlodar, and Qyzylorda. These regions show varying levels of investment risk. Notably, Qyzylorda Region stands out as the only region with a low level of investment risk.

Two regions—West Qazaqstan Region and the city of Shymkent—fall under the category of low investment potential (IP3). These regions also exhibit a medium level of investment risk (IR2) (see Table 4).

Table 4. Values of Indicators Characterizing Investment Potential and Risk Across Regions of Qazaqstan.

Regions	Investment Potential			Investment Risk		
	2021	2022		2021	2022	
Abay	-	2,276	IP₅	-	1,127	IR₂
Aqmola	3,382	2,694	IP₅	1,248	1,051	IR₂
Aqtobe	2,721	2,541	IP₅	1,139	0,954	IR₂
Almaty	2,247	2,666	IP₅	1,053	0,791	IR₂
Atyrau	3,892	3,391	IP₆	1,763	2,111	IR₃
West Qazaqstan	2,111	1,559	IP₃	0,995	1,088	IR₂
Jambyl	1,857	1,747	IP₄	0,788	0,775	IR₂
Jetisu	-	1,819	IP₄	-	1,569	IR₃
Qaragandy	2,988	3,276	IP₆	1,462	1,327	IR₂
Qostanai	2,944	2,469	IP₅	1,847	1,502	IR₂
Qyzylorda	2,213	1,998	IP₄	0,560	0,596	IR₁
Mangystau	2,961	2,295	IP₅	0,811	0,773	IR₂
Pavlodar	0,755	1,759	IP₄	1,092	0,751	IR₂
North Qazaqstan	2,988	3,276	IP₆	1,462	1,327	IR₂
Turkistan	2,944	2,469	IP₅	1,847	1,502	IR₂
Ulytau	-	2,211	IP₄	-	1,260	IR₂
East Qazaqstan	3,202	3,151	IP₆	1,276	1,665	IR₃
Astana	4,055	3,245	IP₆	2,182	2,010	IR₃
Almaty	2,314	3,466	IP₆	3,145	3,072	IR₄
Shymkent	1,048	1,252	IP₃	1,277	1,119	IR₂

Certainly, these calculations may involve certain limitations and may not fully account for all influencing factors. Nonetheless, they provide a useful framework for identifying key conditions that should be taken into consideration when making decisions regarding the initiation of regional investment projects.

ENHANCING STATE SUPPORT

Regional policy in the field of project management should take account of the following key considerations:

- There must be a balance of interests among all participants in the investment process (the state, enterprises of all forms of ownership, and the local population) ensuring safeguarded interests of all stakeholders;
- There should be a mandatory predictable mechanism for combating external and internal threats to socio-economic security, external and internal threats, which involves the use of a set of measures aimed at the sustainable development and improvement of the investment sector of the region;
- There should be a comprehensive investment policy that determines the requirements of the territorial system, that is, engineering and social infrastructure.

The local authorised body, in cooperation with stakeholder government agencies and organisations, conducts a regional assessment. The timeframe for conducting the regional assessment for each project must not exceed 15 (fifteen) working days from the date the application is registered.

The results of the regional assessment are presented according to the following structure:

- Commercial Viability of the Project;
- Availability of Key Initial Conditions for Project Implementation;
- Development and Adequacy of Infrastructure Solutions;
- Environmental Safety and Rational Use of Natural Resources
- Profitability;
- Compliance with the Region's Strategic and Programme Documents;
- Overall Conclusions and Recommendations Regarding the Project.

The main directions of regional policy in managing regional projects are illustrated in the following figure (Figure 1).

Figure 1. Main Directions of Regional Policy in Managing Regional Projects.

Note: Compiled by the author.

According to Figure 1, the first priority should be the establishment of a specialised body in each region responsible for project management. This body should perform several key functions, including: providing information and advisory support to investors, conducting

expert assessments of projects planned for implementation in the region, selecting projects that align with the region's development objectives, facilitating expert-driven evaluation.

During project implementation, it is essential to identify the priority areas of regional development by taking into account the specific characteristics of each region. As a result, the potential to select projects that align with the region's development objectives, areas of specialisation, and innovation system will increase significantly.

A regional project portfolio refers to a set of projects or programmes that are integrated and managed to effectively support the achievement of the region's strategic goals.

We have determined that the successful implementation of projects at the regional level primarily depends on the establishment of a dedicated body responsible for managing projects and for developing a unified project management methodology within that region. Furthermore, it is essential to design the mechanism for project-based investment management in accordance with the primary goals and objectives of the region's investment policy.

By defining the organisational essence of regional project-based investment management, it becomes possible to conceptualise the organisation and management of investment projects as a systemic process—a set of interrelated elements and actions shaped by external and internal factors. This mechanism must be structured both horizontally and vertically, which in turn determines the complex structure of the mechanism within the regional economic space.

As a result of the conducted research, we have developed a schematic model of the mechanism for managing projects at the regional level, which is presented in Figure 2.

The advantage of the proposed concept for managing regional investment projects, from the perspective of the state, is that government authorities can increase the likelihood of achieving the planned indicators of socio-economic development in the region by ensuring a balanced management of the overall portfolio risk.

The obligations imposed on investors serve as an incentive for them to assess risks more soberly. In cases where projects are not implemented due to various circumstances, the investor is required to return the funding received from the state. This, in turn, enables state authorities to reallocate the recovered resources for the implementation of other projects.

For the purpose of evaluating regional projects, a model based on the analytic hierarchy process was developed, creating a set of criteria, identified through expert evaluation, that should be considered during project selection. Initially, all criteria were compiled into a single comprehensive list, which was subsequently categorised into thematic groups.

Figure 2. Schematic Model of the Mechanism for Managing Regional Investment Projects.
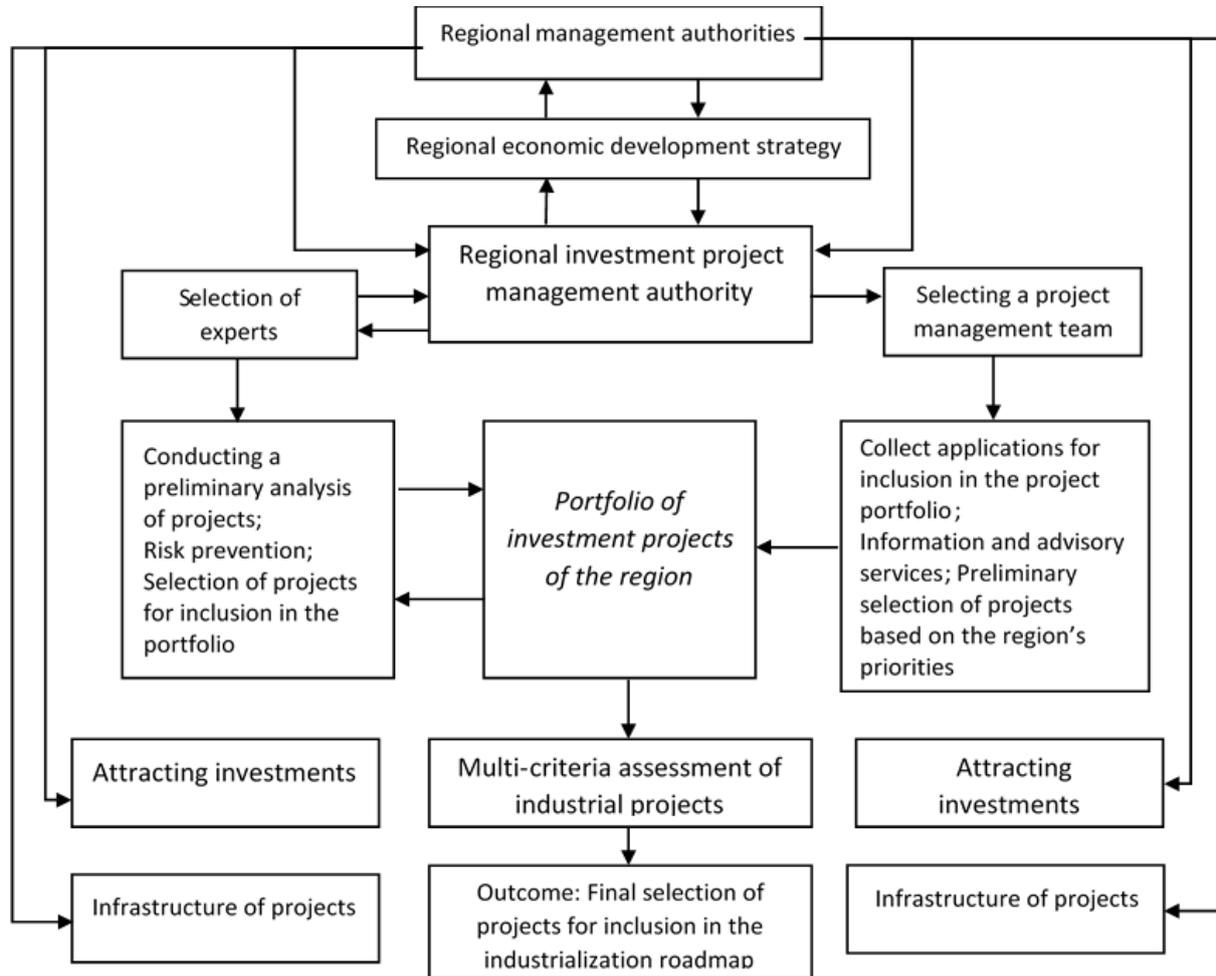
The key criteria for selecting regional projects include:

- Availability of raw materials, labor, and scientific potential in the region;
- Alignment of the project with the region's development objectives;
- Compatibility of the project with the region's innovation system;
- Integration of the project with other regional initiatives;
- Project profitability;
- Payback period of the project;
- Number of jobs to be created in the region;
- Volume of tax contributions
- Availability of prior experience in implementing similar projects;
- Existence of a project management system.

Subsequently, these criteria were grouped into four major categories. The results of this categorisation are illustrated in the following table (Figure 3).

Figure 3. Model for Regional Project Selection.

1. Regional Priorities	2. Financial Indicators	3. Contribution to Regional Development	4. Management
- availability of raw materials, labour, and scientific potential in the region for the project; - alignment of the project with the region's development goals; - compliance of the project with the regional innovation system; - presence of interconnections between the project and other regional initiatives.	- project profitability; - project payback period.	- number of jobs to be created in the region; - volume of tax payments.	- availability of prior experience in implementing similar projects; - existence of a project management system.

Note: Compiled by the author.

To implement the concept of state support for regional investment projects, a model was developed based on the formation of a balanced project portfolio. This model allows for the substantiation of regional investment project selection in accordance with the principles of enhancing efficiency and minimizing risk, with the aim of determining the provision of state support measures. A key feature of the developed model is that projects eligible for state support are selected not based on ranking, but on the objective of improving the overall effectiveness of the portfolio.

CONCLUSION

The article comprehensively addresses the issue of enhancing state support for regional investment projects at both theoretical-methodological and applied levels. By normalising socio-economic indicators using the min–max method, integral indices of investment potential (IP) and investment risk (IR) were calculated for Qazaqstan's regions and cities of republican significance. The classification was carried out using a six-tier scale for investment potential (IP_1–IP_6) and a four-tier scale for investment risk (IR_1–IR_4), which revealed significant spatial asymmetry: although Atyrau, Qaragandy, East Qazaqstan, North Qazaqstan, Astana, and Almaty possess the highest investment potential (IP_6), most of them fall within medium- or high-risk zones.

The analysis revealed that government bodies do not employ a systematic portfolio-based approach in selecting regional projects, fail to ensure a balanced distribution of risk between the state and investors, and exhibit weaknesses in the monitoring–recalibration cycle. A new model based on the analytic hierarchy process was proposed, evaluating projects according to

four criterion blocks (regional priorities, financial indicators, contribution to regional development, and management quality). Under this model, project selection is not based on ranking, but rather on the principle of optimizing the overall efficiency and risk of the portfolio, and support instruments are differentiated according to an IP–IR matrix.

At the same time, the establishment of a dedicated management body in each region to support investment projects was proposed. This body would be responsible for functions such as providing information and advisory services, conducting expert-based project selection, performing portfolio monitoring, and ensuring risk-sharing with investors.

Thus, the proposed article contributes to the formation of a new trajectory for regional development in Qazaqstan providing with a methodological foundation for making regional investment policy more effective, sustainable, and fair.

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