ABSTRACT

of the dissertation submitted for the degree of
Doctor of Philosophy (PhD)by
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The relevance of the dissertation research is determined by the changing structure of global investment flows and the intensifying competition among developing countries for attracting capital. According to the United Nations Conference on Trade and Development (UNCTAD), in 2023 global foreign direct investment (FDI) declined by 2%, reaching USD 1.3 trillion, while FDI inflows to developing countries decreased by 7%, to USD 867 billion. Kazakhstan found itself in a more vulnerable position: in 2024, the country recorded a 25% drop in FDI compared to the previous year, reflecting systemic constraints in maintaining investment attractiveness. Under these conditions, the search for new approaches to the analysis and regulation of investment processes becomes not only an economic priority but also a strategic task of national development.

At the regional level, the study acquires particular significance since the European Union (EU) is both a strategic partner and one of Kazakhstan's largest investors, accounting for 56.7% of total foreign investment inflows (USD 10,365.1 million in 2023). However, the 4.7% decline in European FDI in 2024 coincided with growing EU investment activity in neighboring Central Asian states—primarily Uzbekistan and Turkmenistan. This intensifies competitive pressure and underscores the need for diversification of investment flows, stimulation of non-extractive sectors, and enhancement of Kazakhstan's regional competitiveness. In this context, the study of investment cooperation between Kazakhstan and the EU acquires strategic and geoeconomic importance, extending beyond traditional bilateral relations. The implementation of the EU's *Global Gateway* program opens opportunities not only for attracting new investments but also for diversifying their sectoral and geographical structure, which corresponds to the long-term interests of both parties and contributes to strengthening regional integration.

Internal factors also exacerbate the vulnerability of the investment sphere. First, there remains a high dependence on raw materials: approximately 77% of European FDI is concentrated in the extractive sector, with the main share coming from a limited group of countries—the Netherlands, Italy, France, and Germany. Second, there is a pronounced regional asymmetry: the FDI volume in the Atyrau region is twenty times higher than in the Zhambyl region (for example, USD 3,843.68 million versus USD 182.5 million in 2023 [6]). Third, the methodological problem of assessing regional investment potential remains unresolved, as traditional approaches fail to account for spatial interconnections, the diffusion of economic activity, and the role of innovation factors. The combination of these challenges determines both the methodological and practical significance of the present study. On one hand, a comprehensive approach is needed to analyze

investment processes, integrating tools of spatial econometrics with classical economic and statistical methods. On the other, there is an urgent need to develop scientifically grounded recommendations for diversifying the sources and directions of European investments, as well as for reducing regional disparities.

In the context of intensifying global competition for foreign capital and the necessity of strengthening Kazakhstan's position within the system of international investment cooperation, the development of new methodological approaches to assessing and stimulating investment interaction with the European Union becomes especially relevant. The significance of this task is further emphasized by the absence of a comprehensive methodology for assessing investment attractiveness in the Republic of Kazakhstan that could be applied at both the regional and national levels.

The relevance of the research is determined by its scientific and practical significance. The study addresses the pressing challenges of Kazakhstan's economic policy and contributes to the advancement of national economic thought. The novelty of the research lies in conducting the first comprehensive analysis of investment cooperation between Kazakhstan and the European Union using methods of spatial econometrics, which defines its scientific and practical value.

The purpose of the research is to develop scientifically grounded priorities and mechanisms for enhancing investment cooperation between the Republic of Kazakhstan and the European Union based on a comprehensive analysis of current trends, structural characteristics, and the spatial distribution of investment flows.

To achieve this goal, the following objectives are set, logically structured according to the main directions of scientific analysis:

– to define the concept, essence, and forms of investment cooperation in the context of globalization processes;

– to analyze methodological approaches to assessing investment potential and developing integrated indicators of regional development;

– to study the theoretical foundations of spatial autoregressive models, their classification, and the possibilities of their application in investment research;

– to examine the specifics of investment interaction between the Central Asian states and the European Union;

– to assess the impact of spatial autocorrelation on investment potential and actual inflows of investments into Kazakhstan's regions;

– to conduct an empirical verification of spatial autoregressive models based on regional data of the Republic of Kazakhstan;

– to analyze foreign direct investment (FDI) from the European Union to Kazakhstan, taking into account its dynamics, sectoral, and regional structure;

– to develop an integrated indicator – the "Investment Potential Index" – for Kazakhstan's regions;

– to identify priorities and mechanisms for enhancing the investment attractiveness of Kazakhstan's regions, taking into account the identified patterns and influencing factors.

Object of the research. Investment cooperation between the Republic of Kazakhstan and the European Union as a system of economic relations and

institutional interactions in the context of globalization and regional economic integration.

Subject of the research. The economic relations, patterns, and mechanisms of investment interaction between Kazakhstan and the European Union, manifested in the sectoral, regional, and spatial structure of foreign direct investment, the factors of investment attractiveness, and the institutional conditions of cooperation.

Theoretical and methodological foundation of the research is based on fundamental works in economic theory, modern econometrics, and spatial data analysis. The empirical base consists of data from international organizations, official statistics of Kazakhstan, and EU institutions, ensuring a representative analysis of the dynamics and structure of investment flows.

The methodological framework of the study includes a set of general scientific, statistical, and economic methods, including comparative analysis to identify regional disparities and econometric modeling to determine significant factors of investment activity. Special emphasis is placed on methods of spatial economics, which made it possible to reveal interregional dependencies in the distribution of investment flows based on national and international statistical data.

Scientific Novelty. A comprehensive methodology for analyzing investment cooperation between Kazakhstan and the European Union is proposed, integrating tools of spatial econometrics with classical economic and statistical methods. This approach makes it possible to account for interregional interconnections and spatial effects in the assessment of investment processes, which has not previously been applied in Kazakhstani research practice.

An original classification of EU investor countries has been developed based on cluster analysis, which made it possible to identify four strategic types of investment behavior: strategic investors and transit hubs, conservative investors, diversified small investors, and investors with distressed assets. This typology provides a foundation for developing differentiated measures for regulating investment flows and for adapting national investment policy to various models of foreign partner behavior.

For the first time in Kazakhstan, a set of spatial autoregressive models (SAR, SEM, SDM) has been applied to the study of regional investment processes. This made it possible to identify and quantitatively assess significant spatial interdependencies between the country's regions ($\rho = 0.54–0.58$), and to demonstrate the statistically significant influence of spatial effects on investment activity.

An integrated indicator – the "Investment Potential Index" of Kazakhstan's regions – has been constructed, taking into account not only traditional macroeconomic indicators but also innovation activity, institutional characteristics, and spatial interrelations. Unlike existing approaches, this index provides a holistic and multidimensional assessment of regional investment attractiveness.

The concept of differentiated regulation of investment flows is substantiated, based on the results of spatial analysis and clustering of investor countries. It implies a transition from fragmented sectoral planning to the formation of integrated

interregional investment programs that take into account both territorial effects and the behavioral specifics of different groups of investors.

Main Provisions Submitted for Defense:

– The author formulates and scientifically substantiates a definition of the concept "investment cooperation" as a strategically oriented, institutionally structured form of interaction between economic entities aimed at achieving synergistic effects and risk diversification, in contrast to the narrowly interpreted notion of direct investment.

– A comprehensive assessment of regional investment attractiveness has been developed, based on the parallel calculation of two integrated indices of investment potential: the IIP1 index, constructed according to the principle of balanced factor distribution to ensure comparability of their effects, and the IIP2 index, developed using the principal component method to reflect the objective structure of interrelations among indicators. The methodology has been verified through statistical analysis, including a *t*-test to test the hypothesis of equality of average investment volumes between a given region and the country as a whole. This approach made it possible to identify statistically significant deviations and provide a quantitative assessment of territorial asymmetry in investment activity.

– A methodology for differentiated regulation of foreign investments from EU countries has been proposed, based on their cluster analysis. This allows for a transition from uniform rules to targeted regimes – from monitoring transit jurisdictions to creating preferential conditions for "quality" investments in high-tech sectors.

– It is proposed to include in the Methodology for Assessing Regional Investment Attractiveness and in the Unified Investment Standard a mechanism for managing investment flows based on spatio-temporal modeling, providing institutional support for prioritizing projects with a high share of R&D expenditures through a system of targeted tax incentives. Implementation of this mechanism will increase the share of "quality" investments to 45% by 2029 and promote the development of innovation-oriented sectors of the economy.

– The analysis revealed systemic constraints within RK investment policy. As a solution, a transition to an integrated management system is proposed, based on three key initiatives: Porter's concept of smart specialization, a national regional ranking system, and a digital monitoring platform. Together, these measures will reduce spatial disparities and shift the policy framework from fragmented investment attraction toward strategic modernization.

Theoretical significance of the research lies in the development of the methodology for analyzing investment cooperation through the integration of spatial econometrics and cluster analysis methods.

Practical value of research is expressed in the development of applied tools for government bodies and in concrete recommendations for improving investment policy, adapted for national development institutions and regional authorities.

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Approbation of the research results. The main provisions and conclusions of the dissertation have been presented by the author at international and national scientific and practical conferences, and have been published in journals recommended by the CQASHE of the MSHE of the RK, as well as in an international journal indexed in the Scopus database.

The structure of the dissertation includes an introduction, three chapters, a conclusion, a list of references, and appendices. The total length is 167 pages. The work contains 2 diagrams, 13 graphs, 25 tables, and 1 schematic illustration. The reference list comprises 164 sources.