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INVESTMENTS IN FIXED ASSETS: CONTRIBUTION TO THE ECONOMIC GROWTH OF KAZAKHSTAN

The article examines the sectoral investment in fixed assets in Kazakhstan, explores the problem of imbalance in investment flows between economic sectors. The objective of the article is to ascertain the interrelation of production volumes, produced by industries of Kazakhstan, sectoral investments in fixed assets based on the development of an econometric model. The study identifies current trends and directions of investment flows, the share of sectoral investments to the contribution of industries to the country's GDP. Based on cluster analysis, groups of industries have been identified that the homogeneous in terms proportion of sectoral investment in fixed assets, output and contribution to GDP, as well as the correlation between indicators. It was found that the industries of the second cluster, which includes manufacturing and trade, afford the greatest return on investment. The economic-mathematical model was developed for determining the correlation between sectoral investment flows in fixed assets and the output volume of the various sectors of the economy in Kazakhstan. According to the Findings of the econometric model, the closeness of the statistical relationship was determined, so the elasticity coefficients between analyzed indicators were obtained. The rating of sectoral investment by their impact on output volumes was determined by calculating the values of regression coefficients. The results were obtained during the research are recommended for using in developing strategic directions for industry, implementing investment policy and the investment attractiveness of the Kazakhstani industries.

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Keywords: investment, econometric model, investment flows, fixed assets, correlation, regression, influence model.

Кілт сөздер: инвестициялық салымдар, эконометриялық модель, инвестициялық қамтамасыз ету, негізгі капитал, регрессия, корреляция, әсер ету моделі.

Ключевые слова: инвестиционные вложения, эконометрическая модель, инвестиционные потоки, основной капитал, регрессия, корреляция, модель влияния.

JEL classification: G31

Introduction. In order to maintain and accelerate economic growth, decisive structural economic reforms are needed in Kazakhstan with the creation of effective incentives to expand investments and enhance their positive effect. It is obvious that the activities of production sectors must be provided with financial resources, including investment ones, which must be aimed at financing the processes of economic diversification, the qualitative development of priority sectors of the economy and the expansion of the innovation sector. Even small investments can have a significant beneficial effect on the economic development of the country. The Concept of the Investment Policy of the Republic of Kazakhstan notes the need to raise investment in fixed assets to 25,1 of GDP and increase foreign direct investment inflows to \$25,5 billion by 2026 [1]. These investment flows will be directed to priority sectors, among which industries with the greatest contribution to the production of goods with high added value and towards the advancement of the national economy have been identified.

The task of ensuring an optimal level of investment that meets the needs and capabilities of each sector of the economy is very relevant and significant. The strong demand for investment resources is evidenced by the high depreciation rate of fixed assets, which reached 50-70% in certain sectors of Kazakhstan's economy. Meanwhile, investment in fixed assets as percentage of the country's GDP do not exceed 18% [2].

The necessity to address investment support challenges across industries, reduce sectoral imbalances, and harness substantial investment potential in economic sector development and transformation processes necessitates a thorough reconsideration of specificities, methods, and tools for regulating investment flows.

This underscores the importance of researching a new investment policy model capable of generating positive macroeconomic impacts and establishing robust foundations for sustainable economic growth.

The relevance of the research topic, the presence of unresolved problems and the potential creative role of investments in ensuring high-quality economic growth and structural shifts in the national economy, of course, requires a deep rethinking of the specifics, methods and tools for regulating investment investments and necessitates the search for a fundamentally new model of investment support for industries capable of generating the necessary macroeconomic effects and creating solid foundations for stable growth economy.

The objective of the study is to determine the interrelation between production volumes in economic sectors in Kazakhstan and investment flows in fixed capital based on the development of an econometric model. The formation of a well-founded assessment of the influence of sectoral investments in fixed assets will give an opportunity for formulating the recommendations for improving investment policy and increasing the investment attractiveness of industries.

The methodological foundation of the article drew upon research findings from both domestic and international scholars specializing in theoretical concepts of economic growth and investment, as well as the regulation of investment flows across different sectors. The study employed scientific methods such as statistical analysis, and econometric modeling.

Statistical information from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, other domestic and foreign databases and international organizations was used as the information base of the study. When developing an econometric model, indicators of economic development of Kazakhstan, development of industries, investment investments and other necessary indicators for the period 2003-2023 were used.

Literature review. There are different points of view among researchers about the impact of investments on macroeconomic indicators, including GDP growth. Overall, the research affirms that investments contribute positively to economic development [3]. In the work of Afonso A., St. Aubyn M. to study the impact and effects of displacement and inflow, a VAR analysis was used for 17 OECD countries, which revealed the positive impact of public investment on economic growth in most countries, the positive effect of private investment on economic growth in all the studied countries, as well as the presence of displacement and inflow effects [4].

A study by Sağdıç E.N. et al. Confirms the significant impact of government investment incentives on the growth of regions and industries [5]. Exemption from customs duties and VAT, reduction of corporate tax, investments in projects, land allocation, infrastructure support, etc. were considered as investment incentives. The authors focused on identifying the effectiveness of regional investment incentives in terms of regional development of industries based on the use of panel data analysis and the creation of four models for assessing investment incentives for the economies of regions, agricultural, industrial and service sectors.

Kazakhstani researchers Esdauletova A.M., Demeuov N.B. note that a certain model of investment policy has been formed in our republic, based on the regulatory framework and institutional environment, which has enhanced the environment for investment and maintained the investment attractiveness of the economy [6]. In turn, Temirbayev B., Zagal K., Akhmetzhanova S., based on the calculation of the multiplier of the output of the intersectoral balance, assessed the effectiveness of investments in the context of industries, revealing that investments in the healthcare and social services sectors bring the greatest return [7].

It is important to mention that the existing empirical research mainly focuses on different research periods, data sets, economic indicators, countries, as well as various econometric approaches to studying the impact of investment components on the economic progress of nations. Although there are many studies on the impact of investments on economic development, existing studies do not address the problem of sectoral imbalance in investment flows, which leads to an overabundance of investment in some industries and a lack of investment in others. Given that each industry has its own optimal level of investment, which brings the greatest positive effect, further investigation is required in evaluating the impact of industry investments, as well as finding out which models and tools should be used in planning and managing investment flows to minimize imbalances in the investment provision of industries.

The main part. Of all the factors contributing to economic growth, investment in fixed assets stands out, as higher investments in this area result in the modernization of production facilities and as expansion of production capacities across companies and economic sectors. Figure 1 illustrates key indicators related to investments in fixed capital in Kazakhstan.

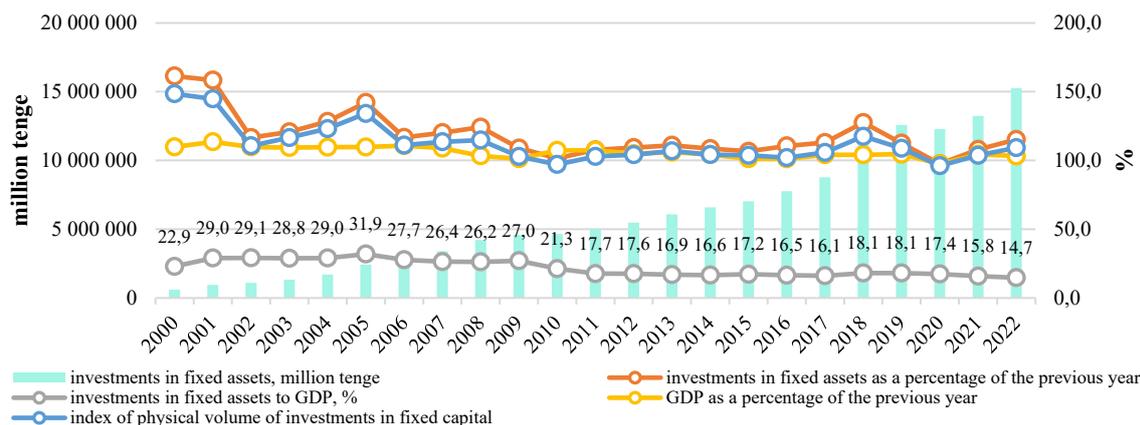


Figure 1. Investment in capital assets in the Republic of Kazakhstan for the period 2000-2022*

* Compiled by the authors based on data provided by the National Statistics Bureau of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

The volume of investments in fixed assets for the period 2000-2022 increased from 595.6 billion tenge to 15.2 trillion tenge or more than 25 times. The rate of investment in Kazakhstan over the period 2000-2022 averaged 116.6%. The most significant growth was observed in 2001 and in 2004-2005 during the period of rising oil prices. It should be noted that only in 2010-2011 the GDP growth rate outpaced the growth rate of investments in fixed assets. This indicates the predominantly extensive development of our country's economy.

During the analyzed period 2000-2022, the share of investments in fixed assets in Kazakhstan's GDP varies from a fairly high level of 27-32% in 2001-2009 to a low level of 14.7-18.1% from 2011 to the present. The downward trend of this indicator is noticeable.

Analyzing the trends in the growth rate of investment in fixed assets (expressed as a percentage change from the previous year) and their share in GDP, it becomes evident that Kazakhstan has developed a notable growth potential fueled by increased investment volumes in the economy. However, concurrent with the rise in fixed assets investments, there has been a decline in labor productivity and product complexity. This diminishes the positive impact of investments on overall economic growth.

Analyzing the dynamics of the growth rate of investment in fixed assets (in % compared to the previous year) and the share of such investments in GDP, it should be noted that in Kazakhstan a certain growth potential has been formed, given by the volume of investments in the economy. However, in the context of increasing investment in fixed assets, there is a decrease in labor productivity and the complexity of products, which leads to a decrease in the positive impact of investments on economic growth.

The expanded distribution of investment in fixed assets by functional categories for the period 2000-2022 is shown in Figure 2. The intensity of investment processes in the areas of use is significantly differentiated: in some sectors of the economy, the volume of investment resources and the dynamics of their increase have a positive trend, in others, on the contrary, there is a decrease in investment volumes.

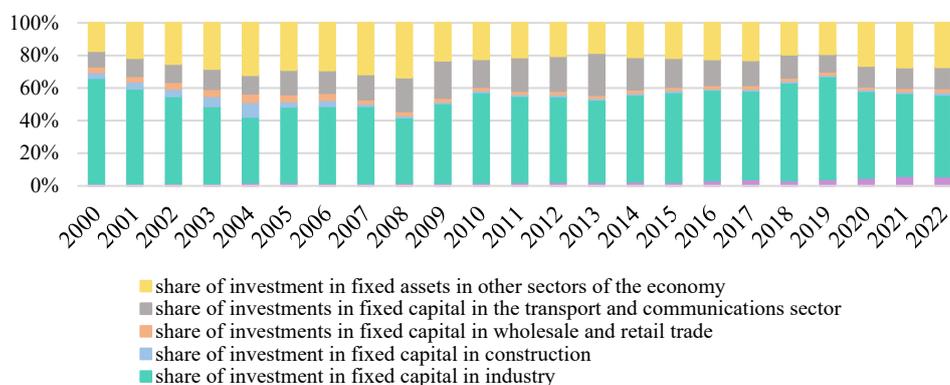


Figure 2. The composition of investment of fixed assets in the Republic of Kazakhstan by areas of use for 2000-2022*

* Compiled by the authors based on data provided by the National Statistics Bureau of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

The sectoral distribution of investments in fixed assets in Kazakhstan has undergone notable changes. The most substantial increase has been observed in the non-manufacturing sector, particularly in real estate, where the share of investments has risen from 9,75% to 19,3%. Additionally, investments in transport and communications have increased to 12,6%, and investments in the agricultural sector have risen to 5,6%.

On the contrary, investment in the industrial sector from 2000 to 2022 decreased significantly from 64,8% to 48,4%, but they remain dominant in the overall sum of investments. In 2022, the mining industry accounted for the largest share of investments in fixed assets (29,2%) compared to other sectors. This includes investments in the extraction of crude oil and natural gas, which constituted 22,3% of total investments. The manufacturing received 10,4%, while electric power, gas, steam and other sectors combined received 8,8%. The substantial investment in fixed capital for the extraction of crude oil and natural gas can be attributed to the sector's attractiveness amid high global energy prices. This sector has a considerable influence on the Kazakh economy.

The analysis of statistical data by economic sectors revealed the proportion of investment resources allocated to fixed capital in the output of goods/services in the basic economic sectors of the Republic of Kazakhstan (Table 1). The industries with a low ratio between investment in fixed capital and contribution to GDP on average for 2013-2022 include the following industries: construction (2.72%), trade (2.06%), agriculture (7.66%) and manufacturing (10.4%). The largest share of investments in the industry's contribution to GDP over the analyzed period was recorded in the mining industry and the transport and communications sector.

Table 1

The ratio of fixed capital investment and the contribution of industries to the GDP of the Republic of Kazakhstan for the period 2013-2022*

| Branch of the economy | The ratio of investment flows to fixed assets and the contribution of the industry to GDP, % | | | | | | | | | | |
|------------------------------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------------|
| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | on average for 2013-2022 |
| agricultural industry | 4,73 | 5,51 | 4,96 | 6,89 | 8,56 | 8,16 | 9,61 | 8,92 | 10,28 | 8,97 | 7,66 |
| mining industry | 16,54 | 17,95 | 30,53 | 29,05 | 25,59 | 30,21 | 34,74 | 33,55 | 20,63 | 17,89 | 25,67 |
| manufacturing industry | 11,74 | 11,96 | 13,87 | 10,91 | 10,17 | 11,94 | 8,79 | 8,15 | 9,00 | 7,50 | 10,40 |
| construction | 2,47 | 2,60 | 3,39 | 1,95 | 2,65 | 2,96 | 2,76 | 2,61 | 2,29 | 3,54 | 2,72 |
| trading | 2,08 | 2,15 | 2,10 | 1,96 | 2,33 | 2,18 | 2,07 | 1,64 | 1,97 | 2,12 | 2,06 |
| transport and communications | 33,66 | 24,91 | 21,44 | 18,64 | 18,57 | 18,69 | 14,14 | 19,29 | 18,19 | 20,26 | 20,78 |

* Compiled by the authors

As a result of the cluster analysis, three groups of industries were identified that are internally homogeneous in terms of the studied set of indicators of investment activity. The average values of industry clustering indicators are shown in Table 2.

Table 2

Average values of clustering indicators of the sectors of the economy of the Republic of Kazakhstan for the period 2013-2022*

| Cluster | Industries | Average contribution to GDP, million tenge | The share of the cluster in GDP, % | Average investments in fixed assets, million tenge | The share of the cluster in fixed capital investments, % | The ratio of investment and contribution to GDP, % |
|---------|--------------------------------------|--|------------------------------------|--|--|--|
| 1 | mining, transport and communications | 20911043,46 | 34,41 | 4850549,40 | 48,15 | 23,20 |
| 2 | manufacturing industry, trade | 20762328,00 | 34,17 | 1256239,30 | 12,47 | 6,05 |
| 3 | agriculture, construction | 8994647,79 | 14,80 | 522666,40 | 5,19 | 5,81 |

* Compiled by the authors

An analysis of the cumulative average contribution of the industries included in the first cluster to Kazakhstan's GDP allows us to conclude that, on average, in the period 2013-2022, the mining industry and the transport and communications sector provided 34.4% of the contribution to GDP annually. In addition, more than 48% of all investment were directed to the first cluster. There is a high ratio of fixed assets' investment and contribution to GDP (23,2%) in the industries of the first cluster.

The second cluster is characterized by an almost similar aggregate average contribution of industries to GDP at the level of 34.2%. Manufacturing and trade are located in this cluster. The level of fixed assets' investments of the second cluster was 12.5%, and the ratio of investments and contributions to GDP was 6.05%. Consequently, the return on investment in the sectors of the second cluster is significantly higher compared to the first cluster.

The sectors of the third cluster – agriculture and construction - provide 14.8% of the country's GDP. They are characterized by low values of the part of fixed capital investments (5.19%) and the ratio of investments and contributions to GDP (5,81%).

Thus, based on the calculation of indicators of clustering of sectors of the Kazakh economy, three groups of industries with different levels of return on investment were identified.

As noted in the study by Kazakhstani authors, a detailed analysis of trend and structure of investments by economic sectors is becoming a key tool of investment policy, contributing to the alignment of imbalances, minimizing risks, taking into account the main trends in the industry and investment activity [8].

To identify the presence of a relationship between the sectoral investment in fixed capital and the output of goods/services, an economic and mathematical model was built. Statistical data from the Bureau of National Statistics of ASPR of the Republic of Kazakhstan in the period 2000-2022 were taken as initial data [9]. As a result of the construction of the econometric model, correlation coefficients were obtained, confirming the existence of a significant correlation between the analyzed indicators (Table 3).

Table 3

The mail results of the correlation and regression analysis*

| Investment in fixed assets | Correlation coefficient | R ² | P- meaning | Regression coefficient | Coefficient of elasticity | Rating of the impact on the volume of output |
|---------------------------------|-------------------------|----------------|------------|------------------------|---------------------------|--|
| In agriculture | 0,98 | 0,96 | 1,467E-05 | 9,77 | 0,72 | 3 |
| In mining industry | 0,89 | 0,79 | 1,515E-08 | 3,62 | 0,87 | 5 |
| In manufacturing industry | 0,97 | 0,93 | 5,3633E-14 | 11,64 | 1,17 | 1 |
| In construction | 0,68 | 0,47 | 0,00031 | 26,41 | 0,93 | 6 |
| In trade | 0,96 | 0,91 | 1,133E-12 | 0,06 | 1,39 | 2 |
| In transport and communications | 0,83 | 0,70 | 3,167E-05 | 5,17 | 1,29 | 4 |

* Compiled by the authors

The results of regression analysis show that investments in fixed assets have a strong impact on the volume of production and output of products/services in economic sectors. Thus, the coefficient of determination (R²) demonstrates that 96% of variation in agricultural output depends on the variation in fixed capital investment of this sector. The remaining 4% of the variation is attributed to other factors. The coefficient of determination, which measures the relationship between production volumes in the mining and manufacturing industries, gross output in transport and communication services, retail trade and investment in fixed capital across these sectors, indicates a strong statistical relationship. However, the statistical relationship between the volume of construction work performed and investment in fixed assets in construction was found to be insignificant. Nevertheless, the P-value of the regression analysis are less than 0,05, demonstrating the statistical significance and reliability of the obtained coefficient.

The strong correlation between investments in fixed assets and economic sector output suggests a potential for predicting GDP volume. For instance, a 1 million tenge increase in sectoral investments in fixed assets could potentially lead to the following increases in production volume 11,6 million tenge in the manufacturing industry, 9,8 million tenge in agriculture sector, 3,6 million tenge in transport and communication.

The closeness of the relationship between investments in fixed assets and the volume of production/output of products/services by economic sector is quite high and can be used to predict the volume of GDP. Thus, an increase sectoral investments in fixed assets by 1 million tenge may lead to an increase in the volume of production: in manufacturing industry - 11,6 million tenge, in agriculture sector - 9.8 million tenge, in mining industry - 3.6 million tenge, in transport and communication - 5.2 million tenge.

The calculated elasticity coefficients allowed us to obtain the following results, that an uptick in the volume of investments in fixed assets for each industry by 1% with unchanged values of all other factors will lead to an increase:

- agricultural output by 0.72%;
- output of mining industry by 0.87%;
- output of manufacturing industry by 1.17%;
- output of construction by 0.93%;
- retail trade volumes by 1.39%;
- gross output of transport and communication services by 1.29%.

Summarizing the results of econometric modeling we determine the influence of investments on output by economic sectors. Thus, an increase in investments in the manufacturing industry is of primary importance for the economic development of Kazakhstan.

Conclusion. As a result of the conducted research, it was revealed that investments in fixed assets tend to increase. However, the level of investment in GDP is declining. The rate of investment growth outstrip the GDP growth, which actually confirms the extensive development of the Kazakhstani economy. The positive influence of investment is imperceptible due to low level of labor productivity and the intricacy of the economy. The disparities have been identified in the direction of sectoral investment flows due to the investment attractiveness of the extractive sector.

The highest ratio of investments in fixed assets/contribution to GDP was revealed in the mining industry and in the transport and communications sector. Based on the computation of metric of clustering of sectors of the Kazakh economy, three groups of industries with different levels of return on investment were identified. The industries of the second cluster, which included manufacturing and trade, bring the greatest return on investment.

The findings from correlation and regression analysis indicate that investment positively influence the development of economic sectors and the output of products/services. The rating of industries was based on the degree of influence of investments on each sector's contribution to the country's GDP, revealing that increasing investments in fixed assets within the manufacturing industry will have the most significant impact on economic growth.

In the future, future research may be focused on improving the methodology for planning and forecasting investment flows to eliminate existing imbalances in sectoral investments, as well as on forming a set of recommendations to reduce sectoral risks.

REFERENCES

1. The concept of investment policy of the Republic of Kazakhstan until 2026, approved by Decree of the Government of the Republic of Kazakhstan dated 15.07.2022 No. 482 [Electronic resource]. – URL: <https://adilet.zan.kz/rus/docs/P2200000482>.
2. Bureau of National Statistics Agency for Strategic Planning and Reforms of the Republic of Kazakhstan. On investments in fixed capital [Electronic resource]. – URL: <https://stat.gov.kz/en/industries/business-statistics/stat-invest/>.
3. Makuyana G., Odhiambo N.M. Public and Private Investment and Economic Growth: An Empirical Investigation // *Studia Universitatis Babeş-Bolyai Oeconomica, Sciend.* – 2018. – №63(2). – P. 87-106. – DOI: 10.2478/subboec-2018-0010.
4. Afonso A., St. Aubyn M. Economic growth, public, and private investment returns in 17 OECD economies // *Port Econ J.* – 2019. – №18. – P. 47-65. – DOI: 10.1007/s10258-018-0143-7.
5. Sağdıç E.N., Karas G., Yildiz F. The Impact of Investment Incentives on Regional Economic Growth in Turkey: An Empirical Analysis // *Sayıstay Dergisi.* – 2021. – №32 (121). – P. 39-64. – DOI: 10.52836/sayıstay.966483.

6. Esdauletova A.M., Demeuov N.B. Investment policy of Kazakhstan: main directions and growth prospects [Electronic resource] // Post-Soviet studies. – 2021. – №7(5). – P. 741-753. – URL: <https://cyberleninka.ru/article/n/investitsionnaya-politika-kazahstana-osnovnye-napravleniya-i-perspektivy-rosta>.
7. Temirbaev B., Zagal K., Ahmetzhanova S. Investment climate in Kazakhstan: changing trends // Kazakhstan – Spektr. – 2021. – №4. – P. 64-82. – DOI: 10.52536/2415-8216.2021-4.05.
8. Elchibaeva A.A., Bokenchin K.K., Bokenchina L.K., Kodashева G.S. Analysis of management of investment activities of companies in the Republic of Kazakhstan // Bulletin of the Kazakh University of Economics, Finance and International Trade. – 2023. – №4(53). – P. 151-158. – DOI: 10.52260/2304-7216.2023.4(53).18.
9. Bureau of National Statistics Agency for Strategic Planning and Reforms of the Republic of Kazakhstan. Socio-economic development of the Republic of Kazakhstan [Electronic resource]. – URL: <https://stat.gov.kz/en/publication/collections/>.

REFERENCES

1. The concept of investment policy of the Republic of Kazakhstan until 2026, approved by Decree of the Government of the Republic of Kazakhstan dated 15.07.2022 No. 482 [Electronic resource]. – URL: <https://adilet.zan.kz/rus/docs/P2200000482>.
2. Bureau of National Statistics Agency for Strategic Planning and Reforms of the Republic of Kazakhstan. On investments in fixed capital [Electronic resource]. – URL: <https://stat.gov.kz/en/industries/business-statistics/stat-invest/>.
3. Makuyana G., Odhiambo N.M. Public and Private Investment and Economic Growth: An Empirical Investigation // Studia Universitatis Babeş-Bolyai Oeconomica, Sciendo. – 2018. – №63(2). – P. 87-106. – DOI: 10.2478/subboec-2018-0010.
4. Afonso A., St. Aubyn M. Economic growth, public, and private investment returns in 17 OECD economies // Port Econ J. – 2019. – №18. – P. 47-65. – DOI: 10.1007/s10258-018-0143-7.
5. Sağdıç E.N., Karas G., Yıldız F. The Impact of Investment Incentives on Regional Economic Growth in Turkey: An Empirical Analysis // Sayistay Dergisi. – 2021. – №32 (121). – P. 39-64. – DOI: 10.52836/sayistay.966483.
6. Esdauletova A.M., Demeuov N.B. Investment policy of Kazakhstan: main directions and growth prospects [Electronic resource] // Post-Soviet studies. – 2021. – №7(5). – P. 741-753. – URL: <https://cyberleninka.ru/article/n/investitsionnaya-politika-kazahstana-osnovnye-napravleniya-i-perspektivy-rosta>.
7. Temirbaev B., Zagal K., Ahmetzhanova S. Investment climate in Kazakhstan: changing trends // Kazakhstan – Spektr. – 2021. – №4. – P. 64-82. – DOI: 10.52536/2415-8216.2021-4.05.
8. Elchibaeva A.A., Bokenchin K.K., Bokenchina L.K., Kodashева G.S. Analysis of management of investment activities of companies in the Republic of Kazakhstan // Bulletin of the Kazakh University of Economics, Finance and International Trade. – 2023. – №4(53). – P. 151-158. – DOI: 10.52260/2304-7216.2023.4(53).18.
9. Bureau of National Statistics Agency for Strategic Planning and Reforms of the Republic of Kazakhstan. Socio-economic development of the Republic of Kazakhstan [Electronic resource]. – URL: <https://stat.gov.kz/en/publication/collections/>.

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НЕГІЗГІ КАПИТАЛҒА ИНВЕСТИЦИЯЛАР: ҚАЗАҚСТАННЫҢ ЭКОНОМИКАЛЫҚ ДАМУЫНА ҚОСУ ҮЛЕСІ

Аңдатпа

Мақалада салалық бөліністе Қазақстан Республикасындағы негізгі капиталға салынған инвестициялардың құрылымы зерттеледі, инвестициялық ағындардағы салалық теңгерімсіздік проблемасы қарастырылады. Зерттеудің мақсаты-Қазақстан экономикасы салаларындағы өндіріс көлемдерінің және негізгі капиталға инвестициялардың эконометрикалық модельді әзірлеу негізінде өзара байланысының деңгейін анықтау. Зерттеуде негізгі капиталға инвестицияларды салудың қазіргі тенденциялары мен бағыттары, инвестициялар үлесінің елдің ЖІӨ-дегі салалардың үлесіне арақатынасы анықталды. Кластерлік талдау негізінде негізгі капиталға инвестициялардың деңгейі мен үлесі, өнім көлемі мен ЖІӨ-ге салым,

сондай-ақ осы көрсеткіштердің арақатынасы бойынша біртекті салалар топтары айқындалды. Инвестициялардың ең үлкен қайтарымы өңдеу өнеркәсібі мен сауда кіретін екінші кластердің салалары екені анықталды. Негізгі капиталға инвестициялар көлемі мен экономика салаларындағы өндіріс көлемі арасындағы өзара байланысты айқындау үшін экономикалық-математикалық модель әзірленді, оның негізінде статистикалық байланыстың тығыздығы айқындалды және зерттелетін көрсеткіштердің серпімділік коэффициенттері алынды. Алынған коэффициенттердің мәні салалар бойынша шығарылым көлеміне инвестициялардың әсер ету рейтингін анықтауға мүмкіндік берді. Зерттеу нәтижелері салалық дамудың стратегиялық бағыттарын әзірлеу, инвестициялық саясатты іске асыру және Қазақстан экономикасы салаларының инвестициялық тартымдылығын арттыру кезінде пайдаланылуы мүмкін.

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**ИНВЕСТИЦИИ В ОСНОВНОЙ КАПИТАЛ:
ВКЛАД В ЭКОНОМИЧЕСКОЕ РАЗВИТИЕ КАЗАХСТАНА**

Аннотация

В статье исследуется структура инвестиций в основной капитал в Республике Казахстан в отраслевом разрезе, рассматривается проблема отраслевого дисбаланса в инвестиционных потоках. Цель исследования – определить уровень взаимосвязи объемов производства в отраслях экономики Казахстана и инвестиций в основной капитал основе разработки эконометрической модели. В исследовании выявлены современные тенденции и направления вложения инвестиций в основной капитал, соотношение доли инвестиций к вкладу отраслей в ВВП страны. На основе кластерного анализа определены группы отраслей, однородных по уровню и доле инвестиций в основной капитал, объему выпуска и вкладу в ВВП, а также соотношению этих показателей. Выявлено, что наибольшую отдачу от инвестиций приносят отрасли второго кластера, куда были отнесены обрабатывающая промышленность и торговля. Для определения взаимосвязи между объемами инвестиций в основной капитал и объемом производства в отраслях экономики разработана экономико-математическая модель, на основе которой была определена теснота статистической связи и получены коэффициенты эластичности исследуемых показателей. Значения полученных коэффициентов позволили определить рейтинг влияния инвестиций на объемы выпуска по отраслям. Результаты исследования могут быть использованы при разработке стратегических направлений отраслевого развития, реализации инвестиционной политики и повышении инвестиционной привлекательности отраслей экономики Казахстана.

