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# Strategic Territorial Development Management (on the Example of the Karaganda Region)

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## ABSTRACT

*The relevance of research. The effectiveness of the implementation of strategic plans is the most important condition for the implementation of strategic planning systems, particularly at the level of the territory, as the closest to the population. This determines the relevance of improving the quality and efficiency of strategic management and development of territories, where great importance is attached to small and medium-sized businesses in the strategic planning system, which is not just a separate area of development of the regional economy, taking into account sectoral and territorial factors, but also a tool for reforming the entire socio-economical system, an important factor in the stabilization and development of the social sphere, services, improving the quality of life of the population. Purpose of the study. In the conditions of modern realities, effective development of territories is impossible without the use of tools for innovative modernization. At the same time, it is advisable to develop strategic directions for the development of the territory on the basis of their classification according to the level of development of innovative potential. The article generalizes the system of indicators characterizing the multidirectional development of territories based on the materials of the Karaganda region. The object of the research is the regional economic environment influencing the development of the territory of the Karaganda region. The subject of the research is indicators that reflect the interests of the main participants in regional strategic development. Research methodology and methods. The research methodology is a set of methods, mechanisms, principles, measures to improve the efficiency of the development of single-industry towns of strategic importance. The methodological basis of the study was the dialectical method of analyzing economic processes and a systematic*

*approach. To solve the set tasks, the work used general scientific methods of analysis and synthesis, the unity of historical and logical, inductive and deductive, abstraction, a graphical method for presenting the results. Research results. When conducting regression analysis, the author, based on the indicators of the mining industry (quarrying,), as well as the volume of innovative products, showed the influence of these factors on the GRP of the Karaganda region and their predicted values. As a result, it was found that in connection with the development of strategic management and planning, the relationship of strategic priorities of regional and industrial development, the rates of socio-economic development of territories are increasing, in particular, based on the materials of the Karaganda region..*

## INTRODUCTION

Today, the most popular practice of modern state regulation and economic science in general is the strategic support of the socio-economic development of the territory. Strategic development management has long gone beyond the framework of state regulation and has become a complex multifaceted process that takes into account the interests of the public sector, the population and economic entities of various forms of ownership and economic structures. In the context of increasing trends in the market model of the economy, the relevance of these processes is of particular importance.

The development of the national and regional economy, the development of the modern world economy, conditioned by such factors as the growing competition in international markets, the stable differentiation of consumer preferences and demands, the development of the modern innovative reproduction process of the market and its cyclical nature, indicated the need to improve the methodological support for the formation and development of long-term strategic plans. socio-economic development of territories.

The Sustainable Development Goals are a call to action from all countries aimed at improving the well-being and protecting the interests of citizens. The state recognizes that measures to eradicate poverty should be taken in parallel with efforts to increase economic growth and address a range of issues in the field of education, health care, social protection and employment, as well as combating climate change and protecting the environment.

The strategic development of territories is based on innovative management approaches and is subject to change based on innovation. In the opinion of most scientists, the principles of researching innovation systems at the state and regional levels are similar, but nevertheless, a more detailed approach is inherent in the analysis of the innovation system of a region (or territory), which makes it possible to take into account the specific features of each separately represented territorial unit, and, as a result, the ability to create objective conditions for managing the entire system.

## 1. LITERATURE REVIEW

The most important direction of the spatial development of territories is the development of cities, in which about 70% of the population lives. It is cities that can become points of growth and attraction for the adjacent territories, stimulating the effective resettlement of citizens, the development of additional areas of economic activity, the creation of centers for trade and the provision of services. However, the management of such development requires the use of methods and approaches of strategic planning, in particular spatial development (Miroshnikov, 2019).

According to Zhikharevich B.S., Pribyshin T.K., the aspects of spatial development of territories include the issues of population placement and economic activity on the territory, safety and comfort of the living environment, space connectivity, transport accessibility (2019). Other authors believe that when developing a strategy for the socio-economic development of a territory, it is necessary to highlight the direction associated with social services (social protection) of citizens (Andreeva and Sukhoveeva, 2019).

Currently, there is a need for the development of a strategic planning system and its linking with the system for monitoring the development of territories. The main directions of development of strategic planning mechanisms include the following: a systematic approach to strategic goal-setting at all levels of management; creation of a model for assessing the conditions and limitations of territorial development strategies and analytical tools for making strategic decisions (Semenov and Filatova, 2017).

Sustainable economic development of territories can be achieved through the formation of a favorable innovation environment in them, contributing to the intensification of investment activities and allowing to ensure the effective use of innovative potential in order to increase competitiveness and accelerate socio-economic development. According to A. Novoselov and A. Faleev (2020), strategic planning and management of the country and its regions is a process that includes the definition of long-term goals of socio-economic development, the problems associated with their achievement, the allocation of priority areas for economic development, the principles underlying the management mechanism, as well as the tools of the management mechanism and the system of institutions that ensure the implementation of the management decisions taken.

The formation of methodological approaches to the study of the problems of strategic planning and management of the regional economy takes place in several directions:

- study of the problems of strategic planning of the processes of formation of the regional economy, as well as its individual elements (Seltzer and Carbonell, 2011).
- the development of economic relations in the regional system, on the one hand, and the diffusion of innovations in the regions, on the other, which led to the appearance of works devoted to the analysis of interrelationships in the planning of regional innovations and investments (Camagni and Capello, 2013).
- arose under the influence of the processes of economic globalization and includes a large number of works devoted to planning and managing the processes of regional development within the framework of the world economic system (Stiglitz, 2003; Pejanovic, 2020).
- includes research based on a system-integrated approach to strategic planning for the development of the regional economy (Bennett, 2012).

At the present stage of development of productive forces and production relations, the region acts as a relatively isolated economic entity with a set of rights and responsibility to other entities. The problems of improving the methodological tools of strategic planning and resource provision of socio-economic development of territories were considered in the works of many scientists (Makovkina and Dovbiy, 2017). Single-industry towns of Kazakhstan occupy a significant place in the country's economy and at the same time are an area of increased risk due to the significant dependence of their socio-economic situation on the specialization of the region and the state of the city-forming enterprise.

The expansion of new types of economic activity of the territories should occur due to the growth of small and medium-sized innovative businesses, which will subsequently lead to the formation of an attractive innovation climate. Such an expansion should take place by creating favorable conditions for entrepreneurs by providing various subsidies to these entities registered and operating in areas of priority for the socio-economic development of single-industry towns. It should be noted that it is necessary to organize new and develop existing enterprises in promising areas (for the implementation of the import substitution policy). The main instrument for the implementation of such activities is investment projects of various scales and municipal programs.

Strategies for the socio-economical development of the regions should be based on a comprehensive analysis of the existing level of industrial development of the region, prospects and mechanisms for the development of industrial potential, including the determination of the sectoral specifics of the region's industry, planned statistical indicators in terms of the growth of volumes of innovative and high-tech products (Inshakov, 2017). In accordance with the research of E Petrenko (2019) work is currently underway to enhance the influence of business needs on the development of research work, in particular, the formation of primary tasks is underway to update the system of interaction between science and entrepreneurship, the creation of a single network of testing laboratories, business development plans, implementation of digital and energy efficient technologies.

In her article, O.B. Mezenina and D.A. Shapovalov (2019), emphasize the issues of the development of territories, where the development of territories should be a process of qualitative change in the social and economic spheres, which does not worsen the state of the environment and leads to an improvement in the living conditions of the population. The need to solve problems and improve the management of the development of the territory requires a comprehensive assessment of the directions and results of using the territory of the subject.

In the works of I.N. Ilyina (2013), Lovyagina V.F., Musich Yu.A. (2011) and Lytkina A.I.(2012), the level of socio-economic development of urban areas, single-industry towns is analyzed with their allocation into groups according to the possibility of implementing various directions of innovative development, the international experience of solving such problems is studied, the effectiveness of state support for single-industry towns is assessed and directions for improving the mechanisms of such support in part of attracting long-term sources of investment financing.

In the scientific report "Policy of regional development as a tool for overcoming stagnation and ensuring innovative development of the economy" E.M. Buchwald notes. that a special "cut" of the integration of the municipal level of management into the strategic planning system as the main toolkit and even the leading institution for solving the country's socio-economic problems on the long-term horizon is the problems of small and "mono" cities. The future of small towns is one of those systemic problems, the successful solution of which determines the strategic perspective of Russia as an economic, socio-political and even national-state integrity (Bukhvald, 2014).

World experience testifies to the effectiveness of strategic documents in establishing an effective mechanism for the development of municipalities. Practically in all European countries, in one form or another, the practice of developing strategic documents is used as a means of balanced development of territorial systems of different levels. The experience of strategic planning, implemented in other countries, gives an idea of the socio-economic processes, problems and achievements of public authorities and local governments in the field of sustainable long-term development of territories (Noskova, 2019).

In their studies, Kookueva, V.V., & Tsertseil, Yu.S. give an overview of foreign experience of cluster policy at the state level in various countries, where models of public administration of innovative clusters are analyzed with the aim of developing the economy of the territories (2019). An important component of the country's economic development is innovative activity, the level of development of which creates the basis for the sustainability of economic growth, contributes to the implementation of the strategic objectives of the development of the territory.

## 2. METHODOLOGY

The sustainable development of regions in the context of the formation of an innovative economy requires local self-government to defend the interests of the population of its territory, develop and implement mechanisms and tools of democratic institutions. One of these tools is a strategic approach to the management of territorial entities, which in market conditions must independently determine the goals of socio-economic development, adapt to changes in the conditions of not only the internal, but also the external environment. Planning processes are complicated both by the high dynamics and uncertainty of the external environment, and by the insufficient level of theoretical developments and tools for preparing and implementing strategies.

The effectiveness of the strategic management of territories largely depends on the results of the operation of individual enterprises and, accordingly, the preservation and development of the economic potential of the region, as well as the level of material well-being and quality of life of the population. Only systematic research conducted on the basis of combining different approaches to analysis and strategic management decision-making, as well as the use of various mathematical methods, modern computer technology and application software packages, make it possible to comprehensively study the situation and obtain objective quantitative estimates of the functioning of social and economic subsystems operating in the region. Such studies will allow us to evaluate the results achieved, identify reserves, and make

informed strategic decisions to improve and improve the efficiency of both individual subsystems and the regional system as a whole.

In this situation, it is very important to develop scientific tools for a comprehensive assessment of the socio-economic development of the territory. Both the regulatory framework for such an assessment and the creation of methodological approaches for spatial analysis of the state of the social sphere and economy within the region at the regional level are necessary. It is necessary to develop methodological foundations for a comprehensive assessment of intraregional social development of territories. From these positions, it is also necessary to develop theoretical and methodological aspects of managing various sectors of the region's economy.

## 3.RESEARCH QUESTIONS.

In the conditions of modern realities, effective development of territories is impossible without the use of strategic management and planning tools. At the same time, it is advisable to develop strategic directions for the development of territories based on the level of development of the innovative potential of the region, where it is necessary to take into account the individual characteristics of a particular region and the possibility of regulating the innovation policy in the process of its implementation.

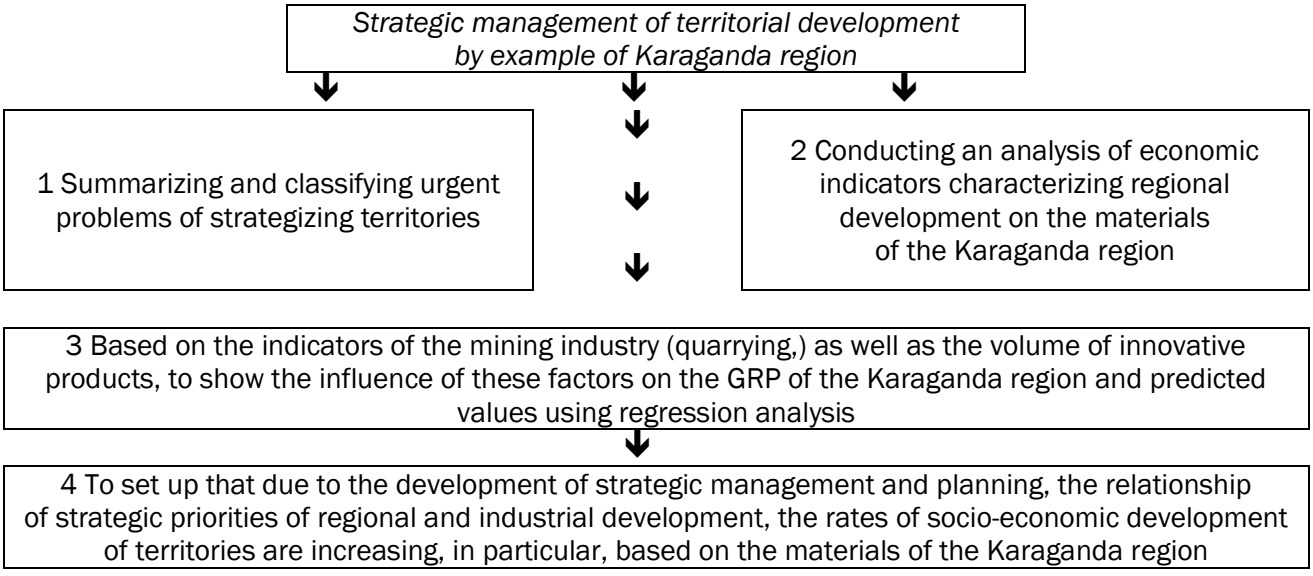


**Figure 1**. Research questions

**Scientific novelty**. The fact of significant differentiation of the regions of the Republic of Kazakhstan in terms of the level of socio-economic development, resource, personnel, production and other potentials, the activity of innovative activity and the effectiveness of innovative processes necessitates a thorough study of the issues of management and development of territories. The author found that in connection with the development of strategic management and planning, the relationship of strategic priorities of regional and industrial development, the rates of socio-economic development of territories are increasing, in particular, based on the materials of the Karaganda region.

Karaganda region is located in the central part of Kazakhstan. The region is the largest region in terms of area in the republic. Karaganda region is one of the key industrial regions of the country. First of all, the industry of the region is represented by a powerful mining and metallurgical complex. The Karaganda coal basin is the main supplier of coking coal. The leading coal

mining enterprises include ArcelorMittal Temirtau JSC, Kazakhmys Corporation LLP, Shubarkol-Komir JSC, Saryarka Energy LLP, and Satkomir GRK LLP.

In addition to coal deposits, the mineral resource base of the region is rich in reserves of copper and tungsten, large deposits of lead, zinc, iron, manganese, and rare metals. At the Zhezkazgan and Balkhash copper-smelting plants of Kazakhmys Corporation LLP, refined copper of the highest purity MOOC is produced - 99.99%. The largest metallurgical enterprise JSC "ArcelorMittal Temirtau" produces 100% of pig iron and finished rolled products from ferrous metals, as well as about 90% of the steel of the republic. In addition, food, pharmaceutical and chemical industries have developed in the Karaganda region, light industry and an industry of building materials have been formed.

Let us consider certain parameters that have a quantitative dimension reflecting the innovative activities of enterprises and organizations in the region, and are the object of monitoring and analysis, since they are associated with indicators of state programs for innovative development of the Karaganda region and the development program of the Karaganda region (Table 1) (The Committee on Statistics of the Republic of Kazakhstan, 2020; Development program of the Karaganda region for 2021-2025, 2020).

**Table 1**. Indicators characterizing the innovative development of the Karaganda region for the period from 2003-2019

| *Year* | *Number of enterprises in the region Units* | *Number of innovational Enterpises Units* | *Share of enterprises with innovations %* | *The number of organizations engaged in research and development work Units* | *The number of organizations engaged in research and development work Mln,tenge* | *Internal costs for research and development work Mln,tenge* | *Volume of innovative product,mln tenge* |
|---|---|---|---|---|---|---|---|
| 2003 | 980 | 16 | 1,6 | 33 | 67157 | 673,1 | 34798,00 |
| 2004 | 715 | 30 | 4 | 43 | 96650 | 823,3 | 37483,80 |
| 2005 | 934 | 42 | 4,5 | 51 | 153438 | 1037,80 | 56239,00 |
| 2006 | 894 | 57 | 6,4 | 51 | 134157 | 1169,60 | 59871,80 |
| 2007 | 981 | 60 | 6,1 | 46 | 151887 | 1148,30 | 37986,50 |
| 2008 | 086 | 64 | 6,5 | 40 | 210247 | 1190,20 | 16473,80 |
| 2009 | 908 | 56 | 6,2 | 29 | 214076 | 1206,00 | 14412,40 |
| 2010 | 963 | 67 | 7 | 28 | 211085 | 939,4 | 14897,70 |
| 2011 | 982 | 71 | 7,2 | 29 | 253048 | 1528,40 | 14388,60 |
| 2012 | 2046 | 78 | 3,8 | 26 | 323816 | 2947,00 | 30891,50 |
| 2013 | 1957 | 18 | 7,6 | 23 | 405015 | 3407,70 | 53731,20 |
| 2014 | 1902 | 159 | 8,4 | 31 | 411852 | 4048,90 | 21578,10 |
| 2015 | 2340 | 216 | 9,2 | 32 | 343351 | 3597,80 | 18442,50 |
| 2016 | 2235 | 238 | 10,6 | 33 | 317571 | 4279,10 | 31327,20 |
| 2017 | 2309 | 257 | 11,1 | 29 | 363267 | 3488,10 | 32048,00 |
| 2018 | 2289 | 336 | 14,7 | 28 | 489030 | 3508,3 | 54778,0 |
| 2019 | 2175 | 293 | 13,5 | 30 | 811433 | 4543,6 | 74007,0 |

Note: Compiled by the author based on the source: Electronic resource: Data of the Committee on Statistics of the Republic of Kazakhstan for 2014-2018. //www.stat.gov.kz

In the Karaganda region, a number of state, regional programs and programs for the development of the territory are being implemented, aimed at supporting the business sector, innovation and the development of innovative infrastructure, improving relations between production and the scientific sphere of the region, etc. It should be noted that the change in the indicators of innovative activity in the region, in general, has a positive trend, which is associated not only with the manifestation of the activity of enterprises in the region, but also is the result of the work of the regional akimat and its subdivisions in the conduct of regional innovation policy.

Despite significant investment flows and volumes of industrial production, on the other hand, the development of single-industry towns is particularly relevant in the region. The region has the largest number of single-industry cities - 8: Abai, Balkhash, Zhezkazgan, Karazhal, Temirtau, Saran, Satpayev, Shakhtinsk. At the same time, the socio-economic situation in monotowns of the region is different.

For your information, the author presents a list of small and single-industry towns in the Karaganda region in 2018:

- small towns: Karkaralinsk, Priozersk;
- single-industry towns: Balkash town, Zhezkazgan town, Karazhal town, Saran town, Satpayev town, Temirtau town, Shakhtinsk town, Abai town (The Committee on Statistics of the Republic of Kazakhstan, 2020).

According to the Program for the Development of the Regions of the Republic of Kazakhstan until 2020, only the city of Temirtau has a high potential for economic development, the rest have an average potential. Social problems include unemployment and a high level of self-employment, low incomes, population outflow, as well as potential tendencies towards an increase in social tension, as evidenced by repeated labor protests and official appeals from residents of single-industry towns.

The socio-economic situation is also influenced by the presence of a large number of single-industry towns, which are characterized by a number of social problems. Taking into account the fact that the largest industrial enterprises operate in the region to solve such problems, it is necessary to systematically increase the level of social responsibility, and also the state should implement measures to improve the living conditions of the population and the effective use of the region's territories.

In terms of territory, the Karaganda region ranks first among the regions of Kazakhstan. At the end of 2018, the GRP of the Karaganda region amounted to 4.41 trillion tenge, which provided the region with a share in Kazakhstan's GDP at the level of 7.4% (2017 - 7.9%). During the reporting period, the Karaganda region, in terms of the share of SMEs in GRP in the amount of 15.8%, took the fifteenth place among the regions of Kazakhstan, having increased its rating by 1 position compared to 2017.

In total, as of January 1, 2019, there are 84.0 thousand units of small and medium-sized businesses in the Karaganda region, or 106.0% of the corresponding period of 2017. In the structure of SMEs, individual entrepreneurs prevail, they account for 69.1% of all operating SMEs, legal entities of small enterprises - 20.4% (The Committee on Statistics of the Republic of Kazakhstan, 2020). The overwhelming share of operating SMEs in the Karaganda region is engaged in wholesale and retail trade - 37,074 units. or 44.1% of the total number of operating SMEs. The second most important type of economic activity is agriculture, forestry and fishing. In this sector, 9,849 SMEs operate, or 11.7% of the total number of operating SMEs. The three leaders are closed by enterprises engaged in the provision of other types of services - 7,875 units or 9.4%. of the total number of operating SMEs.

At the end of 2018, almost all sectors of the regional economy showed positive dynamics, including 5 dominant sectors of the economy:

- mining industry + 107.5%;
- wholesale and retail trade + 77.7%;
- manufacturing industry + 16%;
- agriculture, forestry and fisheries + 11.6%;
- construction + 0.14%.

Only 3 sectors of the economy of the Karaganda region demonstrated a decrease in the physical volume of production:

- arts, entertainment and recreation - 52.8%;
- accommodation and meals services - 34.4%;
- transactions with real estate - 31.5 (Table 2).

**Table 2.** Dynamics of growth of economic sectors of the Karaganda region for 2017-2018yy.

| *Sectors of the economy* | *2017 y bln tenge* | *% of total output* | *2018 y Bln tenge* | *% of total output* | *Growth rate, %* |
|---|---|---|---|---|---|
| Agriculture, forestry and fisheries | 121, | 11,7 | 135,0 | 10,2 | 11,6 |
| Mining industry | 45,5 | 4,4 | 94,4 | 7,1 | 107,5 |
| Manufacturing industry | 229,6 | 22,3 | 266,4 | 20,1 | 16,0 |
| Power supply | 17,7 | 1,7 | 19,4 | 1,5 | 9,60 |
| Water supply | 8,9 | 0,9 | 13,5 | 1,0 | 51,7 |
| Construction | 211,3 | 20,5 | 211,6 | 16,0 | 0,14 |
| Wholesale and retail trade | 204,3 | 19,8 | 363,1 | 27,4 | 77,7 |
| Transport and storage | 33,0 | 3,2 | 43,9 | 3,3 | 33,0 |
| Accommodation and food services | 12,2 | 1,2 | 8,0 | 0,6 | -34,4 |
| Information and communication | 8,8 | 0,9 | 23,7 | 1,8 | 69,3 |
| Financial and insurance activities | 10,5 | 1,0 | 14,7 | 1,1 | 40,0 |
| Real estate operations | 48,2 | 4,7 | 33,0 | 2,5 | -31,5 |
| Professional scientific and technical activities | 36,8 | 3,6 | 45,7 | 3,4 | 24,2 |
| Activities in the region adm. and auxiliary service | 21,3 | 2,1 | 24,» | 1,8 | 13,6 |
| Education | 3,3 | 0,3 | 5,4 | 0,4 | 63,6 |
| Healthcare and social services | 10,3 | 1,0 | 12,9 | 1,0 | 25,2 |
| Arts, entertainment and recreation | 3,6 | 0,3 | 1,7 | 0,1 | -52,8 |
| Provision of other types of services | 5,1 | 0,5 | 8,6 | 0,6 | 68,6 |

Note: Compiled by the author based on the source: Electronic resource: Data of the Committee on Statistics of the Republic of Kazakhstan for 2017-2018. //www.stat.gov.kz

The development of the region is facilitated by the successful attraction of investments. At the end of 2018, the volume of investments in fixed assets of SMEs amounted to 212.9 billion tenge, which is 45.3% of the total volume of investments attracted to the Karaganda region. In January-December 2018, investments in fixed assets amounted to 469.8 billion tenge or 120.7% compared to the level of the corresponding period of 2017.

Of these, 73.1% (343,258.4 million tenge) - at the expense of enterprises' own funds, 14.5% (68,283.2 million tenge) - budget funds, 2.1% (9,935.7 million. tenge) - bank loans, 10.3% (48,337.7 million tenge) - at the expense of other borrowed funds.

In the areas of using investments in fixed assets, a decrease in investment volumes is noted compared to the corresponding period of the last year:

- in wholesale and retail trade by 20.2% (9 452.9 million tenge);
- information and communication by 28.1% (KZT 1,541.5 million);
- financial and insurance activities by 13.7% (KZT 1,055.5 million);
- transactions with real estate by 16.2% (44 693.3 million tenge);

- activities in the field of administrative and support services by 67.4% (KZT 1,693.1 million);
- public administration, defense, compulsory social security by 24.1% (3 633.7 million tenge);
- healthcare and social services by 17.1% (7 893 million tenge);
- arts, entertainment and recreation for 43.1 (1 236 million tenge);
- other services by 38.3% (558.2 million tenge).

The volume of investments in industry amounted to 323,547 million tenge, or 135.6% to the corresponding period of the last year. The largest share of the regional volume of investments in industry has been mastered in Karaganda (14.4%), Temirtau (13.6%), Saran (12.0%), Satpayev (10.3%), Karazhal (9.5%), Shakhtinsk (7.2%), Balkhash (6.4%), Zhezkazgan (6.3%).

A significant share of investments in fixed assets falls on the manufacturing and mining industries - 27.2% and 24.1%, respectively. In third place is electricity supply 14.1% (NGO "Young disabled people of Astana city", 2019).

In total, in 2018, 299 new business facilities were opened in the Karaganda region for an investment of 20 billion tenge with the creation of 1,782 new jobs. In 2018, city-forming enterprises signed 1947 Partnership agreements with small businesses in the amount of 87.1 billion tenge.

To intensify the work on attracting investments, within the framework of the instructions of the Head of State, a Council for attracting investments and improving the investment climate of the region was created. So, for example, the indicators of the volume of investments in the agro-industrial complex were considered for single-industry towns of the Karaganda region for the period from 2015 and with a forecast for 2022 (Figure 2) (The concept of the Regional Program for the Development, 2017).

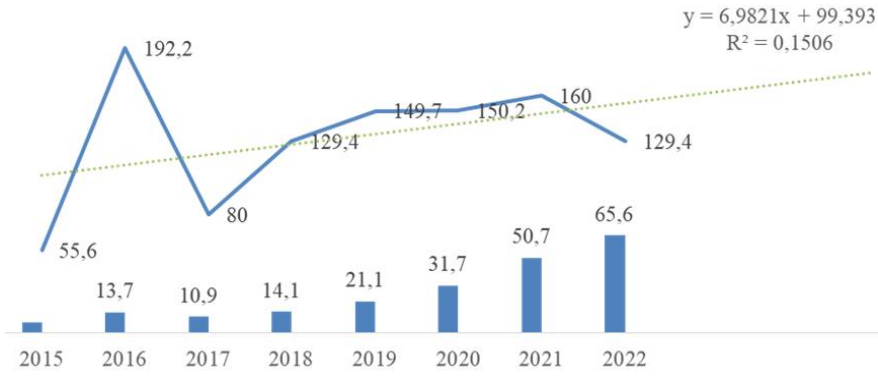


**Figure 2.** The volume of investments in the agro-industrial complex in the Karaganda region for the period from 2015 and forecast for 2022, billion tenge

Note - Compiled on the basis of the source: Concept of the Regional Program for the Development of the Agro-Industrial Complex of the Karaganda Region in accordance with the State Program for the Development of the Agro-Industrial Complex for 2017-2021yy of 12.07.18, No. 423 - p. 59

In the course of the study, it was revealed that in the regional context, the largest share in agricultural production belongs to Bukhar-Zhyrausky, Abaysky, Shetsky, Nurinsky, Karkaralinsky and Osakarovsky districts, the smallest - Aktogay, Zhanaarkinsky and Ulytau districts.

Work continues on the implementation of projects within the framework of the Kazakh-Chinese cooperation in the field of industrialization and investment. The region included 7 projects for a total of 1158 billion tenge with the creation of more than 4,000 work places, which have a high level of redistribution and an innovative component.

The Entrepreneurship Support Card includes 103 projects worth 785.4 billion tenge, with the creation of 11598 new jobs. All 18 regions of the region are presented in the Entrepreneurship Support Card.

The regional Map contains 100 projects with a total value of 536.1 billion tenge, with the creation of 9,119 new work places. As of today, 87 projects have been implemented within the framework of the Card, with the total investment amounting to 292 billion tenge. The enterprises created 6903 new work places.

In order to increase competitiveness, reduce social tension in the labor market, create permanent jobs, develop small and medium-sized businesses, increase the efficiency of state (local) government bodies, it is necessary to form and develop an innovative environment for monotowns, based on the materials of the Karaganda region.

So, for example, we can see a significant increase in labor productivity in the Karaganda region, which as of the end of 2019 amounted to 7229.0 thousand tenge, which is 1261.0 thousand tenge more compared to the same period in 2018 (Figure 3) (Administration of the Karaganda region, 2019).

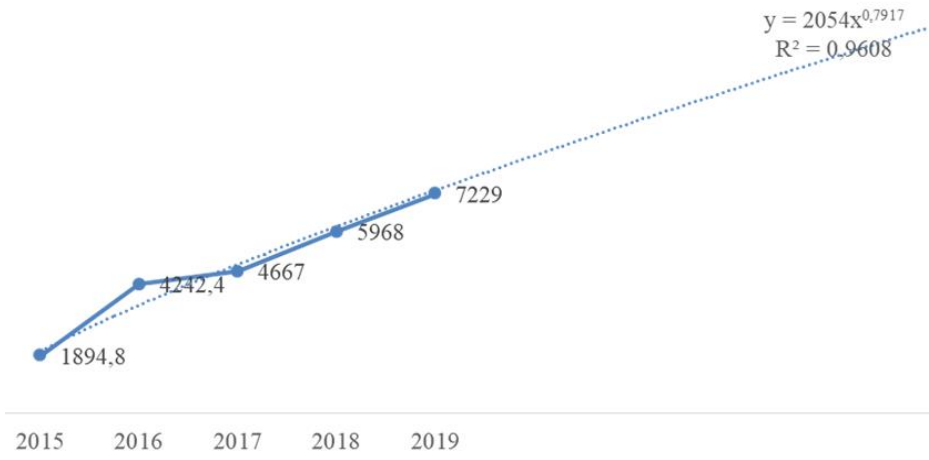


**Figure 3.** Dynamics of labor productivity in the Karaganda region of the Republic of Kazakhstan (in terms of Gross Value Added GVA) for the period from 2015-2019

Note - Compiled on the basis of the source: Administration of the Karaganda region. 2018. URL: https: // karaganda-region.gov.kz/ru/business

The development of the territories of the Karaganda region largely depends on how favorable the environment has been created to attract investment flows to it. The formation of such an environment depends on the presence on the market of companies that create highly efficient infrastructure for business processes, on the productive work of government bodies that contribute to its development, as well as on the activity of local companies and enterprises looking for new resources for business development. Therefore, the strategy of innovative development of territories includes the following areas:

- diversification, renewal and modernization of the technological base of the economy and expansion on its basis of the scale of production of competitive goods, works and services;
- creation and development of the infrastructure of innovation activity as one of the factors for ensuring quality growth (Lytkin, 2012).

The tactics of implementing this strategy provides for the following activities:

- in the field of economics: stimulating the attraction of investments into the economy of a monotown; improvement of the mechanism for the formation and implementation of innovative programs and projects for the development of a monotown; assistance in increasing the competitiveness of the city-forming enterprise and other business entities and their products; stimulating the creation of an innovative climate; implementation of personnel policy; implementation of priority areas of innovation policy; formation and development of small and medium-sized businesses; creation of new highly

competitive jobs; formation of a favorable socio-economic and legal climate for the development of entrepreneurship;

- in the field of life support systems: development of social infrastructure; modernization of engineering infrastructure; continuous improvement of the quality of the urban environment; implementation of the availability of city services; efficient use of all resources of the innovative environment of a monotown;
- in the field of socio-political relations: the formation of elements of civil society; development of partnership relations in the economic, social and cultural spheres; activation of interaction of various groups of the population in achieving the strategic goals of the monotown.

In order to stimulate small and medium-sized businesses (SMEs) in the territory, it is necessary to use such public administration tools as software: "Business Road Map 2020" and "State Program for the Development of Productive Employment and Mass Entrepreneurship for 2017-2021" Enbek "(The program "Business Roadmap 2020"; On approval of the State Program for the Development of Productive Employment and Mass Entrepreneurship for 2017-2021).

We will make a forecast for each of the factors (according to table 3, table 4) that affect the GRP indicator, and we will receive the final GRP forecast for 2021 in the Karaganda region from 2010 to 2019 using formula 7 (The Committee on Statistics of the Republic of Kazakhstan, 2020).

**Table 3.** Data on the mining industry and quarrying in the Karaganda region, for the period from 2010-2019.

| № | *Year* | *Mining industry and quarrying, million tenge* |
|---|---|---|
| 1 | 2010 | 88 461 119 |
| 2 | 2011 | 134 426 171 |
| 3 | 2012 | 134 653 117 |
| 4 | 2013 | 193 647 709 |
| 5 | 2014 | 281 371 474 |
| 6 | 2015 | 159 861 739 |
| 7 | 2016 | 209 385 885 |
| 8 | 2017 | 287 805 257 |
| 9 | 2018 | 355 034 682 |
| 10 | 2019 | 400 265 192 |

Note - Compiled by the author based on the source: Data of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan for 2010-2019. //www.stat.gov.kz

The parameters of the trend equation will be based on the data in Table 6 using the tools - the graph of the function and the approximation coefficient in Excel.

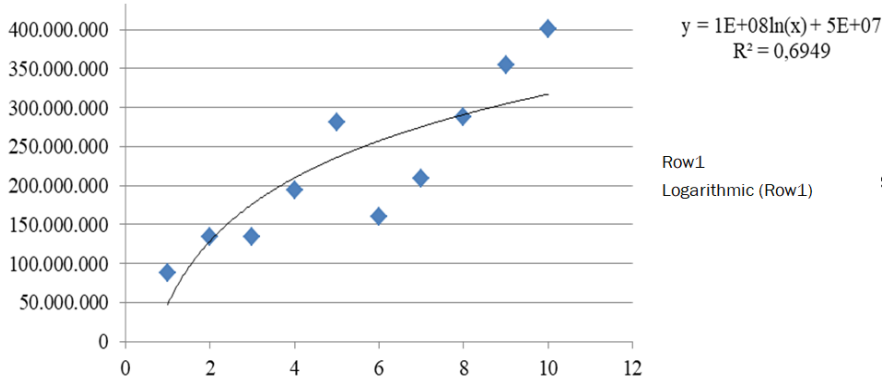


**Figure 4.** Indicators of the mining industry and quarrying in the Karaganda region for 2010-2019 and a graph of the logarithmic trend based on these data, million tenge.

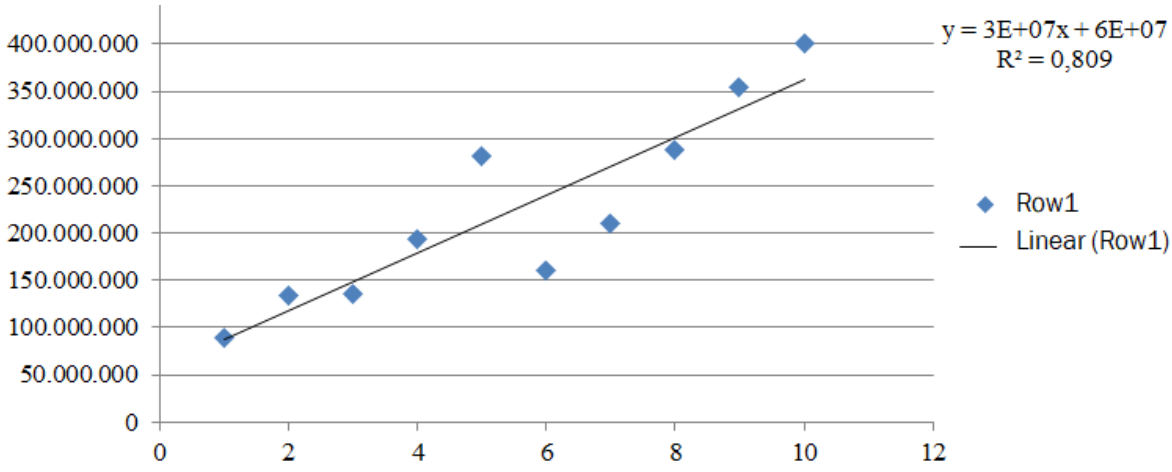


**Figure 5.** Indicators of the mining industry and quarrying in the Karaganda region for 2010-2019 and a linear trend graph based on these data, million tenge.

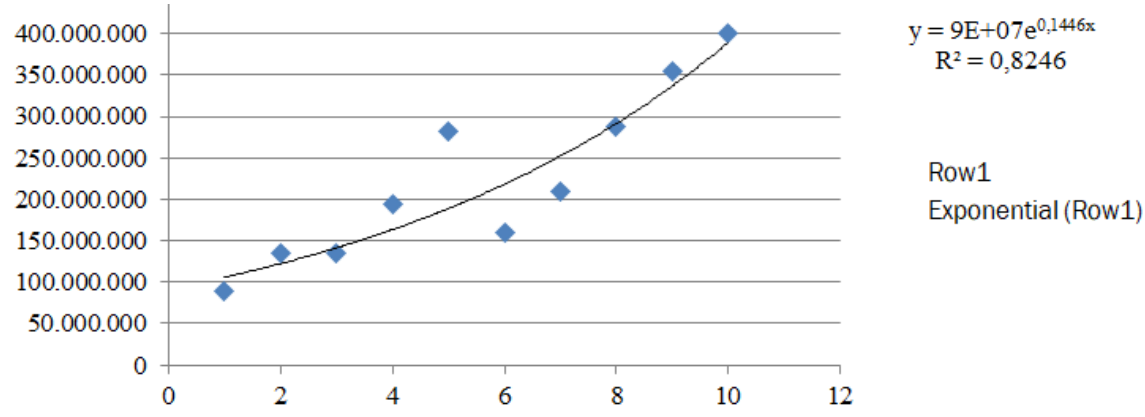


**Figure 6.** Indicators of the mining industry and quarrying in the Karaganda region for 2010-2019 and a graph of an exponential trend based on these data, million tenge.

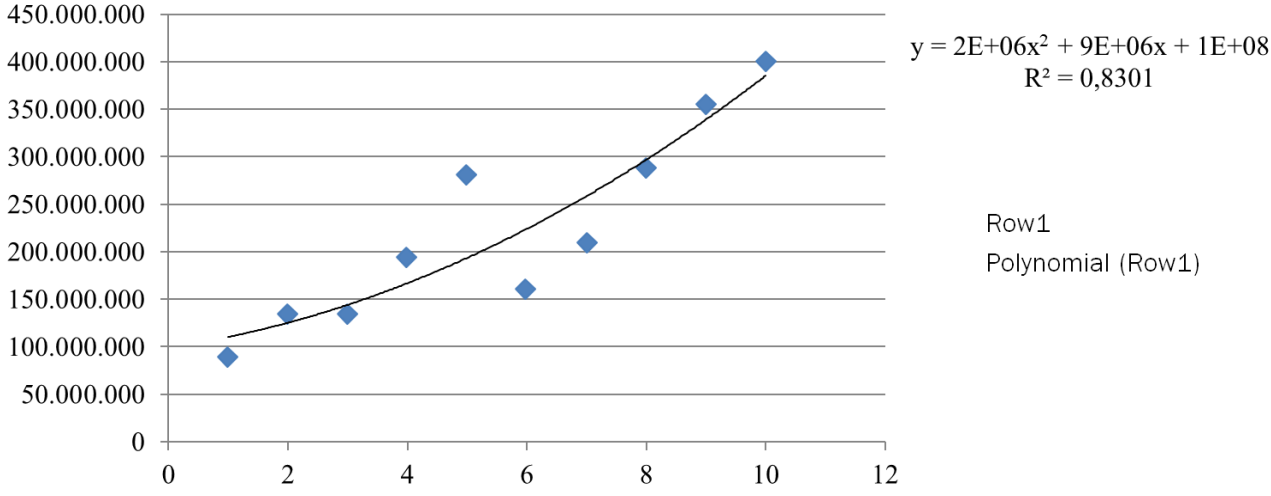


**Figure 7.** Indicators of the mining industry and quarrying in the Karaganda region for 2010-2019 and the graph of the polynomial trend based on these data, million tenge.

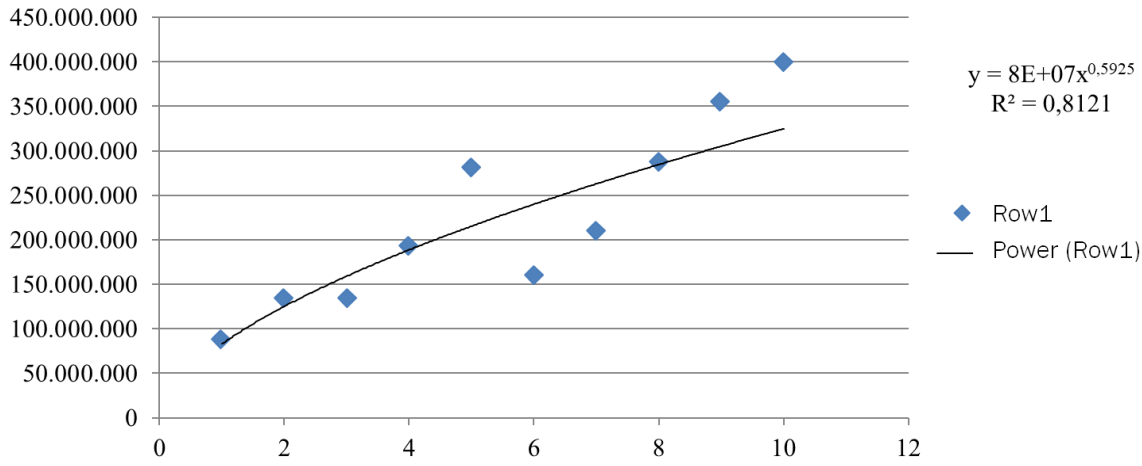


**Figure 8.** Indicators of the mining industry and quarrying in the Karaganda region for 2010-2019 and a power-law trend graph based on these data, million tenge.

Let us now show, in terms of the indicator "volume of innovative products", the equations of different dependences (Table 4) and the forecast for 2021.

**Table 4.** Data on the volume of innovative products in the Karaganda region, for the period from 2010-2019

| № | *Year* | *Volume of innovative products, million tenge* |
|---|---|---|
| 1 | 2010 | 14 897,7 |
| 2 | 2011 | 14 388,6 |
| 3 | 2012 | 30 891,5 |
| 4 | 2013 | 53 731,2 |
| 5 | 2014 | 21 578,1 |
| 6 | 2015 | 18 442,5 |
| 7 | 2016 | 31 327,2 |
| 8 | 2017 | 32 048 |
| 9 | 2018 | 54 778 |
| 10 | 2019 | 74 007 |

Note: Compiled by the author based on the source: Data of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan for 2010-2019. //www.stat.gov.kz

**Table 5.** Equations of dependence of indicators of the volume of innovative products in the Karaganda region for the period from 2010-2019

| № | *Trend name* | *Trend equation* | *Approximation coefficient* |
|---|---|---|---|
| 1 | logarithmic | $y_t = 9062,2 + 16913\ln(t)$ | $R^2 = 0,62$ |
| 2 | linear | $y_t = 9604,2 + 4546,3t$ | $R = 0,69$ |
| 3 | exponential | $y_t = 14282 \cdot e^{0,1345t}$ | $R = 0,73$ |
| 4 | polynomial | $y_t = 25735 - 3518,8t + 733,2t^2$ | $R = 0,73$ |
| 5 | power | $y_t = 13331 \cdot t^{0,5354}$ | $R = 0,69$ |

Note: Compiled by the author on the basis of the data in Table 8, graphs of the function and the approximation coefficient in Excel

As we can see from the graphs of functions of different dependences of indicators of the mining industry and quarry development, the volume of innovative products in the Karaganda region from 2010 to 2019 (graphs 4-8, table 5), it is best to take the equation where the approximation coefficient is closer to 1. For the first indicator is a graph of a polynomial function, for the second one can take either an exponential trend or a polynomial one.

Let's get for the first indicator:

- general view of the model

$$y_t = a + bt + ct^2, \quad (1)$$

- as a result, the equation

$$y_1 = 10^8 + 9 \cdot 10^6 t + 2 \cdot 10^6 t^2, \quad (2)$$

We get for the second indicator:

- general view of the model

$$y_t = a \cdot e^{bt}, \quad (3)$$

- as a result, the equation

$$y_2 = 14282 \cdot e^{0,1345t} \quad (4)$$

Let us determine the predicted values of the indicators under consideration for 2021, for this we substitute the value into the obtained trend equations (equation 2 and equation 4). Then we get the forecast:

– for the mining industry and quarrying

$$y_{2021} = 10^8 + 9 \cdot 10^6 \cdot 12 + 2 \cdot 10^6 \cdot 12^2 = 496 \cdot 10^6 \text{ million tenge} \quad (5)$$

– for the volume of innovative products

$$y_{2021} = 14282 \cdot e^{0,1345 \cdot 12} = 71\,736,52 \text{ million tenge} \quad (6)$$

Now let's compose a two-factor econometric regression model based on the data in Table 6, where:

- y - GRP indicator, million tenge;

– - $t_1$ - indicator of the mining industry and quarrying, million tenge;

– - $t_2$ indicator of the volume of innovative products, million tenge.

**Table 6.** Main indicators affecting the GRP indicator for the Karaganda region, for the period from 2010-2019

| № | *Year* | *GRP, million tenge* | *Mining and quarrying* | *Volume of innovative products* |
|---|---|---|---|---|
| 1 | 2010 | 1 872 842,3 | 88 461 119 | 14 897,7 |
| 2 | 2011 | 2 387 705,2 | 134 426 171 | 14 388,6 |
| 3 | 2012 | 2 446 510,3 | 134 653 117 | 30 891,5 |
| 4 | 2013 | 2 621 888,8 | 193 647 709 | 53 731,2 |
| 5 | 2014 | 2 899 976,8 | 281 371 474 | 21 578,1 |
| 6 | 2015 | 3 107 085,6 | 159 861 739 | 18 442,5 |
| 7 | 2016 | 3 712 055,9 | 209 385 885 | 31 327,2 |
| 8 | 2017 | 4 284 362,6 | 287 805 257 | 32 048 |
| 9 | 2018 | 4734402,0 | 355 034 682 | 54 778 |
| 10 | 2019 | 5388260,6 | 400 265 192 | 74 007 |

Note: Compiled by the author on the basis of table 4 and table 5

The general view of the model is as follows:

$$y_t = b_0 + b_1 t_1 + b_2 t_2, \quad (8)$$

We will estimate the parameters of the trend equation using the Regression analysis tool (Data Analysis in Excel). As a result of data approximation for GRP, we obtain the protocol, which is presented below (Figure 9).

| *Regression statistics* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Multiple R | 0,901218468 | | | | | | | |
| R-square | 0,812194727 | | | | | | | |
| Normalized R-square | 0,749592969 | | | | | | | |
| Standard error | 541886,7527 | | | | | | | |
| Observation | 9 | | | | | | | |
| | | | | | | | | |
| Analysis of variance | | | | | | | | |
| | *df* | *SS* | *MS* | *F* | *importance F* | | | |
| Regression | 2 | 7,6194E+12 | 3,8097E+12 | 12,9739924 | 0,006624046 | | | |
| Balance | 6 | 1,76185E+12 | 2,93641E+12 | | | | | |
| Total | 8 | 9,38125E+12 | | | | | | |
| | | | | | | | | |
| | coefficients | Standard error | t-statistics | P-import | lower 95% | upper 95% | lower 95,0% | upper 95,0% |
| b0 | 1088901,231 | 508736,7741 | 2,140402044 | 0,07610811 | -155932,8105 | 2333735,3 | -155932,8 | 2333735,3 |
| b1 | 0,009163549 | 0,002849302 | 3,216067862 | 0,01822719 | 0,002191558 | 0,0161355 | 0,0021916 | 0,0161355 |
| b2 | 6,103374881 | 13,86626173 | 0,440160081 | 0,67523448 | -27,82614527 | 40,032895 | -27,82615 | 40,032895 |

**Figure 9** - Record representing the approximation of data for the GRP indicator in the Karaganda region from two factors

Thus, the desired regression equation will have the form

$$y = 1\,088\,901{,}2 + 0{,}009\,x_1 + 6{,}103\,x_2. \quad (9)$$

The result showed that with an increase in the volume of the mining industry and quarrying in the Karaganda region by 1 million tenge, the GRP indicator will increase by 0.009 million tenge. An increase in the volume of innovative products in the Karaganda region by 1 million tenge will lead to an increase in the GRP by 6.1 million tenge.

The value of the multiple correlation coefficient R = 0.901 indicates a close relationship of the resulting trait with two factorial traits simultaneously.

Then we will receive a GRP forecast based on the predicted values of two factors: mining and quarrying and the volume of innovative products

$$y_{2021} = 1\,088\,901{,}2 + 0{,}009 \cdot 496 * 10^6 + 6{,}103 \cdot 71\,736{,}52 = 5990{,}7 \text{ billion tenge} \quad (10)$$

Thus, as a result of the analysis, it was found that in connection with the development of strategic management and planning, the relationship of strategic priorities of regional and industrial development, the rates of socio-economic development of territories are increasing, which was shown on the materials of the Karaganda region.

## CONCLUSION

As a result of improving the system of regional strategic planning based on a set of indicators of socio-economic development, it will be possible to make decisions that are realistic from the point of view of the availability of appropriate financial and economic capabilities of the region, to interest business structures located in the region in solving regional tasks to strengthen competitive positions region, building up its financial and economic potential, without resorting to administrative actions, but creating conditions for business that ensure economic feasibility and profitability of participation in solving regional problems, and it will also become possible to concentrate activities on the implementation of priority national projects, on solving cross-sectoral issues that are important for each individual production located in the region, but can be solved only on the basis of intersectoral interaction.

Karaganda region is the center of a dynamic manufacturing industry, combining vertical diversification in traditional export sectors and innovative production in priority sectors of the economy (pharmaceuticals, building materials, agro-industrial complex) with a modernized infrastructure of the transport, communication and energy complex; a region with positive dynamics in the quality of economic space and conditions for the development of human potential.

## REFERENCES


Administration of the Karaganda region (2019), URL: https: // karaganda-region.gov.kz/ru/business

Andreeva O.V., Sukhoveeva A.A. (2019), "Directions for improving the system of social services for citizens within the framework of strategic priorities of the city's socio-economic development", *Economic relations*, Vol. 9, No. 3, pp. 1839-1850, doi: 10.18334 /eo.9.3.40994.

Bennett R. J. (ed.) (2012), "Environment and Planning", Vol. 3, Chapter 1 in *Reflections on «Government and Policy"*, Sage, London, https://doi.org/10.1068/c0426

Bukhvald E.M. (2014), "Problems of 'mono' and small towns", Scientific report "*Policy of regional development as a tool to overcome stagnation and ensure the innovative development of the economy*", Moskow (in Russian).

Camagni R., Capello R. (2013), "Regional Innovation Patterns and the EU Regional Policy Reform: Towards Smart Innovation Policies", *Growth and Change*, Vol. 44, No. 2, pp. 355 — 389.

*Data of the Committee on Statistics of the Republic of Kazakhstan for 2003-2019*, www.stat.gov.kz

*Development program of the Karaganda region for 2021-2025*, https://www. gov. kz/memleket/entities/karaganda-economy/documents/details/64069?lang=ru

Electronic resource: http://economy-lib.com/upravlenie-innovatsionnoy-sredoy-monogoroda#ixzz 62AND2Eip

Ilyina I.N. (2013), *Development of single-industry towns in Russia*, Financial University, Moskow (in Russian)

Inshakov O. V. (2017), "Strategic ideas from the regions – the potential for effective consolidation", *Regional Economy*, *South of Russia*, No. 1 (15), pp. 4–12.

Kookueva, V.V., Tsertseil, Yu.S. (2019), "Review of foreign experience in the implementation of cluster policy in the territories development", *Russian entrepreneurship*, Vol. 20, No. 1, pp. 401-414. doi: 10.18334/rp.20.1.39512 (in Russian)

Lovyagin V.F., Mushich Yu.A. (2011), *Management of urban areas: planning management decisions*, SGGA, Novosibirsk.

Lytkin A.I. (2012), *Management of the innovative environment of a single-industry town*, abstract of dissertation of candidate of economic sciences, Ufa (in Russian)

Makovkina S.A., Dovbiy I.P. (2017), "Problems and prospects of strategic planning (aspects of regional industrial policy)", *Management Issues*, No. 03 (58), http://journal-management.com/en/ issue/2017/05/07

Mezenina O.B., Shapovalov D.A. (2019), "Development of the territories of municipalities: purpose, problems, proposals", *Moscow Economic Journal*, No. 3, p. 17-25. DOI 10.24411 / 2413-046X-2019-13004 (in Russian)

Miroshnikov S.N. (2019), "Problems and directions of strategic planning in regional development", *Actual questions of economy*, pp. 61-77, DOI: 10.24411/2071-6435-2019-10102 8in Russian)

Noskova, A.A. (2019), “Domestic and foreign experience of strategic planning at the municipal level”, *Young scientist*, No. 41 (279), pp. 172-175, URL: https://moluch.ru/archive/279/62951/ (in Russian)

Novoselov, A.S., Faleev, A.V. (2020), “Issues of estimating indicators of regional strategic planning of socio-economic development”, *Regional economy and management: electronic scientific journal*, No. 1 (61), https://eee-region.ru/article/6101/

"On approval of the State Program for the Development of Productive Employment and Mass Entrepreneurship for 2017-2021", Enbek, *Resolution of the Government of the Republic of Kazakhstan*, November 13 (2018), No. 746 // http://adilet.zan.kz/rus/docs/P1800000746

Pejanovic, R. (2020), „The Necessity of a New Global Development Model (Ideas of Contemporary World Economists)”, *Media Dialogues / Medijski dijalozi*, Vol. 13, No. 2, pp. 75-84.

Petrenko, E.S. (2019), “Construction cluster in Karaganda region - new steps to the development”, *Economy of Central Asia*, Vol. 3, No. 2, pp. 107-116. doi: 10.18334/asia.3.2.40765 (in Russian).

*Report on the development of small and medium-sized businesses of the Republic of Kazakhstan in 2018 in the context of regions* (2019), NGO "Young disabled people of Astana city", Nur-Sultan.

Seltzer, E., Carbonell, A. (2011), “Regional Planning in America: Planning Regions” in *Regional Planning in America: Practice and Prospect*, ed. E. Seltzer, A. Carbonell, Lincoln Institute of Land Policy, Cambridge, pp. 1 — 16.

Semenov, S.A., Filatova, O.V. (2017), “About the Directions of Improvement of Mechanisms of the Strategic Planning and the Territory Development Monitoring”, *Administrative Consulting*, No 5, pp.96-102. https://doi.org/10.22394/1726-1139-2017-5-96-102 8in Russian)

Stiglitz, J.E. (2003), *Globalization and its Discontents*, W.W. Norton & Company, New York, London.

*The concept of the Regional Program for the Development of the Agro-Industrial Complex of the Karaganda Region in accordance with the State Program for the Development of the Agro-Industrial Complex for 2017-2021*, 12.07.18 # 423.

*The program "Business Roadmap 2020" approved by the Decree of the Government of the Republic of Kazakhstan of 2010 (with changes and additions as of December 29* (2017).

Zhikharevich, B.S., Pribyshin, T.K. (2019), “Urban Development Strategies: Russian Practice 2014–2019”, *Spatial Economics*, Vol. 15, No. 4, pp. 184–204. https://dx.doi.org/10.14530/se.2019.4.184-204 (in Russian)