

Industrial Single-Industry Areas, Socio-Economic Development Based on Cluster Approach

A N Bikineeva¹, O N Nedzelsky², E N Bulakina²

¹GAOU VO "Khakas state University", Russian Federation, Abakan

²Federal STATE Autonomous educational institution, "Siberian Federal University"
Russian Federation, Krasnoyarsk

E-mail: elenagb09@mail.ru

Abstract. The article presents research, socio-economic development of coal-mining areas of the Republic of Khakassia. It is proved that the increasing economic changes, overcoming the crisis phenomena of increasing variability of organizational and technological systems, determine the need to develop new methodological approaches to the assessment of the most important areas of specialization of the industrial region - the coal mining industry. As a priority direction in the process of industry diversification, the authors consider the cluster approach that contributes to the development of industrial areas. Newly created business entities can become a source of new jobs, tax revenues to the budget of single-profile territories. Currently, the project of development of polycentric Abakan-Montenegrin agglomeration is promising. The presence and nature of interaction is manifested in the intensity of labor and economic migration (labor and capital) between settlements. Particular attention is paid to the control of the implementation of innovation-oriented management strategy, approaches and directions of modernization of monoprofilnost territories in modern conditions: the development of a comprehensive investment development plan, the formation of a set of recommendations to improve the efficiency of the socio-economic situation.

1. Introduction

This article presents the development of theoretical and methodological foundations of socio-economic and organizational and technical development of single-profile municipalities of cities and offers recommendations to improve their functioning, on the example of the urban district of the city of Chernogorsk (Republic of Khakassia). The city of Chernogorsk, is the second, after the capital of the Republic of Khakassia Abakan, in terms of population. The history of the city begins in 1907 (Wikipedia,2017). since the beginning of operation of the coal mine. In the 1990s, ceased to exist: worsted cloth plant, plant of reinforced concrete structures, plant "Iskoz", plant "Siberia", Khakass plant of building materials (the largest in Eastern Siberia), woodworking plant.

To implement the mechanism of the strategy of balanced economic growth in the South of Siberia, Khakassia, we have conducted studies of the stages of development of this territory. On the basis of the analysis of the data obtained by us and generalization of a number of materials of Russian and foreign.

2. Prerequisites for the creation of the Abakan-Montenegrin agglomeration of the Republic of Khakassia

Intensification of development processes in the early XX century was the formation of large urban systems, which were called agglomerations (from lat. agglomerare– attach, accumulate) - grouping of settlements, United not only in the spatial sense, but with developed industrial, cultural, recreational ties [4-6]. According to the results of the 2016 selection, the Republic of Khakassia received a subsidy for the implementation of such areas as:

- 1) involvement of young people in entrepreneurial activities (educational program "You are an entrepreneur") – in the amount of 1 973 540.56 rubles;
- 2) creation and (or) development of infrastructure to support small and medium-sized businesses, including the creation of microfinance institutions – in the amount of 3 540 000,00 rubles;
- 3) support of small and medium-sized businesses in the framework of the implementation of municipal programs (subprograms) for the development of small and medium-sized businesses, including single-profile municipalities – in the amount of 4,390,890. 00 rubles. It should be noted that entrepreneurs of Khakassia produce almost a quarter of the gross regional product of the region. Income taxes in the consolidated budget of the Republic of Khakassia for 2016 was 1 003,6 million.

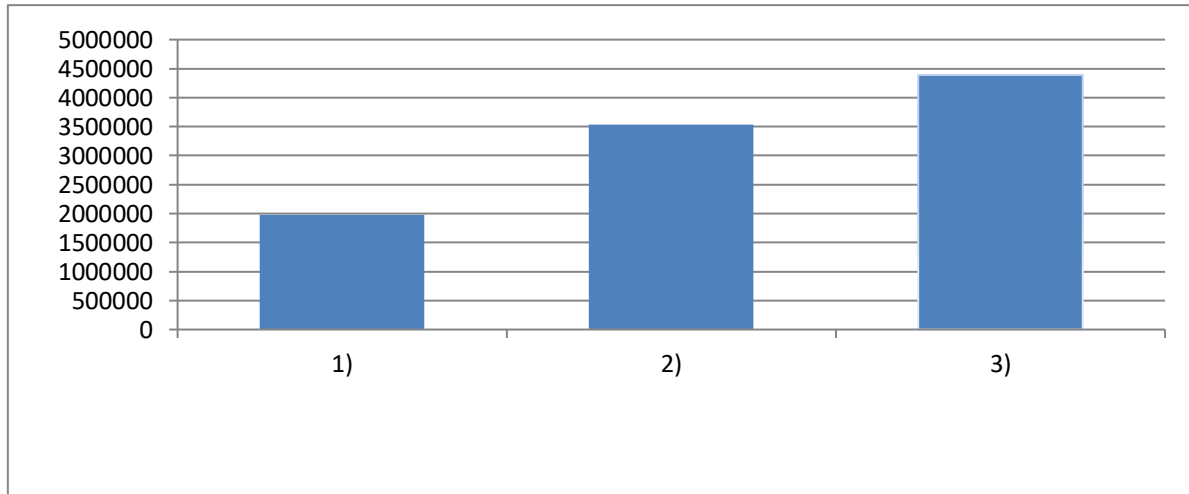


Figure 1. State financing of the business environment of the Abakan-Montenegrin agglomeration of the Republic of Khakassia.

Selections were made and agreements were signed with three single-industry towns (Abaza, Sayanogorsk, Chernogorsk) to provide them with subsidies to support small and medium-sized businesses. In 2018, it is also planned to implement a program to support the activities of municipal programs (subprograms) for the development of small and medium-sized businesses. According to the results of the competitive selection of the Republic of Khakassia approved a subsidy in the following amount:

- 1) Subsidies for the development of microfinance institutions – 4 708.6 thousand rubles;
- 2) Subsidies for the creation and (or) development of the business support center – 5 055,6 thousand rubles;
- 3) Support for the activities of municipal programs (subprograms) for the development of small and medium-sized businesses (single-industry towns) – 6 825,0 thousand rubles.

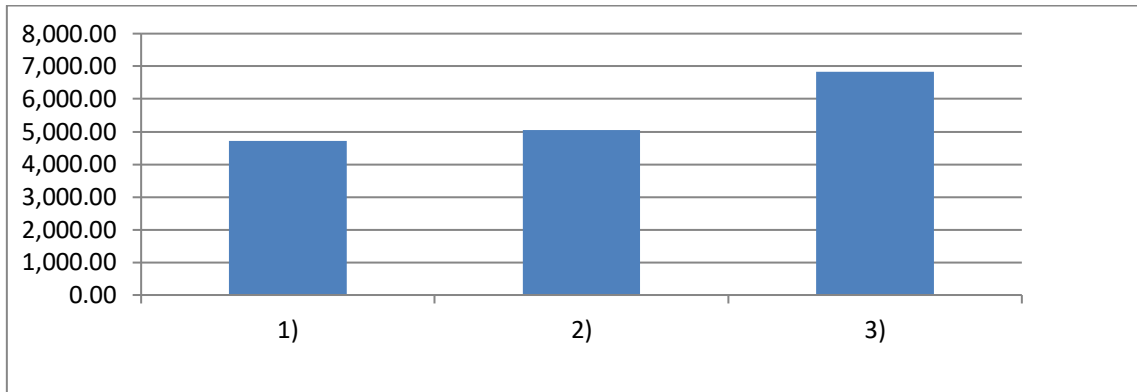


Figure 2. The volume of investments aimed at the development of entrepreneurship (subsidies).

On the territory of the municipality of Chernogorsk as of 01.01.2018, 2233 small and medium-sized businesses operate, including 1752 entities registered as entrepreneurs without a legal entity. Legal entities - 481, the information is presented in table 1

Table 1. Number of business entities by category.

| Total, ed. | Legal entities (481 units.) | | | Individual entrepreneur (1752 units.) | | |
|------------|-----------------------------|-------|--------|---------------------------------------|-------|--------|
| | Micro | Small | Medium | Micro | Small | Medium |
| 2233 | 444 | 35 | 2 | 1735 | 17 | 0 |

In the Republic of Khakassia subsidies for equalization of budgetary provision were replaced by additional standards of deductions from the tax on personal income to the budgets of municipal districts and urban districts. This increases the share of municipalities' own revenues compared to the national average.

Indicators of investment planning of modernization of the municipality are shown in figure 3.

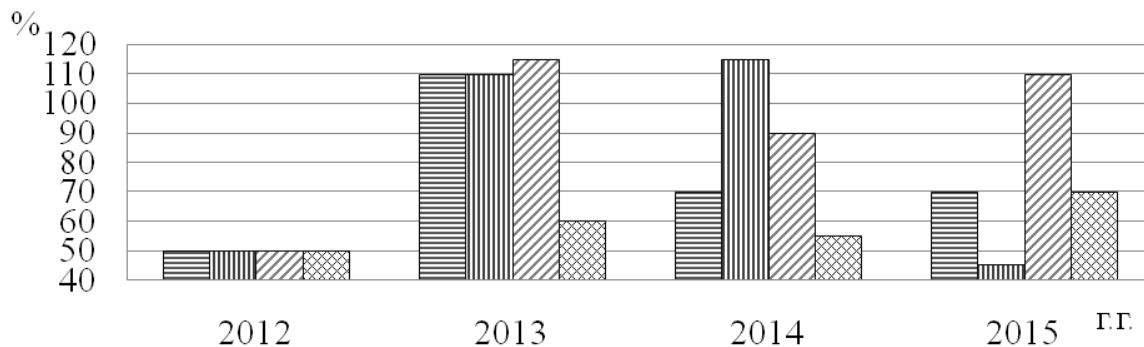


Figure 3. The indicators of modernization of the municipal formation the city of Chernogorsk.

Dynamics of own revenues and separate components of the budget revenues in 2007-2015 - 26%. The main expenditure items were education, health, physical culture and sports, housing and communal services. At the same time, compared to the previous year, the most significant increase in spending occurred on culture (27.9%), law enforcement (27.1%) and education (8.1%). Heaviest compared with 2015, reduced expenditures on utilities – 71.8%. The share of expenditures on housing

and communal services in Chernogorsk is very low compared to the average Russian indicators.

3. The control system of the Abakan-Chernogorsk agglomeration

The control system of the Abakan-Montenegrin agglomeration is represented by the formation of six clusters: fuel and energy, construction and industrial, agro-industrial, environmental, machine-building, the creation of the industrial Park "Montenegrin", is presented in table 2.

Table 2. The organizational structure of the management system of the Abakan-Chernogorsk agglomeration.

| Cluster | Million. | The name of the companies |
|--|----------|--|
| Industrial Park "Montenegrin" | 830 | Industrial park |
| | 250 | Bypass road |
| Fuel and energy cluster | 9 573 | SUEK - Khakassia |
| | 9 573 | The Mine "Steppe» |
| | 289 | "IDGC of Siberia – Khakasenergo,» |
| | 50 | Production of coal briquettes |
| | 25 | A factory for the briquetting of coal |
| | 1 070 | ZhBK-1 Khakassia |
| Construction and industrial cluster | 855 | Brick factory |
| | 320 | Technostroyservice |
| | 120 | Manufacture bentomat |
| | 92 | Project "Warm and clean city» |
| | 16 | Production bentogranules |
| | 15 | Plant for the production of panels lsts |
| Agro-industrial cluster | 350 | Taiga gifts |
| | 30 | Processing and packaging of potatoes |
| | 13 | Fish farm |
| Environmental cluster | 160 | Complex on processing firmly-a household waste |
| Machine building cluster | 150 | The expansion of engineering production "Echoprompt» |

The coordinator of actions for the implementation of the Abakan-Montenegrin agglomeration in the

Republic of Khakassia is the administration of the municipality of the city district of Chernogorsk. It ensures timely preparation of proposals on the volume and conditions of providing the municipal formation with Federal and regional budgets for the implementation of the program of measures provided by the agglomeration, interacts with Federal Executive authorities, Executive authorities of the Republic of Khakassia and monitors the implementation of the comprehensive investment plan.

4. Algorithm of complex assessment of social and economic condition of a single-profile city

Below is an algorithm for a comprehensive assessment of the socio-economic state of a single-industry city, on the example of the urban district of the city of Chernogorsk, table 3.

Table 3.The algorithm of a complex estimation of monopropellant city.

| State capacity | Public - private capacity (Association of investors) | Indicators |
|---|--|---|
| Innovation potential ("priority development areas») | | -research organizations; - number of teaching staff; - number of patents for inventions, licenses for utility models; |
| Saving potential | Credit-money potential Consumer potential Storage capacity | - value of the consumer basket of goods and services; - the standard of living of the population; - the amount of savings; -the level of real income of the population; - the ratio of minimum and average wages; - share of wages in the GGP. |
| Economic potential | Financial potential | - amount of tax revenues to the budget; -city budget surplus (deficit) ; - profitability of the main enterprises - the number of implemented investment projects in the city. |
| Инвестиционный потенциал | Labor potential | - number of employed population; - number of officially registered unemployed; - educational level of the population |
| | Производственный потенциал | - ВВП на душу населения; - объем основных фондов. |
| Infrastructure capacity | | - number of organizations using information and communication technologies, |
| Tourism potential | | - natural-climatic; - cultural and historical factors of attractiveness |
| Natural resource potential | | - natural resources-natural resources |

Thus, by analyzing the degree of monopropellant in the dynamics, we can identify a trend towards diversification of the economy or the worsening of monopropellant. The effectiveness of the development of a single-industry town primarily depends on its investment potential [7-9]. In order to justify the directions of further development of the single-profile city of the municipality and to determine the priority of modernization measures, for a balanced growth of the economy of the territory, it is necessary to control the annual, quarterly, monthly income of sufficient investments [10,11]. To achieve these goals, we consider it necessary: 1 - the creation of "investor Associations"(according to the system of production relationships and relations that determine the stable development of the territory of the Far East); 2 - the designation of the territory of the Abakan-Montenegrin agglomeration "the Territory of advanced development".

5. Conclusion

The conducted research of socio-economic development of the city of Chernogorsk (Republic of Khakassia) allowed to come to the conclusion that the assessment of socio-economic development of a single-industry city should be based on evidence-based development strategies of the region, as well as include the main indicators characterizing the degree of single-industry territory. As a priority direction in the process of economic diversification, the authors recommend agglomeration – cluster development of the Abakan-Montenegrin territory, where the newly created business entities become a source of new jobs.

Thus, the recommendations proposed in the study can improve the efficiency of the territory's competitiveness and significantly reduce the socio-economic risks of mono-industry.

References

- [1] Widrow B, Hoff M E 1960 adaptive switching circuits IRL WESCON (new York) pp 96-104
- [2] Bulakina E N, Nedzelsky O N, Bikineeva A N, Moiseev V V 2014 continuous processes Expert system recovery procedures (art) the *French scientific journal and ed ucational Research* vol III (Paris University Press) **2(12)** pp 607-613
- [3] Bulakina E N, Nedzelsky O N, Moiseev V V outsourcing of application systems for the diagnosis and management of the it infrastructure (article) *French science and education journal* (University of Paris) pp 640-645
- [4] Timofeeva S S, Timofeev S S, Ulrich D V 2014 Environmental phytotechnologies in eastern Siberia and south Ural *14th International Multidisciplinary Scientific GeoConference & EXPO* (Albena, Bulgaria) pp 259–266
- [5] Dwari R K, Hanumantha K 2007 Dry beneficiation of coal - a review *Mineral Processing & Extractive Metall Rev.* **28/3** pp 177–234
- [6] Ban H, Schaefer J, Stencil J 1993 Size and velocity effects on coal particle triboelectrification and separation efficiency *Proc. of International Pittsburgh Coal Conference, Pittsburgh, PA* pp 138–143
- [7] Biswal S K, Acharjee D K 2003 Flotation characteristics of high ash oxidized Indian non-coking coal and its effects on cell flotation *The European Journal of Mineral Processing and Environmental Protection* vol 3 **2** 167–176
- [8] Change in composition and porous structure of coal on thermal conditioning *Coke and Chemistry* vol 59 **6** pp 207–212
- [9] Chen X, Sun B, Li F, Xiao L, Yu J 2016 Research status of the interface reactions between superalloys and ceramic materials in investment casting *Journal of Special Casting & Nonferrous Alloys* vol 36 **8** pp 844–848
- [10] Znamenskij L G, Ivochkina O V, Varlamov A S 2016 Economical ceramic molds in investment casting *Materials Science Forum* vol 843 pp 208–212