Strategic Analysis of Economic Development Tendencies in the Arctic Zone of Republic Sakha (Yakutia)

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Abstract. In order to create a new development strategy for the Arctic zone of the Republic of Sakha (Yakutia), the drivers of economic growth and the features of the influence of various types of state participation on the population of these extreme territories are analyzed. The performed strategic analysis made it possible to identify trends in the most important indicators of the development of the Arctic districts of Yakutia, to study the dynamics of economic indicators, to identify factors affecting the sectoral structure of the economy and its sustainable growth. Estimated indicators for comparative analysis are presented for two groups of the Arctic districts of Yakutia over a long period of time, including the Soviet period and post-Soviet development in a market economy.

1. Introduction

The Russian Arctic is characterized by a wide range of differences in economic development resulting from numerous managerial decisions that either contributed to its development and settlement or were limiting and even worsening factors. The preparation of a new strategy for the development of the Russian Arctic until 2035 involves a thorough strategic analysis of the economies of the territories belonging to this special zone. It is necessary to consider the prerequisites for the development of the Arctic region from the perspective of three most important issues of strategic management: What is the present situation of the Arctic districts? Where do Arctic districts need to go from this situation? How should they get there?

This paper presents the results of a study of a number of indicators characterizing changes in the economy of the Arctic territories of the Republic of Sakha (Yakutia) for periods with different development conditions. The area of the Arctic zone accounts for 52% of the territory of Yakutia (1,608.8 thousand square kilometers), where at the beginning of 2018 only 7% of the republic’s population (68,159 people) live. The Arctic zone of Yakutia consists of 13 districts, five of which (Allaikhovsky, Anabarsky, Bulunsky, Nizhnekolymsky and Ust-Yansky districts) were considered as arctic for a long time, and eight of which (Abyisky, Verkhnekolymsky, Verkhoyansky, Zhigansky, Momsky, Olenyoksky, Srednekolymsky and Eveno-Bytantaysky districts) were included into the Arctic zone of the Russian Federation by the President Vladimir Putin’s Decree in 2019 [1]. The first five of the listed areas in the study are designated as Group 1, the following eight areas as Group 2.

To assess the present situation of Arctic districts, this paper analyzes the previous development of these territories. Such a study allows us to identify economic trends and the dynamics of ongoing processes, to assess the growth opportunities and the reasons for its inhibition. Analysis of trends in socio-economic development allows us to assess the models of economic development of the Arctic
territories that have already been implemented in previous periods. The study of economic development trends in the Arctic zone of Yakutia in a market economy (from the 90s of the last century) made it possible to analyze the impact of the new system of economic relations on the socio-economic situation in the districts under consideration.

The strategic analysis also examined changes in the considered indicators in recent years in the Arctic districts of Yakutia in connection with the adoption of the Fundamentals of the State Policy of the Russian Federation in the Arctic for the Period up to 2020 and Beyond, adopted by the President of the Russian Federation, September 18, 2008 No. Pr -1969 [2] and The Development Strategy of the Arctic zone of the Russian Federation and National Security for the Period up to 2020, approved by Russian President Vladimir Putin on February 20, 2013 [3]

2. Materials and methods
This study used the official state statistics of the Russian Federation and the Republic of Sakha (Yakutia), as well as publications based on the results of studies of socio-economic processes in the Arctic territory for different periods. It should be noted that the published state statistics to date do not provide data on the Arctic territories of Russia as a whole and on the Arctic districts of the federal subjects of the Russian Federation. Such data can only be obtained by calculation.

An analysis of the sources according to the development indicators of the Arctic zone of Yakutia showed their fragmentation and the absence of continuous statistical observations on a number of important processes and results of economic activity. The ambiguity in the area indicators of administrative districts, the classification of the population as defined by national groups, and the information protection in a number of areas were also revealed. It should be noted that official state statistics do not allow assessing the efficiency of managing in dynamics due to the sharp inflationary fluctuations of the ruble and the incomparability of monetary measurements over decades. Nevertheless, the analysis of the available statistical information and the calculations made in this study allow to draw meaningful conclusions and formulate recommendations for creation of a development strategy for the territories under consideration.

As key indicators characterizing economic development trends, this study examined: the main sectors and occupations of the population, population dynamics and changes in its national composition depending on changes in the structure of the economy, changes in livestock development indicators (number of deer and volumes of meat production of all kinds), the development of small business. The periods corresponding to various conditions and economic models of management were considered: the Soviet period (until 1990) and the post-Soviet transition to market economy in the face of declining state support.

An analysis of economic development trends, carried out in two groups of Arctic districts, revealed differences in the considered indicators depending on the conditions of economic activity associated with the remoteness of territories, the features of their settlement, and the industrial structure of production activities.

Strategic analysis in this research was based on Robert Grant methodology and his statement that the purpose of strategy analysis is not to provide answers but to help us to probe the relevant issues [7].

3. Results and discussion

3.1. Key industries and occupations
The main sectors of the economy of the Arctic districts of the Republic of Sakha (Yakutia) in this paper were considered starting from 1933. This year in the history of the USSR is associated with the building of the foundations of socialism and the collectivization of agriculture. By this year, the majority of the administrative districts under consideration have been formed within the borders that have been preserved to date. Comparison with the year 1933 allows to assess the impact on the growth
of the economy of the Arctic districts of the socialist model of farming, to identify changes and achievements of the Soviet period.

Table 1 presents the industries that are noted in the materials of official state statistics of Yakutia as the most important in the economy of each of the considered districts.

**Table 1. The main industries of the districts of the Arctic zone of Yakutia.**

| Group 1        | 1933                          | 2000                          | 2005                          | 2015                          |
|----------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Allaikhovsky   | Hunting, fishing, reindeer herding, meat and dairy cattle breeding, dog-breeding | Hunting, fishing, reindeer herding | Hunting, fishing, reindeer herding | Reindeer herding, fishing |
| Anabarsky      | Hunting, reindeer herding, dog-breeding | Reindeer herding, hunting | Diamonds extraction, reindeer herding, hunting | Diamonds extraction, reindeer herding |
| Bulunsky       | Hunting, fishing, reindeer herding, dog-breeding | Transport, reindeer herding, fishing | Transport, reindeer herding, fishing | Diamonds extraction, reindeer herding, fishing |
| Nizhnekolymsky | Hunting, fishing, reindeer herding, dog-breeding | Hunting, fishing, reindeer herding | Hunting, fishing, reindeer herding | Reindeer herding, fishing |
| Ust-Yansky     | Reindeer herding, hunting, fishing | Gold and tin mining, hunting, fish, reindeer herding | Gold and tin mining, hunting, fish, reindeer herding | Reindeer herding, |

| Group 2        | 1933                          | 2000                          | 2005                          | 2015                          |
|----------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Abyisky        | Meat and dairy cattle breeding, reindeer herding, hunting | Meat and dairy cattle breeding, horse breeding, wildlife breeding, hunting | Meat and dairy cattle breeding, horse breeding, reindeer herding | Meat and dairy cattle breeding, horse breeding, reindeer herding |
| Location     | Activities                                                                 |
|--------------|-----------------------------------------------------------------------------|
| Verkhnekolymsky | Coal mining, meat and dairy cattle breeding, horse breeding, reindeer herding |
| Verkhoyansky  | Meat and dairy cattle breeding, hunting, carrier's trade, Gold mining, meat and dairy cattle breeding, horse breeding, reindeer herding |
| Zhigansky    | Reindeer herding, hunting, fishing                                             |
| Momsky       | Meat and dairy cattle breeding, fishing, hunting, reindeer herding             |
| Olenyoksky   | Hunting, fishing, reindeer herding                                             |
| Srednekolymsky | Fishing, hunting, meat and dairy cattle breeding, Meat and dairy cattle breeding, horse breeding, reindeer herding |
| Eveno-Bytantaysky | Hunting, meat and dairy cattle breeding, Reindeer herding, hunting |

Sources: [5], [8], [9], [10].
The economic characteristics of the considered districts, given in [5], showed that almost the entire population in the early 1930s was engaged in fur and fishing and reindeer herding. In only three of the thirteen considered districts, cattle were kept (Allaikhovsky, Srednekolymsky, Eveno-Bytantaysky). In the tundra zone, breeding dogs, which along with horses provided movement of people and goods, was of economic importance. Horse breeding also provided the population with meat. Decades later, by the beginning of the new century, indigenous peoples preserved the traditional branches of the economy (Table 1).

The appearance of extractive industries and the development of transport in the Soviet period significantly changed the economy of 6 out of 13 districts. The construction of mining enterprises and the creation of a transport hub in Tiksi led to an increase in population and service industries. Industrial and social infrastructure facilities were built, new jobs were created. At the same time, the closure of these enterprises in the adverse economic conditions of the post-Soviet period had negative consequences and was accompanied by an outflow of the population.

3.2. Changes in population

Population movement is essentially an indicator of the economic well-being of the Arctic districts. Population growth indicates the attractiveness of these territories as a source of income, as a habitat with certain advantages. Conversely, the outflow of the population is an indicator of adverse economic conditions, indicating the absence of economic advantages of living in the Arctic for certain groups of the population.

For hundreds of years, these remote and inaccessible areas have been the place of residence and economic activity of the indigenous peoples of the North. The population of the Arctic territories of the Republic of Sakha (Yakutia) at the beginning of the last century was formed not only from indigenous peoples, but also from voluntary immigrants who developed new lands, as well as exiles from Tsarist Russia. Two groups can be distinguished among the population of the Arctic districts: those people for whom these territories are the traditional habitat, and those who live here for economic reasons.

During the years of Soviet power, the population of the Yakut Arctic increased at a fairly rapid pace due to specialists sent by the state to develop the territory and to the process of creating the mining industry. An analysis of population dynamics according to statistical data showed that the number of residents peaked by 1990: in comparison with 1959, the population of 13 districts under consideration increased 2.3 times, and compared to 1933, 4.6 times. During the Soviet period, mining of coal, gold, non-ferrous metals, and diamonds began in these areas, and various types of transport developed. The economic growth of the Arctic territories was carried out by attracting labor resources from other republics of the Soviet Union and subjects of the Russian Federation for relatively long-term residence in these areas. It is important to note that moving people to the Arctic districts was accompanied by economic benefits for them: a higher salary and the right to accelerate retirement. The state in the Soviet period ensured the economic development of the Arctic on the basis of stable plans.

In the era of the establishment of market economy, only from 1990 to 1995 the population of the Arctic zone of the Republic of Sakha (Yakutia) decreased by 40.4 thousand people, and by the year 2000, it had decreased by 62.6 thousand people over a decade of market reforms. Over the entire post-Soviet period, the population of these territories decreased by almost 80 thousand people, while over the years of building socialism it increased by more than 115 thousand ([5], [9], [10], [14], [17]).

The negative dynamics of the population of the Arctic zone of Yakutia is especially visible by summing the number of inhabitants in all the districts included in it when analyzing for five-year periods (see Fig. 1).
Figure 1. Changes in the population of the Arctic zone of Yakutia as a whole and by district groups.

At the same time, a comparison of population dynamics shows a higher rate of population decline for the group of Arctic districts adjacent to the Arctic Ocean, which allows to conclude that there is a more pronounced tendency of worsening living conditions for the population of areas located on the Arctic Ocean coast. The highest rates of population decline were recorded in 1990-2000, which reflected the economic problems of the first post-Soviet decade. The stabilization of the economic situation over the next decade led to a decrease in the rate of population decline while maintaining the general negative dynamics. Between 2009 and 2018, population decline in the Arctic area of Yakutia averaged about 1% per year compared to the previous year.

Since a decrease in population will inevitably lead to a narrowing of the domestic consumer market, a reduction in the number of people employed in the economy and in the social sector, it is important to evaluate the economic and social consequences of migration. For remote areas with a complex transport scheme and low accessibility, it is advisable to assess the prospects and conditions of population attraction.

A study of the censuses of 1989, 2002 and 2010 regarding the national composition of the inhabitants of the Arctic territories of Yakutia in comparison with 1933 ([5], [10], [14]) revealed the trends in population movements associated with the structure of the economy of the Arctic districts. For analysis, calculations were performed for four groups of the population, which have a different relationship to the settled lifestyle and sectors of work. Relatively large population groups of the same nationality were considered: the Yakuts and Russians, as well as two population groups that united the indigenous peoples of the North and representatives of all other peoples living in the 13 administrative districts under consideration. In Table 2, the population is considered in two large groups: 1) Yakuts and Indigenous Peoples of the North and 2) Russians and other nationalities. Such a grouping makes it possible to identify the specific ratios of the permanent population of the Arctic territories and to reveal the effect of migration on the composition of the population.

The dynamics of changes in the national composition of the population showed a clear dependence on the economic tasks set by the state: the emergence of new extractive enterprises in the Arctic territories caused a population increase due to people coming mainly from other districts of the country and, accordingly, the proportion of the indigenous population decreased. With the closure of enterprises or reduction of work performed, the population decreased due to the arrived workers. Judging by the proportion of different national groups in the territories under consideration, indigenous peoples now form the basis of the resident population in most areas.
Table 2. The national composition of the Arctic districts of Yakutia, considered in groups according to the degree of settledness (consolidation).

| District          | Yakuts and indigenous nationals | Russians and other nationalities |
|-------------------|---------------------------------|----------------------------------|
| Allaikovsky       | 1933                            | 1998                            |
|                   | 93.3                            | 68.0                            |
|                   | 100.                            | 100.                            |
| Anabarsky         | 0.0                             | 49.1                            |
|                   | 72.5                            | 93.1                            |
|                   | –                               | 50.9                            |
| Bulunsky          | 94.5                            | 27.9                            |
|                   | 53.4                            | 62.4                            |
|                   | 5.5                             | 72.1                            |
|                   | 100.                            | 46.6                            |
| Nizhnekolymsky    | 66.0                            | 17.3                            |
|                   | 40.3                            | 51.3                            |
|                   | 34.0                            | 82.7                            |
|                   | 100.                            | 59.7                            |
| Ust-Yansky        | 98.2                            | 10.0                            |
|                   | 48.4                            | 59.4                            |
|                   | 1.8                             | 90.0                            |
|                   | 100.                            | 51.6                            |
| Abyisky Verkhneolymsky | 0.0 | 69.1 | 86.8 | 89.2 | 100. | 33.3 | 13.2 | 10.8 |
|                   | 22.1                            | 36.1                            |
|                   | 41.1                            | 88.7                            |
|                   | 100.                            | 63.9                            |
| Verkhoyansky      | 0.0                             | 43.9                            |
|                   | 73.0                            | 78.7                            |
|                   | –                               | 62.9                            |
|                   | 100.                            | 27.0                            |
| Zhigansky         | 98.7                            | 63.1                            |
|                   | 82.4                            | 84.1                            |
|                   | 1.32                            | 36.9                            |
|                   | 100.                            | 27.6                            |
| Momsky            | 0.0                             | 79.4                            |
|                   | 87.5                            | 89.9                            |
|                   | –                               | 20.6                            |
|                   | 100.                            | 12.5                            |
| Olenyoksky        | 0.0                             | 87.2                            |
|                   | 93.8                            | 96.4                            |
|                   | –                               | 12.8                            |
|                   | 100.                            | 6.2                             |
| Srednekolymsky    | 89.8                            | 78.2                            |
|                   | 86.4                            | 87.9                            |
|                   | 7.6                             | 21.8                            |
|                   | 100.                            | 13.6                            |
| Eveno-Bytantaysky | 99.9                            | 49.1                            |
|                   | 96.3                            | 98.1                            |
|                   | 0.1                             | 50.9                            |
|                   | 100.                            | 3.7                             |
|                   |                                 | 1.9                             |

The proportion of indigenous peoples in the population of 10 out of 13 districts under consideration turned out to be closer to the indicators of 1933 in 2010 than during the period of more active economic development achieved during the Soviet period. The proportion of Yakuts turned out to be relatively stable, which allows to conclude that they are relatively more settled in the northern districts with extreme living conditions. The indicators of presence of Russians and other nationalities in the population of the Arctic territories have a pronounced tendency to decrease, which may imply that they are economically disinterested or unable to continue living in the Arctic. The outflow of the population is most associated with the closure of enterprises, the reduction of jobs, the deterioration of transport services, the increase in transportation tariffs, and the decline in real incomes.

Nevertheless, the population of the Russian Arctic is now essentially protecting the strategic interests of the Russian Federation. With any development of the industrial development of the Arctic zone, there will always be a need for people permanently living in this territory or staying for relatively long periods, who will create production and infrastructure facilities and ensure their functioning. Developing new territories will inevitably require the creation of life support systems, the formation of conditions for the safe stay in difficult climatic conditions of inaccessible areas.

3.3. Deer population dynamics as an indicator of economic development

Reindeer herding in the Arctic territories at all times played a very important role in preserving the habitual way of life of indigenous peoples and their existence within certain boundaries. Over the long years of life of people in the Arctic territories, stable forms of self-sufficiency of the population for food, mainly meat and fish, have formed. Of the branches of livestock breeding, the most common and necessary for life was the breeding of deer. Reindeer herding provides people with meat, furs, plays a significant role in transporting people and goods over short distances.
To analyze the economy of the Arctic districts of Yakutia, our study examined reindeer herding not only as one of the most important sectors, but also as an indicator of the economic well-being of the population. During the analysis of the state of affairs in the industry, our study examined the trends in deer numbers over 80 years. Such a time interval was taken in order to identify the maximum achieved indicators and study the circumstances affecting their dynamics in the long term.

Reindeer herding began a qualitatively new development under the conditions of a socialist model of management [4]. In the USSR in 1976, the number of domestic deer amounted to 74% of the global total (2.3 million animals out of 3.1 million total on the planet), and there were also about 900 thousand wild reindeers. In Yakutia, at the beginning of 1977 the level of deer stock reached 377.8 thousand animals (16.4% of all deer of the Soviet Union). This was not considered as a limit, since the forage base of the northern territories allowed to increase herds and accordingly increase the production of meat, fur products and other processed products [6].

Over 50 years of socialist development, the number of deer in Yakutia tripled and ensured the production of more than 20% of meat in the republic. Breeding deer in the Arctic territories is economically profitable: the cost of deer meat is 2.5-3.5 times lower than the cost of meat of other species of farm animals bred in the North [6]. The territories under consideration are generally characterized by the high cost of production, making it unprofitable and uncompetitive in terms of deliveries to other districts. Nevertheless, to ensure the population living here it is necessary to produce local products.

Changes in the number of deer in the Arctic territories during the Soviet and post-Soviet periods show different development dynamics by districts and by individual short-term periods. Industry development has always depended and depends on many factors, including natural ones. The change in the total indicator for the number of deer in the Arctic zone of Yakutia as a whole and for the two considered groups of districts in the long term is presented in Figure 2.

**Figure 2.** Dynamics of the total number of deer in the Arctic zone of Yakutia and in the two groups of its constituent districts (sources: [5], [10], [11], [12], [13], [17]).

When considering five-year periods, Fig. 2 clearly shows the highest rate of reduction in the number of deer from 1990 to 2000, which led to a decrease in the livestock by 2.6 times. In part, this decrease can be attributed to a decrease in the population of the Arctic districts: it decreased 1.7 times over ten years. In the same period, the production of all types of meat in the Arctic zone decreased by 3.7 times.

A comparison of trends in the number of deer in two groups of districts shows that in areas adjacent to the Arctic Ocean, the situation is more favorable and there has been a positive trend in the last
decade. This indicates that reindeer herding in the first group of districts plays a more important role in the economy than in the second group of districts. If the share of the population of the first group of districts over the past ten years has remained at the level of 38% of the population of the Arctic zone of Yakutia, then by the number of deer by 2017 these districts accounted for 65% of the total number in the two considered groups of districts. But at the same time, from Fig. 2 it is clear that the situation is very close to the level of development of reindeer herding in 1933 by the number of deer in the territories under consideration.

A sharp reduction in the number of deer during the transition to market economy poses a threat to the loss of this important livestock industry in a strategic perspective. To preserve reindeer herding in the Arctic, it is necessary to develop appropriate decisions aimed at creating mechanisms of state support and stimulating the development of the industry.

When developing a strategy for the development of the Arctic territories, it is important to assess the limits of the capabilities of the technogenic load for the natural environment of each administrative district. There are specific restrictions on pastures for the development of reindeer herding: their restoration after grazing deer requires up to 10 years. In the presence of a significantly larger number of deer in the Soviet period, it was believed that with appropriate conduct, the number of deer could be increased by developing new pastures. If we compare the current stock of deer in the Arctic zone of Yakutia with that achieved in 1980, then there was a decrease of 2.7 times. Consequently, an increase in the number of deer by 2–3 times can be considered as a real possibility in the case of economic feasibility (availability of demand for reindeer herding products).

3.4. Dynamics of meat production indicators

Meat and meat products are the most important food products for the population of the Arctic zone. Own production of meat is a prerequisite for life support in the face of problems with transport accessibility of many settlements and high transportation costs. The dynamics of meat production in such conditions is an indicator of the state of the industry in the considered territorial boundaries.

Official statistical observations allow to consider the production of meat in dynamics based on an aggregated indicator of livestock and poultry production for slaughter in live weight. This indicator is presented in the statistical digests of the Republic of Sakha (Yakutia) for all administrative districts per capita and in the total indicator for all categories of producers in each district. Indicators of meat production per capita, when considering from 2009 to 2017 for all the thirteen districts of the Arctic zone of Yakutia, are characterized by large differences reaching up to tens of times (see Fig. 3).

Such differences in annual meat production are explained by the fact that in extreme northern conditions the results of livestock development depend heavily on the condition of the food supply, which in turn is determined by weather conditions and possible natural circumstances (low rainfall, icing of pastures, fires). In the development of the industry, risks must be taken into account. An important role for reindeer herding is also played by the fight against predators, causing great damage to herds, as well as the prevention of deer incidence, which for many years has been a function of state support for the development of the industry.

An analysis of meat production per capita over the past 10 years showed a steady downward trend in 8 out of 13 districts. Moreover, in comparison with 1990, meat production decreased many times in all districts except Ust-Yansky (Fig. 3). Our calculations of the total meat production in this representation for the Arctic zone of Yakutia showed that, compared with unstable production volumes in each of the 13 districts under consideration, the average meat production per capita has relatively small fluctuations in the period from 2009 to 2017 (in Fig. 3 shown by the bold line).

If on average in the Arctic districts in 1990 the production of meat per capita was 72.2 kg, then by 2000 this figure dropped to 34.1, and in 2017 amounted to 31.7 kg. It can be assumed that meat production is associated with changes in the population of the territories in question. But a general decrease in meat production per capita in the Arctic zone of Yakutia may indicate a low efficiency of such production, which does not create economic incentives for the development of the corresponding enterprises.
Figure 3. Dynamics of per capita meat production in the districts of the Arctic zone of Yakutia and in the whole zone (bold line) (according to [10], [17]).

When calculating the total production volumes of all types of meat for the two groups of the considered Arctic districts from 2009 to 2017, relatively small fluctuations are observed throughout the period, with the exception of 2011 and 2017, when production volumes decreased throughout the Arctic zone by 12% and 25% respectively compared with the previous year (Fig. 4).

Figure 4. Dynamics of production of all types of meat in the Arctic zone of Yakutia and in the two considered groups of districts (sources: [15], [16], [17]).
Analysis of meat production volumes and their ratio with the number of people by groups of Arctic districts shows that the development of livestock production in the territories under consideration is oriented towards domestic consumption. At the same time, in case of population growth in these areas, livestock production may develop with a 2-3-fold increase in production, which has already taken place in the previous history of the economic development of the Arctic zone of Yakutia.

3.5. Assessment of the development of entrepreneurial activity
In 2017, according to state statistics, in the Arctic zone of Yakutia, there were 1,904 enterprises and organizations, of which 636 (33.4%) were industrial enterprises. By types of economic activity: agricultural, forestry, hunting, and fishing accounted for 60.4% of enterprises (384); mining 3.5% (22), manufacturing 6.4% (41), construction 10.1% (64), wholesale and retail trade, repair of motor vehicles and motorcycles 19.7% (125). In 2017, there were 281 small enterprises in the considered groups of districts (calculated according to [17]).

To assess the development of entrepreneurial activity of the population, we studied the dynamics of the number of small enterprises in the Arctic districts of Yakutia and the number of employees in these enterprises. The official regional statistics provide indicators on the number of small enterprises in various statistics digests, but not for each calendar year (in official publications we could not find information on the number of small enterprises from 2011 to 2013). When studying the dynamics of the number of small enterprises in each individual district, multidirectional changes can be noted over the years, while the total indicator calculated by the author of this paper shows a tendency towards an increase in the number of small businesses until 2014 and their rapid decrease in subsequent years (Figure 5).

Figure 5. Dynamics of changes in the number of small enterprises in the Arctic zone of Yakutia and in the two considered groups of districts (sources: [11], [14], [16], [17]).

The graph shows different trends in the development of small business in different periods of time. Since the beginning of the 2000s, there has been an annual increase in the number of small enterprises: in the 10 years before 2014, their number has increased by 3.5 times. A further decrease in the number of small enterprises in less than five years by 1.8 times (from 509 in 2014 to 281 in 2018) reflected the deterioration of the situation and the inability to continue the work of many small enterprises because of unprofitability. Accordingly, while the average number of employees of all enterprises and organizations in the districts of the Arctic zone decreased by 18.3% from 2010 to 2017, the average number of employees of small enterprises for the same period decreased by 51.4% (from 2,420 to 1,177 people). In the first group of the considered districts, the number of employees of small enterprises decreased by 53.9%, in the second group by 49.6% (with a decrease in the number of employees of enterprises and organizations by 21% and 16.4%, respectively).
The calculated indicators indicate a deterioration in the economic situation of small businesses in the Arctic districts. The most important reasons for the lack of competitiveness of small enterprises in the territories under consideration are: low internal and external transport accessibility, remoteness of settlements from each other, dependence on seasonal factors, lack of financial resources for business development, lack of qualified personnel, administrative barriers, tariff policies of transport and energy enterprises. To these factors should be added a narrowing market for small enterprises, due to the outflow of the population. This shows the relationship between population dynamics and development trends (or degradation) of the economy of the Arctic zone of Yakutia, its most important sectors.

4. Conclusions
The development of a strategy for the development of the Arctic territories should be based not only on the analysis of opportunities and the use of the territory's strengths in the form of rich natural resources. It is very important to study the previous experience of economic development, to analyze the achievements and economic problems of the development of the Russian Arctic from modern positions.

The point development of industry, transport hubs and highways, carried out over the past 50-70 years, showed that for the successful development of areas under extreme conditions, the active participation of the state is necessary. This participation should include comprehensiveness in the development of territories, preservation of the habitat of indigenous peoples and the search for new conditions and opportunities for creating the attractiveness of life in the Arctic.

Approved by the President of the Russian Federation in 2008 and 2013, respectively, the Fundamentals of the State Policy of the Russian Federation in the Arctic for the period up to 2020 and further perspectives and the Strategy for the development of the Arctic zone of the Russian Federation and national security for the period up to 2020 defines the goals and objectives of the development of the Arctic territories of Russia. As our study showed, these documents did not have a turning point on economic development trends in the Arctic territories of Yakutia. The economy continues to decline. Due to per capita financing of education and healthcare, the situation in these most important sectors is becoming more complicated. With prevailing transport tariffs for intra-district and inter-district transportation, for travel to the capital of the republic, the city of Yakutsk, the Arctic districts are becoming more isolated and less attractive for life.

An analysis of the dynamics of the considered indicators and the calculations performed for analysis allow to draw certain conclusions and recommendations for the development of strategic documents for the development of the Arctic territories of Yakutia. These findings are as follows:
- in determining the development guidelines for the Arctic zone of Russia, it is advisable to take into account previously achieved development indicators and the experience of involving the natural resources of its constituent territories in the economic turnover;
- differentially approach the role of various population groups in the development of the Arctic. Many years of experience in economic development of the Arctic zone of Yakutia showed that the implementation of new projects should provide for joint activities with people living in these territories, which in essence can become a support for the emergence of new industries and activities here. Our study showed that indigenous peoples and Yakuts, whose migration outflow rates are many times lower than those of other national groups, are most adapted to life in the Arctic districts. It is necessary to ensure the effectiveness of managerial decisions to preserve and improve the habitat of the indigenous peoples of the North and their active adaptation to the competitive environment of the modern world;
- in the new version of the development strategy of the Russian Arctic, it is necessary to pay special attention to state programs to attract the population by creating various incentives and guarantees, creating a modern digital environment for the inhabitants and transport accessibility, ensuring conditions of inclusion in global processes of social development;
- the development of the Arctic zone requires the wide participation of the state in the economic development of its districts. It is necessary to develop systems of state subsidies for economic activities, which in the future will pay off due to the economic benefits of using the rich natural resource potential. It is important to create an economic environment for the Arctic through the formation of a local consumer market and the development of new industries that attract revenue to this region and create jobs (including processing industries, infrastructure sectors, tourism).

Since the ideas about the extent and timing of the development of the Arctic territories of Russia have changed in recent years, new market and technological circumstances have emerged, it is necessary to rethink the Strategy for the Development of the Arctic Zone of the Russian Federation and Ensuring National Security for the Period Until 2020, proposed in 2013.

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