RESEARCH PAPER

RURAL POPULATION DYNAMICS IN THE RUSSIAN EXTREME NORTH IN 1989–2019: A CASE OF SAKHA REPUBLIC (YAKUTIA)

Tamara V. Litvinenko[1*], Kazuhiro Kumo[2], Antonina N. Savvinova[3], Viktoriia V. Filippova[4]

[1]Institute of Geography, Russian Academy of Sciences, 29 Staromonetny pereulok, 119017, Moscow, Russian Federation

[2]Hitotsubashi University, Institute of Economic Research, Naka 2-1, Kunitachi, Tokyo 186-8603, Japan

[3]M. K. Ammosov North-Eastern Federal University, 58 Belinskogo str., Yakutsk, 677007, Russian Federation

[4]The Institute for Humanities Research and Indigenous Studies of the North, Siberian branch, Russian Academy of Sciences, Petrovskogo str. 1, 677027, Yakutsk, Russian Federation

***Corresponding author:** tamaralit@bk.ru

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ABSTRACT. In this study, the specific characteristics of Yakutia's rural population dynamics in 1989-2019 in comparison with other Extreme North regions are identified along with geographical differences in the population dynamics of the republic's rural districts. The research results are based on the analysis of the official statistical data and field trip observations in rural areas of Yakutia. Sakha has witnessed a relatively small decline in total rural population compared to other regions, which can be explained by the high proportion of the indigenous population that has a historical preference for living in rural areas and higher birth rates as well as by the regional rural support measures. Despite the common overall trend in the rural population dynamics, significant intraregional differences have been identified. In the regions characterized by more central location and a larger share of the indigenous people, the population growth due to migration and the natural increase was observed, while in more remote northern locations with poor transport accessibility to the region's centre population decreased due to migration outflow. A shift in rural population took place in the districts of Central Yakutia, historical settlement area of Yakuts, who are engaged in livestock and horse breeding, which are the traditional types of economic activities for this territory. The largest population decrease due to migration outflow was observed in Momsky and Zhigansky ulus, which are characterized by their northern location, poor transport accessibility and a smaller share of indigenous people.

KEY WORDS: rural population dynamics, Russian Extreme North, Republic of Sakha (Yakutia), indigenous people, Namsky ulus, Anabarsky ulus

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INTRODUCTION

The Russian Extreme North[1] is mostly located north of the Arctic Circle and has recently attracted a lot of attention due to its rapid population decline (Arctic…2014; Orttung 2017; Khoreva et al. 2018; etc.). Certain Far East regions, such as Chukotka and Magadan, have experienced a severe population outflow. However, there is a region that can be considered an exception, where demographic stability and even a slight increase in the rural population are observed. That is the Republic of Yakutia, which suggests that its approach to the use of resources and population allocation has a positive impact on its demographic trends and the conclusions that can be drawn from the experience of Yakutia may provide important knowledge for understanding the demographics of other regions.

Thus, the purpose of this study is to identify region-specific characteristics, intraregional and local differences in rural population dynamics in Sakha Republic, as well as its determining factors. Issues of population dynamics and demographic development of Yakutia were reviewed in the publications of several researchers (Fedorova 1998; Sukneva and Mostakhova 2002; Sukneva 2010; Savvinova and Filippova 2016; Sukneva et al. 2017). Detailed analysis of the dynamics of rural settlements, their population size and functions in the post-Soviet period was carried out by G.A. Ponomareva and V.I. Bubyakin (2013) and T.S. Mostakhova (2015). Spatial distribution of' the economic activities of the population was investigated by M. Yu. Prisyazhniy (2011). Our studies complement the above works by establishing specific characteristics of Yakutia's rural population dynamics in 1989–2019 in comparison with other Russian Extreme North regions and identifying geographical variation in the population dynamics of the republic's rural districts in relation to their location, ethnic composition and the dominant type of economic activity.

MATERIALS AND METHODS

The research was carried out using statistical, geographical, cartographic and field study methods. The primary source of material for research at all spatial levels were the census data and current population records. Population dynamics in Anabarsky and Namsky uluses (districts) were analysed based on data presented in their socio-economic development programmes available at the official municipalities' websites. The authors also used the results of their surveys of rural settlements conducted during field research in 2017 in Namsky ulus (all authors), and in Amginsky, Gorny, Verkhnevilyuisky, Oleneksky, Suntarsky, Churapchinsky, Ust-Aldansky and Eveno-Bytantaysky uluses in 2008–2018 (A.N. Savvinova, V.V. Filippova).

The application of an integrated approach resulted in a study, which was divided into several stages. At the first stage, common trends and regional differences in rural population dynamics of the Russian Extreme North were established. At the second stage, the factors of a relatively small decline in Yakutia's rural population compared to other regions were identified. During the third stage, the differences in Yakutia's rural population trends in various post-Soviet years (periods) were analysed and the intraregional differences in rural population dynamics of districts (uluses) were identified in relation to their geographical location, ethnic composition and the dominant type of economic activity. The fourth stage consisted of identification of local characteristics of rural population dynamics and its major driving factors on the example of Anabarsky and Namsky uluses.

The choice of the Arctic Anabarsky ulus and the Namsky ulus, located in Central Yakutia, as the key areas was determined by the differences in their geographic location, ethnic composition of the population, the prevailing type of economic activity, population size and population density.

Results and Discussion

Rural population dynamics in the Russian Extreme North

Looking at the Russian Extreme North in general, it can be seen that the total population has been decreasing continuously since the collapse of the Soviet Union (Fig. 1). The volume of urban population has stabilized in the first half of the 2000s but, as shown in Fig. 1, rural population demonstrates an apparent decreasing trend even after that period and the rate of its decline remains approximately the same over the last 20 years.

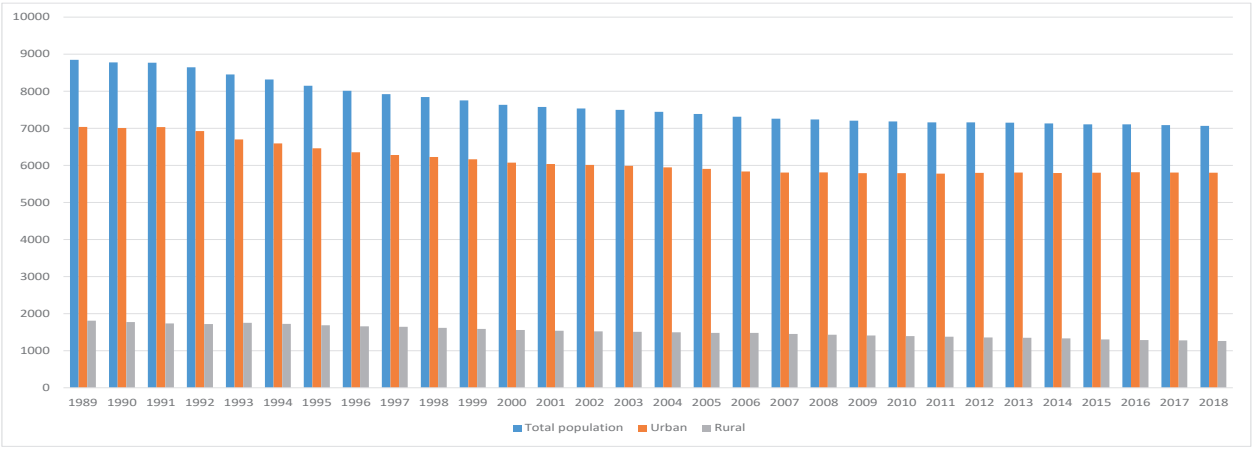

Fig. 1. Population dynamics in the Russian Extreme North, 1989–2018 (thousand people)

[1] «Extreme North» is a region defined by the Russian government. Largely it is located north of the Arctic Circle. Because of its harsh environment, the government offers higher wages or other benefits to the residents.
In this article and, particularly, in the figures 1-2, all the regions that are categorized as «the Extreme North» or «equivalent with the Extreme North» are included: namely, Republic of Karelia, Murmansk oblast, Arkhangelsk oblast, Republic of Komi, Yamalo-Nenets autonomous okrug, Khanty-Mansi autonomous okrug (Yugra), Taimyr raion, Evenki raion, Republic of Sakha (Yakutia), Magadan oblast, Kamchatka krai and Chukotka autonomous okrug. Although all the territories of Sakhalin oblast and Tyva republic are also defined as the Extreme North, they were excluded because of their southern location.

The trends in the rural population differ from region to region (Fig. 2). The biggest decline in rural population was observed in Magadan oblast and Chukotka autonomous okrug (Fig. 2) due to the abolishment of mining settlements populated predominantly by Russian people during 1990s (Litvinenko and Kumo 2017). The largest growth of rural population compared to 1989 is observed in Khanty-Mansi autonomous okrug (109.9% in 2018), Sakha republic is the second region in this aspect as its population in 2018 equals 91.6% of that in 1989, then it is followed by Evenki raion (88.2%), Karelia republic (82.3%) and Yamalo-Nenets autonomous okrug (81.4%).

These observations are essential when studying the factors which contribute to stabilization or even growth of the rural population in the regions of Extreme North. The rural population in Khanty-Mansi autonomous okrug, where the share of the indigenous population is fairly low (Fig. 2), showed continuously increasing trend as a result of its economic growth due to export of hydrocarbon resources. The share of the rural population in the region though is only about 8%, which the smallest among all regions of the Extreme North. The relatively positive situation in Yamalo-Nenets autonomous okrug can be attributed to its huge deposits of natural gas. Such industry, however, may not be the factor that explains the stabilization of the rural population, the share of which in the region is around 15%. To account for that, other possible factors should also be examined. The one factor, which plays a significant role in the rural population dynamics of these regions, is the presence of ethnic (indigenous) people in the Russian Extreme North (Fig. 2). A notable example here is the small decrease in rural population observed in Evenki raion, which can be attributed to this ethnic factor. Some of the authors' papers were also devoted to the districts with relatively high share indigenous people in Chukotka autonomous region, which maintained their population (Litvinenko and Kumo 2017; Kumo and Litvinenko 2019).

Meanwhile, the Republic of Sakha is characterized by the combined effect of both factors described above. Namely, on the one hand, Yakutia has a huge endowment of natural resources such as diamond, coal, non-ferrous metals, oil and gas, which might have positively affected the urban population dynamics in Sakha. On the other hand, Sakha is famous for its indigenous people, who engage in pastoralism, reindeer herding or other traditional natural resource use, which might have contributed to the relatively small decrease in the rural population of the region.

The authors believe that the main factor which prevented a greater decline in the rural population in Yakutia was the high (the highest among all Far North regions) proportion of the indigenous population, which traditionally a has higher birth rate and historically lives in rural areas. This proportion increased from 35% according to the 1989 census to slightly more than half of the total population according to the 2010 census (Fig. 3). A certain positive contribution was made by the growth of the region's revenues from export-oriented diamond and coal mining industries in the post-Soviet period, and in recent years also from oil and gas production, which allowed the regional authorities to implement support measures targeting rural residents, particularly young families. Nevertheless, the regional government has admitted that the measures implemented to promote sustainable development of rural areas have been insufficient to ensure comprehensive and effective use of rural areas' potential and improvement of villagers' quality of life[2].

Rural population dynamics in the Republic of Sakha

Throughout the Soviet period, the share of the rural population in the total population was decreasing, reaching 33% in 1989. After the collapse of the USSR, over the intercensal period of 1989–2002, it increased by two percent and has only been changing slightly thereafter. The share of the indigenous population also declined during the Soviet period, but less than the share of the rural population, and between the censuses of 1989 and 2010, as it was noted above, it has increased significantly (Fig. 3).

During the Soviet period, between the censuses of 1959 and 1989, Yakutia's total rural population increased by a factor of 1.4 and by the end of the Soviet period it exceeded the 360,000. During the economic crisis that

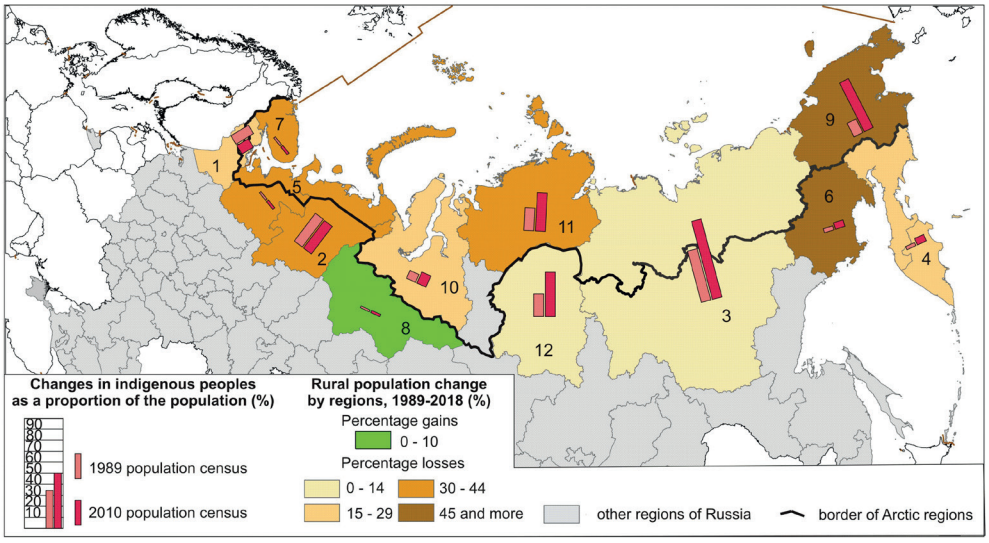

Fig. 2. Rural population dynamics in the Russian Extreme North by regions, 1989–2018 (%)

[2]A comprehensive programme of the Republic of Sakha (Yakutia) «Sustainable development of rural territories of the Republic of Sakha (Yakutia) in 2013-2016 and for the period until 2020», approved by Ordinance No 421 of the Government of the Republic of Sakha (Yakutia) of December 9, 2013. https://www.sakha.gov.ru/files/front/download/id/1232325

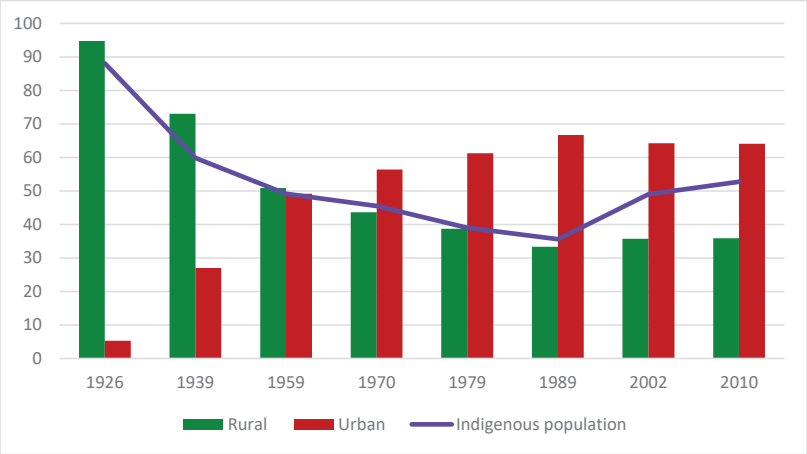

Fig. 3. The share of urban, rural and indigenous populations in the total population of Sakha republic

Source: census data

followed the collapse of the USSR, rural population of Yakutia (Fig. 4) and most of its uluses continued growing until 1994, while total and urban population started decreasing from 1992. Faced with the closure of many industrial enterprises and loss of income, part of the urban population, seeking means to feed their families, returned to villages to run their private subsidiary plots and engage in cattle, horses and pigs breeding and vegetable gardening. Despite the intensifying intraregional migration from rural to urban settlements in the intercensal period of 2002–2010, rural population in 2010 has increased by 1.4% compared to 2002 due to the natural increase as well as the recategorization of several urban-type settlements (Tabaga, Magan, Bolshoi Nimnir, Yllymakh, Zarechny) into rural settlements.

Between 1995 and 2019, with the exception of some years, a slight gradual decrease in rural population was observed (Fig. 4) due to internal migration from villages to urban settlements, particularly to the region's capital. The region's rural and urban population trends diverged in 2004 (Fig. 4), whereas the total population has been slightly growing, primarily due to the growing population of the city of Yakutsk.

In order to identify what caused the trends presented above, more detailed data on the region was used. Along with the overall trends observed at the regional level, significant intraregional differences in the rural population dynamics were identified. Out of Yakutia's 35 uluses, only 13 have a rural population (Fig. 5). The share of the indigenous population in such uluses varies from 82% in Zhigansky to 99% in Ust-Aldansky ulus. Rural uluses vary by the ethnic composition of their population and the prevailing type of economic activities. The prevailing economic activity in the mostly Yakut-populated Western and Central Yakutia is agriculture (nomadic cattle and horse breeding); in the northwestern regions populated by the small indigenous peoples of the North (Dolgans, Evenks, Evens) the dominant activities are reindeer-herding, hunting and fishing, and Momsky ulus, which has predominantly Yakut population but also a large share of Evens, is dominated by agriculture, reindeer-herding, hunting and fishing (Prisyazhnyy 2011). Rural uluses of Central Yakutia are characterized by greater population size and density, while those located to the north have smaller population size (Fig. 5) and density. The largest population decline (over 20%) was observed in Zhigansky ulus in the north-west and Momsky ulus in the north-east. They are both characterised by a northern location, reindeer-herding, hunting and fishing as their major types of economic activities and a smaller, less than 90%, share of the indigenous population compared to other rural districts (Fig. 5).

A decrease of 19% or less occurred in the Arctic reindeer-herding-type Anabarsky ulus and agrarian uluses – the western Suntarsky ulus and the central Ust-Aldansky ulus (Fig. 5). They differ from districts with a larger population decline by a higher proportion of the indigenous population (ranging from 92% in Suntarsky to 99% in Ust-Aldansky ulus) and from districts with an increasing population by their remote location relative to the regional centre (Anabarsky and Suntarsky uluses) and poor transport accessibility to the capital compared to other districts in Central Yakutia (Ust-Aldansky ulus).

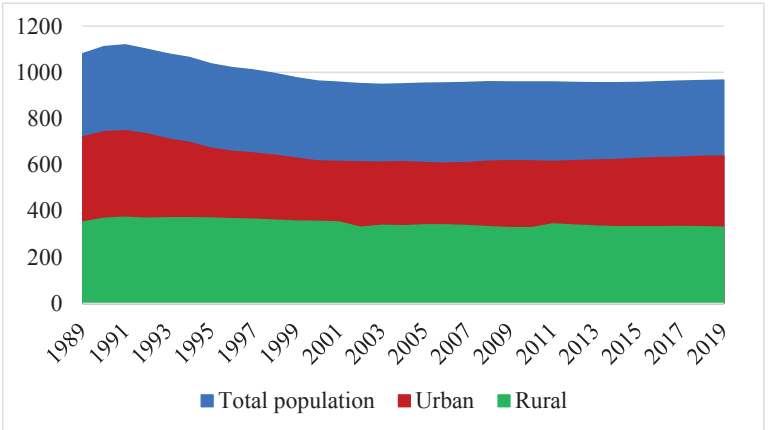

Fig. 4. Dynamics of the rural population in comparison with the urban and the total population in the Republic of Sakha in 1989–2019, thousand people

Source: current population records and 1989, 2002 and 2010 census data

In 7 out of the 13 rural districts, the population increased by less than 20% – from 1% in Verkhnevilyuisky to 19% in Gorny ulus (Fig. 5). The common characteristic of these districts is a high, more than 96%, share of the indigenous population, except for Amginsky ulus (93%). At the same time, they differ in their ethnic composition, type of prevailing economic activities and geographic location, as represented by the reindeer-herding, hunting and fishing-type Oleneksky and Eveno-Bytantaysky uluses located far from the region's centre in contrast to some agrarian districts of Central Yakutia. The largest (over 20%) population growth was observed in the central agrarian Namsky ulus with a 96% share of the indigenous population. It is characterized by its proximity to the region's centre and the best transport accessibility to Yakutsk.

The reindeer-herding, hunting and fishing-type districts compared to the agrarian ones are characterized by larger decrease and lower growth of population, ranging from an 8% growth in Eveno-Bytantaysky ulus to a 26% decrease in Zhigansky ulus. In the agrarian districts, the increase was larger, and the decline was smaller, ranging from an increase of 35% in Namsky ulus to a decline of 10% in Suntarsky ulus. Population only grew in districts that have a proportion of the indigenous population of 93% or more. In districts like Suntarsky, Zhigansky and Momsky, where it was lower, the population decreased by 10% or more. Thus, the post-Soviet dynamics of the population in rural districts was determined by their geographic location, the prevailing type of economic activity, ethnic composition of the population, and the share of the indigenous population in the total.

Local-specific characteristics and differences

Geographic and ethnic differences between Anabarsky and Namsky key districts defined their overall population trends in 1989–2019, explaining the highest growth among all the rural districts in Namsky and a decline in Anabarsky ulus.

Located beyond the Arctic Circle, the Anabarsky ethnic (Dolgan-Evenk) ulus is sparsely populated (population density is less than 0.1 person per sq. km) and has the

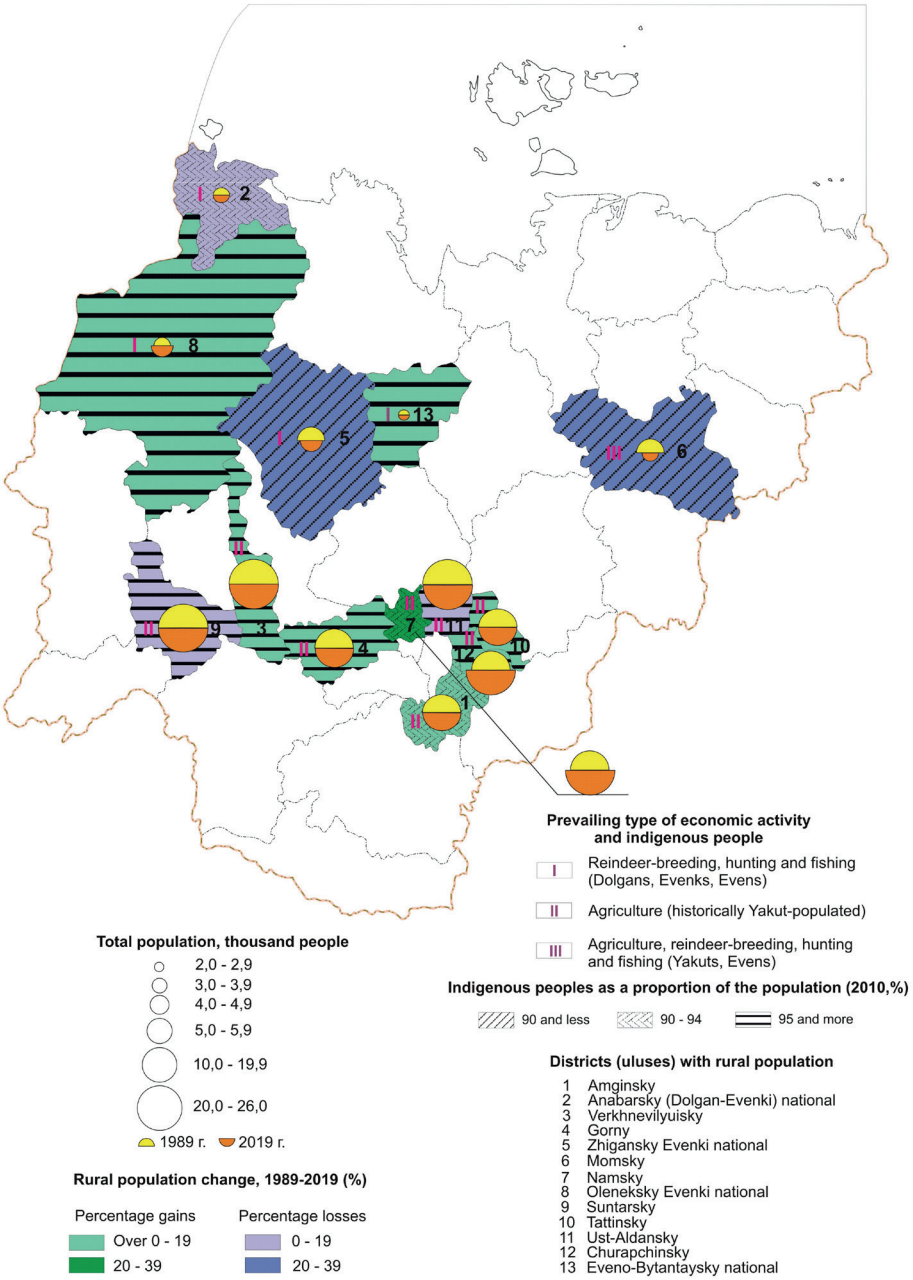

Fig. 5. Population dynamics in rural districts of the Republic of Sakha (Yakutia), 1989–2019 (%)

Source: compiled by the authors based on statistical data

smallest, except for Eveno-Bytantaysky ulus, population among the rural districts (3.5-4.0 thousand in the post-Soviet period) (Fig. 5). According to the 2010 census, its indigenous population is dominated by Dolgans with a share of 42.4%, while Evenks comprise 22.7%, Yakuts – 21.6%, Evens – 6.4%. In addition to the traditional types of economic activities of the indigenous people living in the tundra zone, such as reindeer-herding, fishing and hunting, the diamond-mining industry has been actively developing in recent decades. This rural population-dominated district has become an industrial area, occupying a leading position in diamond mining among the republic's northern districts. Production bases, not including mining areas, of large diamond-mining enterprises such as «Almazy Anabara» JSC and «Nizhne-Lenskoye» JSC cover 30.3% of the district's entire area[3].

During the reviewed period, the population of ulus decreased in 1992–1994, 2007 and 2009–2012, while in other years it did not change or increased slightly. The net population decrease of 7.9% in 1989–2019 was primarily due to migration outflow partially offset by natural population growth. Abolishment of the previously engaged in geological exploration and diamond mining rural settlements (the villages of Amakinsky and Ebelyakh) in 1999 and 2011, respectively, contributed significantly to the negative net migration. The abolishment of Ebelyakh village with a population of just under one thousand people due to the closure of Anabarsky mining and processing plant which operated in the village in 1999–2007 resulted in a significant migration loss in 2008–2014. According to local experts, a larger migration outflow from Anabarsky ulus was avoided due to the remote location of the district relative to the region's centre and the high cost of relocating to Yakutsk or nearby areas.

Namsky ulus, located in the Central Yakutian Lowlands 84 km from the city of Yakutsk, is distinguished by the most favourable geographical location and transport accessibility to the region's centre via an asphalt road. The district is located in Yakuts' historical homeland and is characterized by a relatively large population size (Fig. 5), as well as high density of settlements and population. Its population density exceeds that of Anabarsky ulus more than 20 times, and its total population –4-5 times. Availability of fertile grasslands and pastures in the Lena river valley has historically contributed to the development of livestock and horse breeding[4]. This ulus is the republic's only district where, despite the post-Soviet crisis, the population has been increasing, with an exception of just a few years. This can be explained by the migration inflow and high birth rate, combined with the population's young age structure[5]. Such a significant and unusual growth for a rural area (more than 30% in 1989–2019) was due to a combination of factors positively affecting population dynamics: the ethnic factor (Yakuts comprise 96.7% of the population according to the 2010 census), the historical factor (the district is located in Yakuts' historical homeland with higher populated settlements and higher population density), natural resources (availability of sufficient renewable resources for traditional agriculture) and the geographic location factor. The importance of the latter has increased and played a key role in the migration inflow from more northern and remotely located uluses that have poorer transportation access from the republic's capital. The highest growth, just over 50% in 1989–2019, was observed in the district centre – the village of Namtsy. In addition to the above-mentioned factors, this largest rural settlement with a population of over 10,000 people in 2019, attracted residents of other uluses by its relatively well-developed social infrastructure, availability of a pedagogical college, new sports facilities, opportunities for self-employment or employment in proximity to the region's centre. During the field research, changes in the appearance of the village due to the positive population dynamics and income growth were observed including new buildings and facilities, burgeoning individual housing construction activities, and the construction of an apartment building.

CONCLUSION

Similar to other Extreme North regions located north of 55ºN, with the exception of Yugra, the Republic of Sakha (Yakutia) has witnessed a decline in the total rural population in 1989–2019. However, this decline was relatively small due to the high proportion of the indigenous population which has historical preferences for living in rural areas, as well as higher birth rates. A certain positive role was played by regional rural support measures that became possible due to significant budget inflows resulting from the development of profitable export-oriented industries.

Differences in the Republic of Sakha rural population dynamics can be observed in certain periods and years. Whereas at the beginning of the 1990s rural areas were preferred for survival purposes, in subsequent years there was a general trend of migration outflow to district centres, towns and the capital city of Yakutsk. Despite migration outflow recorded in the 2002–2010 intercensal period and in 2003–2005 according to current population records, the rural population increased due to the recategorization of former urban-type settlements into rural settlements.

Despite the overall trend in the rural population dynamics, significant intraregional differences have been identified. In rural districts, differences ranging from a decrease of over 20% in the northern Momsky and Zhigansky uluses to an increase exceeding 30% in the central Namsky ulus were observed. A more central location and a larger share of the indigenous population contributed to the population growth due to migration and natural increase, while a more northerly location, remoteness and poor transport accessibility to the region's centre contributed to a decrease due to migration outflow.

A shift in rural population took place in Namsky, Churapchinsky and Gorny uluses, where statistics show more than a 10% growth over three decades. The common characteristic of these districts is their location in Central Yakutia in the Central Yakutian Lowlands – the historical homeland of the Yakuts, who are engaged in livestock and horse breeding, which are the traditional types of economic activities for this territory. These are relatively densely populated districts, with larger population of settlements and a share of the indigenous population of over 96%. Their district centres are located 185 km or less from the regional centre; federal highways pass through two uluses (Gorny and Churapchinsky). Namsky

[3]A comprehensive socio-economic development programme of the «Anabarsky ethnic (Dolgan-Evenk) ulus (district)» municipality in 2017-2019. «Anabarsky ethnic (Dolgan-Evenk) ulus (district)» municipal district's official website. Electronic access: https://mr-anabarskij.sakha.gov.ru

[4]Ulus's history. «Namsky ulus (district)» municipal district's official website. Electronic access: https://mr-namskij.sakha.gov.ru/mo-namskij-ulus/istorija-ulusa

[5]A comprehensive socio-economic development program of the «Lensky nasleg (village)» municipality in 2020-2024. Namtsy village, 2019. Electronic access: https://nam.sakha.gov.ru/files/front/download/id/2248234

and Churapchinsky districts have an additional advantage of operating higher education facilities, which is contributing to the migration influx of young people.

Research in the districts selected for case studies has identified influences of other factors on population dynamics as well. Abolishment of villages due to suspension of geological exploration and diamond mining stimulated migration outflow of non-indigenous population from Anabarsky ulus. Construction of new education and sports-related buildings and facilities as well as burgeoning housing construction boosted the migration attractiveness of Namsky ulus and its centre.

The impact of the ethnic factor (the share of the indigenous population, which historically lives mainly in rural areas and is characterized by higher birth rate, in the total population) on rural population dynamics was observed at all spatial levels, from regional to local. Zonal differences between the more northern reindeer-herding, hunting and fishing-type districts, where the growth was smaller and the decline was larger, and the central agrarian districts, where the trends were the opposite, demonstrate the influence of geographic location factor in combination with the type of economic activity. At the intraregional and local level, a very strong influence of accessibility to the region's centre can be noted; the better it is, the smaller was the observed decline, or even population growth was recorded. While population growth took place in rural districts of various total population and settlements sizes, the largest (over 20%) decline was only noted in districts with a total population of less than 6 thousand.

The influence of socio-economic factors on rural population dynamics was observed at the interregional level but is more difficult to reveal at lower spatial levels.

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