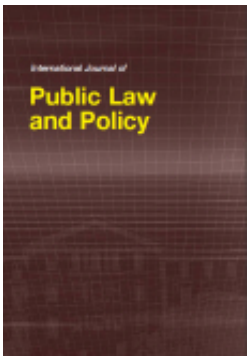

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Population census as an institutional tool for socio-economic analysis of regional and state development in Russia

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Abstract: The purpose of the study is to substantiate the population census as an effective institutional tool for conducting socio-economic analysis of regional and national development for the implementation of state policy to improve the quality of life of the population. The authors analysed the results of population censuses dynamics in Russia, identified the main trends in the development of the country and its regions, as well as the causes of new social phenomena. The authors studied statistical information on the distribution of the population in Russia (educational, gender, age, financial, labour characteristics). The authors systematised the main users of information obtained as a result of population censuses, and also formed recommendations for the implementation of state policy to improve the quality of life of the population.

Keywords: population census; state policy; institutional tool; statistics; socio-economic development; analysis; region; state; Russia.

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1 Introduction

The implementation of policies aimed at ensuring the socio-economic development of the country and its regions requires accurate statistical information about the population. Such information should reflect the state of the labour market in different regions, migration flows, gender and age structure of the population of the regions, their national identity, activity, employment and the number of unemployed and so on.

In different countries, the sources of accurate statistical information are analytical reports of various government agencies, specialised institutions, state statistics bodies, foundations, and independent organisations. However, the largest range of statistical data is usually accumulated as a result of regular population censuses. Moreover, the frequency of population censuses varies from country to country. So, in Austria, the population census was conducted 28 times, starting from 1818, in Germany the first census was made in 1871, and there were only 15 of them.

In Russia, the all-Russian population census has been conducted eleven times since 1897, and the next one will be held in 2021.

The availability of accurate statistical information on various characteristics of the country's population makes it possible to plan the development of industries in the territorial context, introduce new programs to stimulate business, predict the aging of the population, and plan the construction of kindergartens, schools, hospitals and other social facilities. The results of the population census allow us to assess the impact on people's lives of natural disasters, economic crises, epidemics, and changes in the technological order.

It is likely that the results of population censuses can become an effective institutional tool for socio-economic analysis of regional and national development, ensuring an increase in the quality of government decisions aimed at eliminating problem areas in the economy and social sphere and improving the quality of life of citizens.

2 Literature review

The development and health of the social sciences owes much to the generally accepted belief that they are socially useful. Bulmer (1982) in his book *The Use of Social Research* answers questions concerning the use of empirical social sciences in the process of developing public policy and carries out an expanded analysis of the main problems.

The book *Tools for Demographic Estimatio* by Moultrie et al. (2013) combines the methods used by demographers to measure demographic parameters from limited and defective data.

Afzal (1986) in his research claims that he potential for improvement in data collection and analysis is greater in countries with little experience in demographic assessment than in countries with more experience where a high margin of error has become institutionalised in the data base. In countries such as Africa, where demographic sources are limited, extra effort is essential to produce demographic estimates that can serve as benchmarks.

Walter and Andersen (2013) open a new approach to research across the disciplines and applied fields. While qualitative methods have been rigorously critiqued and reformulated, the population statistics relied on by virtually all research on indigenous peoples continue to be taken for granted as straightforward, transparent numbers.

Studies based on census data in New Zealand and Australia suggest modernising the methods of conducting this event (Bycroft, 2015; Kukutai and Walter, 2015). They are aimed at finding opportunities to obtain population census information from administrative sources, since holding this event in these countries every five years is quite labour-intensive. Separate researches are devoted to the study of ethnolinguistic diversity based on census data (Bouma and Hughes, 2014).

An assessment of the value of national population censuses as sources of information with a specific reference to the UK census data and their use in the development of public policy is given in the research of Kirik et al. (2016).

The idea of O'Hara (2019) is to investigate the reasons for the importance of population censuses, as well as the fact that they form the basis of a democratic system of government. Countless decisions in the public and private sectors are made based on census data. Moreover, the consequences of errors in calculations often last for decades, since population estimates, forecasts and survey weights are based on census calculations. According to this document of the US Census Bureau, data from the Decennial Census are used for many important applications including: allocating political power; distribution of federal funds through funding formulas; civil rights enforcement; business applications; post-census population estimates and projections; providing weights for sample surveys; providing denominators for rates; community planning; economic and social science research.

The study of Gupta et al. (2003) investigated the uses of demographic census data for monitoring geographical imbalance in the health workforce for three developing countries (Kenya, Mexico, and Vietnam), as a basis for formulation of evidence-based health policy options.

In the article 'International migration and the developing world', Hanson (2010) used the population census of 30 OECD countries in 1990 and 2000 to obtain the count of adult immigrants (25 years and older) by source country and level of education (primary, secondary, or tertiary schooling).

The book *Social Statistics and Ethnic Diversity* of Simon et al. (2017) is devoted to methods of statistical research of various peoples. It examines the ethno-racial classification of the population according to census data in France, Quebec, Brazil, Great Britain, Malaysia, Uruguay, and other countries.

Kwan-Lafond and Winterstein (2020), Curtis (2019) and Ashutosh (2014) conducted reviews of the history of population censuses in Canada, as well as in studies about New Zealand, considered the ethnic composition of the population. Macdonald (2010) also analysed the results of population censuses for a long period of time (1871–1991).

Louckx and Vanderstraeten (2014) studied the population censuses of two significant periods in the history of Belgium (the first census and the second after World War II). The authors highlighted the expectations of the government and society from the results of these censuses. In any case, studies have proved the influence of the results of population censuses on the decisions of the authorities.

Studies of the results of population censuses by American researchers (Jean Emigh et al., 2015; Swanson, 2016; Prewitt, 2010) are interesting. The authors consider the process of organising and managing the population census in US, explore demographic categories associated with problems of asymmetric combination of race and legal status according to the first population censuses.

Busse (2015) examines the importance of statistics for population management in Palestine. He argues that social statistics is the most important political technology of public administration.

Thus, studies of the importance of population censuses for government decision-making were conducted in different countries in various formats: narrow and wide time intervals, specific directions or generalised areas were studied.

3 Research methodology

3.1 Research hypothesis

The study of the results of population censuses makes it possible to identify the causes and trends of the development of the state, to confirm them with real data. The analysis of this information makes it possible to formulate proposals for the qualitative improvement of the socio-economic condition of the country or region.

The purpose of the research is to study the dynamics of Russian population censuses and their results, as well as to justify the population census as an effective institutional tool for conducting socio-economic analysis of regional and national development and making management decisions within the framework of the implemented state policy to improve the quality of life of people.

The study period: from 1897 to 2010 when official population censuses were conducted in Russia.

Scientists from different countries studied population censuses and promoted the need for statistical research. The founder of statistical science, Quetelet (1911), was the first to organise a statistical Commission in Belgium. Nightingale (1858) insisted that statistical data should be used by entrepreneurs and government officials to make managerial decisions in the UK. In the 20th century, statistical commissions were actively created in various countries and regions to study socio-economic phenomena in detail. During this period, Reichman (1969) noted that the age of statistics has come, and now natural

phenomena, as well as human and other activities, will be measurable using statistical indicators.

Among Russian statisticians, the greatest contribution to research was made by Herman (1817), Arsenyev (1848), Troynitsky (1861), Semenov-Tienshansky (1867) (under his leadership, the first all-Russian population census of 1897 was conducted), Boldyrev (1974, 1990). During the period of soviet statistics, the works of Popov (1993), Groman (1924) and Kondratev (1991) were published.

Currently, Eliseeva and Yuzbashev (2013) and Mkhitaryan et al. (2013), are actively engaged in research in the field of statistics.

Research methods: analysis of absolute and relative statistical indicators, analysis of time series, graphical and logical methods, analysis of the composition and structure of the population.

4 Results and discussion

The population census as a large-scale statistical observation was conducted in Russia periodically for more than 100 years. During this time, nine population censuses were conducted (in 1897 – the Russian Empire, in 1926–1989-the USSR). For the period 1926–1989, we used data from the Russian Soviet Federative Socialist Republic.

Information about the location of the population has always been important for the characteristics of the country, as it helped to understand which place to live citizens consider the most attractive. These data for the years 1897–2018 are presented in Table 1.

Table 1 Distribution of the population in Russia for 1897–2018 (people)

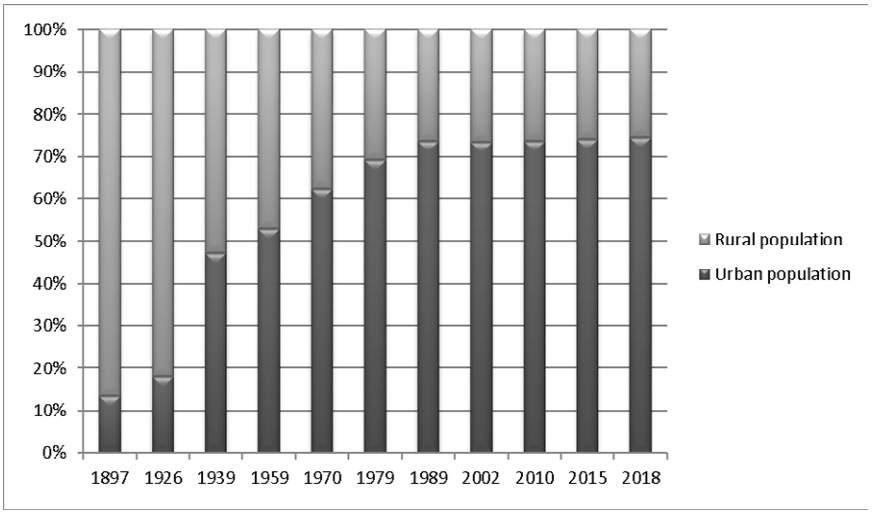
Year	*Urban population*		*Rural population*		*Total number*
	Number	*% of total*	*Number*	*% of total*	
1897	16,828,395	13.4	108,811,626	86.6	125,640,021
1926	26,314,114	17.9	120,713,801	82.1	147,027,915
1939	51,593,770	47.2	57,803,693	52.8	109,397,463
1959	62,059,783	52.8	55,474,532	47.2	117,534,315
1970	80,981,143	62.3	49,098,067	37.7	130,079,210
1979	94,942,296	69.1	42,467,625	30.9	137,409,921
1989	108,425,580	73.6	38,974,957	26.4	147,400,537
2002	106,429,049	73.3	38,737,682	26.7	145,166,731
2010	105,313,773	73.7	37,542,763	26.3	142,856,536
2015	108,469,823	74.1	37,936,171	25.9	146,405,994
2018	109,390,216	74.5	37,440,360	25.5	146,830,576

Source: Compiled by the authors according to the Federal State Statistics Service of the Russian Federation (2020)

We can see that in the early days of the first census, most of the population, namely 86.6%, lived in rural areas, and only 13.4% of people lived in urban areas. However, this order did not last long – by 1939 the rural and urban populations were almost equal in numbers (47.2% and 52.8%, respectively), and in 1959 the number of urban residents

exceeded the number of rural ones. The rapid growth rate of urban residents is interesting to observe in the graph (Figure 1).

Figure 1 Ratio of urban and rural population in Russia for 1897–2018



Source: Compiled by the authors according to the Federal State Statistics Service of the Russian Federation (2020)

After studying the figure presented above, you can see that the shares of urban and rural population have changed places since 1926: rural residents in 2018 are about the same as urban residents during the soviet period. This suggests that life in the city is now more comfortable and attractive for the population, since many rural settlements have low levels of education, medicine, and problems with finding a job. If the condition of villages does not improve in the coming years, they will turn into an abandoned area, where it will be impossible to count even 50 people (CSO of the USSR, 1984).

Another important factor that characterises the country is the level of education. This information is presented in Table 2. From 1897 to 1939, the entire population was divided into literate and illiterate – it is important to say that the number of the former steadily increased. It is interesting to note how much education improved between 1926 and 1939. We see that by 1926 the number of illiterates had decreased by only 11.5% (over 29 years), but by 1939 (over 13 years) it had reduced by as much as 34.2%. Since 1959, the census has provided more detailed data on educational levels (HSE, 2020).

Since 1959, the percentage of people with higher education has increased by 28.3 percentage points. This means that the population wants to have a decent profession and high qualifications. The number of citizens with special secondary education is also rising; the number of citizens with general secondary education is decreasing, but this is due to the growth of the first two categories. The percentage of illiterate people is kept to a minimum, and after 2010 there is no data on this part of the population – either this is such a small number, or every person can be called literate (Gks, 2010).

Such data indicate that the education provided by the state is able to fully cover the population, fulfils its task and provides the necessary knowledge and skills (Yakovleva et al., 2020; Maksaev et al., 2020). This is a positive characteristic for the socio-economic

life of the country, since only with an educated population it is possible to create a stable economy and a reliable society.

Table 2 The level of education of the Russian population in 1897–2018 years, people

Year	Literate, in % of the total	Of them have an education, in % of the total			Illiterate		The total number of people
		Higher education	Secondary special education	Secondary general education	Number of people	In % of total	
1897	21.1	…	…	…	99,070,436	78.9	125,640,021
1926	32.6	…	…	…	99,070,436	67.4	147,027,915
1939	66.7	…	…	…	36,368,892	33.2	109,397,463
1959	93.7	1.9	4.1	4.5	7,432,820	6.3	117,534,315
1979	86.2	6.0	9.9	16.0	18,929,010	13.8	137,409,921
1989	95.0	8.6	14.7	21.0	7,323,202	5.0	147,400,537
2002	99.5	13.1	22.7	14.7	670,480	0.5	145,166,731
2010	99.7	18.8	25.7	15.0	371,427	0.3	142,856,536
2014	≈100.0	27.3	61.4		…	…	146,405,994
2018	≈100.0	30.2	…		…	…	146,830,576

Source: Compiled by the authors according to HSE (2020)

Let us pay attention to the peculiarities of the distribution of the population by gender. This information is presented in Table 3.

Table 3 Population distribution by sex for 1897–2018 years

Year	Men		Women		Total number of men and women
	Number of people	In % of total	Number of people	In % of total	
1897	62,477,348	49.7	63,162,673	50.3	125,640,021
1926	71,043,352	48.3	75,984,563	51.7	147,027,915
1939	51,593,770	47.2	57,803,693	52.8	109,397,463
1959	52,424,767	44.6	65,109,548	55.4	117,534,315
1970	59,324,787	45.6	70,754,423	54.4	130,079,210
1979	63,208,265	46.0	74,201,656	54.0	137,409,921
1989	69,039,087	46.8	78,361,450	53.2	147,400,537
2002	67,605,133	46.6	77,561,598	53.4	145,166,731
2010	66,046,579	46.2	76,809,957	53.8	142,856,536
2015	67,834,124	46.3	78,571,870	53.7	146,405,994
2018	68,108,171	46.4	78,722,405	53.6	146,830,576

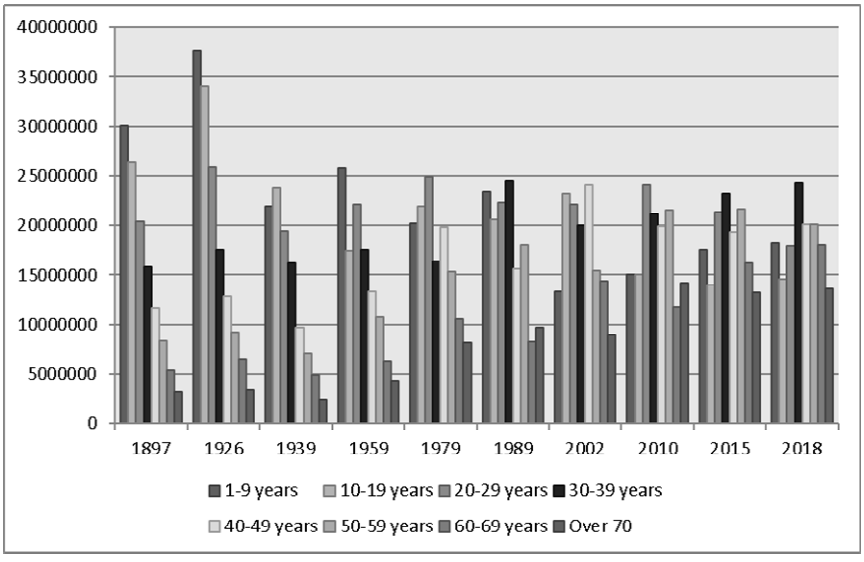
Source: Compiled by the authors according to Statdata (2020)

We can see that over the past 120 years, the share of women in the total population has prevailed over the share of men – from 1% to 5%. Perhaps this is due to the length of life-women live longer. In general, the gender distribution did not change much during

the study period: the male part of the population decreased by 3.3 percentage points, and the female part, respectively, increased by the same number.

The distribution of the population by age group not only allows us to draw conclusions about the length of life in the state, but also warns about such negative phenomena as population aging or low birth rate. It is more convenient to study these figures in the form of a graph, so you can see the changes more clearly (Figure 2).

Figure 2 Population distribution by age group for 1897–2018



Source: Compiled by the authors according to the Federal State Statistics Service of the Russian Federation (2020)

It is interesting to compare data from 1897 and 2018. We see that the number of children aged 1 to 9 years was significantly higher at the time of the first census than at present – however, this may be due not only to the high birth rate, but also to the fact that the territory of the Russian Empire was larger than the territory of present-day Russia. There were also more people aged 10–29, but the number of those over 30 is higher in our time. This suggests that the quality and standard of living in 1897 were so low that not everyone lived even to 30–40, not to mention the elderly. These age groups began to increase only in 1959 (CSO of the USSR, 1984).

Until 1989, the young population was noticeably predominant – there were more people under the age of 30 than the rest. In 2018, we see a different picture – most of those who belong to the age group from 30 to 39 years, and the number of older people is more than teenagers and young people. This may be a sign of a negative demographic effect such as an aging population (Boldyrev, 1974).

Let us look at how the statistics of marriages and divorces have changed over the 100 years since 1987 (Table 4).

These tables show that with each new census, the number of both marriages and divorces increases, and in the censuses of 1939, 1959 and 1979, the population was asked only about the state of marriage.

Table 4 The coefficients of marriage and divorce of Russia according to censuses of the population for 1897–2019 years, ‰

Year	*The marriage rate, ‰*	*Divorce rate, ‰*
1897	198.87	0.42
1926	196.27	3.99
1939	199.97	No data
1959	205.68	No data
1970	227.49	No data
1979	242.10	31.33
1989	245.95	34.80
2002	451.79	104.52
2010	202.02	45.10
2015	7.94	4.18
2019	6.08	3.98

Source: Compiled by the authors according to the Federal state statistics service of the Russian Federation (2020)

During the years of the Russian Empire, the number of divorces was close to zero. However, in 2015 and 2019, there is a decrease in the number of marriages and divorces per 1,000 people. Only 2002 stands out sharply from this series of dynamics. There is an assumption that this is a statistical artefact, which was caused by the fact that since the end of the 20th century, spouses have received the right to terminate their marriage in any registry office, and not only in the one where the marriage was registered. Consequently, during this period, the population took advantage of the simplification of the process of termination of official relations.

When collecting data on marriages and divorces, we noticed that at the end of each census, the number of men who answered that they are divorced is almost two times less than the number of women who gave the same answer. Probably, men are lying in this part, attributing themselves to bachelors.

In general, we can say that the number of people who are married in the 21st century per 1,000 people of the population is several times less than in the 20th century. This clearly shows that now the value of the family is not in the first place for people.

The world is changing rapidly, and people's values are certainly changing. If 50 years ago cohabitation of a man and a woman before marriage was considered absolutely unacceptable, now it has become normal. Therefore, in 2002 and 2010, residents of Russia were asked the question: 'Are you in an unregistered marriage?' In this regard, it is possible to calculate the coefficient of 'unregistered marriage', and data for calculating this coefficient can only be obtained from the results of the population census. For example, in 2002 the rate of 'unregistered marriage' was 49‰, and in 2010 it was 31‰.

This means that for every 1,000 people in the population, there were 49 people in an unregistered family Union in 2002, and 31 people in 2010. The question about unregistered marriage will be asked to residents of Russia during the next census-in 2021 (Strana, 2020).

The population census provides information about many aspects of a person's life. One of them is national identity. Information about the number of births, registered marriages, taxes, can be obtained from sources such as the civil registry office, databases

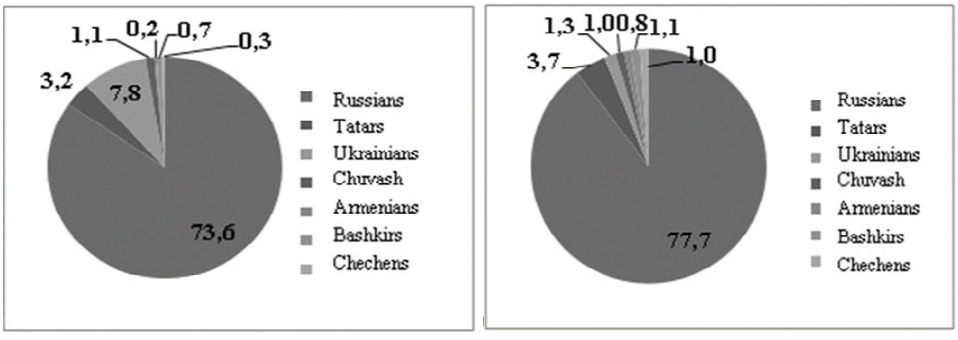
of the Ministry of internal Affairs or the Pension Fund, and information about nationality can only be obtained through the population census.

Russia is a multi-ethnic country, and every citizen, in accordance with article 26 of the Constitution of the Russian Federation, has the right to determine and indicate their national identity and cannot be forced to do so (Consultant, 2014).

The national composition of Russia is constantly changing: some nations are becoming more numerous, while others are on the verge of extinction. According to the all-Russian population census of 2010 there were more than 194 nationalities in Russia.

Russians, Tatars, Ukrainians, Chuvash, Armenians, Bashkirs, and Chechens are among the most numerous nationalities with more than 1 million representatives since 2002. In 1926, their distribution was as follows (Figure 3).

Figure 3 (a) The share of the most numerous nationalities in Russia in 1926, in % (b) The share of the most numerous nationalities in Russia in 2010, in %



(a) (b)

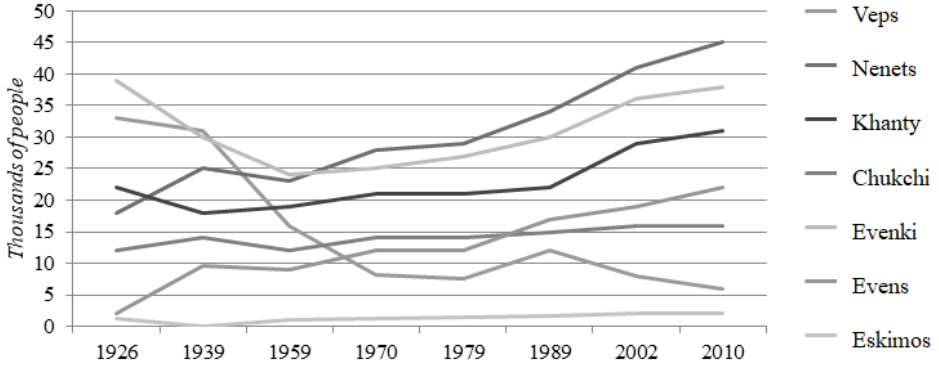
Source: Compiled by the authors according to the Federal State Statistics Service of the Russian Federation (2020)

The most numerous nationalities according to the 1926 and 2010 censuses are Russians and Ukrainians. Russian population increased by 4.1 percentage points, while the share of Ukrainians decreased the most-by 6.4 percentage points. In our opinion, this situation can be explained by the fact that after the collapse of the Soviet Union, many peoples preferred to return to their historical homeland, while many Russians also returned to Russia from the Union republics (Rosinfostat, 2020).

It is also possible to distinguish the smallest nationalities in Russia. These are mainly peoples living in the North of Russia. Some people have never even heard of representatives of these nationalities. In this regard, we analysed seven nationalities, of which only four are known (Nenets, Khanty, Chukchi, Eskimos) and three rare nationalities – Veps, Evenks, Evens (Figure 4) (Novikova and Funk, 2012).

Thus, the number of Eskimos among the listed nationalities is the smallest and from 1926 to 2010 practically did not change, the average absolute increase was 100 people. The number of Finno-Ugric people – Veps – has sharply decreased. So in 2010, compared to 1926, their number reduced by 81.8%. Despite the fact that the negative dynamics of the number of Evenks in 1959 changed to positive, the growth rate in 2010 was 97.4%, that is, it did not reach the level of 1926, having decreased by 1 thousand people (Table 5) (Federal State Statistics Service of the Russian Federation, 2012).

Figure 4 Groups of small nationalities according to the all-Russian population census from 1926 to 2010



Source: Compiled by the authors

Table 5 Estimated data for the group of small-numbered nationalities of Russia for 1926 and 2010, thousand people

Nationality	*1926*	*2010*	*Growth rate, %*	*The rate of growth in %*	*Absolute increase (decrease), thousand people*
Veps	33	6	18.2	–81.8	–27
Nenets	18	45	250.0	150.0	27
Khanty	22	31	140.9	40.9	9
Chukchi	12	16	133.3	33.3	4
Evenks	39	38	97.4	–2.6	–1
Eskimos	1.3	2	1,100.0	1,000.0	20

Source: Calculated by the authors according the Federal state statistics service of the Russian Federation (2012)

We can distinguish three nationalities, the number of which decreased sharply from 1926 to 2010. This is primarily due to the deportation of these peoples in the 30–40s of the 20th century and ethnic migration in 1989 (Table 6) (Institute of Demography HSE, 2020).

Table 6 The number of residents dropped sharply nationalities of Russia in the 1926–2010, thousand people

Nationality	*Year*							
	1926	*1939*	*1959*	*1970*	*1979*	*1989*	*2002*	*2010*
Jewry	567	891	855	792	692	537	230	157
Kirghiz	672	6,3	4,7	9,1	15	42	32	103
Germans	806	811	820	762	791	842	597	394

Source: Compiled by the authors according Institute of Demography HSE (2020)

Table 6 shows that the number of Jews only tended to decrease, while the number of Germans increased in some years, and the number of Kyrgyz gradually increased. Thus, in 1939 the number of Jews increased by 324 thousand people (57.1%) compared to 1926 or in 1989, the number of Germans raised by 4.5%. However, the growth rate of all three nationalities declined sharply in 2010 compared to 1926. The number of representatives of these nationalities has decreased by more than 50%. We associate this fact with migration processes: representatives of all these nationalities returned to their historical homeland. This trend continues at present (Table 7).

Table 7 Relative dynamics indicators according to Table 6

Nationality	*The growth rate for the 1926, in %*								*Growth rate in 2010, in % to 1926*	*Absolute growth in 2010 to 1926, thousand people*
	1926	*1939*	*1959*	*1970*	*1979*	*1989*	*2002*	*2010*		
Jewry	N/d	157.1	150.8	139.7	122.0	94.7	40.6	27.7	–72.3	–410
Kirghiz	N/d	0.9	0.7	1.4	2.2	6.3	4.8	15.3	–84.7	–569
Germans	N/d	100.6	101.7	94.5	98.1	104.5	74.1	48.9	–51.1	–412

Source: Calculated by the authors according the Institute of Demography HSE (2020)

Data from population censuses on the nationalities of Russian residents can be used in the development of special programs aimed at preserving small-numbered peoples. For example, Federal and regional authorities can allocate subsidies for reindeer husbandry, specialised crafts, and provide special-purpose places in universities for teaching children of small-numbered peoples of Russia. Each nationality is unique, it has only its own traditions and customs, its own language or a certain dialect. The fact that we can only get data on the national composition of a country from the census once again confirms its significance.

The state has always been interested in the sources of livelihood of citizens. Such information is currently almost impossible to obtain without contacting the public directly (Table 8).

Table 8 highlights that the transition to a market-based economic system has created opportunities for the population to earn income from renting out property or from interest on deposits and dividends. A comparison of the results of the 2002 and 2010 censuses shows that the structure of the population's sources of funds has not changed much. The main part of the Russian population is engaged in labour activity, works for hire. The second most popular source of livelihood is dependency, alimony, and assistance from others; the third is a pension. The number of private subsidiary farms decreased sharply in 2010 compared to 2002 – by 17.7%. We are confident that even fewer people will be engaged in this activity by 2021, due to the process of urbanisation (Boldyrev, 1990).

What about employment in Russia in general? In the years of the USSR, the coefficient of economic activity of the population was 100%. The main classifications of employees are: workers, employees, and collective farmers; those engaged in mental and physical labour. Since the collapse of the USSR, the situation has changed (Table 9).

Table 8 Sources of livelihood of the Russian population according to the population censuses for 1979–2010, thousand people

Sources of livelihood	*1979 (RSFSR)*	*1979 (USSR)*	*1989 (USSR)*	*2002*	*2010*	*2010 to 2002 in %*
Employment (including part-time work); working in the national economy in 1989 and earlier	74,247	134,860	141,892	62,165	66,621	107.2
Personal subsidiary plot	213	…	…	18,204	14,979	82.3
Scholarship	3,474	6,633	6,772	3,330	2,768	83.1
Pension (other than disability pension)	22,564	40,126	50,503	31,920	33,475	104.9
Disability pension				4,711	5,170	109.8
Benefits (other than unemployment benefits)				16,634	10,771	64.8
Unemployment benefit				1,171	1,416	120.9
Other type of state security				1,976	1,717	86.9
Savings, dividends, interest	-	-	-	350	641	183.3
Lease or lease of property; income from patents, copyrights	-	-	-	225	369	164.1
Dependency; assistance from others; alimony	36,763	80,195	86,049	43,460	38,423	88.4
Other source	149	271	527	2,197	117	5.3

Source: Compiled by the authors according the Federal State Statistics Service of the Russian Federation (2012)

Table 9 Employment and unemployment in Russia for 2002–2019, million people

Category	*2002*	*2010*	*2015*	*2019*
Economically active population	67.1	71.2	76.6	75.3
Employed	59.7	64.9	72.3	71.8
Unemployed	7.4	6.3	4.3	3.5
Total	145.2	142.9	146.3	146.8
Economic activity coefficient	0.462	0.498	0.524	0.513
Occupancy rate	0.890	0.912	0.944	0.954
The unemployment rate	0.110	0.088	0.056	0.046

Source: Calculated by the authors according the Federal State Statistics Service of the Russian Federation (2020)

Since 2002, according to population censuses and Federal state statistics service of the Russian Federation data (for 2015 and 2019), the number of economically active population has been growing. Only in 2019, compared to 2015, there is a slight decrease – by 1.7%. It should be noted that the coefficient of economic activity of the population decreased in 2019 compared to 2015 (by 1.1 p.p.), while the employment coefficient on

the contrary increased by 1.0 p.p. The unemployment rate has been steadily decreasing since 2002. This means that an increasing part of the population finds work and contributes to the development of the country's economy (Perepis, 2002; Sagina et al., 2020; Karpunina et al., 2022; Nazarova et al., 2022).

Of course, population census data allows to create and adjust regional and national projects, state programs, and Federal and regional laws.

5 Conclusions

In Table 10, we have compiled a list of the main users of information obtained from population censuses, the results and decisions made on the basis of these data, and also offered some recommendations for improving the quality of life in the regions of the Russian Federation and the country as a whole.

We conclude that the population census data are accumulated in several large sections: gender and age composition of the population, accommodation and migration, education level, marital status, national composition, housing conditions, sources of income, employed and unemployed.

Our set of recommendations is also divided into these blocks. Based on the information from the population censuses, we identified the main consumers of this data and proposed the following recommendations:

1 Conducting annual monitoring of social infrastructure facilities according to indicators of 'occupancy' and efficiency of use.

2 Control of budget expenditures to support citizens of all ages (children, youth, students, working youth, mature and elderly people) to maintain social balance.

3 Development of rural areas: creation of new jobs through the support of entrepreneurs working in rural areas; support of city-forming enterprises; targeted creation of jobs in areas where high unemployment is recorded; creation of the necessary number of social infrastructure facilities (hospitals, schools, kindergartens, sports and cultural institutions, parks).

4 Continuing to stimulate fertility through the payment of maternity capital, expanding the possibilities of using maternity capital, for example, for essential goods.

5 Creating an all-Russian project to increase the interest of schoolchildren and students in their own education, attracting psychologists to such work, holding periodic 'class hours' on the importance of education in human life.

6 Preservation of the subject 'native language' in schools, holding events to highlight the traditions and customs of the small peoples of Russia.

7 The introduction of clear and strict standards for the recognition of emergency housing, checking all new apartment buildings for compliance with standards. Development of territories where most residents live in old, dilapidated, dilapidated housing.

Table 10 Users of information obtained from population censuses and the main results and government decisions taken on the basis of these data

Census data	*Users of information*	*Results and recommendations*
Population number	Local authorities, Ministry of Transport of the Russian Federation, Ministry of Finance of the Russian Federation, Ministry of Economic Development	1 The results of the census were used in the USSR to develop five-year plans. 2 The amount of funds from the budget allocated for the construction and maintenance of kindergartens and schools, clinics and hospitals, financing of transport infrastructure depends on the number of people living in a particular city or region. *Recommendation: annual monitoring of social infrastructure facilities by indicators of 'occupancy' and 'efficiency of use'.*
Gender and age composition of the population	Ministry of Health, Pension Fund of the Russian Federation, Ministry of Finance, Ministry of education, Federal Agency for Youth Affairs	1 Federal program 'Older generation' and 'Development of the pension system'. 2 Data on the age structure helps to adjust and reserve the necessary amounts for the payment of pensions. 3 Data on the number of school-age children adjust the required number of schools. *Recommendation: balance budget expenditures to support citizens of all ages (youth and students, working youth, Mature and elderly people).*
Population distribution	Ministry of Agriculture of the Russian Federation	1 The national project 'agriculture development'. 2 Gasification of the rural population became a priority after the 2002 census. *Recommendation: the development of rural areas: creation of new jobs through supporting entrepreneurs in rural areas; create the required number of objects of social infrastructure (hospitals, schools, kindergartens, institutions of sports and culture, parks).*
Fertility	Ministry of Finance, Ministry of Science and Higher Education	1 Federal project 'financial support for families with children' and 'Support for families with children'. 2 'Year of youth' and 'year of the family' were announced after the 2002 census. 3 The maternity capital program was introduced. *Recommendation: continue to stimulate the birth rate through the payment of maternity capital: expand the use of maternity capital, for example, for basic necessities for a small child (cot, stroller, hygiene products).*
Marital status	Ministry of Labor and Social Protection of the Population of the Russian Federation, Ministry of Economic Development of the Russian Federation	1 State program 'social support of citizens'. 2 Federal law 'on state benefits for citizens with children'. *Recommendation: based on this data, you can create measures to support young families, for example, preferential mortgage conditions for such families*
Education of population	Ministry of Science and Higher Education, Ministry of Education, Federal Service for Supervision of Education and Science	1 Federal project 'Modern school'. 2 The state program 'Education development'. *Recommendation: creating a national project to increase the interest of schoolchildren and students in their own education, involving psychologists in such work, conducting periodic 'class hours' on the importance of education in human life.*
National composition	Ministry of Culture of the Russian Federation, Federal Agency for Ethnic Affairs, research organisations	1 The Constitution of the Russian Federation (laid the foundations of national policy). For example, the state guarantees the rights of small indigenous peoples (Chapter 3, article 69); no one can be forced to determine and indicate their national identity (Chapter 2, Article 26). 2 National project 'culture'. Support for the preservation of the cultural heritage of the peoples of the Russian Federation. 3 The presidential decree 'on the strategy of state national policy of the Russian Federation for the period till 2025'.

Source: Compiled by authors

Table 10 Users of information obtained from population censuses and the main results and government decisions taken on the basis of these data (continued)

Census data	*Users of information*	*Results and recommendations*
Possession of languages	Ministry of Culture of the Russian Federation, scientific organisations, society, educational institutions, business	1 The law ‘on languages of peoples of the Russian Federation’. 2 Investing in business projects that require employees with good knowledge of a foreign language. *Recommendation: preservation of the subject ‘Native language’ in schools, holding events to highlight the traditions and customs of small-numbered peoples of Russia.*
Citizenship	Russian Foreign Ministry, Ministry of Internal Affairs, research organisations, migration services	1 State program for assistance in voluntary resettlement of compatriots living abroad to the Russian Federation. *Recommendation: increase the penalties, in the identification of illegal immigrants (as illegal migration in Russia has become a general phenomenon).*
Migration	Migration services, regional authorities, Ministry of Economic Development of the Russian Federation	1 Federal law ‘on employment in the Russian Federation’. 2 Increasing labour mobility in the framework of the program to improve economic and social conditions in cities that are subject to the greatest outflow of population.
Number and composition of households	Small and medium-sized businesses, Ministry of Economic Development of the Russian Federation, Pension Fund of the Russian Federation	1 State program ‘mortgage – young family ‘and ‘housing’. 2 Presidential decree ‘on providing veterans and participants of the great patriotic war and military operations with housing’. *Recommendation: introduction of clear and strict standards for recognising housing as emergency, checking all new apartment buildings for compliance with the standards.*
Economically active population	The Ministry of Economic Development, the Ministry of Finance of the Russian Federation, Federal Tax Service, Ministry of industry and trade of the Russian Federation, Ministry of Labor, and State Non-Budgetary Funds (pension fund, funds of medical and social insurance)	1 National projects ‘healthcare’, ‘labour productivity and employment support’. 2 The state program ‘assistance of employment of the population’. 3 Priority program ‘increasing labour productivity and supporting employment’. *Recommendation: support for city-forming enterprises.*
Economically inactive population	The Ministry of Economic Development, Ministry of Labour and Social Protection of Population of the Russian Federation (Ministry of Labor), state non-budgetary funds (pension fund, funds of medical and social insurance)	1 The state program ‘social support of citizens and the development of the pension system’. 2 The national project ‘Health’. 3 Project of the government of the Russian Federation ‘disabled people. Safe environment’. 4 Federal law ‘on veterans’. *Recommendation: creation of projects to promote the employment of people with limited mobility, the disabled and pensioners. A separate ‘labour exchange ‘for such individuals.*
Sources of livelihood	The Ministry of Economic Development, Russian Ministry of Labor	1 The state program ‘Assistance of employment of the population’. 2 The national project ‘Support of SMEs and individual business initiative’. *Recommendation: the introduction of programs for targeted job creation in those localities where a lot of unemployed people. This is especially true in rural areas.*
Housing conditions of the population	The Ministry of Economic Development, the Ministry of Construction of Russia, the Russian Registry	1 The national project ‘Housing and the urban environment’. 2 Priority projects ‘creating a comfortable urban environment’ and ‘ensuring the quality of housing and communal services’; priority project ‘mortgage and rental housing’. 3 Revision of plans and directions of work of the Ministry of Construction of the Russian Federation. *Recommendation: development of territories where the majority of residents live in old dilapidated housing.*

Source: Compiled by authors

The main consumers of information from population censuses are federal and regional authorities. Census data affect the activities of all ministries and departments both directly and indirectly. To a greater extent, the information from the population censuses forms the basis of the activities of such federal departments as the Ministry of Health, the Ministry of Labor and Social Services protection of the Population of the Russian Federation, the Ministry of Education and the Ministry of Science and Higher Education, the Ministry of Economic Development, extra-budgetary funds (pension, social and medical insurance). It is those ministries whose purpose is to improve the welfare of the population.

Census data has led to the creation of many government programs and priority projects. In our opinion, the most significant state decisions for the population were: national projects 'culture', 'agriculture development', 'labour productivity and employment support', 'housing and urban environment'; state programs 'pension system development', 'education development', 'promotion of employment'; federal project 'support for families with children', including the introduction of maternity capital.

The need to conduct population censuses is primarily due to the state's goal – to improve the lives of its residents. This is important for the country as a whole and for every citizen.

In conclusion, we report that the subject-semantic limitation of the study was the use of population census data as a basis for analysing the socio-economic state of the country and offers recommendations for its development. When studying the population census data, we summarised the results of 11 official events. However, we did not consider these data in the context of federal districts and regions of Russia.

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