Demographic contraction as an indicator of the problems of single-industry municipalities

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Abstract

Migration processes associated with the outflow of the population from single-industry municipalities (monotowns) are becoming one of the components of global demographic changes on the territory of the Russian Federation. One of the tools to curb demographic contraction in the territory of single-industry municipalities can be the strengthening of diversification of the economy of monotowns, which should contribute to improving the quality of life of the population, including through a change in the structure of employment. The article analyzes the existing trends in the socio-economic development of single-industry towns of various types and shows that a significant number of them are characterized by demographic contraction, caused, among other things, by outflow of the working age population. Correlation analysis for a number of indicators characterizing demographic processes in single-industry municipalities showed a weak connection between them. Population survey data for 2016 and 2019 indicate a low assessment of measures to support single-industry towns by the population. The most significant factors for residents, indicating a favourable level of socio-economic development of the single-industry entity, in the opinion of the respondents, are employment opportunities, a decent level of wages, the quality of medical care, the quality of housing and utilities, and the ecological situation.

Keywords

city-forming enterprise, demographic contraction, migration, single-industry town, population outflow, problems of single-industry towns, support programmes, population size

Russian monotowns: concept and main problems

Crisis development trends are characteristic of a significant number of Russian single-industry municipalities (single-industry entities, single-industry towns, monotowns — in this

article, the terms are used synonymously), and this is primarily due to the peculiarity of the spatial organization of the country's production forces. The need for development of natural resources and the vast territory of Russia contributed to the formation of a network of single-industry towns with a rigid dependence of socio-economic processes on the activities of the city-forming enterprises, including in districts remote from large administrative centres with a low level of transport and social infrastructure development and extreme climatic conditions (Turgel 2017: 14).

In Russia, a municipality is recognized as a single-industry entity if it is included in the list of single-industry municipalities of the Russian Federation as of January 1, 2014 or meets the following criteria:

- the municipality has the status of an urban district or urban settlement, with the exception of those in which the legislative authority is located;
- the residential population is more than 3,000 people;
- at the city-forming enterprise in the five years preceding the date of approval of the list of single-industry towns, the number of employees reached 20% of the average listed number of employees of all organizations operating in the territory of this municipality;
- the city-forming organization carries out activities for the extraction of minerals (except for oil and gas) or the production and (or) processing of industrial products (Resolution of the Government of the Russian Federation No. 709 2014: 6).

As of January 1, 2021, 321 municipalities with a total population of over 13.3 million people were included in the list of single-industry towns; thus, every ninth resident of the country lives in a monotown.

Single-industry towns are widespread on the territory of 63 subjects of the Russian Federation, the largest number of them are concentrated in Kemerovo region (24 single-industry towns, total population of over 1.51 million people), Sverdlovsk region (17 single-industry towns, population over 1.31 million people) and Chelyabinsk region (16 single-industry towns, the population exceeds 1.15 million people) (Order of the Government of the Russian Federation No. 1398-r 2014: 7).

The lack of a constructive reaction on the part of state authorities to the existing features of the development of single-industry towns had a significant impact on the social aspects of the life of the local population, forming a stable block of problems specific to single-industry settlements. These include a long period of unemployment due to an imbalance between labour demand and supply, low wages, poor-quality provision of social services, including housing and utility services, health care, and additional education, monodirectionality or liquidation of educational institutions professionally oriented to the needs of the city-forming enterprise, the almost complete absence of cultural institutions and leisure facilities, the marginalization of residents and, as a result, the outflow of the working age population (Ivanova 2018: 2).

Main directions of support for monotowns

The scientific community identifies three main approaches to solving the problems of single-industry towns:

- diversification of the economy of a single-industry town — this measure is applicable to single-industry towns with a high level of competitive advantages, in view of the

fact that it implies attraction of investments, as well as the formation of an economic development trend that is independent of the city-forming enterprise;

- support of the existing city-forming base — complete or partial restoration of the activities of the city-forming enterprise, including its social function. It takes place if the further activity of the enterprise depends on insignificant investments but the functions of the city are preserved;
- controlled demographic contraction— the process of a controlled decrease in the population of a monotown through the implementation of resettlement programmes for local residents. This approach is relevant if the territory of the city does not have competitive advantages, and the primary function, as well as resource and production potential of the city-forming enterprise are exhausted, the enterprise is liquidated; the quality of the territory's labour resources is low; ecological, infrastructural, climatic and geographic parameters negatively affect the possibilities of developing the territory and improving the quality of life of the population (Zubarevich, 2017: 1).

Despite the significant differentiation of single-industry towns by the level of socio-economic development, geographical, historical, and cultural factors, resource potential, investment attractiveness, financial condition of the city-forming organization, the quality of the urban environment, internal infrastructure aspects, population size, and other parameters, in the existing practice of strategic development of single-industry entities, the greatest preference was given to the enhancing the diversification of the economy through the formation of a competitive and attractive investment climate, as well as a comfortable urban environment. This is done to reduce the risk of a significant increase in the unemployment rate, slow down the outflow of the working age citizens, to guarantee reduction of the share of those employed in city-forming enterprises, as well as a gradual reduction in the number of single-industry towns (Table 1).

In April 2016 the Ministry of Economic Development of the Russian Federation presented a unified list of targeted measures to support monotowns consisting of 95 positions; in 2020 it was expanded to 114 positions. State support for single-industry towns is carried out by 25 departments and divisions, the supervising organization is the Foundation for the Development of Single-Industry Towns. The existing support measures are the same for all single-industry towns, they are not differentiated depending on the type and particular characteristics of the city's development (Register of measures to support monotowns 2020: 13).

In order to monitor the socio-economic situation in monotowns, it is proposed to divide them into categories depending on the level of socio-economic development. The typology includes the following categories of monotowns:

- *with the most difficult socio-economic situation* — if the city-forming enterprise has ceased production activities or an insolvency procedure has been initiated against it; it is planned to lay off more than 10% of the average number of employees of the city-forming enterprise; the development of the industry in which the city-forming enterprise operates is assessed as unfavourable; the unemployment rate in the municipality is two or more times higher than the average unemployment rate in the Russian Federation;
- *with the risk of worsening of the socio-economic situation* — if the dismissal of employees of the city-forming enterprise is planned in an amount exceeding 3% of the average number of employees of the organization; the unemployment rate exceeds the average unemployment rate in the Russian Federation;

- *with a stable socio-economic situation* (Order of the Government of the Russian Federation No. 1398 2014: 7).

The single-industry towns with the most difficult socio-economic situation (category 1) include 98 settlements with a total population of over 4.14 million people. The largest number of single-industry towns of this category are located in the Kemerovo (9) and Chelyabinsk (7) oblasts, the Republic of Karelia (6) and Perm Krai (6). The category of monotowns with a risk of worsening the socio-economic situation includes 148 single-industry entities, with a total population of over 4.73 million people.

Table 1. Support programmes for single-industry towns in the framework of strengthening the diversification of the economy

Programme	Description	Objectives	Status
Creation of a comprehensive investment plan (CIP)	Diagnostics of the socio-economic state of single-industry towns; overcoming critical risks; increasing the competitiveness of the city-forming enterprise; small business development	Ensuring a competitive quality of life in a single-industry town; diversification of the economy	Active
5 steps of development	Modernization of five public areas of a monotown	Improving the quality of the urban environment	Does not act
Walk the city	Development of tourist routes by residents of single-industry towns with mapping them on Google maps	Development of a tourist destination in monotowns	Active
Integrated development of single-industry towns	Coordination of federal and regional support measures, as well as public involvement	Creation of 230 thousand new jobs not related to the city-forming enterprise, curbing the outflow of the working age population, attracting investments in the amount of 170 billion rubles, reducing the number of single-industry towns	Does not act
Territories of Advanced Social and Economic Development (TASED)	Preferences for TASED residents, development of small and medium-sized businesses, increasing the investment attractiveness of single-industry towns	Reducing social tension, diversifying the economy of single-industry towns, developing territories	Active
«Place of Attraction» Project	Formation of comfortable and event-filled places of attraction for residents and guests of the city in monotowns	Creation of places of concentration of small and medium-sized businesses, leisure and service centers to concentrate demand	Active
Small business franchises	Special conditions for single-industry towns when starting a franchise business of well-known world companies	Diversification of the economy, creation of new jobs	Active

Source: (*Моногорода.рф*, Register of measures to support monotowns, as of 01.01.2020: 13)

The population of 75 single-industry towns with a stable socio-economic situation is more than 4.45 million people.

Despite the fact that the number of single-industry towns in the three described categories differs, they turn out to be almost equally populated. More than 66% of the population of single-industry municipalities live in monotowns, where the socio-economic situation is already rather difficult, or there are significant risks of its deterioration (Fig. 1).
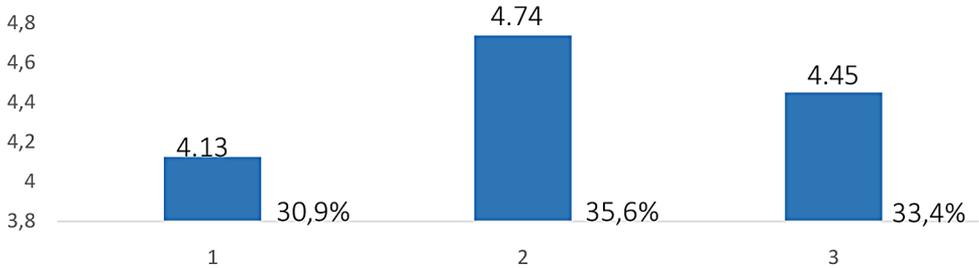
Fig. 1. Population size of single-industry towns depending on the category of socio-economic development, million people (1 — difficult, 2 — with the risk of deterioration, 3 — stable situation). *Source:* (Rosstat, as of 01.01.2020: 15)

Single-industry settlements are significantly differentiated within each of the categories, including in terms of population size:
- category 1: large single-industry towns, for example, Tolyatti with a population of over 699 thousand people, Naberezhnye Chelny (533 thousand people); small single-industry towns, which mostly include single-industry municipalities with the administrative status of a rural settlement — rural settlement Kizema (2.29 thousand people), rural settlement Pesochnoe (2.24 thousand people);
- category 2: large monocities — Miass (151.2 thousand people), Neftekamsk (131.1 thousand people); small monocities — Vyartsilya (2.9 thousand people), Elan-Kolenovsky (3.5 thousand people);
- category 3: Novokuznetsk (540 thousand people), Reshetiha (6.6 thousand people).

More than 75% (249) of single-industry municipalities are small towns with a population of less than 50 thousand people. The largest number of such single-industry towns are included in the category of settlements with complex socio-economic development and with a risk of deterioration in socio-economic development (Table 2).

As of January 1, 2020, 13 settlements included in the list of single-industry towns did not meet the criteria mentioned above in terms of population size (the number did not reach 3,000 people): for instance, rural settlement Svetlogorsk (1.45 thousand people); rural settlement Kizemskoe (2.29 thousand people); rural settlement Gruzinskoe (2.51 thousand people), and others. 54% of such territories belong to single-industry municipalities with a difficult socio-economic situation. The population size of eleven more single-industry towns, taking into account the existing dynamics of migration, is close to the critical level for this criterion.

Table 2. Distribution of single-industry towns by categories of socio-economic development depending on the size of the population

Population of single-industry towns, thousand people	Under 3	3-10	10-20	20-50	50-100	100-300	300-500	500-1000	Total
Category 1									
Number of single-industry towns	7	30	24	18	11	5	1	2	98
Total population of the group, thousand people	16.0	196.4	348.4	580.9	764.9	670.9	314.8	1233.3	4125.6
Category 2									
Number of single-industry towns	3	33	34	51	21	6	0	0	148
Total population of the group, thousand people	8.2	202.4	478.3	1719.8	1470.3	859.7	0	0	4738.8
Category 3									
Number of single-industry towns	3	15	15	16	15	8	2	1	75
Total population of the group, thousand people	8.5	102.8	213.8	546.2	1095.7	1168.8	764.8	549.4	4450.0
Total by three categories									
Number of single-industry towns	13	78	73	85	47	19	3	3	321
Total population of the group, thousand people	32.7	501.6	1040.6	2846.9	3330.9	2699.4	1079.7	1782.7	13314.4

Source: (Rosstat, as of 01.01.2020)

Main trends in the socio-economic development of single-industry towns

The dynamics of socio-economic development of the territory serves as an indicator of the effectiveness of the state policy in relation to the development of single-industry towns. While analyzing the existing trends in monotowns that differ in population size and level of socio-economic development, we will consider monotowns that were included and excluded from the rating of the *Top 10 monotowns of Russia* for 2019 (entry into the rating indicates maximum participation of monotowns in existing support programmes), at the same time belonging to different categories in terms of socio-economic status (the degree of stability of the city-forming enterprise and the assessment of the socio-economic state of a single-industry town by the population are taken into account), as well as significantly differing in terms of population size:

- Group 1: the largest single-industry town Tolyatti (population 702.8 thousand people), single-industry town Kumertau (63.6 thousand people). According to 2019 data, these single-industry entities took leading positions in the annual rating of single-industry towns, calculated according to 17 indicators, including an analysis of the urban environment quality, an assessment of the small and medium-sized businesses network, as well as the economic situation in a single-industry city. These single-industry settlements belong to the first category — with the most difficult socio-economic situation (Rating of monotowns 2019: 12).
- group 2: Nizhnekamsk (238.9 thousand people) — a large monotown, also included in the top-10 of the annual rating of monocities in 2019, but belonging to the third category of monocities — with a stable socio-economic situation;
- group 3: Novokuznetsk, which is the second most populous single-industry town (553.6 thousand people) and Kotovsk (29.4 thousand people), which were not included in the top-10 rating of single-industry towns in 2019, but at the same time belong to the category of single-industry towns with a stable socio-economic situation;
- group 4: Kaspiysk (119.2 thousand people) and Gavrilov-Yam (16.7 thousand people) — single-industry towns that were not included in the top-10 of the rating of single-industry cities in 2019, belong to the category of single-industry towns with the most difficult socio-economic situation (Table 4).

To analyze the dynamics of socio-economic processes in monotowns, the author proposes to use the system of indicators presented in Table 3.

The choice of indicators is due to the following:

- indicators of industrial production of single-industry towns are insufficiently informative due to the fact that the legal addresses of many industrial enterprises do not coincide with the locations of production;
- the indicator of tax revenues to the budget has a significant dependence on the level of wages, and due to the low diversification of the economy of single-industry towns, this indicator to a greater extent reflects the financial condition of a city-forming enterprise, and not the level of socio-economic development of a single-industry city; in addition, the inclusion of highly subsidized mono-cities in the analysis (in terms of the formation of the city's budget) reduces the reliability of the conclusions;
- the amount of information on indicators of the development of social infrastructure presented on the website of state statistics is significantly differentiated depending on the size of the settlement; for small single-industry towns, the data are presented rather succinctly, and to a large extent only for 2015, which does not allow to carry out a qualitative study (Knyazeva and Retivykh 2019: 4).

Table 3. A set of indicators for analyzing the dynamics of socio-economic development of single-industry towns

№	Evaluation unit	Indicator name
1	Demographic processes	Population size
		Natural population growth
		Migration growth
2	Labour market	Number of the working age population
		Registered unemployment rate
		Number of population employed in the city's economy
3	Diversification of the economy	The share of the city-forming organization (CO) employees in the average number of employees of all organizations operating in the territory of a single-industry town
		Number of small and medium enterprises (including individual entrepreneurs)
		New jobs created in the monotown: total

Source: compiled by the author

For the single-industry settlements of group 1 (Tolyatti and Kumertau), the trend of population outflow persists (in 2019 relative to 2014 in Tolyatti, the reduction was 2.1%, in Kumertau — 3.9%). The demographic contraction occurs due to the negative migration and natural balance of the population in the period under review. At the same time, the migration outflow exceeds the natural population decline (see Table 4). An outflow of the working age population is observed in the single-industry towns of this group despite the decrease in the level of registered unemployment, as well as a significant increase in the number of jobs created, and with a relatively stable level of employment at the city-forming enterprise (see Table 4).

The monotown of Nizhnekamsk (group 2) is characterized by population growth (by 1.37% in 2019 compared to 2014), determined by both positive natural population growth and stable positive dynamics of migration processes (see Table 4). There is a decrease in the number of jobs created (by 89% in 2018 compared to 2014) with a simultaneous increase in the share of those employed in the city-forming enterprise, which indicates its stability and the continued monopolization of the labour market, as well as the possible creation of a significant number of temporary jobs which were subsequently eliminated.

The population dynamics in monotowns of group 3 is uneven: in one of the largest and most diversified monocities in Russia — Novokuznetsk — we observe an increase in the population size (by 0.81% in the period from 2014 to 2019); the growth is provided by positive dynamics of migration. At the same time, against the background of an increase in the number of jobs created, as well as a decrease in the unemployment rate, there is a decrease in the number of the working age and employed population in the city's economy. In Kotovsk (group 3), the population is decreasing throughout the entire period under review, the decrease is due to negative dynamics of migration and natural population growth, as well as a decrease in the size of the working age population with a relatively low level of unemployment.

Table 4. Changes in the socio-economic indicators of single-industry towns for 2014–2019.

	Demographic processes																	
	Population size, increment rate, %						Natural population growth rate, ‰						Migration rate					
	2015/ 2014	2016/ 2015	2017/ 2016	2018/ 2017	2019/ 2018	2019/ 2014	2014	2015	2016	2017	2018	2019	2014	2015	2016	2017	2018	2019
Tolyatti	0.21	-0.98	-0.29	-0.44	-0.65	-2.13	1.34	1.61	0.98	-1.00	-2.13	-2.62	0.77	-11.37	-3.85	-3.44	-4.34	-5.07
Kumertau	-0.42	-0.91	-0.79	-1.09	-0.70	-3.86	-0.82	-1.06	-1.49	-3.34	-3.26	-4.45	-3.42	-8.03	-6.43	-7.60	-3.72	-3.27
Nizhnekamsk	-0.07	0.32	0.43	0.29	0.39	1.37	6.99	5.70	6.56	6.34	3.97	3.98	6.36	-3.42	-2.10	-1.06	-0.05	2.12
Novokuznetsk	0.19	-0.02	0.20	0.22	0.22	0.81	-0.52	-0.88	-1.87	-1.59	-3.56	-4.23	2.40	0.72	3.91	3.75	5.72	1.46
Kotovsk	-0.27	-1.34	-1.19	-1.17	-2.07	-5.90	-4.87	-4.11	-6.41	-6.36	-6.77	-6.77	2.18	-9.31	-5.47	-5.30	-13.9	-7.59
Kaspiysk	2.12	2.56	2.97	2.64	2.49	13.45	11.95	13.30	13.86	12.10	11.78	11.79	9.20	12.34	16.90	14.30	13.13	28.04
Gavrilov-Yam	0.26	-0.46	-0.48	-1.69	-2.01	-4.31	-2.63	-6.57	-3.04	-5.99	-6.86	-6.28	27.82	26.89	23.06	14.24	11.67	13.10

	Labour market																	
	Number of the working age population, increment rate, %						Registered unemployment rate						Number of employed in the city's economy, increment rate, %					
	2015/ 2014	2016/ 2015	2017/ 2016	2018/ 2017	2019/ 2018	2019/ 2014	2014	2015	2016	2017	2018	2019	2015/ 2014	2016/ 2015	2017/ 2016	2018/ 2017	2019/ 2018	2019/ 2014
Tolyatti	-1.21	-3.17	-1.83	-0.09	-3.25	-9.23	1.2	1.9	1.9	1.2	0.98	0.9	0.82	-3.77	-0.05	6.49	0.00	3.26
Kumertau	-2.58	-3.13	-2.64	-2.48	-2.20	-12.37	6.4	5.86	5.6	5.7	5.3	n / a	-0.22	-0.40	-0.02	-0.06	-0.02	-0.72
Nizhnekamsk	2.70	-4.60	-0.95	-1.90	-0.01	-4.81	5.1	4.5	3.9	3.9	n / a	n / a	0.60	0.29	-0.07	-0.15	n / a	n / a
Novokuznetsk	-1.15	-1.40	-1.11	-0.83	-0.50	-4.90	0.9	0.85	0.9	1.4	1.1	0.8	-3.13	-3.33	-2.66	2.85	-2.72	-6.23
Kotovsk	-1.73	-4.12	-2.50	-2.38	-3.54	-13.50	0.94	0.68	0.77	0.7	0.77	0.71	1.34	1.93	-7.92	0.13	0.21	-4.56
Kaspiysk	0.64	11.58	0.02	1.05	1.96	15.73	16	16	16	15.8	n / a	0.33	0.53	0.64	1.32	1.27	n / a	n / a
Gavrilov-Yam	-2.60	-1.95	-1.96	-1.98	-2.05	-10.11	10.8	11.9	9.6	10.0	10.4	2.4	2.68	1.56	1.16	1.27	0.23	7.07

Table 4 (continued)

	Diversification of the economy																
	Share of CO workers in the average number of employees of all organizations, %						Number of small and medium enterprises (including individual entrepreneurs), increment rate, %						Number of new jobs created, increment rate, %				
	2014	2015	2016	2017	2018	2019	2015/ 2014	2016/ 2015	2017/ 2016	2018/ 2017	2019/ 2018	2018/ 2014	2015/ 2014	2016/ 2015	2017/ 2016	2018/ 2017	2018/ 2014
Tolyatti	30.3	25.3	25.9	24.4	23	n / a	-4.40	1.98	1.81	61.14	30.93	59.94	31.35	-0.80	96.89	-31.47	75.83
Kumertau	27.5	27.52	29.9	31	31.3	n / a	357.6	-27.01	3.48	22.96	n / a	-7.21	39.73	-17.65	6.75	397.40	510.96
Nizhnekamsk	20.68	19.82	15.7	30.98	32.1	n / a	1.94	9.71	-1.40	9.71	n / a	20.99	-7.97	-69.28	194.27	-87.87	-89.91
Novokuznetsk	20.3	20.3	20.2	27.55	20.13	n / a	-8.63	0.46	1.82	10.0	n / a	2.81	29.70	3.96	17.16	-3.87	51.86
Kotovsk	16.1	16.1	15.9	17.6	17.61	n / a	2.10	-0.69	0.20	2.46	n / a	4.10	285.0	329.87	-80.36	1127.7	3890.0
Kaspiysk	5.8	8.1	8.1	6.7	6.9	n / a	80.59	0.06	-2.17	-0.12	n / a	76.55	-22.4	22.37	-38.17	11.30	-34.69
Gavrilov-Yam	28.9	25.6	22	34.5	34.51	n / a	0.0	22.22	-9.09	-5.0	n / a	-14.3	-38.5	-28.57	-62.50	n / a	n / a

Source: (State Automated Information System «Upravlenie», monitoring of single-industry towns 2014–2019: 5)

In the single-industry town of Kaspiysk (group 4), despite the high level of registered unemployment (more than 15% in 2019) and the low share of employment at the city-forming enterprise (6.9% in 2018), we observe population growth, which is determined by positive trends in natural and migration gain. There is an increase in the size of the working age population (by 15.7% in 2019 compared to 2014). In the monotown of Gavrilov-Yam, the decrease in the population is determined, first of all, by the excess of mortality over fertility, while a decrease in the migration inflow is also recorded. The number of the working age population is decreasing (by 10.1% in 2019 compared to 2014), a significant share of employment is provided by the city-forming organization (34.5% in 2019).

The dynamics of the socio-economic indicators of the mono-industry cities under consideration is significantly differentiated — despite the attempt to combine them into groups according to common classification criteria and the existing uniform support measures for all single-industry entities. We have reason to believe that, in addition to the labour market conditions and the planned changes in the socio-economic state of the territories within the framework of the existing support programmes, there are a number of other factors in the development of the territory that have a significant impact on the motivational aspects for the local population in relation to living in a single-industry town.

In general, according to data as of January 1, 2020, 76% of single-industry municipalities have negative dynamics of migration population growth. The total population of single-industry towns decreased by 0.73% in the period from 2014 to 2019 and as of January 1, 2019 amounted to 13,469.36 thousand people. By January 1, 2020, the population of single-industry settlements decreased by another 91.7 thousand people and amounted to 13,377.6 thousand people.

The demographic contraction is typical for the majority of single-industry settlements; the most significant decrease in the population for 2014–2020 is observed in the cities of Satka (-4.2%), Prokopyevsk (-7.3%), Novoulyanovsk (-8.8%) and Vorkuta (-14.4%). Positive population dynamics are characteristic of competitive single-industry towns with a high quality of life, a developed urban infrastructure, as well as a stable city-forming enterprise: for instance, Naberezhnye Chelny (+2.3%), Novoaltaisk (+5.5%) and Kaspiysk (+17%) (Ivanova 2019: 3).

In the analyzed period, the process of demographic contraction in single-industry towns is uncontrollable; the decline in the population is largely due to the outflow of the working age citizens. In the period from 2015 to 2019 the number of the working age population in single-industry towns decreased by 4.6%. The number of employees of city-forming organizations for the same period decreased by 0.6% (Accounts Chamber 2019: 9).

The total number of unemployed citizens in the period under review decreased by 2.2%, but the level of registered unemployment exceeded the national average in 182 single-industry entities, and in 27 of them — by three times or more. The average monthly nominal wages of employees of organizations in 271 single-industry entities are twice or more below the national average.

Despite the implementation of programmes aimed at increasing the diversification of the economy of monotowns, the number of legal entities registered in single-industry municipalities decreased by 23%, while the number of liquidated legal entities exceeded the number of registered ones by 52.2%.

Correlation analysis results

The correlation analysis carried out for a number of indicators characterizing the demographic processes of single-industry entities in the period from 2016 to 2019 showed weak

correlations between migration flows and the state of the city-forming industry, the number of jobs created, and the number of small and medium-sized enterprises (Table 5).

Table 5. Spearman's rank correlation coefficient for variables characterizing the labour market of single-industry towns

Variables	The share of the average headcount of small and medium-sized enterprises in the average headcount of all enterprises	Registered unemployment rate	Population size
The number of small and medium-sized businesses per 10 thousand population	0.17	−0,14	0.5
The share of the average headcount of small and medium-sized enterprises in the average headcount of all enterprises	—	−0,06	−0,013
Registered unemployment rate	—	—	−0,18

Source: compiled by the author

The results obtained indicate that the strategy of increasing the level of diversification of the economy of single-industry towns does not guarantee the provision of employment and a decrease in the unemployment rate, it also does not contribute to significant changes in the structure of employment.

A significant proportion of jobs created require low qualifications and do not meet the needs of the working age population. Most small and medium-sized businesses operate exclusively in the domestic markets of single-industry municipalities, meeting the needs of limited domestic demand, their activities are based on the motivational aspect of «survival» of the local population.

The perception of the possible socio-economic effects of supporting single-industry towns

A 2019 survey of 3,439 respondents from 152 Russian single-industry towns conducted by the author identified the key factors contributing to the uncontrolled demographic contraction in single-industry towns, namely: ecology, quality of medical care, unemployment, low salaries. 80.8% of the respondents negatively assessed the ecological situation in their city of residence; 92.61% consider the quality of medical care to be low; 60.7% of the respondents noted lack of the desired employment in their settlement; 76.4% consider their level of wages

to be low; 88% of respondents referred to the urgency of the problem of unemployment. 76.4% of respondents indicated a possible risk for the development of a single-industry town due to the outflow of the working age population, while 75% of the respondents would not want their children to stay in the single-industry town; 59% of respondents are considering the possibility of moving; 23% of them — in the nearest future. It should be noted that no significant differentiation in the answers of the respondents, depending on their residence in single-industry towns belonging to different categories of socio-economic development, has been revealed.

Table 6 shows a comparison of the respondents' answers to the same type of questions from the author's research and the survey conducted as part of the control and expert and analytical activities of the Accounts Chamber of the Russian Federation in September 2016. A change in the distribution of answers over three years that passed since support measures were intorduced may indicate possible shifts in the population's perception of the socio-economic transformations of single-industry towns. Here, the data show a slightly higher subjective assessment of the financial situation, but more pessimistic assessments of the prospects for employment and entrepreneurship development. At the same time, similarities in the distributions of the answers to questions related to the implementation of state programmes and their effectiveness indicate the absence of significant changes for the population in the socio-economic processes of single-industry towns within three years after the start of their operation.

Based on the data of the sociological survey and correlation analysis, as well as taking into account the observed dynamics of migration flows, it is possible to predict a further increase in the uncontrolled demographic contraction in a significant number of single-industry towns, which will lead to a decrease in the quality of labour resources and the investment attractiveness of the territory, as well as to an increase in social tension.

An uncontrolled decline in the population, despite the outlined positive trends in the labour market, is an unconditional indicator of the existing unresolved problems of single-industry towns. Positive shifts in socio-economic processes have reduced the risks of a sudden significant aggravation of situations typical for single-industry towns due to a change in the economic base of the city, a decrease in the dependence of its life support processes on the activities of the city-forming enterprise; however, they did not become fundamental.

Table 6. Comparison of answers to similar questions of the questionnaire developed by the author and the survey conducted by the Accounts Chamber of the Russian Federation

Questions and answers of respondents to the questionnaire of the Accounts Chamber of the Russian Federation, 2016		Questions and answers of respondents to the author's questionnaire, 2019	
Question	Share of responses, %	Share of responses, %	Question
1) How do you assess your financial situation?		1) Please, evaluate your financial situation.	
Below the poverty line	5.1	5.2	I live below the poverty line
I live in poverty	41.8	30.9	I live in poverty
I am somewhat well-off	48.1	57.0	I am somewhat well-off
I am well-off	1.9	3.0	I am well-off
I find it difficult to answer	3.1	3.9	I find it difficult to answer

Questions and answers of respondents to the questionnaire of the Accounts Chamber of the Russian Federation, 2016		Questions and answers of respondents to the author's questionnaire, 2019	
Question	Share of responses, %	Share of responses, %	Question
2) How do you assess the possibility of finding a decent job in your locality?			2) How do you rate the possibility of finding a job that meets your needs?
Impossible	48.2	60.7	Impossible
It is possible with difficulty	41.3	33.6	Difficult but possible
Possible	6.7	1.5	High enough
It is easy enough	0.5	-	-
I find it difficult to answer	3.3	4.2	I find it difficult to answer
3) Please, assess the level of entrepreneurial activity and promising areas of business development in your city.			3) How do you assess the opportunity for the development of individual entrepreneurship, small and medium-sized businesses in your locality?
Very high	1.5	1.4	Very high
High	7.0	12.2	Rather high
Average	41.4	-	-
Below average	26.5	63.4	Rather low
No activity	11.1	11.2	No opportunities
I find it difficult to answer	12.5	11.8	I find it difficult to answer
4) Do you know about measures taken by the Government of the Russian Federation to support your city?			4) Are you aware of the government programmes and other measures to support your settlement?
Yes, I know	27.2	17.3	Yes, I am aware
I have heard some rumors	29.3	39.7	I have heard some rumors
No, I do not know	43.5	43.0	No, I am not aware
5) In your opinion, are the measures taken to improve the socio-economic situation in your settlement sufficient?			5) In your opinion, are the measures taken by the state authorities sufficient to improve the quality of life in your locality?
Sufficient	7.5	3.6	Quite sufficient
Not quite sufficient	31.0	45.6	Not quite sufficient
No such measures are taken	41.1	44.8	No such measures are taken
I find it difficult to answer	20.4	6.0	I find it difficult to answer
6) Would you like to change your place of residence (move to another locality if possible?			6) Are you considering the possibility of moving to another locality?
Yes, I am considering it	56.6	58.9	Yes, I am considering it
-	-	1.7	I would like to, but cannot afford to move
No, I do not want to	29.5	23.3	No, I am not considering it
I haven not considered it	13.9	16.1	I find it difficult to answer

Source: author's calculations based on 2019 data, (State Audit 2016: 8)

Conclusion

Summarizing everything said above, we conclude that single-industry municipalities are significantly differentiated by a number of indicators: the level of socio-economic development, population size, industry specialization, administrative status, territorial distribution, and other characteristics. At the same time, the existing support programmes for single-industry towns are the same for all types of single-industry entities.

The demographic contraction is observed in a significant number of single-industry settlements. The decline in the population of single-industry towns is largely due to the outflow of the working age population. Local residents cite environmental problems, poor quality of medical care, high unemployment, and low wages as key motivating factors for relocation.

The existing strategy for increasing the level of diversification of single-industry towns did not form stable positive trends in the development for most of them and did not have a significant impact on the labour market indicators of single-industry settlements of various categories. It seems to the author that in order to increase the effectiveness of support programmes for single-industry towns, measures should be individualized, taking into account the particular indicators of the functioning of each single-industry entity.

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