



# Reasons for sedentarism of shrinking cities in public opinion (evidence from Volgograd city)

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## Abstract

The shrinking of cities has become a mass phenomenon, both in foreign countries and in Russia, since the end of the twentieth century. Until now, the question of why some old-industrial cities succeed in the modern global network of comparative advantages and specializations, while others fail and face population decline, seems to be of no small importance. The article attempts to fill the existing gap in the study of the reasons forcing residents of shrinking cities to stay in them. They were defined as “reasons for sedentarism”, which the authors propose to consider as circumstances that keep residents from moving to another city/region/ country in the presence of stable migration intentions. In order to identify the causes of sedentarism, the authors conducted a survey of students of educational institutions in the city of Volgograd and its region using an online questionnaire created on the Google Forms platform. The study used a non-random sample (the “snowball” method). The present study confirms the primacy of the economic causes of sedentarism in shrinking cities and the need to implement an adequate and systematic economic policy that promotes the innovative development of territories. The analysis of the answers shows that the second most important reasons, following material ones, that keep students of shrinking cities from changing their place of residence, are socio-psychological: the desire to preserve social ties (family, friends, relatives) and the fear of changing the situation.

## Keywords

shrinking cities, causes of sedentarism, migration, standard of living, quality of life

**JEL codes:** R0, R1

## Introduction

The phenomenon of shrinking cities is global in nature, which is associated by researchers primarily with population decline (Cattaneo and Robinson 2020). Most often, scientists characterize the population decline as long-term depopulation caused by demographic reasons,

such as ageing and low fertility (Hospers 2013). The reason for the «shrinking» of cities is related to the asynchrony of supply and demand in the labour market. Economically active cities create more employment opportunities and are more attractive to young people (Arnott and Chaves 2012). A generalized definition of a shrinking city can be formulated as follows: a type of city in which there is a phenomenon of depopulation of the economically active population, including youth, and which is accompanied by a decrease in the quality of life of the population, outflow of business, marginalization and criminalization of the social space of cities.

For territorial management, in order to achieve sustainable development, it is necessary to understand the reasons for the attractiveness of the territory and manage them to attract additional development resources (including human resources). However, even more important, in our opinion, is understanding what makes local residents stay in shrinking cities. The main purpose of this study is to identify the causes of sedentarism in shrinking cities from the perspective of the younger generation, since it forms the human potential for the future economic development of the region. The identification of their motivation and life attitudes will allow adjusting the policy pursued by the authorities of shrinking cities in order to change the trend of population outflow.

## Literature analysis

Studies of the phenomenon of the shrinking city began in 1980, but there is still no generally accepted definition of this term. The most conceptual formulation of the concept of “shrinking city” was proposed by Grossmann et al. (2008), who reveal it through the specifics of the interaction of macro processes with local structures. These macro-processes are associated with general economic and demographic development, expansion of settlement systems, as well as environmental problems or political and administrative changes. “Shrinking” occurs in cities where such interaction leads to a reduction in the population, which acts as a key indicator of this phenomenon.

In the totality of studies of shrinking cities from the 1980s and to the present, several key approaches can be identified.

The first group of studies considers the population decline of shrinking cities as part of an evolutionary process or cyclical trend. From this perspective, population decline, especially in industrial areas, is interpreted as part of shifts in the spatial organization of cities, especially between the urban center and suburban areas (Couch and Cocks 2013; Kabisch and Grossmann 2013; Marta et al. 2020; Reckien and Martinez-Fernandez 2011; van den Berg et al. 1982).

In the second group of studies, the decrease in the population in cities and the degradation of their economic potential is considered as an inevitable result of uneven economic development, in which some territorial entities grow, and others shrink (Solow 1956; Armstrong and Harwey 2000; Harvey 1989; Massey 1979; Amin and Thrift 1994). Population changes – in this case due to migration movements – are considered as a natural reaction of the population to spatial differences in the number and level of employment opportunities or in the quality of life offered. Residents of cities and urban areas with a lack of work or a lower quality of life (for example, with a polluted environment or expensive housing) leave for more attractive regions with better prospects (Tiebout 1956).

The third group of studies considers population decline in the context of “internal” demographic changes. Some scientists interpret these changes as part of the so-called “second

demographic transition” in reproductive behaviour, household formation and readiness for migration (Zaidi and Morgan 2017), while others consider such behaviour as a reaction to shock events, such as technological shifts, or as a way of adapting the population to changing socio-economic conditions, as it was in post-socialist countries since 1990 (Rabušić 2001; Steinführer et al. 2010).

The fourth group of studies links the “shrinking” of cities with the processes of globalization. The root cause of urban shrinking is explained by the lack of industrial diversification in specific urban areas, which increases the political and economic power of large multinational companies and weakens the ability of workers to protect themselves from reduced investment and subsequent deindustrialization of cities. The lack of economic diversity (an extensive industry structure) in old industrial cities hinders their development according to the model of an industrial center and deprives them of jobs (Martinez-Fernandez et al. 2012; Silverman 2018; Bartholomae et al. 2017).

In the overwhelming majority of modern studies, the causes of the “shrinking” of cities are considered from the standpoint of uneven economic development, are understood extremely narrowly, only in the aspect of transformational and investment reasons, which is due to the dominance of the neoclassical paradigm in the theories of regional and urban economics.

Since starting from the end of the twentieth century, the shrinking of cities has become a mass phenomenon both in foreign countries and in Russia, many researchers are interested not only in the causes of compression, but also in the issues of the revival of old industrial cities. The benchmarks for the development of shrinking old industrial cities are empirical reference models, such as “service city”, “learning city”, “creative city” and “smart city”. An important question is why some old industrial cities succeed in the modern global network of comparative advantages and specializations, while others fail and face population decline (van der Waal and Burgers 2011; Couch and Cocks 2013; Bassett 2017). In this regard, the problems of attractiveness of shrinking old industrial cities are of particular importance. What are the reasons that encourage the population to stay in a shrinking city, and which ones enable attracting new people? Insufficient attention is currently paid to the analysis of the reasons for the attractiveness of shrinking cities.

D.Reckien and C.Martinez-Fernandez’s (2011) study can be considered the most detailed on reasons for the attractiveness of shrinking cities, in which the main attention was paid to the spatial discrepancy leading to the sprawl of suburbs, and highlighting the causes of compression and expansion of old industrial territories. Papers by (Cheshire and Magrini 2006; Royuela et al. 2010; Guimarães et al. 2016) (on the example of Portugal) are also devoted to identifying the causes of attraction and expulsion that determine the attractiveness of a shrinking city. In their opinion, the combination of spatial (aesthetics, availability and accessibility of green areas), human (including social relations) and functional aspects (welfare, availability of public transport) can influence migration decisions from the perspective of qualitative perception of the environment of a shrinking city.

A number of authors believe that shrinking cities may be of interest to certain segments of the population, without identifying the reasons for their attractiveness. For example, K. Pallagst believes that shrinking cities may retain some attractiveness, since they offer opportunities to improve the lifestyle of the remaining residents (Pallagst et al. 2009). This idea is confirmed by the studies of E. Delken and J.B. Hollander, who showed that residents of shrinking cities, despite economic and demographic decline, can feel happy in terms of their subjective perception (Delken 2008; Hollander 2011).

Some studies are devoted to identifying the psychological and social reasons for the attractiveness of the territory, but not from the perspective of a shrinking city. Hedonistic models (Chen and Jim 2010; Waltert and Schläpfer 2010) were used to study the reasons for the attractiveness of the territory, such as convenience and quality of service. Psychological reasons preventing residents from leaving the city (Grzeskowiak et al. 2003; Hidalgo and Hernandez 2001) included: attachment to a place through material factors (work, life) (Brown et al. 2003; Hidalgo and Hernandez 2001), social ties (Coulton et al. 2012; Hospers 2014) and loyalty to the place.

In Russian science, the problem of youth migration has been studied within a broad interdisciplinary context, both at the level of the country as a whole and the region. As O.Chudinovskikh notes, in the first years after the collapse of the USSR, youth was characterized by “sedentarism”, which later gives way to mobility. The 2014 study recorded a significant level of regional migration of graduates, both at the school-university level and after receiving higher education. The most highly appreciated characteristics of migration sites included an acceptable standard of living, cultural environment, and tolerance of society (Varshavskaya and Chudinovskikh 2014). We should immediately note that the role of the economic factor dominates almost all studies of such issues. N.Zubarevich, considering the concept of a “depressed city”, directly points to the growth of unemployment and the decline in production as its main signs (Zubarevich 2001; Zubarevich et al. 2020).

In a study of a group of RANEPА employees, the authors conclude that the key reason for migration is the search for work, for which half of the respondents are ready to move to another city (Klyachko and Semionova 2018). We should also note the works of N.Mkrtchyan, which consider the problems of return migration of young people and conclude that it is due to social, not economic reasons (Mkrtchyan 2017).

The regional migration model is described in the studies of A.Averyanov, E.Sharova, A.Odintsov and others. For young people from the region, regional centers are the center of attraction, forming, as T.Nefedova points out, a steady trend of urbanization (Nefedova and Mkrtchyan 2017). At the same time, a paradox arises when higher educational institutions in the centers of the regions seek to stand out in the educational services market by providing quality education, but at the same time they actually train personnel who are being “washed out” from the regions to the capital (Sharova 2015). There is also an increase in cognitive dissonance, since high-quality modern education takes into account digitalization and increases alienation from industrial regional structures (Averyanov et al. 2021). Domestic studies of this kind deal exclusively with the problems of migration and the study of migration potential in depressed regions (Giltman et al. 2020; Odintsov et al. 2020).

The article attempts to fill the existing gap in the study of the reasons forcing residents of shrinking cities to stay in them. These reasons were defined as “reasons for sedentarism”, by which, within the framework of this study, we will understand the circumstances that keep residents from moving to another city/region/country if there are stable migration intentions to change their place of residence.

## Research methodology

In order to identify the causes of settlement, the authors conducted a sociological study. The choice of the study format was due to the impossibility of holding face-to-face meetings and conversations with respondents due to the unfavourable sanitary and epidemiological

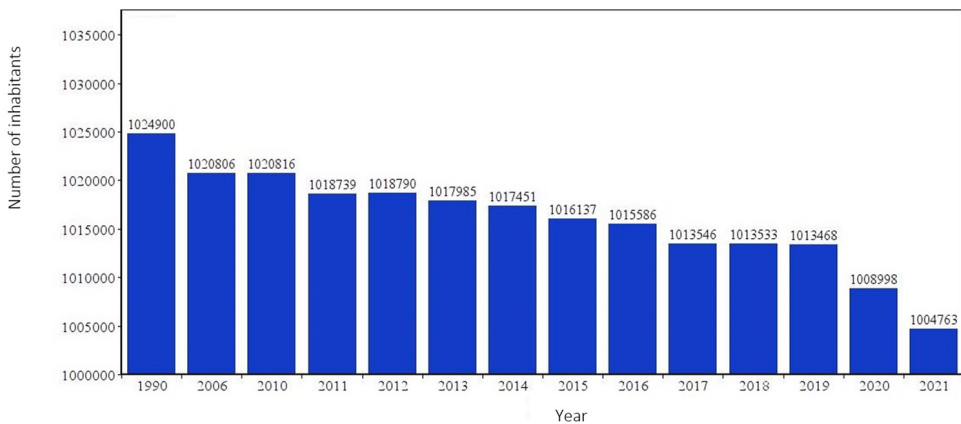
situation caused by the coronavirus pandemic. The survey was conducted anonymously, by means of a questionnaire in the period from May 15 to June 01, 2021 using an online questionnaire created on the Google Forms platform (<https://docs.google.com/forms/u/0/>). The target audience of the survey were students of all forms of education from educational institutions in Volgograd and its region. The study used a non-random sample (the “snow-ball” method). A total of 614 respondents took part in the survey. The socio-demographic composition was represented by the following indicators: men - 293, women - 322; the age of the majority of respondents was under 21 (59.7%); the place of residence of the vast majority of respondents was Volgograd (81.3%), the rest were residents of the region. The task of sample representativeness was not set. The results of the study can be applied only to a sample population and used as a reference.

The following section provides a brief overview of the existing literature on the issues of “shrinking cities”, the causes of this phenomenon and the issues of the revival of old industrial cities. After that, the characteristics of a shrinking city are presented, with an analysis of indicators of socio-economic development (on the example of Volgograd). This is followed by an analysis of the results of the author’s research to identify the causes of sedentarism of residents of shrinking cities. In the final section of this article, conclusions and practical recommendations are formulated.

### Socio-economic portrait of a shrinking city (on the example of Volgograd)

Volgograd is an example of a shrinking city. The annual population decline of the city averages about 700 people (Fig. 1). This is despite the fact that in 2010, the city authorities artificially expanded the administrative boundaries of the city to preserve the status of a million-plus city, due to the annexation of nearby settlements (Resolution ... 2010).

The decline in the population of Volgograd is explained by the unstable pace of socio-economic development and the low quality of life of the population. According to the results of the crisis in 2020, the macroeconomic indicators of the city’s development



**Figure 1.** Population of Volgograd, 1990-2021. *Source:* compiled by the author according to Volgogradrosstat

were characterized by negative values in a number of industries. The most affected are retail trade turnover (-9.9%), catering turnover (-18.4%) and construction work volume (-9.2%). Real wages (taking into account the consumer price index) for 2020 increased by 2.8% against the background of an increase in prices for goods and services in the consumer market of the Volgograd oblast by 4.9% by December 2019 (Analysis of socio-economic ... 2020).

The indicator of the economic development of territories has always been business structures, especially small and medium-sized ones, which are the most sensitive to the conjuncture of the development of the local economy and business conditions. The turnover of organizations by type of economic activity decreased by 8.2% in 2020 compared to 2019. And the number of organizations engaged in various types of economic activity decreased from 38,344 in 2020 to 35,512 as of 01.01.2021. In 2020, the number of individual entrepreneurs having passed state registration decreased by 13.0% (3.6 thousand) compared to 2019 and amounted to 24.2 thousand.

The priority of employment of individual entrepreneurs for a number of years remained wholesale and retail trade (37.6% of the total number of individual entrepreneurs). At the same time, since the beginning of 2020, the largest outflow of employment of individual entrepreneurs (-1.8 thousand entrepreneurs) was noted in the trade sector (Analysis of socio-economic... 2020).

The reduction in the number of commercial organizations and individual entrepreneurs is reflected primarily on the tax base. The volume of tax and non-tax revenues received by the budget of Volgograd in 2020 amounted to 7632.7 million rubles, which is 3.5% less than in 2019. Tax revenues of the Volgograd budget amounted to 5955.1 million rubles (48.8 million rubles more than 2019), non-tax revenues of the Volgograd budget amounted to 1677.6 million rubles (324.9 million rubles less than 2019). The dynamics of tax and non-tax revenues to the budget of Volgograd are presented in Table 1.

**Table 1.** Tax and non-tax revenues of Volgograd, thousand rubles.

<b>Indicator name</b>	<b>2019</b>	<b>2020</b>	<b>Growth / decline rate, %</b>
<b><i>Tax revenues</i></b>	<b><i>5 906 300,6</i></b>	<b><i>5 955 138,9</i></b>	<b><i>100.8</i></b>
Personal income tax	3 235 949,2	3 518 867,8	108.7
Excise taxes	75 772,5	66 102,0	87.2
Simplified Taxation System	160,817.4	158,450.1	98.5
Unified imputed income tax for certain types of activities	523,359.6	403,711.7	77.1
Unified agricultural tax	8 257,0	8 648,7	104.7
Tax levied using the patent system	12 835,7	9 788,2	76.3
Personal property tax	416,575.2	354,043.7	85.0
Land tax	1 286 455,3	1 251 192,8	97.3
State duty	186,298.1	184,336.2	98.9
Cancelled taxes and fees	-19.4	-2.3	11.9

<b>Indicator name</b>	<b>2019</b>	<b>2020</b>	<b>Growth / decline rate, %</b>
<b>Non-tax income</b>	<b>2 002 477,3</b>	<b>1 677 555,0</b>	<b>83.8</b>
Land rent	775,283.7	705,564.7	91.0
Property rental income	4.3	790.6	by 183.9 times.
Treasury property rental income	145,687.8	107,627.5	73.9
Income from the sale of property	190,591.7	160,437.4	84.2
Income from the sale of land plots	165,484.7	100,716.0	60.9
Revenue from the placement of advertising structures	80 308,7	73 973,5	92.1
Payment for the right to place a non-stationary object	135,886.6	122,259.7	90.0
Other non-tax income (income from the profits of the Municipal Unitary Enterprise, payment for the use of natural resources, income from the provision of paid services, fines, sanctions, damages, other non-tax income)	509,229.8	406,185.6	79.8
<b>Total tax and non-tax income</b>	<b>7 908 777,9</b>	<b>7 632 693,9</b>	<b>96.5</b>

Source: Analysis of socio-economic... 2020.

As can be seen from Table 1, in 2020, there was a decrease in almost all types of non-tax income compared to the indicators of 2019.

The reduction in the number of organizations also strongly affects the unemployment rate. The number of unemployed registered at the Volgograd Employment Center increased by 5.9 times compared to 2019 and amounted to 13269 people on January 1, 2021. Let's venture to assume that this indicator is higher, since it does not include the unregistered unemployed, as well as people with seasonal earnings. The reduction in the number of working organizations entails an increase in unemployment, and as a result – an increase in the outflow of the able-bodied population to other regions in search of work.

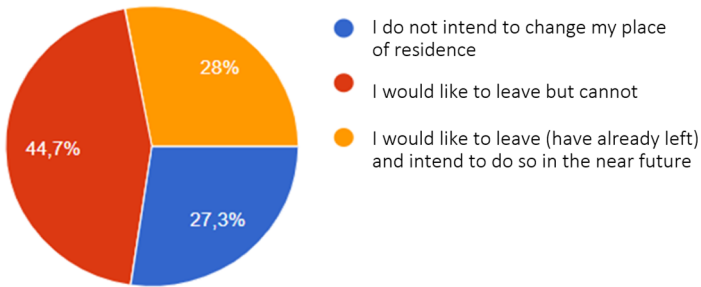
In 2020, the number of Volgograd residents born decreased by 711 people compared to 2019 and numbered 8,061 children. The number of deaths, on the contrary, increased by 2,589 people and amounted to 15,302 people, which exceeded the number of births by 1.9 times. The natural decline of the population increased to 7,241 people against 3,941 people in 2019 (Analysis of socio-economic... 2020). Migration growth partially compensated for the natural decline. Naturally, 2020 is unique due to the tense sanitary and epidemiological situation and cannot be considered indicative, but the decline in the population of Volgograd has a long-term trend and only worsened due to the spread of the coronavirus infection.

## Research results

The survey questions were aimed at identifying the reasons forcing residents of Volgograd to stay in it. When asked about their attitude to the prospects of living in Volgograd and



Volgograd oblast, only 27.3% indicated that they were not going to change their place of residence (Fig. 2). 44.7% expressed a desire to leave their native region without being able to, and 27.3% of respondents plan to leave in the near future. It is alarming that in the overwhelming majority the desire to leave dominates even despite the lack of experience of living in another city, which may indicate an unfavourable image of the region in the information field.



**Figure 2.** Are you going to change your place of residence in the near future? *Source:* authors' estimates

When asked about the reasons that deterred from changing the place of residence (no more than five options could be chosen), the most popular option was the lack of financial opportunity and dependence on parents/ spouse (Table 2). The next most important statistically significant reasons were: the presence of friends and acquaintances (29.6%), the need to care for relatives and loved ones (23.1%), fear of change (22.8%) and unwillingness to leave alone (18.7%). Considering the age category, it is quite expected that some respondents (6.5%) associate their plans to change their place of residence with the completion of their studies in the current form of study.

Slightly less than half of respondents (42.4%) answered about the availability of employment, but at the same time, only 12.7% of respondents indicated that the availability

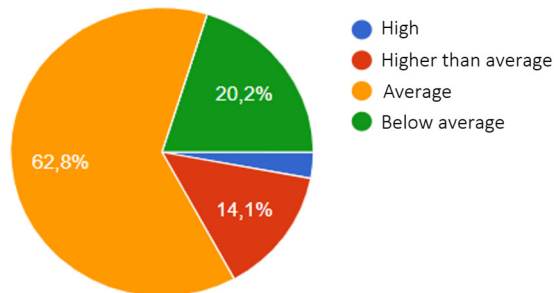
**Table 2.** Reasons that keep you from changing your place of residence

	Reason	% of responses
Economic reasons	Lack of financial opportunity and dependence on parents/ spouse	46.5
	Having a well-paid job	12.8
	Everything suits me/there is everything I need	14.3
Socio-psychological reasons	Fear of change	22.8
	Unwillingness to leave alone, no company /like-minded person to move with	18.7
	The need to care for relatives and loved ones	23.1
	Having friends and acquaintances	29.6
	The lack of an alternative / it is about the same everywhere	9.9
	Study	6.5

*Source:* authors' estimates.



of work is the reason that deters them from moving to another city. As part of the survey for students, in addition to specifying the role of the student, the possibility of specifying an alternative professional status was provided. Most of the surveyed workers are involved in the public sector, however, based on the results of the survey, the attitude to the income level in this area does not enable bringing up the presence of favourable labour market conditions in the region. Thus, the vast majority of respondents rated their well-being as average or below average (Fig. 3).



**Figure 3.** How do you assess the level of your well-being? *Source:* compiled by the author

When asked whether the region is a place that respondents could recommend for living, 61.5% answered negatively. At the same time, 51.7% of respondents are ready to recommend the region as a place for tourism. The willingness of local residents to recommend Volgograd for travel may indicate the preservation of tourist attractions in the region and the high potential for the development of this sector of the regional economy (Volkov 2019).

Based on the data obtained, it can be argued that the Volgograd student is in search of migration routes, but does not always have the opportunity to move to a permanent place of residence in other regions. The analysis of the answers shows that the main reasons that keep students of shrinking cities from changing their place of residence are economic: lack of financial opportunity and dependence on parents/spouse. In second place in importance are social reasons: the presence of friends and acquaintances and the desire to preserve social ties (family, friends, relatives). In some cases, the presence of stable social ties in the place of permanent residence may dominate the economic feasibility, which, however, may vary depending on the life cycle of people and their social status.

## Discussion and recommendations

The data obtained in the course of this study indicate a high migration mood of the students of Volgograd as a shrinking city. The reasons we have identified that encourage them to stay in shrinking cities correlate with the typology of reasons described earlier: economic (Andersen and van Kempen 2003), social (Partridge et al. 2007) and psychological (Coulton et al. 2012).

Having a well-paid job and an acceptable level of income (above average and high) is the reason that explains the desire of residents to stay in the city, as well as their potential departure if work or better working conditions can be found elsewhere. Thus, the present study confirms the primacy of the economic causes of sedentarism in shrinking cities and the

need to implement an adequate and systematic economic policy that promotes innovative development of territories.

Stable social ties and attachment to the place of residence are the dominant social causes of sedentarism for residents of shrinking cities. Unwillingness and psychological unpreparedness to break close social contacts force residents of shrinking cities, including to the detriment of economic expediency, to remain in those cities. However, this reason is closely correlated with economic and institutional reasons. The underdevelopment of rental housing markets, high bureaucratic barriers (the need for temporary registration, registration in social institutions, a number of documents, etc.) and the asymmetry of access to information about the labour market (the effect of nepotism and horizontal ties) make moving to another city/region problematic. Thus, artificial barriers are created for interterritorial migration, which artificially constrains the process of “shrinking” of cities.

In the light of the conducted research, it can be assumed that further outflow of the population will eventually lead to significant socio-economic shifts, aggravating the consequences of “shrinking”. The share of young people, especially their most qualified part, will decrease. With the departure of young people who have in-demand professional skills, the incomes of organizations and the consumer demand of the population will decrease, increasing the social tension. In addition, the pension burden on both the budget and the population will increase.

The improvement of the economic indicators of the region may have an unexpected effect. Since now part of the active population is deterred from migration only by economic circumstances, the improvement of their financial situation may cause mass migration, since too long a regression process has already created a stereotypical image of the depressive image of the region. Social ties, which, as it was found in the study, are a deterrent cause of migration, can only be considered as an instrument of adaptation to the existing economic situation, but, given the mobility of young people and the difference in generational value characteristics, they cannot be considered as unchangeable.

The reason for the forced sedentarism of the active part of the population identified in the study may manifest itself in various social practices, which may not be recorded in quantitative indicators, but reflect the general nature of dissatisfaction with the current situation. In our opinion, in general, the attitude towards the region as a home will change, which may be expressed in general passivity in political, social and other spheres of public life.

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