

## MANAGEMENT OF INDUSTRIAL MONOTOWNS: SPECIFIC FEATURES

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**Abstract:** The objective of the paper is to substantiate promising conditions for the development of industrial company towns taking into account the context of their functioning. Research methodology included critical analysis of statutes and regulations, generalization of both foreign and Russian research experience, building a model of statutory instruments system concerning the development of one-factory towns. During the research, the following progress prospects for company towns were determined: reforming legal and regulatory framework, using new industrial policy approaches, and expanding the services sector at the expense of boosting the educational sphere and digitization of the economy. In the paper, the authors also emphasize that local residents have to adopt an active stance to be able to spot issues, make decisions, and carry out projects independently.

**Keywords:** Russia, monotown, Northern context, innovation development, new industrial policy, services sector.

### 1 Introduction

Both in Russia and in the entire world, studying one-factory towns, or monotowns, has remained relevant for several decades already. Relevance of the research topic – and its scientific importance at the same time – consist in the necessity of leveling out crisis phenomena observed in one-factory towns (particularly those aggravated during the global financial crisis), taking into account their strategic significance both for the economy of individual regions and the country in general.

In Russia, this is associated with transition to the market type of economic development when established industrial centers – monotowns – found themselves in a dramatically different formation having brought about qualitative change to both public relations and the production ones associated with them. So, the demand for products of their backbone companies started to be determined not by the state but by the market where competitive producers are the only ones operating efficiently. In its turn, it is on them that the local population's level of life depends. With regard to this, for crisis one-factory towns, ways of development currently simmer down to mitigating social tension which brings on outflow of local population from them; this is provided by creation of new jobs, engaging private investors, and moving away from totally state support in the form of subsidies for such towns.

As for monotowns, the relevance of single-industry dependence issues is confirmed by the numerosity and diversity of studies available in the world which deal with one-factory towns. A greater part of them is aimed at searching for innovation development ways for the economy of single-industry towns.

Still, in monotowns, implementation of innovations is a more complicated process basically, as there are functional, cognitive, and political inhibitors to development which are expressed in long-standing industrial traditions rooted in individual productions, welfare mentality of local population, and passivity of self-government authorities.

The authors believe the recently undertaken by scientists search for ways to overcome innovation development inhibitors and identification of specific features in managing industrial company towns will contribute to acceleration of the process of their development.

### 2 Literature Review

Current development issues of single-industry towns are one of the most popular research subjects considered by scientists worldwide. This is associated with diversity and trends of the issues over time; part of them are consistent, while others are new, including ones caused by expansion of crisis phenomena (Ryakhovskaya & Polyakova, 2016; Skufina & Baranov, 2017; Skufina & Mitroshina, 2020; North, 2005; Hausmann et al., 2007).

The said issues are extremely varied and versatile. Meanwhile, it is territorial particularities determining the specific features of social, economic, and environmental issues of one-factory towns that are noted by researchers (Zamyatina & Pilyasov, 2016; Samarina et al., 2020; Volkov, 2020). This is why studies highlighting the necessity of considering special conditions of economic activity in questions of ensuring comprehensive development of single-industry areas are so important. This is especially relevant for Northern areas, with their economic and geographic features (high costs of economic activity, poorly developed infrastructure, remoteness, living environment lacking comfort, and so on) determining so-called "Northern context" of one-factory towns functioning, which is quite pronounced (Samarina et al., 2019; Economy of the Contemporary Arctic..., 2020). However, generalized results of studies exploring specific features in social and economic development of one-factory towns and regions of Russia's North point to the fact that as of nowadays, common theoretical approaches have not yet been elaborated even to management of this highly specific area (Zamyatina & Pilyasov, 2016; Baranov et al., 2020, Larchenko & Kolesnikov, 2018; Healy, 2017). Thus, the researchers register the problem of local particularities of single-industry towns being underestimated at the federal level, which can also be traced down by drawbacks in legal and statutory regulation of the development of one-factory towns and in the practice of managing one-factory towns and regions of Russia's North (Stupina et al., 2020; Samarina et al., 2019; Druzhinin & Potasheva, 2019; Emelyanova, 2019; Economy of the Contemporary Arctic..., 2020).

One cannot but note the industrial context of economic management in Northern regions, too; in its turn, it predetermines poor development of the services sector and innovations and the so-called dynastic principle in selecting a profession. The range of specialities available for young people in one-factory towns is also narrowed down by few focus areas of training offered by local higher educational institutions to choose from (Romanenko et al., 2018). So, what is observed in monotowns is the trend for the passive population part relying on backbone companies' social responsibility to settle down there. Meanwhile, the enterprising and ambitious young people leave their native towns first for getting a higher education in specialities not available in their home regions, and then for employment (Zamyatina & Pilyasov, 2016). In another region, they may well get an education the profile of which is in line with production of their native monotown, yet this does not guarantee the specialists' returning home. The point is that the infrastructure of one-factory towns is considerably inferior to that of cities, which cannot but influence the young specialists' selecting a place of residence.

### 3 Research Methodological Framework

The objective of the research consists in substantiating promising conditions for the development of industrial company towns taking into account the context of their functioning.

Research tasks include:

1. summing up the experience of solving issues of monotowns;
2. identifying the specific features of managing industrial company towns;

- finding out the most efficient conditions for developing one-factory towns.

The authors used the following methods as the research ones: systemization, analysis of literature, critical analysis of statutes and regulations, generalization of both foreign and Russian research experience, building a model of statutory instruments system concerning the development of one-factory towns. Such a set of research methods is typical for similar studies dealing with consideration of local particularities and institutional environment which determine social and economic development of Northern areas (Larchenko & Kolesnikov, 2018; Healy, 2017; Economy of the Contemporary Arctic..., 2020; Ryakhovskaya & Polyakova, 2016; Volkov, 2020).

#### 4 Results and Discussion

In Russia, when issues of monotowns are addressed, the task of moving away from single-industry dependence has been set at the state level for many years. However, the essence of the problem consists in the fact that neither science nor management has a clear-cut idea how to do this without affecting the balance of interests of local population, authorities, and business. Meanwhile, a number of researchers believe that it is only the "tip of the iceberg" of the issues haunting one-factory towns that is visible from the federal level (Development of Monotowns in Russia, 2013; Zamyatina & Pilyasov, 2016; Baranov et al., 2020). This determines the necessity of harmonizing the legal and regulatory framework in relation to monotowns, that is, delimiting the levels at which their development is managed.

In the contemporary conditions, laws and regulations are the most perfect legal right expression forms, with laws occupying the top place in their hierarchic structure. Taking into account the extent of significance of laws as statutory instruments, ordaining the relevant law "On single-industry municipalities of the Russian Federation" will allow granting a certain status to the issues of monotowns, indicating their importance and priority in tackling them.

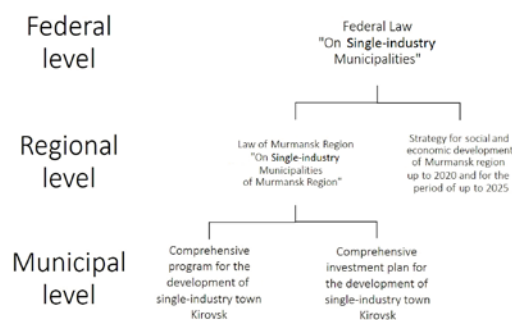
Since social and economic development of one-factory towns is an objective for not only municipal governments, but regions and the country in general, the hierarchic principle of legislation is relevant. For example, the conceptual framework, criteria for referring municipalities to monotowns, the procedure of distributing them into categories, the authorities of the Monotown Development Fund, and principal support measures depending on certain categories have to be stipulated at the federal level. So, the extent of state support has to be largest for one-factory towns being in the most difficult social and economic situation, while for those in the stable situation, perhaps, the said support should not be provided for, even. For such towns, repayable support measures will be feasible in the form of loans, and measures associated with engaging investors will be the most relevant.

At the regional level, laws can be ordained which make more precise measures provided for by the federal law and take into account the region's development strategy.

As for the comprehensive program for developing monotowns itself, it must be elaborated by the municipal government relying on the comprehensive investment plan and agreed with the Ministry of Economic Development and Trade for its further financing. Meanwhile, consolidated programs can be calculated by regions for identifying the required financing volume and performing control measures. Thus, they will be able to achieve actual indicators calculated locally while optimizing the expenditure part of budgets at all levels.

Figure 1 shows the model of statutory instruments where the top tier of the hierarchy is occupied by the federal law; based on it, regions develop regional laws, adhering to their social and economic development strategies.

Figure 1. The model of statutory instruments in relation to one-factory towns using the case of Murmansk Region



Source: author's own processing

Currently, Russia's legislators are trying to create a federal-level program for the development of monotowns, which complicates its adaptation to regional particularities of economic management. The true extent to which one-factory towns need state support is difficult to identify at the federal level – and a significant proof of this is the fact that the state comprehensive development program for one-factory towns designed for the period of up to 2025 was recognized as inefficient and early terminated on January 1, 2019, with the new program draft being still under consideration.

In other words, the aim of the federal law is to consolidate a certain list of support measures for each category of monotowns, which will allow focusing the attention of the state on one-factory towns being in the most challenging social and economic situation.

Proceeding from the backbone companies' key activity features, social tension level, and other factors that are specific for some monotowns or others, regions identify the most suitable lines of their development independently. In recent years, new industrial policy ideas are becoming the most popular ones; this policy emphasizes the innovation search of local subjects of the economy (Healy, 2017; Hausmann et al., 2007). Expanding the scientific views of the world science (North, 2005; Hausmann & Rodrik, 2002), Russian researchers (Zamyatina & Pilyasov, 2016) study the extent of influence innovations can have on the development of single-industry municipalities, as well as principal inhibitors hindering the innovation search. According to the authors, the most important conclusion consists in the fact that Russia's towns are at different economic development stages, which imposes quite specific requirements for selecting the state policy tools. That is, in the contemporary Russia, a uniform arsenal of measures simply cannot be selected to be applicable throughout the country's area, for all single-industry towns or at least one group of monotowns of the same industry or department affiliation.

Summing up findings of the world studies allows stating that almost in all countries, the former industrial policy was carried out from the top-down by means of target financing of a sector, an industry, or an enterprise. Its disadvantage was lobbying of high-level officials by recipients of state grants-in-aid, subsidies, and subventions from among representatives of industrial and agrarian enterprises. Meanwhile, the new industrial policy is a completely unique and special process for each single-industry town. In new industrial policy measures applied in various towns, the only shared point is their focus on stimulating the backbone enterprise, small and medium industrial companies, other subjects of the local production system to keep up the innovation search for new development opportunities – as a result of continuously experimenting and comparing to best practices. In the long run, this process of innovation search inevitably leads to discovering institutional practices which work fine exactly for a certain town and bring the desired results in attracting new investors, completing new projects, and gaining new specialization.

This is why it is important to determine long-term priorities relying on the context of one-factory towns. For example, specific features of managing industrial company towns consist in having to build up the services sector, too, alongside implementing innovations into industrial production and research and development aimed at production process optimization. This will allow creating new jobs, expanding the infrastructure of one-factory towns, and solving the qualified personnel outflow issue.

Let several examples of innovations to be implemented in monotowns of Murmansk Region (one of Russia's Arctic Zone regions) be given.

1. Frequently, during optimization of production or its scaling back, facilities are made available on backbone companies' industrial sites which are fit for further use. The same can be observed in budget-funded organizations where office premises remain abandoned in the course of reorganization measures. However, bringing these assets into the economic turnover again is difficult due to little information about their availability or due to their poor technical condition. So, keeping records of such objects alone is not enough; they have to be visualized, e.g. by shooting short video clips which capture both their current technical condition and visualization of expected appearance of the objects after completion of the investment project. For shooting remote industrial sites out of town, camera-carrying drones can be used. The video clips as such can be hosted on a specially created Internet resource. This will allow drawing the attention of potential investors faster than "net figures" which one has to look up on the owner's website at that.
2. Taking into account the severity of climatic conditions in Murmansk Region, heat-saving technologies have to be developed which will not only allow keeping heat in houses, but will also contribute to stepping up greenhouse agriculture. The use of solar battery power has to be made accessible for the region's seasonal gardeners, too, so that they could fulfill their farming potential in their home region.
3. Social advertising has to be developed for awakening the active civic stance in the region's residents, including that of environmental topics. For this, creation of the advertisements has to be committed to professional designers, and benefits for placing the advertisements on private urban billboards, local Internet websites, and in social networks have to be reinforced by law. A wise approach can turn even a children's drawing into an advertisement stirring up citizens' social responsibility. Various mass and cultural events – fairs, competitions, contests, celebrations – can contribute to consolidating residents of monotowns as well.

Importantly, the contemporary economy is the economy of innovations, on the one hand, and on the other – that of services. Rapid development of information and communication technologies brings about qualitative change to all spheres of life, the services sector among them. However, understanding and realizing inseparability of the services sector and innovations is a comparatively recent concept. Conventionally, innovations were mostly associated with industrial production, research and development, design works. By contrast, the essence of contemporary innovation processes is determined by the fact that in industrial company towns, developing the sector of services (especially educational and information ones) can become one of the ways for diversifying their economy. It is here that another feature of functioning of industrial monotowns lies: the services sector, too, has to be built up in them, simultaneously with supporting production capacities of backbone companies.

In many countries, Russia included, within the current state policy in the domain of higher education, special attention is paid to establishment of universities as development drivers for regions and cities where they are located. In particular, the task of increasing the contribution of Russian higher educational

institutions into social and economic development of their home areas is tackled by shaping a network of basic higher educational institutions, as well as by the priority project "Higher educational institutions as centers of the innovation creation space". The latter implies that higher educational institutions have to become centers of technological, innovation, or social development of their home regions (Romanenko et al., 2018).

Higher educational institutions can be considered as potential development drivers in one-factory towns, able to train the required personnel for the local labor market and stimulate the diversification of the town's economy and urban environment development. A monotown-based university can ensure stable functioning of its backbone company by training qualified personnel for it and performing research and development, experimental designing works in the company's interests. Moreover, the university can promote small entrepreneurship by cultivating the relevant skills in students and supporting promising business projects, which will contribute to overcoming the single-industry nature of the town's economy. The university can also ensure general attractiveness of the urban environment by keeping and engaging most talented students, carrying out urban projects, becoming more open and accessible for the town and its citizens. The activity of a monotown-based higher educational institution, particularly if it has enough budget-funded openings, produces a favorable effect on the local demography because it prevents ageing of the population and even influences the social and psychological climate in the town. In other words, in a company town, a university can play a much greater part than an individual university in a metropolitan city.

In monotowns, applicants to a higher educational institution can be conventionally subdivided into three principal categories: school graduates, technical college graduates, and employees of backbone companies already having either a secondary or a higher education. However, in the present-day realities of one-factory towns, there also emerges the fourth category: city managers and their project teams for whom training in further professional education programs, e.g. in the "Professional retraining program for teams managing monotown development projects", has to be provided for in their native regions.

One of the key issues of monotowns is the outflow of young people to metropolitan cities distinguished by a more developed infrastructure and diversification of production and economy. School graduates go to study at higher educational institutions in other towns and cities, after which they settle there, quite frequently working in other specialities than they have trained in. So, training or re-training of their employees already having a secondary professional education and work experience is cultivated by enterprises at their own expense. Subsequently, the employees getting a higher education after a technical school or college hold managerial positions. The companies try not to engage outside managerial staff, because the knowledge of ins and outs of production is essential.

Placing basic higher educational institutions in one-factory towns will also promote influx of students from other towns who realize the high probability of target employment with a backbone company due to limited cooperation between local higher educational institutions and backbone companies.

Another focus area contributing not only to the expansion of education in monotowns, but also to the development of their economy in general is implementation and development of information technologies, namely, digitization.

In 2018, A. A. Vysokovsky Graduate School of Urbanism published findings of the study of the digital technologies permeation level in Russian towns of up to 200 thousand people population. Authors of the study note distinctions in the use of digital services: in smaller residential settlements, the Internet is mostly used for communication, while residents of cities use the Internet for shopping and getting services – on top of social networks and messengers. The difference in using digital services between small and larger towns can be illustrated by the practice of shopping via the Internet well. Similarly, the

frequency of using online state and municipal services varies considerably: in small towns and in million-plus cities, the shares of citizens getting such services via the Internet differ by almost 20 percentage points. Experts of GSU explain this particularity not by different skills of using the network, but by residents' being not accustomed to such practices in small and medium-sized towns.

It should be noted that at present, monotowns are at the first level of digitization in terms of availability and accessibility of digital infrastructure. For them to pass to the next one, digital technologies have to be implemented in daily life, and digital competencies have to be cultivated. It is these competencies that will enable local population to use digital infrastructure as the new employment sphere – one that is independent of backbone companies, – which contributes to diversification of the economy (Digitization in Small and Medium-Sized Towns of Russia, 2018).

In Russia, backbone companies ensure high social protection for its employees. However, such a level of social responsibility of backbone companies has the reverse side to it – manifesting itself in passivity of the population expecting the state or the said companies to solve all social and economic issues. Such behavior of local population is peculiar exactly for single-industry towns the population of which remembers Soviet practices and has more demands for enterprises in terms of providing higher social benefits, including area development in monotowns. Anyway, the contemporary Russian conditions which require getting in sync with the global social processes determine the necessity of "awakening" the citizens' active stance – for them to be able to spot and tackle issues, make decisions, and carry out projects independently.

In recent 20 years, in the world scientific literature, they highlight path dependence almost unanimously as the most burning issue in economic development of areas, one-factory towns included. Such dependence consists in inheriting obsolete behavioral habits, mental attitudes, and skills; it inhibits innovation processes (North, 2005). For Russia's industrial company towns, formation of workers' family dynasties is characteristic which consist of two or three generations of workers. In these conditions, one simply cannot expect a new view on issues of single-industry towns to come from within, from the local professional lobby. Just the opposite is more likely: for years, they will keep discussing prospects of development within the established over decades economic and technological practices by inertia. As a result, it is only a slashing crisis situation that can motivate the economic agents to launch the process of economic transformations relying on broad innovation search from within.

First of all, the path dependence attitudes inhibit the advance of initiative, ability to take risks; therefore, it hinders the development of small business (Skufina et al., 2019). Secondly, it reduces the subjective value of working in any other spheres but the backbone company. So, by attracting to it the most qualified, talented, and ambitious young employees, a successful backbone enterprise thus renders local small business and other branches of local production system lifeless (Zamyatina & Pilyasov, 2016).

As the authors have already noted, habits and attitudes characteristic for local population of monotowns are a restraining factor for the development of such towns in terms of diversification of their economy. This is why it is so important to build up the sphere of education by incorporating training in specialities of the services sector into educational programs – and not only in technical specialities up to their backbone companies' activity profile; entrepreneurship should be popularized in one-factory towns, too.

## 5 Conclusion

Failure of the state comprehensive development program for one-factory towns designed for the period of up to 2025 – it was recognized as inefficient and early terminated on January 1,

2019, – confirms the conclusions about the necessary reform of legislation on monotowns.

According to the authors, it is the new industrial policy relying on search for innovations that is the most promising development line for single-industry towns, which is confirmed by studies of both Russian and foreign scientists (Zamyatina & Pilyasov, 2016; Healy, 2017; Hausmann et al., 2007; North, 2005). Meanwhile, what is in question is not only innovation in equipment and technology, but also in the services sector.

The authors believe that special attention should also be paid to developing educational services in the region, in particular, to higher education: i.e. to ensuring young people the opportunity to get not only an education in line with the production profile, but to master other popular focus areas, too. Placing branches of prestigious higher educational institutions in monotowns enhances their attractiveness not only for local population, but also for citizens of adjacent towns and regions (Romanenko et al., 2018). Alongside this, higher educational institutions must introduce an elective course to teach entrepreneurship for students wishing to launch their own businesses. This will allow rendering small and medium business in monotowns more popular altogether and distracting their young people from the so-called path dependence.

These processes and development of the services sector at large have to be furthered by digitization gradually gaining momentum. It is to this that both issues of Russian industrial monotowns and successful experience of developing one-factory towns in foreign countries orient (North, 2005; Economy of the Contemporary Arctic..., 2020; Skufina et al., 2019).

Certainly, for digitization to advance in monotowns, hi-tech equipment and high-speed Internet service have to be provided, which, in its turn, can become another investment project bringing on creation of new jobs, if only temporary. Meanwhile, a project of such a scale must be co-funded by the state, because unfolding digitization in regions is one of its strategic objectives.

Finally, a specific feature of local population of one-factory towns is their passive life stance and belief that they do not decide anything and all social responsibility lies with backbone enterprises and the state. This is why working with local population is essential which consists in boosting their activity and involving them into tackling issues of one-factory towns jointly with local self-government authorities. For this, it is necessary to more frequently call on citizens for voting for priority projects, announce contests for inclusion of yard spaces in overhaul programs, learn their opinions about support measures, i.e. to keep up feedback continuously.

Thus, in the course of the research, promising conditions for developing industrial company towns taking into account the context of their functioning have been outlined. Proceeding from foreign and Russian experience, promising development lines for one-factory towns have been identified which will allow partially offsetting the issues of single-industry dependence of their economy. The authors emphasize that importance of the human factor for developing one-factory towns is increasing in the contemporary conditions. First of all, it is local population who are in question, as the speed of social and economic development processes depends on their activity. Next, insufficiency of the legal and regulatory framework governing the development of one-factory towns has been noted, and prospects for improving it have been suggested. These prospects are associated with forming a new system consisting of hierarchy-based statutes and regulations which will allow considering the local context of each monotown.

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