

MONOFUNCTIONAL URBAN SETTLEMENTS IN BULGARIA-⁴⁴ THEORETICAL AND PRACTICAL ASPECTS

Milen PENERLIEV

Konstantin Preslavski University of Shumen, Bulgaria
penerliev@yahoo.com

Abstract

The paper deals with the functional and spatial structure of the monofunctional urban settlements in Bulgaria. Some examples have been given, using parameters such as population number, depopulation rate, unemployment rate, etc. Special attention has been paid to urban settlements with no leading function. An attempt has been made to clarify the situation that has led to the existence of such towns in Bulgaria. Through the analysis of literary sources, a universally valid definition of monofunctional urban settlements has been proposed and applied. The elaboration of that definition was based mainly on the experience of Russian researchers, considering the fact that such type of urban settlements prevail in that country, and as such, are subjected to systematic analysis and research. As a result of the analyses, the introduction of a separate group of monofunctional urban settlements with no leading function has been proposed, which would enhance the identification of problems, as well as the elaboration of more accurate projections. Some basic guidelines for future studying of monofunctional urban settlements have been given, considering that so far the issue has been somewhat disregarded.

Keywords: monofunctional urban settlements, indicators, problems, perspectives.

Resumo

O artigo trata da estrutura funcional e espacial dos assentamentos urbanos mono - funcionais na Bulgária. Foram dados alguns exemplos, utilizando parâmetros como o número de população, a taxa de despovoamento, a taxa de desemprego, etc. Foi dada especial atenção aos aglomerados urbanos sem função de liderança. Foi feita uma tentativa de esclarecer a situação que levou à existência de tais cidades na Bulgária. Através da análise de fontes literárias, foi proposta e aplicada uma definição universalmente válida de aglomerados urbanos mono - funcionais. A elaboração dessa definição baseou-se principalmente na experiência de investigadores russos, considerando o facto de este tipo de assentamentos urbanos prevalecer naquele país e, como tal, serem sujeitos a análises e pesquisas sistemáticas. Como resultado das análises, foi proposta a introdução de um grupo separado de assentamentos urbanos mono - funcionais e sem função dirigente, o que melhoraria a identificação de problemas, bem como a elaboração de projeções mais precisas. Foram fornecidas algumas diretrizes básicas para estudos futuros de assentamentos urbanos mono - funcionais, considerando que até agora a questão tem sido um tanto desconsiderada. Palavras-chave: assentamentos urbanos mono - funcionais, indicadores, problemas, perspectivas

1 - Introduction.

Urban settlements (cities/towns) in Bulgaria, can be classified based on various characteristics, such as the number of inhabitants; the geographical location; the performed functions; altitude; time of origin, etc.

One of the first classifications of urban settlements in Bulgaria was done by Konstantin Ireček in 1899, when he divided them into two main types: 1) agricultural and 2) craft-commercial. In fact, that was the first division of Bulgarian urban settlements by functionality. In the post-war periods (After World War II), the grouping of urban settlements based on predominant functions assumed a more

⁴⁴ Published within the project ПД-08-66 / 30.01.2023 titled „Opportunities for the Development of the Career Development Center's Competitive Advantages Through Collaboration and Innovations“

scientific and differentiated character, and nowadays it is accepted, that according to their functionality, urban settlements can be divided into five main categories (Donchev, Karakashev, 2015):

- urban settlements with capital functions (Sofia)
- urban settlements with complex functions (Varna, Plovdiv, etc.)
- multifunctional urban settlements (i.e. combining at least 3 economic sectors or industries: Shumen, Dobrich, etc.)
- urban settlements with two main functions (with different variations between the branches of transport, tourism, agriculture, etc.) For example, Gorna Oryahovitsa, which performs industrial-transport functions, or Velingrad - exhibiting tourist-industrial functions.
- monofunctional urban settlements (such as Madan, Rudozem, Laki, Belovo, Bankya, Sozopol, Varshets, etc.).

The object of the present study is precisely the monofunctional urban settlements. Today, a large part of those towns show the most pressing urban problems in both demographic and economic aspects. Moreover, as a result of the economic crisis and the transition to market economy, which exacerbated the "center-periphery" problem in the country, these urban settlements also experience a number of social problems as well. There are no clearly developed rules or methodology for evaluation of monofunctional urban settlements, nor of the measures for targeted impact on such settlements in Bulgaria (for example, each of these relatively small towns can finance certain activities under different EU programs).

For the needs of this study, we adopted some indicators describing the demographic situation of the urban settlements (e.g. the depopulation rate), as well as the unemployment rates, as reliable and comparable indicators.

Specific thematic studies on monofunctional urban settlements are generally lacking. Here we first give specific examples and then look for the theoretical and methodological "relationships". The initial study on this new problem for Bulgaria was published in a similar paper by the author back in 2018. Similar setups are used in the current study, but with up-to-date statistics.

2 - Analysis of the problem and its territorial manifestations.

The analysis of monofunctional urban settlements is difficult due to the fact that the very assignment of settlements to this group is controversial. The temporal vector of changes often alters the specialization of towns. For example, in the early 1990s Sozopol was a town with two main functions - tourism and food processing, whereas today only tourism is the activity that provides a living for the local population. Within the framework of the analysis, it is also important to take into account the geographical location of the settlements - the town of Madzharovo is monofunctional in terms of the extraction of lead-zinc ores - an industry with a limited territorial scope nowadays, in the Rhodope Mountains. Sea resort monofunctional towns have a much better geographical location, and therefore, in their case the socio-economic and demographic processes exhibit less negative trends.

Table 1 shows basic indicators for the towns of Sozopol, Kozloduy and Laki. All three are monofunctional, one with declining mining functions (Laki), another one - with rapidly developing Black

Sea tourism (Sozopol), while Kozloduy is the center of Bulgaria's atomic energy industry and a prospectively developing town.

Table 1
Demographic indicators for some monofunctional urban settlements in Bulgaria

Indicators	Sozopol	Kozloduy	Laki
Population number (as of 15 June 2023)*	4 808	12 297	1 786
Depopulation rate (%)**	-8.7	- 10.3	-26
Unemployment rate (% as of 2022)***	4.8	9.3	3.7

* by current address

**base year – 2003; data from The General Directorate "Civil Registration and Administrative Services" www.grao.bg

***data from the Institute for Market Economics (<https://ime.bg/articles/bezrobotitsa-v-obshtinite-prez-2022-g-vyzstanovyavane-pochti-navsyakyde/>)

The analysis of Table 1 reveals some surprising trends: a seaside town such as Sozopol, which is well-developing in today's economic conditions in the country, exhibits the expected lowest rate of depopulation. The specialization of this monofunctional town in tourism has some peculiarities, however - tourism in Bulgaria is seasonal, therefore - those employed in the tourist industry are temporary workers, who often come from the interior of the country. On the other hand, in a purely economic aspect, the financial benefits from attracting tourists and offering various services are indisputable for the town itself.

Kozloduy is the largest urban settlement by population among those surveyed in this study. It is the center of nuclear energy and specialists with a high professional status are concentrated in the town. This suggests a positive population growth rate - given the attraction of nuclear power plant (NPP) specialists, who otherwise lack in the region. Yet, the depopulation rate is even higher than that of Sozopol, which comes as a bit of a surprise. That negative population trend is due to an ongoing reduction in the number of jobs at the NPP following the gradual liquidation of several power units.

The town of Laki is a mining town. Within the studied period, it marked the highest rate of depopulation, but we can predict that this process had already started at the beginning of the 1990s and ended soon thereafter. Today, the mines around the town are still operating and providing employment to the locals, but at a decreasing capacity and pace. Unemployment rate is the lowest (another surprising fact) among the three studied towns, but it is due to the smallest number of population the town of Laki has among the three, and also due to the need for labor force for the mines. The high unemployment rate observed in the case of Kozloduy is generally related to the population of lower educational level, for whom there is little to no employment opportunities in the town. Unemployment data is provided at the municipal (LAU 1) level, which further limits the correct interpretation of that indicator. The average unemployment rate for Bulgaria in the summer of 2023 is 4.3%.

Urban settlements with different specializations exhibit different problems. It is clear that the development of nuclear energy in a certain town does not significantly help the development of other economic sectors so as to reduce unemployment (the so-called multiplier effect). On the other hand, purely touristic settlements are seasonally functioning, and outside the active tourist season they literally come to a halt. Tourism in the town of Sozopol does not help to improve its demographic situation. Mining settlements, on the other hand, require a lot of manual labor (personnel), which affects the employment indicators and results in their consistency.

The development of certain industries gives certain advantages to urban settlements: according to public data for 2022, the average salary at the Kozloduy NPP varied from BGN 2,400 to BGN 9,000 (exceeding BGN 15,000 for certain positions). In the Rhodope mining region, the average wage was around 1,700, while there is no data on wages in the tourism sector along the Southern Black Sea coast of Bulgaria. The higher average income observed in certain urban settlements should give a boost to trade and the provision of various services. The average salary in Bulgaria is BGN 1,500, mostly due to the high salaries in the capital city of Sofia and industries such as energy production and the IT sector. The impact of the income level on local economies has not yet been studied in depth.

In the group of monofunctional urban settlements in Bulgaria there are also such settlements where it is difficult to single out even one economic activity of some leading nature. Small towns such as Zemen - with a population of up to, or slightly over 1,500 inhabitants - function on the basis of the so-called *emigrant money* (money coming from relatives working and residing abroad), and to some extent - on small-time trade and administrative services. The demographic crisis in Zemen is manifesting itself in full proportions: the number of newborn babies in the municipality of Zemen as a whole in 2022 was just 9, while in 2014 that number was 16, and in 2013 - 21. This puts the functioning of social institutions in the town at risk. The natural decrease of the population in Zemen in 2022 was -29.5%. (NSI, www.nsi.bg). The population under working age constitutes just 7.7% of the total (twice below the national average). In fact, the state policy of analyzing the situation, proposing real measures and expecting positive results, should be aimed precisely at such settlements. Those are towns with no prominent function (which, therefore, could be referred to as *non-functional* towns). Such urban settlements should be into a separate hierarchical category, and their condition should be assessed on the basis of certain parameters. If we look at several similar examples, we can find a number of anomalies (Table 2).

Table 2

Demographic indicators of some urban settlements in Bulgaria with no leading function

Indicators	Zemen	Gulyantsi	Hadzhidimovo	Bregovo
Population number (as of 15 June 2023)*	1 570	3 138	2 512	2 167
Depopulation rate (%)**	-10.5	-8.7	-7.3	-16.2
Unemployment rate (% , as of 2022/2017)	8.5/ 12.2	13.4/ 27.0	11.8/14.9	26.2/30.2

*by current address

**base year – 2013, data from The General Directorate "Civil Registration and Administrative Services"

www.grao.bg

The unemployment rate data for 2022 is from the Institute for Market Economics

(<https://ime.bg/articles/bezrobotitsa-v-obshtinite-prez-2022-g-vyzstanovyavane-pochti-navsyakyde/>)

We tentatively call the small towns in Bulgaria proposed for analysis in this study "*non-functional*". No specific criteria and parameters for such a division exist at this stage. In terms of population, those urban settlements have a population number in the range of 1,600-3,400 inhabitants. Due to their geographical location, Bregovo, Gulyantsi, and Hadzhidimovo (with some conditionality - the town of Zemen as well) are located in border municipalities, without this being an intended effect.

However, several startling trends emerge from Table 2: the depopulation rate is higher compared to the first group of monofunctional towns analyzed earlier in the paper. Both Zemen and Bregovo fall into one group according to this indicator - in the 10-20% range of depopulation rate. According to Mladenov (2014), this is the group of settlements with "moderate depopulation". This can be regarded as general trend of the investigated settlements, regardless of their geographical location. On the other hand, the variability in the unemployment rate is visible: it ranges between 12 and 30% for 2017, and between 8.5 and 26% for 2022. This clearly shows that the state of the labor market in all these settlements has not improved significantly over a 5-year period - all indicators exhibit values which are several times higher than the national average for the studied period! Of the studied monofunctional towns, we can only find similarity between Zemen and Kozloduy, although at first glance, the two settlements have little in common. Employment in Kozloduy requires very high qualifications of the employees, and most likely the high unemployment rate originates among the local population with lower qualifications, or among the women in the families of the nuclear specialists. This fact, however, is subject to further analysis. On the other hand, the total number of the population of Zemen shows that emigration has long passed its peak - today only 1,500 people have a permanent address in the town. A probable reason for that is the possibility of daily commuting between Zemen and other settlements. Bregovo and Gulyantsi have the worst unemployment indicators among all studied settlements. In the case of Bregovo, the unemployment rate resembles that of the rest of the municipalities in Vidin region (NUTS 3). On the one hand, these are unemployment rates that largely characterize the border territories of the country in general, while on the other hand, they give the appearance of most towns without a clearly pronounced economic activity across the country, border areas or not.

3 - Some theoretical and methodological problems.

In the examples given, there is naturally a certain amount of conditionality. The need for research on monofunctional urban settlements is mostly related to the introduction and application of uniform criteria for their classification. The functional structure of these towns is undeveloped in its genetic aspect - whether due to historical and natural-resource circumstances, or to political reasons. Applying selected uniform criteria would enhance the definition of such settlements. But would it really?

Lappo (1997) defines monofunctional cities as highly specialized, which can be further divided into two main groups: the ones with production functions (industrial centers), and those with non-production functions (science centers, etc.). According to Russian publications (Tsumarova, 2017), monofunctional cities (Russian: моногородов) are defined as those whose economic functioning is related to just one or several closely integrated enterprises. According to similar English-language publications (Macmillan dictionary), those are cities whose residents work mainly in a single industry (mostly Russian cities are cited as examples). Kyzmenko, Soldak (2010) go even further by defining monofunctional, monoindustrial, and monocentric cities. A unifying element for all three groups, however, is the presence of a leading industry rather than service activities.

All model Bulgarian urban settlements discussed in this paper can be related to the definitions proposed by the above-mentioned authors. The question of the existence of a specific parameter determining the volume (share) of the leading economic activity when defining an urban settlement as monofunctional, however, remains open. In Russian literature we find such parameters (Ivashina, Ulyakina, 2011, etc.), based on legislative documents of the Russian Federation, according to which, in a monofunctional city at least 25% of the economically active population must be employed in one enterprise or in several interconnected enterprises with a common profile. In addition, this profile (industry, economic activity) must give no less than 50% of the total production of the city (other, less important criteria are also mentioned). The Bulgarian towns given as examples in this study can be related to that parameter as well - without having analyzed those shares in detail, we believe that all three towns - Sozopol, Kozloduy and Laki - have their own profiling economic activity, where even more than the cited share of workers are employed. This fact shows that this quantitative criterion could be applicable to the Bulgarian conditions as well.

In this study we also pay attention to urban settlements with no leading function, and even settlements with no economic activity, which we refer to as "non-functional urban settlements". If we apply some of the proposed definitions to those towns, they probably would not "recognize" themselves in any of them. If there are mainly trade enterprises functioning in such settlements, then they would not be identified with the mono-industrial cities, nor with those regarded as scientific centers (according to the definition of Kyzmenko, Soldak). I.e. trade and the presence of an educational facility (school, community center) would not be a criterion for determining the functional structure of such settlements, since those are activities inherent to all urban centers, and not even urban in some cases. The lack of any flagship function in these towns is a complex problem, most probably historically developed and related to the geographical location, or to political reasons. Such examples are former military garrisons (e.g. Malko Tarnovo), artificially developed during the socialism era; or small mining settlements that

no longer have the necessary mineral resources (e.g. the town of Madzharovo). Many of the villages that were declared towns without the necessary grounds for that (e.g. Loznitsa), but only based on an administrative decision, also immediately fall into this group (in the period 2000-2007, 13 villages across Bulgaria were proclaimed towns). These small urban settlements should also be purposefully and systematically analyzed. No such group of urban settlements exists in foreign language literature, and no such category of settlements either. As Lappo (1997) emphasizes, the essence of cities is their multifunctionality. And again, according to that same author, monofunctional towns are artificially created to fulfill a certain function (Palo Alto in the USA for example - as a scientific center; Novouralsk in Russia - as a military-defense center). In the Bulgarian reality, only the mining settlements, those with mineral springs, and in the recent past - the border military bases, were created according to that principle. Some of those preserve their temporal stability and monofunctionality (e.g. Hisarya) given the presence of an exhaustible but renewable resource. For others (e.g. Laki), which today show relatively sustainable levels of certain indicators (see the analysis above), the "horizon" of depletion of the exhaustible mineral resource should be taken into account. For other settlements, for whom it is already too late (the town of Madzharovo), the approach should be different. It is exactly such settlements like the latter, together with artificially proclaimed urban settlements such as Loznitsa, Kuklen, Marten, etc., which form the group of the so-called *non-functional urban settlements*. There should be a clearer defining parameter for them, as well as for those that in the near future will fall into this group due to the reduction of the role of the current leading economic activity. Those matters would be the subject of future studies.

So far, in this paper, the population number has not been taken into consideration as a necessary indicator for determining monofunctional towns. In Russian sources, the variations are too great - some define the range of 10-30 thousand people, others - more than 3 thousand people, and in fact the cited Russian authors indicate the city of Toliati as the largest "monofunctional city" in Russia - a city of over 700,000 residents. The examined Bulgarian urban settlements in this study are of a much smaller scale - all of them are in the order of 1000-5000 inhabitants (with the exception of Kozloduy). The declining population is in sync with the simplification of their functionality. The absence of functionality (Table 2) leads to a sharp increase of unemployment rates, and probably to the volume of emigration. This explains the lower population numbers in such settlements. The number of population as a necessary parameter for defining mono- and non-functional towns, and is also subject to future clarifications.

4 - On the necessity of studying monofunctional cities: systematization of primary conclusions.

This study only highlights a problem that has been given too little space in the scientific geographical literature in Bulgaria. On the one hand, due to the fact that mainly large cities and their multifunctional structure have been studied, while on the other hand, current settlement studies (after the beginning of the twenty-first century) consider settlement areas rather than point settlement structures. It is fashionable to talk about rural, urban, mountainous areas. Taking a "geographical look" at small towns,

however, and more specifically - at monofunctional towns, is necessary, since those concentrate a significant number of population and its "urban" future. The sheer number of such settlements is relatively large as well. The application of system analysis will put order in the theoretical-methodological aspects of the study of such settlements, and will allow "drawing" of strategies and projections.

The following can be drawn as main conclusions of this study:

- Monofunctional urban settlements are a fact and exhibit relatively similar characteristics;
- They are subject to definition based on the number of employees and share of industrial production of the leading economic activity;
- A group of non-functional urban settlements is distinguished, for which there is no analogue and applicable definition criteria. Obviously, those settlements have significant differences with monofunctional towns, although in this study they are considered as a function of monofunctional urban settlements;
- Criteria and parameters should be developed for further classification, ranking and research of urban settlements of both groups (monofunctional and non-functional).

The relevance and the need for studying such settlements is indisputable.

Bibliography

DONCHEV, D. H. KARAKASHEV. 2015. Geography of Bulgaria (collection of materials for high school students and university applicants). Siela. Sofia.

IVASHINA N.S., N. A. ULIAKINA. The mono-profile city: theoretical aspects of defining the category. Vektor nauki, Toliati State University, "Economy and management" series, № 4 (7), 2011.

LAPPO, G.M. 1997. Geography of cities. Vldos, Moscow;

MLADENOV, CH. Depopulation - the "plague" of the settlement network. "Demographic situation and development of Bulgaria", Institute for Population and Human Studies - BAS, 2014.

TSUMAROVA, E. U. The mono-city as a subject of state regulation: an overview of the international and the Russian experience, Studia Humanitatis Borealis. 2017. № 1. pp. 31–42, Petrozavodsk.

KYZMENKO, L.M., M.O. Soldak, Monofunctional cities: problems, support provision and development, Economic gazette of Donbas, № 4 (22), 2010;

https://www.grao.bg/tna/t41ob-15-12-2017_1.txtwww.nsi.bg (20.06.2023)

<https://www.nsi.bg/bg/content/2920/%D0%BD%D0%B0%D1%81%D0%B5%D0%BB%D0%B5%D0%BD%D0%B8%D0%B5-%D0%B4%D0%B5%D0%BC%D0%BE%D0%B3%D1%80%D0%B0%D1%84%D0%B8%D1%8F-%D0%BC%D0%B8%D0%B3%D1%80%D0%B0%D1%86%D0%B8%D1%8F-%D0%B8-%D0%BF%D1%80%D0%BE%D0%B3%D0%BD%D0%BE%D0%B7%D0%B8> (23.06.2023)

<https://www.macmillandictionary.com/dictionary/british/monocity> (24.06.2023)