

## Trends in the regional development of medium-sized municipalities with a population between 10 and 50 thousand in Eastern Bulgaria

Kamen Petrov<sup>1</sup>, Nikolay Tsonkov<sup>2\*</sup>

<sup>1,2</sup>University of National and World Economy, Department of Regional Development, Bulgaria; petrovkamen@abv.bg (K.P.)  
kolio\_tzonkov@abv.bg (N.T.).

**Abstract:** This article is devoted to the medium-sized municipalities of Eastern Bulgaria, which play an important role in forming the backbone of the Bulgarian regional economy in the context of the ongoing processes of transformation, optimization, structuring, and integration of Bulgarian society into the European Union. Thus, the study shows the extent to which these municipalities can play a strategic role in the systematization of regional development, and hence the formatting of a new geo-economic model of the functioning of the Bulgarian socio-economic space. Relevant comparisons, assessments, and analyses are made of medium-sized municipalities, which have a role to play in supporting large municipalities while simultaneously playing a pulling role towards smaller municipalities. Recommendations are drawn for modeling a new socio-economic development of the national territory from a pan-European perspective.

**Keywords:** Areas, Black Sea, Demographic situation, Eastern Bulgaria, Economy, Information, Municipalities, Region, Regional development.

### 1. Introduction

Territorial knowledge is important for the formulation and implementation of integrated multisectoral development policies, and strategic planning creates the optimal conditions for each territory to capitalize on its potential and increase the level of concentration of its activities. Concentrating on the spatial assessment of the region of Eastern Bulgaria, which covers an area of nearly 34 286 km<sup>2</sup> or nearly 1/3 of our national territory. The region includes the North-East planning area (14,487 km<sup>2</sup>) and the South-East planning area (19,799 km<sup>2</sup>) of the NUTS II level<sup>1</sup>. Important economic areas related to regional development are concentrated in this part of Bulgaria, such as the districts of Stara Zagora, Sliven, Yambol, Shumen, Targovishte, and the Black Sea districts of Burgas, Varna, and Dobrich. Thus, in geo-economic terms, a region is formed which is an intersection of economic, trade, transport, energy, geostrategic, and political points. Under normal conditions, cities concentrate more and more resources, generating a wide range of opportunities, and as resources concentrate around certain urban centers, local economies grow strongly to achieve convergence with less developed areas that are lagging is to connect the people who live here with opportunities in large cities. Small towns can benefit from the growth generated by agglomerations by cooperating and providing basic services to rural populations. It is, therefore, necessary to focus on municipalities of 10 to 30,000 souls as the backbone of new programs, with a special emphasis on the role of cities, functional geographical boundaries, areas facing specific geographical or demographic problems, and macro-

<sup>1</sup>NUTS - Nomenclature of Territorial Units for Statistics in European Union. On 26th of May 2003 REGULATION (EC) No. 1059/2003 of The European Parliament and of the Council on the establishment of a common classification of territorial units for statistics (NUTS) was adopted. The purpose of this Regulation is to establish a common statistical classification of territorial units in order to enable the collection, compilation and dissemination of harmonized regional statistics in the Community.

regional strategies. The spatial planning in Eastern Bulgaria is mainly strategic in nature, based on the implementation of plans and programs from European and national funding. However, the importance of regional business for the development guidelines in the spatial profile of municipalities remains a question. The imposed model of spatial public coordination is not based on the principle of maximizing the potential synergies of sectoral development of the territory. It is like legal norms and documents that define the spatial development for the respective territory, but the legal and political aspects integrated into the approved spatial development plans do not have the expected effect on regional businesses and local populations. The spatial development plans are the technical basis and the political and legal prerequisite of the strategies for accessing funding for programs and projects from national and European funds, which do not help to develop the synergy between regional business, the public sector, and the effect on the living standards of the population. All this gives us the reason to draw those patterns that determine the focus of the regional development policy that can bring out the need for groups of activities that promote integrated territorial management and, above all, the dominance of several public contracts that solve problems of local and local nature. In this part, the possibility of regional and local business to be embedded in a national and supranational economic policy, concerning the construction of infrastructures and logistic environment in the North-South direction and the construction of rail and road infrastructure to create the necessary sustainable level of connectivity for the promotion of regional business, can be verified. The importance of Eastern Bulgaria is the epicenter of the interests of global and regional players related to the improvement of economic, environmental, social, and transport development such as initiatives related to the Three Seas Initiative, the completion of Corridor 8 with the Black Sea Motorways, Trakia, the expressways Obzor – Nessebar, Kameno – Malko Tarnovo, Nova Zagora – Sliven - Aitos - Karnobat - Kableskovo village, and other facilities such as railways, economic zones, and airports along transport corridor No 8. Unfortunately, at this stage, there are no targeted strategic documents and funding to address several regional problems in Eastern Bulgaria. In this direction, it is necessary to bear in mind that the concept of spatial planning is a set of methods, programs, projects, and actions through which the targeted development, guided by explicit strategies, of the physical space is implemented to balance the economic, social, cultural and historical components, landscape and natural environment of a given territory. Spatial planning involves interdisciplinary approaches and involves different levels of analysis and design, constituting the conceptual basis of regional development policies and interventions to correct anomalies and dysfunctions that may arise in their development. Thus, the municipalities in this region have the role of important strategic areas for strengthening the spatial and socio-economic development of this part of the national space.

## 2. Methodological Framework

To derive the relevant patterns and ensure coherence of the spatial research approach and implicitly of the planning process, it is necessary to group the elements of the analysis with a focus on spatial planning and regional development towards the territorial connected system. It should include all connecting infrastructures at the level of Eastern Bulgaria as part of the national territory (transport, energy, economy). Next, an analysis of the territorial system of settlements. This approach includes the territorial areas directly related to the concentration of human activities, in particular the set of settlements in the mentioned municipalities of 10 to 50 thousand souls and their equipment (analysis). Next, is the territorial system's socio-economic potential, which is part of natural components. In this respect, Eastern Bulgaria is a specific area with a border focus on the European Union and as such, from a geo-economic point of view, it is characterized by a particular development potential. That is why it is important to analyze the processes of demographic and socio-economic development in the region to form a balanced urban system of settlements that will form the basis of a regional market. This market must be seen in a broader context, ensuring connectivity between the Balkan countries. The main objective of the study is to establish the demographic situation and trends in the socio-economic development of Eastern Bulgaria. The object of study is the municipalities of 10-50 thousand people,

which represent the backbone of the urban system in this region. The creation of a new economic profile in the context of transformation is one of the opportunities to examine to what extent these municipalities have been able to restructure given their depressive state since the early 1990s. On the other hand, Bulgaria's membership of the European Union and NATO has created several new initiatives that could play a significant role in the regional development of the two planning regions that make up the territory of Eastern Bulgaria. In this direction, we examine the dynamics of development in Eastern Bulgaria by looking at it in the broader context of the development of municipalities of 10 to 50 thousand people. The purpose is to seek solutions and vision for their pulling regional economic development. Thus, to justify the need to illustrate a practical field of impact for achieving regional economic growth. Territorial cohesion is a political objective at the European level and territorial development policies are instruments to achieve it, whose role is to contribute to economic and social development and to take advantage of territorial potential to bring out the strengths of individual regions. Territorial cohesion implies consolidating the territorial dimension in the set of Community and national policies, to valorise the links between different sectoral policies and to exploit the specific potential of each type of territory. Thus, let us assume that Regional Development is a complex process that involves a series of interdependent, legislative, and institutional components that establish new kinds of relationships between different sectors and spheres of activity, between authorities and communities. Furthermore, this process is linked to mentalities, traditions and behaviors, professional training, and adaptation to new changes occurring at local, regional, national, and international levels.

### 3. General Characteristics of the Region, and Analysis of Research

Focusing on the object of study, Eastern Bulgaria can be characterized as an inland continental territory with an intensity of tertiary sector development and predominant sub-regions with agrarian, industrial, and tourism profiles. The proximity of the districts of Burgas, Varna, and Dobrich to the Black Sea seaside gives the coastal areas a certain advantage for the development of tourism. However, the demographic concentration is mainly in the cities of Varna and Burgas, while the other cities with access to the sea do not have the necessary socio-economic pace for year-round development. In this direction, on the northern Black Sea coast the municipalities of Kavarna (15 772), Balchik (22 001), and Dolen Chiflik (19 666) are in the group of between 10, and 30 thousand people, and on the southern Black Sea coast these are Nessebar municipality (29 333), Pomorie municipality (27 780), Sozopol municipality (14 826) and Tsarevo municipality (10 123). In practice, these municipalities have a landing importance of the two large municipalities of Burgas (219 324) and Varna (356 713), which have a leading position in the socio-economic development of the Bulgarian section of the Black Sea. In this direction, in the northern Black Sea coast the municipalities of Kavarna (15772), Balchik (22 001), and Dolen Chiflik municipality (19 666) are in the group between 10 and 30 thousand people, and on the southern Black Sea coast these are Nessebar municipality (29 333), Pomorie municipality (27 780), Sozopol municipality (14 826), and Tsarevo municipality (10 123). In practice, these municipalities have a landing importance of the two large municipalities of Burgas (219 324) and Varna (356 713), which have a leading position in the socio-economic development of the Bulgarian section of the Black Sea. The picture is similar in the hinterland, where the municipalities of Karnobat (25 624), Aitos (32 179), Ruen (28 834), Sredets (16 034), Straldzha (13 205), Elhovo (15 935), Tundzha (23 876), Sungurlare (12 189), Tvarditsa (14 611), and Tverditsa (14 611) have a similar position, Nova Zagora (40 980), Radnevo (20 676), Chirpan (22 356) and Pavel Banya (14 612) have a landing and gravitational importance compared to the municipalities of Yambol (76 559), Sliven (130 765), Stara Zagora (173 085) and Kazanlak (76 340). In practice, in the Northeast planning region, the medium-sized towns are smaller, but play the same role as regional economic hubs and complement the regional economic integration of the large municipalities of Dobrich (90 657), Shumen (102 857), Turgovishte (62 636), and these are the municipalities Dobrich - village ( 23 456hn), Tervel (13 546), Valchi Dol (10 657), Novi Pazar (19 345), Provadia (21 908), Dalgopol (13 702), Varbitsa (10 820), Popovo (30 676), Kaolinovo (14 323), Omurtag (24 522) and Veliki Preslav (14 850), among others.

Our exhibition shows the geo-economic situation of the municipalities from 10 to 50 thousand in Eastern Bulgaria and how they can be the backbone of the new regional policy of Bulgaria in the European Union. In practice, in spatial terms, Eastern Bulgaria includes two regions - the Northeastern region with the capital city of Varna and the Southeastern region with the capital city of Burgas. But within the regions themselves we have nearly 40 municipalities with populations of up to 50 000 people. In the new demographic reality's municipalities emphasize municipalities with a predominant population of 10 to 50 thousand people. In practice, these are the municipalities that lie between the small municipalities of up to 10 thousand inhabitants and those of 50 to 100 thousand inhabitants. This middle position enables them to be the backbone of Bulgarian regional development policy and search for opportunities to indicate the state of Bulgarian regional business and the effectiveness of the public sector in territorial governance. A careful analysis of the spatial development of this territory shows that regional development policy seeks to implement a strong model of regionalization that achieves balance, good regional business, equalization of the distribution of wealth, by creating conditions for the In this direction, the assessment and analysis of the spatial development of the mentioned territorial areas show that in the scientific and expert literature, we find local and focused studies related to the attempt to bring out the problems and features of regional, demographic and socio-economic development, in the context of the ongoing reforms, transformations, and changes in the socio-economic [1-4]. These processes involve finding a specific approach to solving the diverse problems layered over the years. They are related to local economic development, security, geoeconomics, geopolitics, transport accessibility, urbanization issues, investment policies, and emerging complex demographic problems [5]. In another direction, regional policy in certain regions and areas appears to be one of the most feasible mechanisms for regional development. This predetermines that the focus of European integration and sustainability of regional policies passes through making regional development a real national priority. The mentioned group of municipalities from 10 to 50 thousand population is called to form the profile and foundation of regional development, as well as to be essential for stable regional development with quality life of the population [6].

It should be borne in mind that regional science focuses its attention on two factors that are not taken into account by economic theory: distance and area (region). The importance of distance is reflected using transport costs, whose influence is evident both on the market price and on the location of factors of production. At the same time, the location of an area (region) determines the geographical differentiation of prices of different products or services. Without claiming to be an exhaustive analysis of regional economic theories, we will try to illustrate the main points of the importance of the public sector on regional business development and the formation of moral and ethical foundations in local public institutions. The main problems of regional development remain linked to a series of questions: what are the forces that guide the development of a region? How do these forces depend on external decisions? Are these forces identical or different from those that determine growth at the national level? Does space tend to homogenize or differentiate? In the Bulgarian context, the legal and regulatory framework has set more goals and objectives for local authorities. It has now become a tradition for local authorities to be increasingly involved in consciously shaping the conditions for economic development of local, and regional space. On regional soil, two entities are being formed about the population, and these are the public sector, which sets the rules and directs financial instruments in one direction or another, and the second entity is regional business. Provided that it has room for development it is normal to expand the economically active entities, seeking competition and solving several problems of local and local nature. In this direction, it is necessary to use a set of instruments and action-serving methods mainly to stimulate entrepreneurship. Thus, conditions for development and functional development of the national space are naturally created within the municipalities. however, according to current data, the state government relies on the support of the national state infrastructure, which is essential for the local demographic potential development, and the rate of proactive development [7-9].

Another significant problem that emerged in the period 2018-2023 is the deterioration of the demographic situation in Bulgaria. In this period, the trend of high mortality, low fertility, and aging population is increasing [10, 11]. Referring to an expert assessment, we can assume that the country is at the fifth stage of the demographic transition, which is characterized by an excess of mortality rates over birth rates, which is also the cause of negative natural growth. Mortality rates are high and are the result, on the one hand, of the worsening age structure of the population, namely the increase in the proportion of old people in the population, and, on the other hand, due to lifestyle and living standards [12, 13]. Low fertility is characteristic of all developed countries, but in these countries, the population shortfall is compensated by migration. In Bulgarian conditions, only high birth rates are available in low-educated population groups [14]. In addition, the country annually loses between 10-12 thousand young people who go to study outside Bulgaria. This decrease in the birth rate is related to a decrease in marriages. The fertility transition was achieved in the first phase by delaying marriage and increasing the burden of permanent celibacy, and in the second phase by limiting the fertility of marriages. This evolution of marriage is related to the condition of the woman, through the extension of the period of training, which determines the increase in the age of marriage, by increasing her role in society through economic activity and becoming economically independent [15]. Another, no less important factor, is external migration [16]. It has a negative impact not only on the size of the population in the country but also on the age structure and the structure of education and acquired qualifications. In the urban environment, there is a smaller share of large families, and a fairly large number of married couples limited to one or at most two children. The difference between fertility rates in Eastern Bulgaria is based on differences in the age structure of the population and the proportion of the female population of childbearing age between urban and rural areas, the level of education, traditions, women's activities within or outside the household, and the level of internal migration. The demographic situation of the population as a whole affects various aspects of socio-economic life related to the labor market, pension, and welfare systems [17]. We could find several similarities regarding the demographic development of Bulgaria and other European countries [18, 19]. The population, gender structure, and natural and migration growth have a direct impact on the labor market. The change in these basic indicators leads to a change in the ratio of the population under working age, working age, and overworking age. Internal migration flows play an important role in the configuration of regional demographic typologies and determine the improvement of the age structure of the population in economically developed countries. The departure of young people aged 15-29 from poor municipalities to improve their education or to find work leads to a decrease in the fertile-age population, causing a decrease in the birth rate in the "donor" counties and an increase in the phenomenon of population aging in these areas. At the same time, in urban areas, the fertility curve has already moved away from the early pattern, having the characteristics of the pattern shown, with higher values in the 25-29 age group, which is an intermediate phase towards the late pattern specific to Western European populations. The intermediate pattern is also adopted by the rural population. Fewer children, preferably one, and born into the world at an older age become the rule that governs the reproductive behavior of the young couple in a society that is rapidly adopting the value system and attitudes of the territory it inhabits.

#### 4. Assessment and Analysis of Demographic Processes and Migration

The surveyed municipalities in Eastern Bulgaria need a realistic vision of their demographic development in the coming decades. In the definition and structure of a demographic development strategy, population is a central element and from this perspective, one of the components of development should be to halt demographic decline and limit adverse migration processes. Thus, the focus falls on the two planning regions of the North East and the South East, which have a particular regional pace of development marked by demographic contrasts.

The North East region is characterized by a declining population, which has decreased by 13.9% between the two censuses 2011 and 2021, according to the National Statistical Institute (NSI) data, the region has a population of 823884 people, which is decreasing by about 0.5% per year. The average

population density is 65 people/sq km. The processes characterizing the population decline are population aging, low birth rate, high death rate, and continued negative net migration. The population of the districts of Dobrich and Targovishte is declining at a high rate.

In the Southeastern region of Bulgaria, the population is also declining, having decreased by 11% between the two censuses in 2011 and 2021, and as of 31.12.2022 is 948410 people, also forming an average annual rate of decline of 0.5%. The average population density is 48 people/sq km. Yambol district has a high rate of population decrease - 8.6%.

Natural growth in Northeast and Southeast regions for the period 2018-2022 is negative for all districts and municipalities in the region. As for the Northeast region, the average annual rate of natural growth is -8.6%, and for the Southeast region -8.1%. As districts, the highest rates of negative natural growth are in Dobrich and Yambol for the respective regions.

Mechanical growth Northeast region for the period 2018-2022 is positive and the population has increased by 822 people, but this cannot compensate for the decrease in population from natural increase. Mechanical growth in the region is only negative in 2018 and 2019 and the region is positive and more favourable than the national average. In the Southeast region, the situation is different. Over the period under review, the region has lost nearly 2,300 people from mechanical movement as the positive mechanical balance is only there in 2020 and 2021 due to Coronavirus.

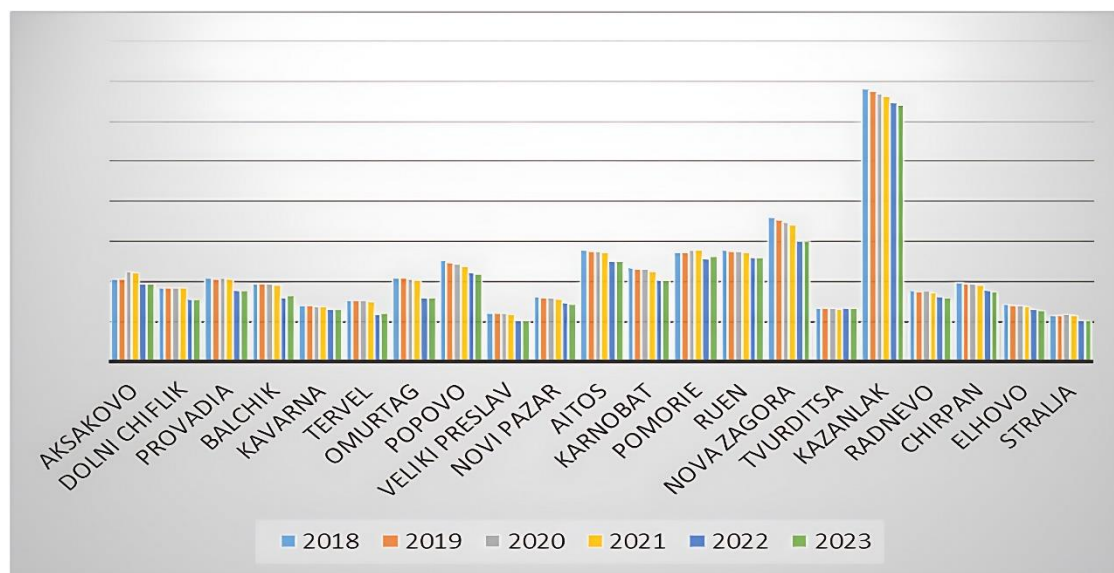
According to the convergence approach for population projection of the National Statistical Institute, the Northeast region will have a population of 832,641 d. in 2035. The decrease for the projection period is 86,103 d., which is a decrease of 9.4%, with the largest decrease in the districts of Dobrich with 14.5% and Shumen with 14.4%. According to the same approach, in 2035 there will be 938 167 people in the South-East region. A decrease of 87,766 d. over the forecast period, a decrease of 8.4%, with the largest decrease in Yambol District by 13.4%.

The subjects of the in-depth study are municipalities with a population of more than 10,000 and those planning areas reaching up to 50,000 people. Based on a socio-economic analysis to identify the potential and opportunities for their development. The forecast until 2035 for all three options (pessimistic, optimistic, and realistic) shows that the population in both regions will decrease and age. In addition, the declining population, the aging population and the fact that there are fewer of them of working age create a real challenge for the development of these municipalities. Therefore, it is necessary to capture the trends in the selected municipalities over 5 years (2018-2023) to reveal their potential, starting from their demographic characteristics. In this direction, the aging of the urban population affects all the municipalities studied. It represents another aspect that can affect the economic competitiveness of cities (almost 22% of the urban population will be over 60 years old in 2022). Another factor is the housing segment, which represents a key component of urban development - the quality of the housing stock, the location in the city, and the relationship with the functional areas of the city are elements that determine the quality, economic efficiency, and city attractiveness. In all of the municipalities surveyed, the slow pace of new housing construction is evident, although since the coronavirus pandemic crisis, there has been interest in purchasing property in these municipalities and renovating older buildings. The other trend of declining urban population is also noticeable, leading to an increase in the average size of an urban dwelling. In fact, in the last two decades, we have seen an increase of more than 14% (from 34 sq. m. to 39 sq. m.) in the useful area per inhabitant in these municipalities. At the same time, there has been an increase in the living area per urban resident in the municipalities studied, from 11 sq. m/resident in 1991 to 15 sq. m/resident in 2022, both due to the increase in the total habitable area and as a result of the gradual decrease in the urban population. Migration problems also remain. In recent years, processes related to the social and economic implications of migration have also become apparent, as they have to provide services geared to the needs of migrants facing problems of socio-cultural integration in the countries of settlement, resulting in an increasing trend towards so-called "return migration". On the other hand, daily labor migration, which is popular in Bulgaria, is essential. The share of incoming workers demonstrates how attractive a local labor market is. Unfortunately, seasonal migration is prevalent in Eastern Bulgaria and both

planning areas, but with a change in the focus of regional development, given the spatial location of settlements, a sustainable daily labor migration market could form in the order of 50-60 kilometers. In some places, purely administrative distribution leads to significant migration - such examples are Tundja and Dobrich-rural municipalities, where agricultural territories are administratively separated from the cities of Yambol and Dobrich. In large cities, labor migration does not have such a large relative weight because of the sheer size of the market - in Burgas, for example, which attracts the largest number of incoming workers in the country, they account for 9% of all employees, and in Varna - 13%. Daily labor migration well describes the economic processes and interactions between different territories and localities within the country's economic centers. These processes are particularly suitable as a basis for future amendments and rationalizations of administrative divisions, which seem increasingly urgent.

Experts analyzed the data to identify social trends and use them to develop strategies and measures to prepare Eastern Bulgaria for a declining and aging population. The most important measures that could help couples have the children they want are: daycares with extended hours to allow women to work; employer-provided daycares and nurseries to allow parents to be close to their children; and flexible work schedules to increase the time young parents spend with family and home. Other measures that could lead to increased fertility are better living conditions, especially facilitating young people's access to housing; rural development programs; and increasing access to and quality of reproductive health services, including family planning [20]. By investing in human capital, factual productivity is increased and technological progress is promoted, as Kazakov says about it, it is a socio-economic problem field where my most important problems are economic. An eventual economic recovery may lead to a reduction in mortality, and fertility - usually sensitive to a higher standard of living - will respond moderately. Increasing fertility can only be achieved through demographic policies, through incentive policies that respect the right of the individual or couple to make their own decisions.

The population in all of the municipalities considered in Eastern Bulgaria is declining by 2022, with only one municipality (Aksakovo) experiencing an increase in 2020 and 2021 (Figure 1).



**Figure 1.**

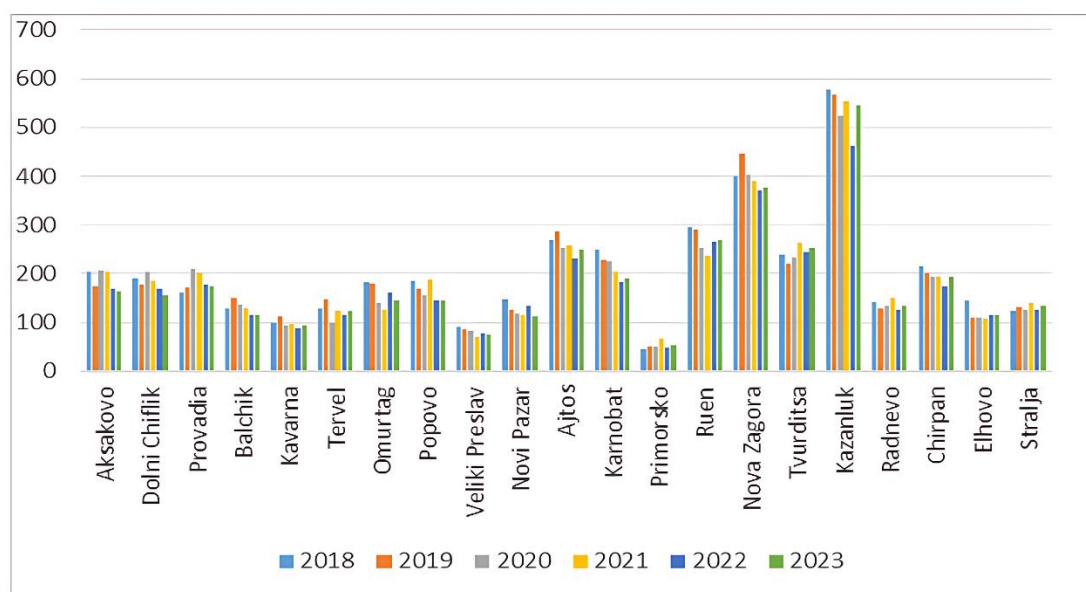
Population by municipality for the period 2018-2023.

Source: National statistical institute.

There has been a more intense decline in population as a result of migration and higher mortality due to the emergence of the COVID-19 virus. Here it is appropriate to emphasize that the population

movement can be distinguished by the possibility of work, or "temporary work" and "permanent work", because those who migrated to cities remain in them for permanent residence. The difficulty also comes from the fact that there is no complete statistical record of which of them remain in place and which commute daily. There is a tendency for the majority of those temporarily living and working in small and medium-sized towns to move to areas of relative economic stability due to the level of unemployment, the unstable socio-economic environment, and limited employment opportunities. In addition, in Eastern Bulgaria, the presence of depopulating municipalities process is noticeable. These are municipalities such as Kotel, Nikola Kozlevo, Antonovo, and others. In these municipalities, there is a labor market with low wage levels, and lower incomes, such as mostly rural or post-industrial areas where there are few opportunities for the active part of the population. Hence the question arises about the problems of fertility and mortality of the population in these municipalities of Eastern Bulgaria.

The focus on the municipalities we have studied shows a deterioration of the natural population movement, which is reflected in the birth and death rates. The trends show that the birth rate is decreasing year by year. In the municipalities we studied, both in Northern and Southern Bulgaria, the trend is similar (Figure 2).



**Figure 2.**  
Number of live births by municipality for the period 2018-2020.  
**Source:** National statistical institute.

In practice, the policies pursued so far by the Bulgarian state have no real result. Another solution could be sought to increase the birth rate. In particular, an effort to achieve an increase in the birth rate through means that change the environment in which people live. In many European countries with low fertility, governments have initiated pronatalist policies to encourage increased fertility. Their success depends, of course, on the extent to which they succeed in counteracting the factors that contributed to the significant decline in fertility to begin with. The number of children that a woman or family decides to have is the result of a complex combination of factors, including the cost of raising children, women's opportunities for higher education and the best possible occupational position, status, the family's economic situation, marital status (including divorce or cohabitation), and the degree of compatibility of service with child care. This directly corresponds to the fact that the proportion of children born out of wedlock is prevalent in our country. In Bulgaria, 324 591 families live in cohabitation without marriage, or 17.4% of all families in the country, according to the last census of 2021 carried out by the National



Statistical Institute. According to the data, married couples with children living in cohabitation without marriage account for 27.3% of all married couples with children in the country, with a relative share of 26.0% in urban areas and 31.2% in rural areas. The picture of married and out-of-wedlock children in the municipalities under consideration is not different.

During the period under review, more than 60% of children born in the municipalities under study were born out of wedlock. The difference between live births and deaths represents natural population growth. After 1990, the demographic development of the country is characterized by a negative natural population growth, in the municipalities studied is also negative, as can be seen in Table 1.

**Table 1.**

Natural population movement in number of people (Difference in population between birth and death rates).

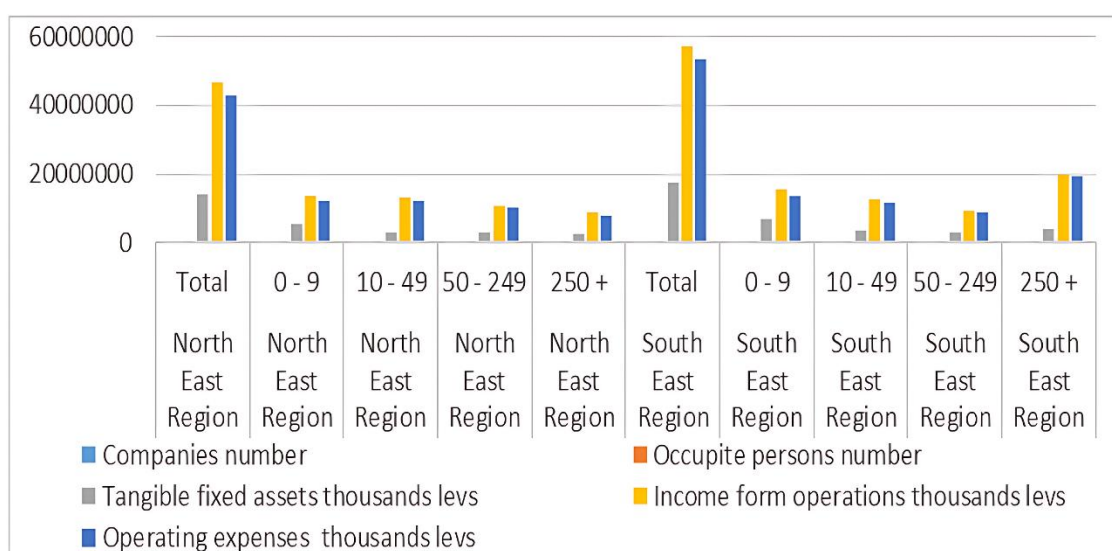
	2018	2019	2020	2021	2022	2023
Aksakovo	-135	-130	-194	-259	-204	-136
Dolni Chiflik	-93	-118	-118	-178	-102	-101
Provadia	-193	-186	-206	-297	-271	-150
Balchik	-191	-183	-228	-298	-281	-189
Kavarna	-121	-98	-191	-239	-179	-127
Tervel	-94	-87	-177	-179	-145	-94
Omurtag	-81	-128	-257	-341	-188	-161
Popovo	-314	-326	-412	-532	-393	-274
Veliki Preslav	-144	-141	-157	-271	-171	-144
Novi Pazar	-119	-150	-192	-273	-144	-143
Aitos	-64	-93	-207	-251	-208	-102
Karnobat	-179	-188	-258	-386	-241	-181
Primorsko	-40	-72	-75	-72	-62	-53
Ruen	-9	9	-114	-194	-81	-19
Nova Zagora	-267	-160	-307	-402	-304	-203
Tvurditsa	20	13	4	-9	39	38
Kazanluk	-567	-599	-750	-912	-824	-495
Radnevo	-208	-265	-277	-319	-261	-211
Chirpan	-131	-200	-274	-341	-254	-157
Elhovo	-146	-208	-189	-246	-183	-154
Stralja	-154	-123	-133	-207	-119	-97

The natural increase, as a result of the birth and death rates, is negative in all municipalities. Only two municipalities (Tvurditsa and Ruen) have a positive growth rate, which is characterized by another minority ethnic structure. It is specific for it that representatives of these ethnic groups have high birth rates. The North-East region forms an average annual natural increase of -8.6 ‰, with the lowest value in 2021 of -12.6 ‰, and the highest is again a negative value of -5.9 ‰. For the same period, the Southeast region had an average natural increase of -8.1‰, with the lowest in 2021 when it was -11.6‰ and the highest in 2018 and 2019 when it was -5.7‰ for the region. Two of the districts (Dobrich and Turgovishte) are the districts losing the most population on an average annual basis over the last 5 years of -12.1‰, and -11.7‰ respectively. In the studied municipalities, the annual average of natural growth for the 5 years of study is -10,27‰.

The negative change in population over the last 5 years is one of the main unfavorable factors for the future demographic and socio-economic development of the municipalities under study. Negative natural growth leads to changes related to the municipality's reproductive potential, labor force, and socio-economic development.

The localization of Eastern Bulgaria in the context of the socio-economic development of these municipalities implies the achievement of efficient transport connectivity, which allows for minimizing transport costs, as well as the foregrounding of the available natural, social, economic, and transport potential when deciding on the stable development of the settlements. In this direction, stable development means covering certain aspects related to the region's profitability, the growth poles'

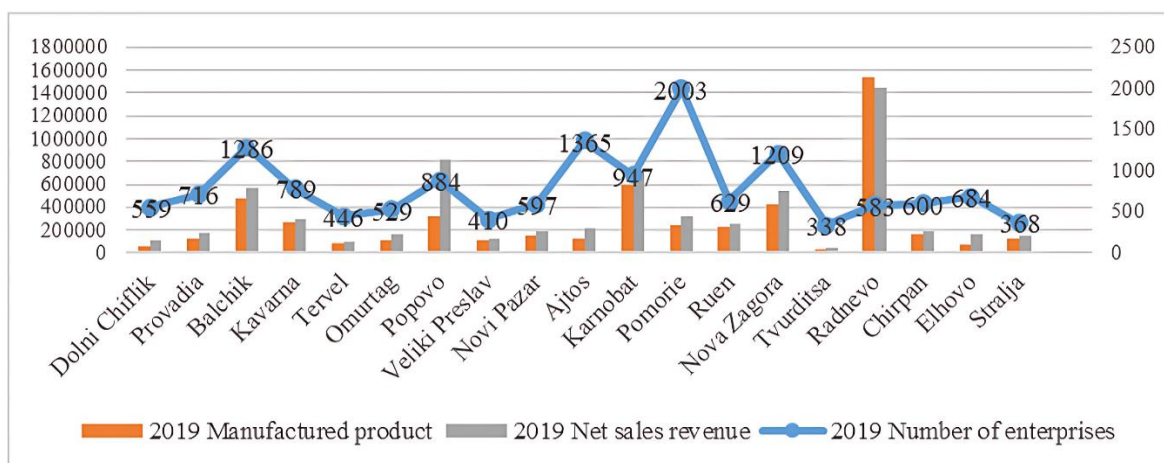
existence, and overcoming demographic decline in the territory of the municipalities studied. This means adopting social policies that aim to create local employment in the direction of supporting villages and towns in developing pragmatic, new, and sustainable solutions that combine social, economic, and environmental aspects in an integrated approach to municipal development. Another negative factor affecting the labor market is the mismatch between the structure of secondary vocational education and current labor market requirements. As a result, only a little more than half of vocational school graduates and a third of college graduates succeed in entering the labor market. For these reasons, there is a need to better market forces match - supply and demand. This means that the labor market depends on structural mismatches between the education/qualifications of employees and the educational and skill requirements for jobs. There will be a surplus of employees with tertiary and primary education and a shortage of workers with secondary education. The free movement in the labor market, the increasing mobility of human resources, and the observed migration processes do not allow us to identify the specific areas where these structural deficits will be observed. Only economic revitalization can provide the impetus for population growth. Specific objectives to achieve this are: development of a vibrant functioning economic sector, creation of alternative sources of employment and income, stabilization of demographic and settlement development, reduction of unemployment, increase in incomes, improved access to education and health care infrastructure, protection, preservation of specific natural and cultural heritage. Economic indicators are used for measuring and assessing the overall health of an economy. The municipalities' economic development has been characterized by different dynamics in recent years.



**Figure 3.** Main economic indicators of non-financial enterprises by regions and groups of enterprises by the number of persons employed in them.

**Source:** National statistical institute.

There is an obvious need for the general economic development of the territory, which positively affects the provision of employment (permanent and/or temporary), opportunities for higher wages and incomes, better working conditions, faster professional realization, etc. The data show that the two regions under consideration are characterized by economic dynamism. It is noteworthy that the South-West region is characterized by better indicators, with enterprises with more than 250 people in 2023 having higher revenues, operating costs, and the value of tangible fixed assets (Figure 3).



**Figure 4.**  
Main economic indicators of non-financial enterprises by municipality for the period 2018-2020.  
Source: National statistical institute.

From Figure 6, we see that the output produced by non-financial enterprises as well as net income are not proportional to the number of enterprises. The highest value of output produced and net sales revenue generated is in the municipality of Radnevo, with the town of Radnevo having the highest value of output produced and net sales revenue generated. Radnevo is defined as a level 4 town - small towns with micro-regional importance, town centers offering jobs and basic services with importance for more than one municipality. Minerals are the main asset of the Municipality of Radnevo. Coal mining and energy are structurally defining industries, which is why the area is defined as industrial. The municipality of Stara Zagora, together with Kazanlak and the energy complex Radnevo-Galabovo, account for almost 94% of the district's revenues.

The largest number of enterprises is in Pomorie municipality-1947, but they are mainly in the tertiary sector, which is in the sphere of entrepreneurship and family business. The companies are represented by micro-enterprises, which are the backbone of the municipality's economy, but as can be seen from the graph, they do not contribute so much to the output - BGN 245 959 thousand and its revenues for BGN 315 549 thousand. The extractive industry is related to the activity of Pomorie Saltworks, while the investment activity is associated with the services provided by the tourism sector (hotels and restaurants, culture, sport, and entertainment), as well as financial and accounting services, ICT services, logistics, transport and maintenance services and other services related to investor interest and tourist flow.

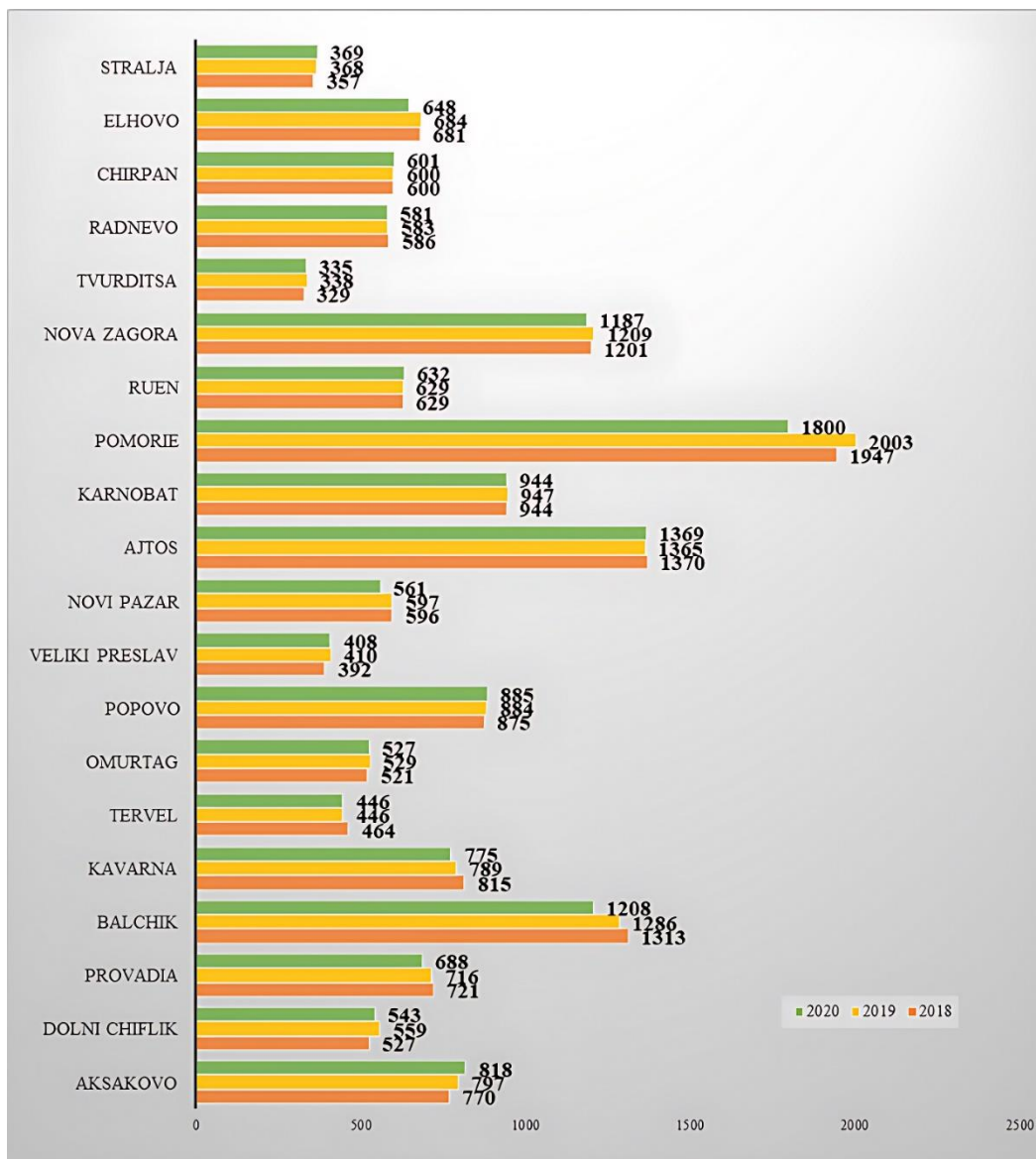
The municipality of Tvarditsa has the lowest number of enterprises - 329 - and the lowest net sales revenues and output, respectively BGN 49 846 thousand and BGN 30 808 thousand. It contributes little to the economy, producing 1.6% of the district's output, out of only 4.6% of the enterprises in this area. The economic crisis and the unfavorable business environment in the country do not affect the development of enterprises in Veliki Preslav municipality. Structurally defining sectors of the local economy are industry, trade and services, agriculture and tourism /hotel and restaurant industry/. In 2019, the economic development of Veliki Preslav Municipality showed some growth compared to the previous year. As of 2018, 629 non-financial enterprises, or 2.05% of the companies in the Burgas region (30 736) and only 1.08% of the enterprises in the Southeast region (58 304), were operating in the municipality of Ruen. The economy of Dolni Chiflik municipality by several indicators is at a relatively high level compared to other municipalities of similar functional type, it has a well-developed industry related to wood processing, based on logging, and also has mining of aggregates such as sand, and gravel, clay, etc. The development of the municipal economy in Dolni Chiflik is favorably influenced by the proximity of the regional administrative centers - Varna and the sea outlet, which contributes to the

development of the tertiary sector in the field of tourism. Of course, the number of enterprises related to the tertiary sector is the largest, followed by enterprises in the primary sector and finally the secondary sector related to the manufacturing industry.

In the municipality of Popovo, the predominant number of micro, small, and medium enterprises is related to small businesses in the field of trade and services. However, the ratio of number of enterprises, output, and revenue is quite good. There are 2 large enterprises on the municipality territory, both in the town of Popovo, specializing in the production of industrial fittings for the chemical and food industry, energy and hydro-remediation facilities, and the other with producing women's and men's clothing, and processing fruit and vegetables. The leading economic activity in the municipality of Popovo is the trade and repair of cars and motorcycles.

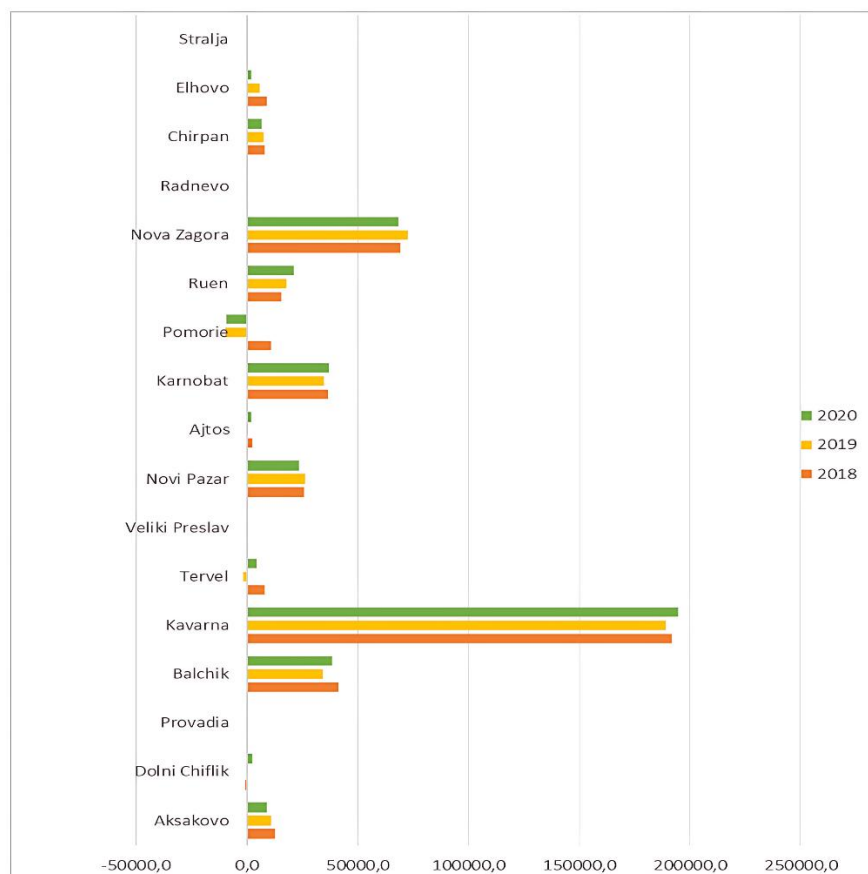
In the municipality of Aksakovo, this ratio between combat enterprises, output, and income is even better than in the municipality of Popovo. Here, the largest number of enterprises operate in activities such as trade; and repair of cars and motorcycles, and the second largest number of enterprises in activities are those in the fields of agriculture, forestry, and fishing, with micro-enterprises predominating, occupying almost 90% of all enterprises in the municipality. Of course, the proximity to the sea provides an opportunity to develop tourism and hence the tertiary sector.

Karnobat is associated with production in electrical equipment and machinery, as well as with the food industry, with the secondary sector leading, followed by the tertiary sector, and lastly the primary sector in terms of output. The number of enterprises operating in 2018 is 947 numbers, and their output amounted to 595,216 thousand leva and net sales revenue to 714,939 thousand leva. Traditionally, the municipality has been associated with the processing industry of agricultural products and the production of alcoholic beverages



**Figure 5.**  
 Number of enterprises by municipality for the period 2018–2020.  
 Source: National statistical institute.

The trend in the municipalities considered for the period 2018–2020 is a decline in the number of enterprises with an average value of about 1% over the period (Figure 5). From the data in the graph, we can conclude that the number of municipalities with the number of enterprises over 1000 enterprises during the period under consideration is decreasing.



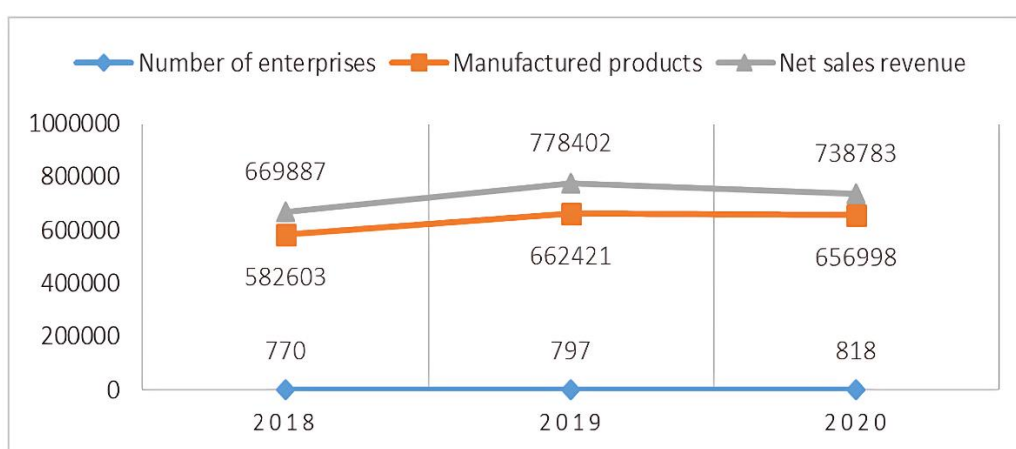
**Figure 6.** Foreign direct investment in non-financial corporations 2018–2020 in thousands of euros.  
**Source:** National statistical institute.

Investment activity at the district and municipal level very clearly outlines the leading economic centers in the country. Half of the foreign direct investment with accumulation until 2019 is concentrated in the capital - EUR 12.3 billion, to which we can add nearly EUR 1.5 billion in the Sofia district. The districts of Burgas, Varna, and Plovdiv are the other major centers with EUR 1.9 billion of cumulative foreign investment, followed by Stara Zagora with EUR 900 million. In this context, we see that the main capital flows are directed to cities with a population of over 100,000 (Sofia, Varna, Burgas, Stara Zagora). Of these cities, Varna, Burgas and Stara Zagora fall within the region of Eastern Bulgaria under consideration. Although these cities concentrate a large part of foreign direct investment, the municipalities that are the subject of our study are within their reach. Viewed geographically, these three large cities form a triangle within which we can expect to stimulate the development of municipalities of 10–50,000 people.

Figure 6 shows that the group of municipalities with the most foreign direct investment is the Black Sea municipalities group which are distinguished by their tourism potential. In practice, investment activity is mainly directed at sectors such as tourism, energy, agriculture, fisheries, and manufacturing. Certainly, some of the Black Sea municipalities registered a serious decline in foreign investment. For the mainland municipalities in Eastern Bulgaria, the energy enterprise processes development, manufacturing, and agriculture are particularly. The sectoral structure depends on the geographical and territorial characteristics of the municipalities. In addition to the natural and geographic characteristics of the territory, the transport infrastructure built up in recent years has a clear influence on the need for

better connectivity of the municipal territories with the regional cities. It is noteworthy that municipalities located close to towns of more than 100,000 people are affected differently from large cities. In the case of the Black Sea municipalities and the largest seaports in Bulgaria, there is an outflow of investment from small municipalities. At the same time, the mainland of Eastern Bulgaria's small municipalities benefit from the availability of natural resources and the proximity of a large market, which is any central location (large cities).

On the other hand, the north-south divide is pronounced here in Eastern Bulgaria. Almost all of the mentioned growth centers with a population of over 100,000 people are located in the south and are connected to one of the major transport arteries in Bulgaria, linking the Bulgarian capital with Plovdiv (the second largest city in the country) - Stara Zagora and Burgas. Only Varna is north of the Balkan Mountains, which can influence the development of smaller municipalities, including directing investment activity towards them. This clearly outlined territorial and urban disproportion shows some negative trends, expressed in the correlation between the number of enterprises, the output, and the sales revenues (Figure 7).



**Figure 7.**  
Enterprises number, manufactured products, and net sales revenue correlation.  
**Source:** National statistical institute.

In Figure 7 we observe an analysis of the relationship between several enterprises, net sales revenue, and output. It becomes clear that it is difficult to establish persistence between basic economic indicators.

## 5. Conclusion

Bulgaria's economy has had an unstable convergence trajectory at the national level over the last 5 years compared to the EU average over the last decade. For example, GDP per capita at purchasing power parity has grown from a level of 53.8% of the EU27 average in 2010 to almost 62% in 2019. However, inequalities persist given the unbalanced process of territorial development. Inequality between localities in Bulgaria is evident across territorial dimensions. Thus, in the context of a changing environment, let us highlight the common problems of the municipalities of Eastern Bulgaria and give impetus to each one to seek opportunities to overcome the mentioned deficits. It is necessary to look for innovative solutions and apply new approaches in territorial management. Creating new industries, increasing the share of start-up companies with young entrepreneurs, improving secondary education, and directing it towards practical and applied character. In this part it should be clearly emphasized that the studied municipalities need innovative and educational support to be able to practically implement local business projects to form a new business environment, and therefore a new creative business, which will be the basis of the new development of the mentioned municipalities. Regional development

policies are needed to overcome the finding that 20% of most developed municipalities have a GDP 5.85 times higher than the poorest 20% of urban centers. This brings up new conundrums for regional development and the need to defragment the problems onto the planning areas themselves, and often even at the county level. In this direction, it is evident that half of Bulgaria's economic output is concentrated in the Capital Region and the South-Central Planning Region with the leading center in the city of Sofia. In both regions, we have a fragmentation of municipalities from 10 to 50 thousand into Black Sea municipalities and inland municipalities. An important incentive for the development of these municipalities is their budget structure, which should be strategically targeted at local decision-makers. This type of data can help us outline how local action can determine a different development trajectory from the existing one. However, it is important to look for opportunities for investment driven by regional economic activity and the potential for new regional policies to enter these municipalities in general. The data analysis covered all categories of settlements - municipalities from 10 to 50 thousand inhabitants in the two planning regions until 2022. Compared to other studies looking at disparities at the regional level (NUTS II) or the county level (NUTS III), this study brings the analysis to the level of detail of all administrative and territorial units (UAT) from 10 to 30 thousand in the South East and North East planning regions. The analysis also covers socio-economic and infrastructure development trends. The results of our study show that, despite the positive trend, the process of territorial cohesion in these planning regions in Bulgaria is not achieving results. At the same time, the analyses show a sufficiently strong dynamic to help develop more regions as a whole. In addition, they are looking for alternatives for regional economic development. This means that reforms are needed to boost the country's decentralization and enable the municipalities studied to find their true regional economic profile.

### Fundings:

This publication was financed and is part of a project of the Scientific Research Fund entitled "Models for the valorization of the landscape for the development of regions" (KP06-K65/11 of 12.12.2022).

### Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

### Copyright:

© 2025 by the authors. This open-access article is distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

### References

- [1] B. Ivanov, "Demographic shift of rural and non-rural areas in Bulgaria. Topic: China-CEEC Cooperation and Development Time: November 18, 2020 Hosts: Shanghai Jiao Tong University (SJTU) University of Nation and World Economy (UNWE) Organizer: SJTU Bulgarian Center, 69," 2020.
- [2] M. Sugareva and M. Murgova, "What are the real demographic problems of Bulgaria?," *Statistics*, pp. 152-208, 2021.
- [3] R. Mikova, "Demographic scenarios for the development of rural areas in Bulgaria and forecast expectations for the number of the population for the period 2023-2027," *International Multidisciplinary Scientific Geo Conference: SGEM*, vol. 23, no. 5, pp. 361-368, 2023. <https://doi.org/10.5593/sgem2023/5.1/s21.46>
- [4] M. Ivanov, "Peculiarities in the socio-economic development of the regions in Bulgaria," *Part Iv: Humanitarian Sciences and Economics*, vol. 60, pp. 1-5, 2017.
- [5] K. Stoychev, "Regionalization of Bulgaria: Socio-economic development and geopolitical identification," *Public Policies*, vol. 9, no. 4, pp. 14-35, 2018.
- [6] K. Petrov, "Trends in the regional development of Bulgaria," *Trakia Journal of Sciences*, vol. 18, no. 1, pp. 498-506, 2020.



- [7] K. Slaveva, Et Al., "The economic centers in Bulgaria-an opportunity to discover additional potential in the regional development of rural territories," *Scientific Papers Series Management, Economic Engineering in Agriculture & Rural Development*, vol. 24, no. 2, pp. 1-10, 2024.
- [8] R. Rangelova and V. Bilyanski, "Demographic development of Bulgaria in a regional plan as a basis for economic development," *Economic Studies*, vol. 27, no. 6, pp. 141-154, 2018.
- [9] V. Mintchev, Et Al., *Migration of Bulgarian population-characteristics and relations to the regional socio-economic disparities* Germany: University Library of Munich, 2016.
- [10] E. Velinov, "Unequal development of municipalities: Socio-economic paradox in Bulgaria," *International Journal of Economic Policy in Emerging Economies*, vol. 16, no. 2-4, pp. 368-380, 2022. <https://doi.org/10.1504/ijepee.2022.126611>
- [11] J. Doitchinova and E. Lazarova, "Demographic changes and inequalities: regional differences with a focus on rural area in Bulgaria," *Scientific Papers Series Management, Economic Engineering in Agriculture & Rural Development*, vol. 23, no. 4, pp. 1-10, 2023.
- [12] A. Rangachev, G. K. Marinov, and M. Mladenov, "The demographic and geographic impact of the COVID pandemic in Bulgaria and Eastern Europe in 2020," *Scientific Reports*, vol. 12, no. 1, p. 6333, 2022. <https://doi.org/10.1038/s41598-022-09790-w>
- [13] P. Marinov and E. Mutafov, "Birth rate in rural areas of Bulgaria for the period 2011-2021, according to nuts 1," *Scientific Papers Series Management, Economic Engineering in Agriculture & Rural Development*, vol. 23, no. 2, pp. 1-6, 2023.
- [14] E. Mutafov and P. Marinov, "Population migration processes and digital coverage in rural areas of Bulgaria," *Scientific Papers Series Management, Economic Engineering in Agriculture & Rural Development*, vol. 22, no. 2, pp. 1-8, 2022.
- [15] T. Petrova and T. Ingot, "Introduction: Politics and current challenges of demography in central and Eastern Europe," *East European Politics and Societies*, vol. 34, no. 4, pp. 879-892, 2020. <https://doi.org/10.1177/0888325420905886>
- [16] H. Kostanick, *Characteristics and trends in Southeastern Europe: Romania, Yugoslavia, Bulgaria, Albania, Greece, and Turkey. In: Population and Migration Trends in Eastern Europe*. Routledge, 2019.
- [17] T. Sobotka and A. Fürnkranz-Prskawetz, *Demographic change in Central, Eastern and Southeastern Europe: Trends, determinants and challenges. In: 30 Years of Transition in Europe*. Edward Elgar Publishing, 2020.
- [18] V. Terziev and H. Can, "The relation between the Migration, population aging, labor force productivity and economic growth: An analysis for Bulgaria," *International E-Journal of Advances in Social Sciences*, vol. 4, no. 10, pp. 77-83, 2018. <https://doi.org/10.2139/ssrn.3119861>
- [19] National Statistical Institute, "National Statistical Institute," Retrieved: <https://www.nsi.bg/bg>. [Accessed 2023].
- [20] F. B. Wietzke, "Poverty, inequality, and fertility: The contribution of demographic change to global poverty reduction," *Population and Development Review*, vol. 46, no. 1, pp. 65-99, 2020. <https://doi.org/10.1111/padr.12317>