

Labor Market in the Border Municipalities of Southwestern Bulgaria - Challenges and Trends

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ABSTRACT

Border municipalities have traditionally developed as peripheral territories with limited socio-economic functions due to their historical role as dividing zones. While Western Europe began processes of integration and cross-border cooperation after the Second World War, in Eastern Europe such developments occurred much later, which deepened demographic and economic disparities. In Southwestern Bulgaria, border municipalities continue to face high unemployment, long-term joblessness, depopulation, and limited access to public services. The centralization of services in municipal centers accelerates the migration of the working-age population and reduces the local labor force, making economic interventions less effective. Many municipalities are highly dependent on public resources and project-based funding, mainly in tourism and the agricultural sector, but the lack of entrepreneurial capacity, marketing, and modern infrastructure hinders their competitiveness. The development of modern business practices, improved transport connectivity, and strengthened cross-border cooperation are essential for overcoming this peripheral status.

Keywords: *Border municipalities, Social processes, Employment, Unemployment, Wages*

INTRODUCTION

Border municipalities in South-western Bulgaria represent some of the most demographically and economically vulnerable territories in the country. Their peripheral position, combined with mountainous relief, declining population, and limited access to major labor markets, has shaped a persistent pattern of socio-economic disadvantage. Although border areas hold potential for cooperation, mobility, and regional integration, they continue to face structural challenges such as high unemployment, low wages, weak private-sector activity, and dependence on public employment. These characteristics reflect broader European trends, where border regions are often described as "underutilized development spaces" that struggle to fully participate in national and regional economic processes.

In Bulgaria, these disparities are particularly evident along the borders with Serbia and North Macedonia, where demographic decline and restricted economic activity reinforce each other. The labor market plays a central role in these transformations: employment opportunities, wage levels, daily labor mobility, and the balance between the public and private sectors determine the capacity of



local communities to remain viable and retain working-age population. Despite this, there is still a lack of detailed studies focusing specifically on the labor-market dynamics of the border municipalities in Southwestern Bulgaria. Existing research tends to examine broader regional or national trends, leaving a gap in understanding the local socio-economic mechanisms that drive inequality within these peripheral territories.

This article seeks to address this gap by offering a spatially differentiated analysis of employment, unemployment, labor mobility, and wages in the fourteen border municipalities of the Southwestern Region. By integrating statistical data with territorial interpretation, the study aims to identify the structural factors that shape labor-market outcomes and contribute to persistent regional disparities. The findings provide a clearer understanding of the socio-economic conditions in these municipalities and offer a basis for developing targeted policies aimed at strengthening local labor markets, improving connectivity, and enhancing the competitiveness of border regions.

Figure 1: Location of the border municipalities in the Southwest Region

LITERATURE REVIEW

The labor market in border and peripheral regions has attracted increasing academic interest due to deepening demographic decline and socio-economic disparities. In the Bulgarian literature, Ravnachka (2015; 2021) highlights demographic erosion, population ageing and the shrinking labor force in mountain and border areas, including the Blagoevgrad and Kyustendil regions.

Similar findings are reported in recent European studies, which emphasize that peripheral labor markets experience accelerated depopulation, structural unemployment and limited economic diversification (ESPON, 2020; Lang & Görmar, 2019). Border regions in particular exhibit weaker labor-market absorption capacity and higher vulnerability to demographic shocks, especially in Southeastern Europe (Partridge, M. D., & Rickman, D. S., 2008; Buturac, 2019).

Veselinova (2017) provides the theoretical framework for processes such as urbanization, peripheralization and intra-regional inequalities. Contemporary geographical research further notes that labor markets in mountainous and rural border territories face multi-dimensional constraints such as ageing, low human capital and infrastructural deficits. International research demonstrates that peripheral and border regions consistently face structural labour-market disadvantages linked to low accessibility, demographic decline, and limited private-sector capacity (Fratesi, U., & Wislade, F., 2017; Corcoran, J., & Faggian, A., 2017). These structural disadvantages reduce labor mobility and hinder integration into wider regional economic systems. At the local level, Patarchanova (2019) demonstrates the role of Blagoevgrad as a regional center of attraction and a factor shaping labor flows from neighboring municipalities.

The specificity of border regions is examined both through the lens of cross-border cooperation (Geshev, 1998) and within European strategic documents, which emphasize the untapped potential of

border areas and the need to overcome infrastructural and institutional barriers (COM, 2017) 534; European Court of Auditors, 2021). Projects such as INNOBUS (2021) show that a cluster-based approach and strengthened connectivity can enhance competitiveness and employment in border territories. At the same time, several Bulgarian studies emphasize the need for functional labor-market integration and improved cross-border regional planning (Karadzhov, 2024). Recent regional studies also highlight the importance of tourism diversification for small municipalities and its role in strengthening local labor markets in peripheral areas (Karadzhov et al., 2024). These works highlight that border regions can benefit substantially from improved infrastructure, digitalization and coordinated regional employment policies.

International comparative research confirms that labor-market inefficiencies in peripheral regions are strongly correlated with low wage levels, skills mismatches and outward labor migration (Rodríguez-Pose & Ketterer, 2020; OECD, 2019). Studies focused on Balkan border regions also reveal persistent structural unemployment and dependence on low-paid sectors such as agriculture and seasonal services (Nestorov & Petrović, 2022).

Furthermore, recent publications in the International Journal of Digital Research demonstrate how digital connectivity, cross-border cooperation and regional innovation strategies can influence socio-economic performance in small municipalities (Filatova & Patarchanova, 2025).

The empirical basis for analyzing the labor market in border municipalities is provided by official statistics from the National Statistical Institute (employment, unemployment, wages, and daily labor mobility), the Employment Agency and Eurostat, which allow long-term trends and territorial differences to be traced. However, there is a lack of targeted research focused specifically on the border municipalities of Southwest Bulgaria. This article aims to contribute to filling this gap by offering a spatially differentiated analysis of employment, unemployment, labor mobility and wages in these peripheral territories.

Overall, the existing literature suggests that labor-market challenges in border municipalities are multifactorial and deeply embedded in spatial, demographic and infrastructural conditions. This aligns with broader conceptualizations of regional peripherality and labor-market fragmentation, underscoring the need for territorially specific analyses such as the present study.

METHODS OF RESEARCH

The study applies a set of complementary research methods that ensure a comprehensive and territorially grounded analysis of labor-market processes in the border municipalities of Southwestern Bulgaria. First, a **statistical method** is used based on official quantitative data from the National Statistical Institute, the Employment Agency and Eurostat. This allows the dynamics of employment, unemployment, wages and daily labor mobility to be traced over time and compared with regional and national averages. The indicators are processed and interpreted in order to reveal long-term trends, structural characteristics and the degree of socio-economic vulnerability of the fourteen border municipalities.

Secondly, a **comparative territorial analysis** is applied to examine differences between municipalities that vary in demographic structure, geographical location, economic profile and degree of integration into wider labor markets. By comparing municipalities with relatively developed urban centres to sparsely populated, mountainous and peripheral territories, the study identifies distinct patterns such as core-periphery relations, labour-attracting versus labour-donor municipalities, and territories with predominantly public versus predominantly private employment.

Thirdly, a **document and policy analysis** is used to contextualise the observed labour-market processes within the existing institutional and strategic framework. National and regional strategic documents, socio-economic analyses and EU policy papers related to regional development, cohesion policy and cross-border cooperation are examined in order to link empirical findings with the objectives, instruments and limitations of current development policies. In addition, the interpretation of cartographic materials and spatial distributions (employment rates, unemployment, labour mobility,

wage levels) supports the identification of geographical dependencies and functional linkages between municipalities, contributing to a more accurate understanding of the spatial dimensions of the labour market in the border region.

RESULTS AND DISCUSSION

The following section presents a detailed territorial analysis of the main labor-market indicators in the border municipalities of Southwestern Bulgaria. By combining statistical data with spatial interpretation, the discussion highlights the structural patterns that shape employment, unemployment, labor mobility and wage dynamics across these peripheral territories. The aim is to reveal the geographical disparities and functional dependencies that determine the socio-economic position of each municipality, and to provide an integrated understanding of how demographic, infrastructural and economic factors interact within the regional labor market.

Employment

Employment represents a fundamental dimension of the socio-economic condition of border municipalities, reflecting both the capacity of local economies to generate jobs and the ability of the population to participate in productive activity. In peripheral and demographically declining territories, employment patterns are strongly shaped by geographical location, access to labor markets, infrastructural connectivity, and the degree of economic diversification. Before examining the specific indicators, it is essential to outline the overall employment landscape in the region, as it provides the basis for understanding the territorial contrasts and structural vulnerabilities that characterize Southwestern Bulgaria's border municipalities.

Employment rate

Employment is one of the key indicators of the economic and social condition of a given territory, as it reflects not only the economy's ability to create jobs but also the degree to which the population is integrated into productive and service activities. The level of employment is directly linked to income, quality of life and social stability, and more broadly – to the sustainability of local communities and their ability to retain and attract population. In peripheral and border regions, where economic activity is often limited and access to markets and resources is constrained, employment becomes even more important as a factor in overcoming demographic decline and social marginalization.

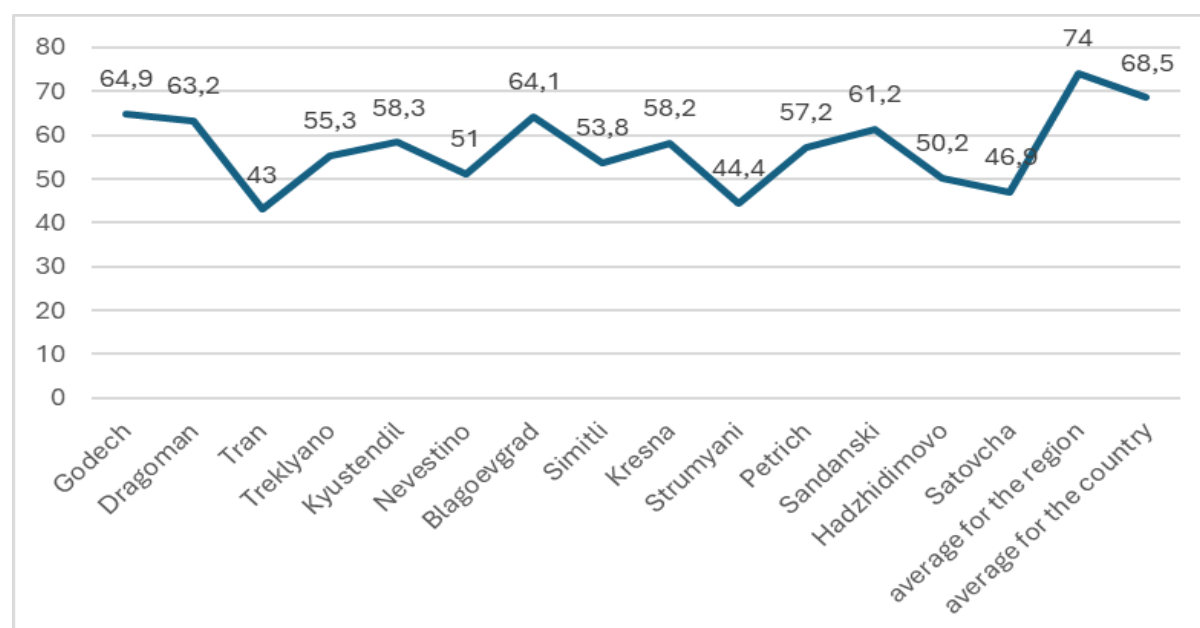


Figure 2: Employment rate of the population aged 15–64, 2021 (in %)

The analysis of the employment structure in the border municipalities of the Southwestern Region, based on empirical data, reveals a clear territorial differentiation and discrepancies compared to the average values for the region and the country. According to Fig. 2, the average employment rate for Bulgaria stands at 68.5%, while that for the Southwestern Region reaches 74%. A significant share of the border municipalities remain below these values, reflecting their economic peripherality and socio-demographic vulnerability.

The municipalities of Godech (64.9%), Dragoman (63.2%), Simitli (64.1%), and Sandanski (61.2%) show the highest employment levels, approaching or exceeding the national average. Their relatively more favorable economic profile is determined by several key factors: proximity to Sofia (in the case of Godech and Dragoman), the presence of logistic corridors and industrial zones (Dragoman), or active development of tourism, balneology, and services (Sandanski). Simitli, for its part, benefits from its location between Blagoevgrad and Sandanski and from maintained connectivity to major transport arteries.

The group of municipalities with medium employment values (between 50% and 60%) includes Treklyano (55.3%), Kyustendil (58.3%), Nevestino (51%), Blagoevgrad (53.8%), Kresna (58.2%), Petrich (57.2%), and Hadzhidimovo (46.9%). Here, we observe a strongly heterogeneous profile – from the relatively industrialized Kyustendil to the agriculturally oriented Nevestino and Hadzhidimovo. Blagoevgrad, despite its status as a regional center, lags behind the regional average, which may be explained by demographic pressure, youth migration, and the concentration of non-working student population. Petrich, although benefiting from cross-border trade and services, still fails to realize its full economic potential.

Particularly concerning are the data for the municipalities of Trŭn (43%), Strumyani (44.4%), and Hadzhidimovo (46.9%), which show some of the lowest employment levels in the region. These are mountainous and border territories characterized by demographic collapse, a high degree of isolation, difficult access to labor markets, and the lack of a sustainable economic base. These municipalities fall into the so-called “zones of silent depopulation,” where social infrastructure is reduced to a minimum, and labor activity is maintained mainly through self-employment, seasonal migration, or informal forms of employment.

This spatially determined analysis highlights the need for a differentiated regional employment policy based on local potentials and vulnerabilities. A “one-size-fits-all” approach does not work in the context of border and mountainous areas, which require territorially targeted measures – encouraging local entrepreneurship, supporting seasonal and social economy, investments in human capital, and employment-related infrastructure.

Public and Private Sector

The structure of employment between the public and private sectors is among the fundamental characteristics of local economies, as it reveals both the patterns of economic activity and the degree of institutional and market dependence of the municipalities. The share of employees in the two sectors reflects not only the presence of state and municipal institutions, but also the capacity of private businesses to create jobs and stimulate local development. The analysis of these indicators makes it possible to outline the structural differences between municipalities and to assess the sustainability of local labor markets.

Figures 3 and 4 reflect the dynamics in the share of employees in the public sector in the border municipalities of the Southwestern Region of Bulgaria for the years 2019, 2021, and 2023. The municipalities are divided into two groups according to the relative share of public employment – the first group includes municipalities with predominant public-sector employment, while the second comprises those with more pronounced participation of the private sector. A comparison between the share of employees in the public sector and the complementary share of those employed in the private sector (as the difference up to 100%) reveals significant territorial, economic, and social disparities that directly influence the sustainability of local economies, structural employment, and the functional role of public administration and services in regional development.

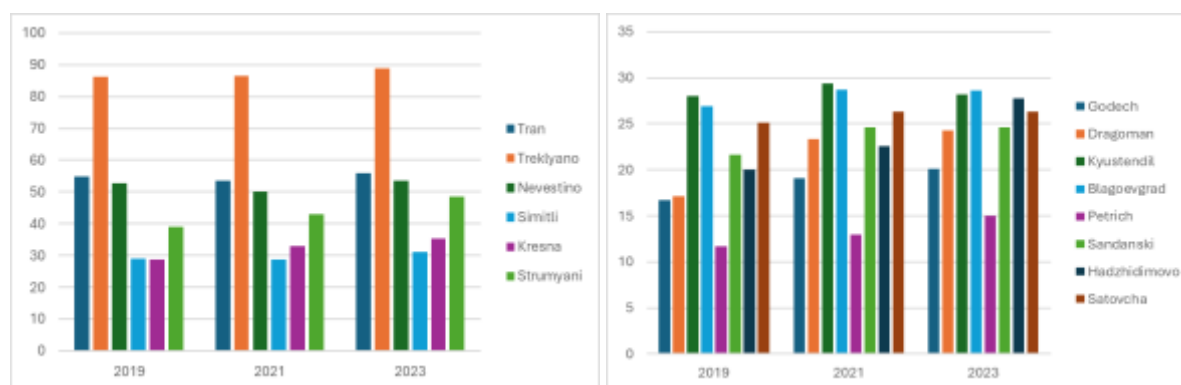


Fig. 3 and Fig. 4 Share of Employees in the Public Sector (in %)

In the first group, with high levels of public employment, the municipality of Treklyano clearly dominates. Throughout the entire period under review – 2019 to 2023 – more than 85% of employees in the municipality work in the public sector. In 2023, the share reaches almost 90%, leaving only about 10% for the private sector. This is a classic example of the so-called “budget economy” – a model in which state and municipal institutions, including administration, educational, and healthcare establishments, serve as the main (and often the only) source of employment. A similar situation is observed in the municipalities of Trun and Nevestino, where the public sector maintains a share between 50% and 55%, while the private sector ranges between 45% and 50%. This indicates that public employment plays a stabilizing role and is a key source of income for the population in conditions of limited economic initiative.

The municipalities of Strumyani and Kresna demonstrate a more moderate but stable dependence on public-sector employment. In Strumyani, an increasing trend is observed – from about 39% in 2019 to nearly 48% in 2023 – suggesting that the public sector continues to assume functions that the private sector is unable to fulfill. A similar, though less pronounced, trend is present in Kresna. In the municipality of Simitli, the share of public-sector employees remains relatively low – around 30%, indicating that the private sector maintains a stronger position, especially compared to the other municipalities in this group.

The second chart includes municipalities in which the public sector plays a secondary role in overall employment. These are larger, better connected, and economically more active territories where private initiative and business development play a dominant role. In the municipalities of Blagoevgrad, Kyustendil, and Sandanski, the share of employees in the public sector ranges between 26% and 30%, meaning that around 70–74% of the workforce is engaged in the private sector – in trade, services, tourism, manufacturing, and transport. This ratio is an indicator of a more robust economic structure, market mechanisms, and weaker dependence on state support.

The municipality of Petrich demonstrates an even stronger orientation toward the private economy. The share of public employment fluctuates between 12% and 15% during the observed period, meaning that the private sector provides over 85% of jobs. A similar situation exists in Godech, which, although smaller, shows a stable share of private employment – around 80% over the three years. This suggests the presence of local enterprises or a favorable proximity to economically active zones, including opportunities for labor migration to the capital. In the municipality of Hadzhidimovo, the share of public-sector employees increases to nearly 28% in 2023, but the private sector still retains a larger share. However, this may signal constraints on private initiative and compensation through public programs or budgetary spending.

The analysis of the differences between public and private employment highlights the presence of two main types of border municipalities in Southwestern Bulgaria. On the one hand are the small, demographically vulnerable, and economically lagging territories with dominant budgetary employment, where the public sector acts as a stabilizing factor. On the other hand are the more urbanized, integrated, and economically active municipalities where the private sector is

leading, while the public sector complements it through administrative and social functions. The balance between these two sectors not only outlines the structure of the local economy but also affects sustainability, quality of life, investment attractiveness, and the demographic prospects of each municipality.

This indicator is crucial for analyzing socio-economic processes in border areas, where the effects of remoteness and demographic decline require targeted policies for economic diversification, promotion of entrepreneurship, and strengthening the capacity of the private sector to provide stable and sustainable employment.

Labor Migrants

Within contemporary regional studies, labor mobility has become a key indicator of the degree of economic interconnectedness between individual territories. In the context of increasing spatial dynamics and growing municipal specialization, daily labor movements reflect the actual functional organization of regional space. In this regard, the analysis of the share of labor migrants who leave the municipality, as well as those who enter it from other territories, provides valuable information about the directions, intensity, and interdependencies of local labor markets. The data for 2021 make it possible to outline the characteristic patterns of labor mobility in the studied municipalities and to identify the leading centers of labor concentration.

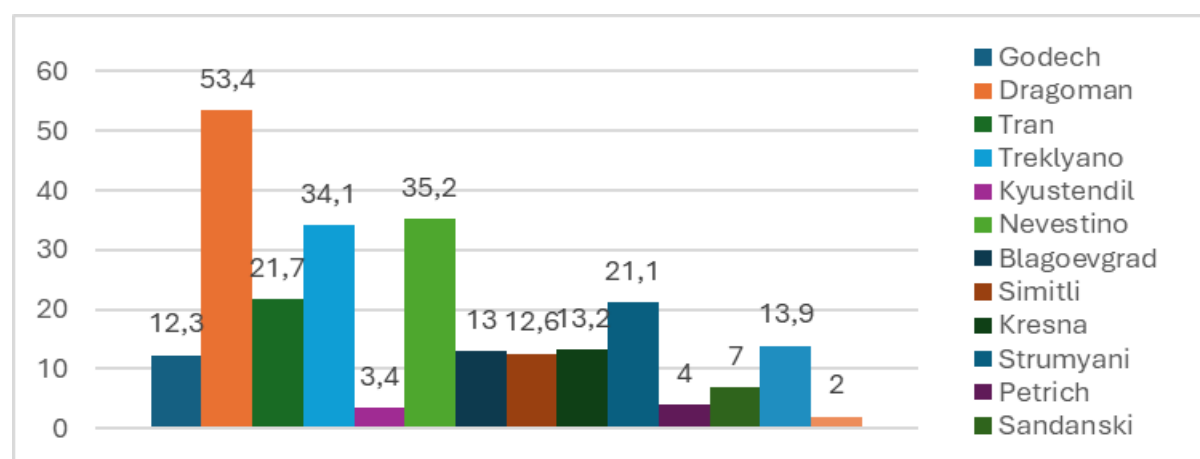


Figure 5: Share of daily labor migrants from other municipalities in %, 2021

Figure 5 traces the spatial differences in the share of daily labor migrants from other municipalities relative to the total number of employed persons in selected municipalities of Southwestern Bulgaria for 2021. The diagram reveals a clear heterogeneity between the municipalities, which suggests the need for a deeper analysis that takes into account the socio-economic, demographic, and infrastructural characteristics of the studied territory.

The municipality of Dragoman stands out most strikingly, with more than 53% of employed persons being daily labor migrants from other municipalities. This phenomenon should be interpreted as a result of its strategic location near Sofia – the leading economic and labor center of the country. It is highly likely that Dragoman functions as a logistic and transport zone serving the periphery of the capital. This generates a demand for labor that cannot be met solely by the local population, both due to demographic constraints and mismatches between available qualifications and employers' requirements. In this sense, the high share of incoming labor migrants is an indicator not only of economic activity but also of structural deficits in the local labor market.

A similar dynamic is observed in small and demographically vulnerable municipalities such as Nevestino (35.2%) and Treklyano (34.1%). In these cases, the high values of incoming labor migration are not so much the result of intensive economic activity as of an extremely small and ageing local labor force. Even a limited number of incoming workers significantly increases their relative share of total employment in the municipality. These cases clearly illustrate the so-called

“small-base effect” and should be interpreted with caution, especially when used for policy or strategic conclusions in regional development.

Municipalities such as Trŭn (21.7%) and Strumyani (21.1%) also register a high share of incoming labor migrants. In both cases, these are territories with limited local employment, where selective economic specialization is observed – for example in agriculture or extractive industries – which often rely on seasonal or external labor. Cross-border labor mobility may also play a role, particularly given the proximity to the Serbian and North Macedonian borders.

At the opposite end of the spectrum are municipalities such as Satovcha (2%), Petrich (4%), and Kyustendil (3.4%). Here, the share of incoming daily labor migration is extremely low, suggesting the presence of a relatively well-balanced local labor market. This may be due both to a comparatively stable demographic structure and to an economy that provides sufficient local employment opportunities. For example, Kyustendil is an administrative and cultural center with traditions in agriculture and services, which creates conditions for local employment without the need to import labor.

Sandanski (7%) and Simitli (12.6%) occupy an intermediate position, characterized by a moderate inflow of external labor migrants. This likely reflects regional mobility within agglomeration zones around larger cities (e.g. Blagoevgrad), while also indicating the presence of a relatively self-sufficient labor force.

Based on the above analysis, several main conclusions can be drawn. First, a high share of incoming daily labor migration is often an indicator of economic activity that exceeds the capacity of the local labor market.

Second, in small and demographically weakened municipalities, a high share may result not from economic attractiveness but from the low absolute number of employed persons, which distorts the relative values.

Third, a low share of labor migrants may signal both the stability of the local labor market and low economic attractiveness, necessitating a deeper contextual analysis.

Such an understanding of labor-migration dynamics is essential for designing territorially adapted policies in the fields of employment, infrastructural development, and demographic sustainability.

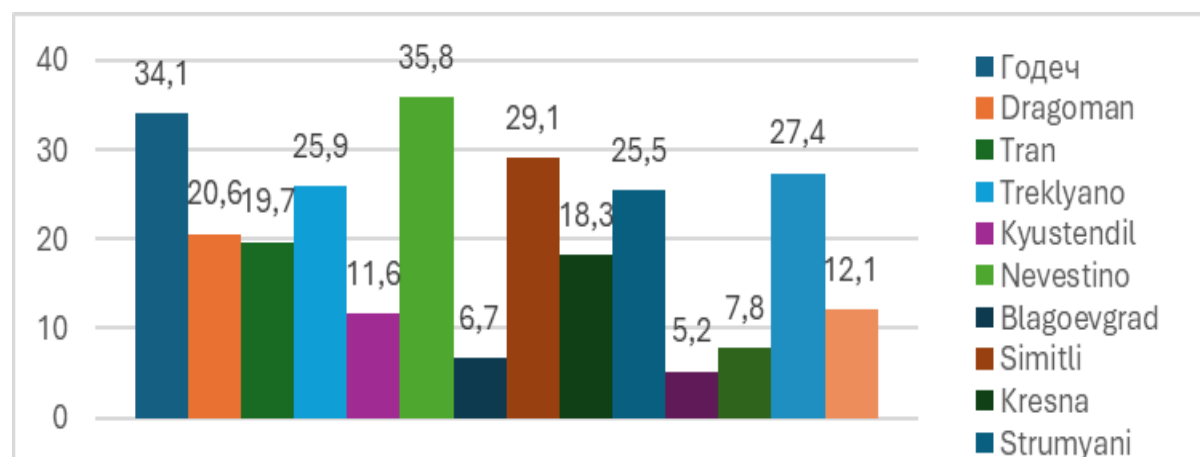


Figure 6: Share of daily labor migrants commuting to other municipalities in %, 2021

In 2021, the spatial distribution of daily labor migration in Southwestern Bulgaria (Fig. 6) reveals clearly expressed territorial disparities in the share of employed persons who leave their municipality to work elsewhere. These differences reflect a complex spectrum of economic, demographic, and infrastructural factors that shape the socio-economic dynamics at the regional level.

The highest share of outbound labor migrants is observed in the municipality of Nevestino, where 35.8% of employed residents commute daily to other municipalities for work. This is indicative of an acute deficit of local employment opportunities and a limited economic base within the municipality itself. As a small and demographically vulnerable territory, Nevestino sends a substantial portion of its active population to larger and more economically developed centers, making mobility a necessary strategy for labor realization.

A similar tendency is present in Godech, where 34.1% of employed persons work in other municipalities. Godech's proximity to Sofia positions the capital's labor market as the primary attractor of workforce mobility. Here, the issue is not merely the lack of local opportunities but a structural dependence on a major economic pole, within whose orbit Godech functions as a periphery. This suggests the presence of adequate transport accessibility and daily connectivity with Sofia, facilitating labor migration.

High levels of outbound mobility are also recorded in Simitli (29.1%), Blagoevgrad (27.4%), Strumyani (25.5%), and Treklyano (25.9%). Although differing in scale and economic profile, these municipalities share a common characteristic: limited capacity to retain their workforce. Simitli and Strumyani are typical transit municipalities near larger cities such as Blagoevgrad and Sandanski, implying that residents travel daily to neighboring settlements offering better employment conditions. Blagoevgrad itself, despite its status as a regional center, registers a considerable share of outbound commuters, underscoring regional interconnectedness and the deep integration of municipalities within a broader functional urban zone.

At the opposite end of the spectrum are municipalities with low shares of daily outbound labor migration. Petrich reports only 5.2%, indicating a strong local labor market and a high degree of economic self-sufficiency. The town serves as a local hub, with a balanced employment structure and the presence of industrial, commercial, and tourism-related activities that satisfy the labor needs of its residents.

A similar case is observed in Kyustendil (11.6%), where outbound mobility is also low due to a stable economic structure. Dragoman likewise registers a relatively low share (20.6%) of workers commuting out of the municipality, aligning with data on its high inbound labor flow – a sign of economic activities capable of retaining workforce locally.

These observations highlight the existence of clear regional polarization – some municipalities function as sources of labor, while others emerge as centers of labor concentration. A high share of outbound daily migration should be interpreted not only as a deficit of local economic capacity but also as a sign of integration into broader labor systems, especially when supported by adequate transport accessibility.

In conclusion, the distribution of daily labor mobility towards other municipalities is the result of a complex interplay between available employment opportunities, geographical location, transport infrastructure, and regional economic dependencies. This process requires careful planning within the framework of regional policy, focusing on balanced territorial development, improving local labor markets, and strengthening integration between centers and peripheries.

The “from-to” relationship

A comparison of data on daily labor migration “from” and “to” other municipalities reveals deeper territorial dynamics that are essential for understanding regional labor markets in Southwestern Bulgaria. The two forms of mobility – inbound and outbound – follow different logics of movement but are closely interrelated, shaping the functional profile of each municipality according to its economic role within the broader regional context. The 2021 data outline a consistent, though not mechanical, correlation between the two types of migration, exhibiting both classical core-periphery models and more complex and unstable interdependencies between individual territories.

Municipalities with a high share of inbound labor migration typically display low or moderate levels of outbound migration. This inverse relationship is clearly visible in municipalities such as Dragoman, where more than half of the employed workforce consists of workers from other

municipalities, while only about one-fifth of local employees commute outward daily. This model unmistakably indicates a concentration of economic activity and an accumulation of labor opportunities that not only satisfy local needs but also require additional human resources from outside. Dragoman, given its proximity to Sofia and the presence of logistics and industrial structures, functions as a labor-attracting center, albeit secondary in scale compared to the capital.

Conversely, Godech exhibits the opposite pattern: its outbound labor migration significantly exceeds inbound migration, positioning the municipality as a labor donor. Many local residents seek employment outside the municipality, mainly in Sofia, indicating a weak economic base, dependence on external labor markets, and likely an underdeveloped industrial or service infrastructure locally.

Particularly interesting are municipalities that register high levels of both inbound and outbound labor migration, such as Simitli. Here, both significant inflows of external workers and outflows of local residents are observed, implying a high degree of mobility and interconnectivity within the regional system. Simitli functions as an intermediate or transit zone, where labor flows converge and redistribute towards major urban centers such as Blagoevgrad. This configuration reflects the complex urbanized structure of the region, where municipal boundaries become blurred with respect to labor functions and economic dependencies. A similar, though less pronounced, dynamic can be observed in Trŭn and Kresna, both of which display a more balanced profile between inbound and outbound migration, pointing to a somewhat unstable but adaptive labor structure.

A more complex – even paradoxical – model is seen in Nevestino, where both inbound and outbound migration exceed 35%. For a small and demographically constrained municipality, such values likely reflect the small-base effect – even minimal absolute movements of the workforce translate into high relative shares. This emphasizes the need for careful interpretation of data and contextual understanding when analyzing mobility in sparsely populated territories. It is likely that a considerable portion of residents travel daily to Kyustendil or other nearby towns, while a small yet structurally significant number of incoming workers perform specific activities locally, such as administrative work.

At the opposite end are municipalities such as Petrich and Kyustendil, where both inbound and outbound migration are extremely low. This indicates strong internal labor consolidation and the presence of a relatively closed labor market that provides employment for the local population without the need for daily mobility. Petrich, in particular, stands out with a developed local economy, cross-border activity, and tourism potential, all of which create internally satisfied labor needs. Kyustendil, as a larger municipal and regional center, also demonstrates a high degree of labor self-sufficiency, albeit with some workforce outflows.

Overall, the analysis of both types of migration shows that an inverse correlation is observed in most cases – a high share of inbound mobility is accompanied by a low share of outbound mobility and vice versa. This confirms the classical model of regional cores and peripheries, whereby some municipalities act as centers of economic attraction and others as labor donors. Exceptions to this pattern reveal more complex regional interrelations characteristic of urbanized areas with high levels of integration and functional spillover across municipal boundaries. Such cases highlight the need for an interdisciplinary approach in the analysis of labor mobility and in the development of territorial policies that consider not only administrative boundaries but also the actual socio-economic flows between municipalities.

Unemployment

Unemployment is one of the most significant socio-economic indicators, directly reflecting the condition of the labor market and the effectiveness of local economic structures. In the border municipalities of the Southwestern Region, it acquires particular importance, as it reflects the complex interaction between demographic processes, economic activity, the degree of urbanization, and access to labor markets. The dynamics of unemployment over the past decade show a clear territorial differentiation and a distinct divide between municipalities operating in more favorable economic environments and those in which structural weaknesses and demographic erosion deepen social vulnerability.



Dynamics of Overall Unemployment (2011–2022)

The data presented in Figures 7 and 8 show that during the period 2011–2022, most border municipalities experienced a decline in unemployment rates, albeit with varying intensity and stability. The national average fell from around 11% in 2011 to below 5% in 2022, while in several border municipalities the values remained significantly higher.

In the first group of municipalities (Fig. 7), the highest unemployment levels in 2016 were recorded in Trün (over 35%) and Treklyano (over 20%), significantly exceeding national figures. These territories exemplify isolated and demographically severely affected areas, where the absence of an economic base and limited transport accessibility sustain high levels of structural unemployment. Although some improvement is observed by 2022, unemployment rates remain approximately twice the national average.

The municipalities of Kyustendil and Nevestino demonstrate relative stability and more favorable indicators – around 10–12% in 2022, which is close to the national average. Their comparatively lower unemployment is due to a combination of agricultural employment, seasonal activities, and proximity to urban labor markets. Godech and Dragoman also display moderate values (6–9%), reflecting the positive influence of labor migration towards Sofia and the presence of logistics and industrial zones.

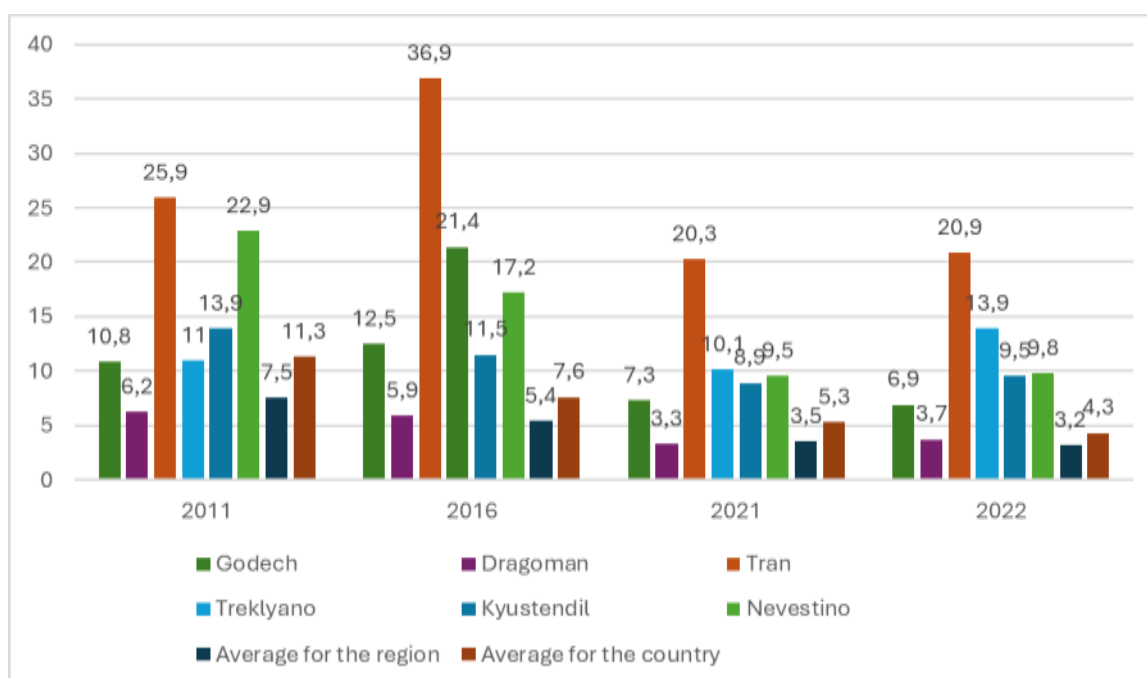


Figure 7: Unemployment Rate in the Western Border Municipalities of the Sofia, Pernik, and Kyustendil Provinces (in %)

In the second group of municipalities (Fig. 8), the variation is even more pronounced. Municipalities such as Strumyani and Satovcha maintain persistently high unemployment rates, reaching 20–25% in both 2016 and 2022, while Blagoevgrad, Petrich, and Sandanski remain below 8%. This territorial polarisation highlights a clear distinction between economically active urban centers and peripheral, agriculturally oriented territories. In Strumyani and Satovcha, high unemployment is driven by limited opportunities for permanent employment, the seasonal nature of available work, and the low qualification levels of the population.

The municipalities of Simitli and Kresna demonstrate moderate unemployment levels (10–14%), which indicates partial integration into regional labor networks and possibilities for labor mobility towards Blagoevgrad and Sandanski. Petrich and Sandanski exemplify economically resilient areas

with a well-diversified economic structure – agriculture, tourism, trade, services – enabling them to maintain low unemployment levels even under conditions of demographic pressure.

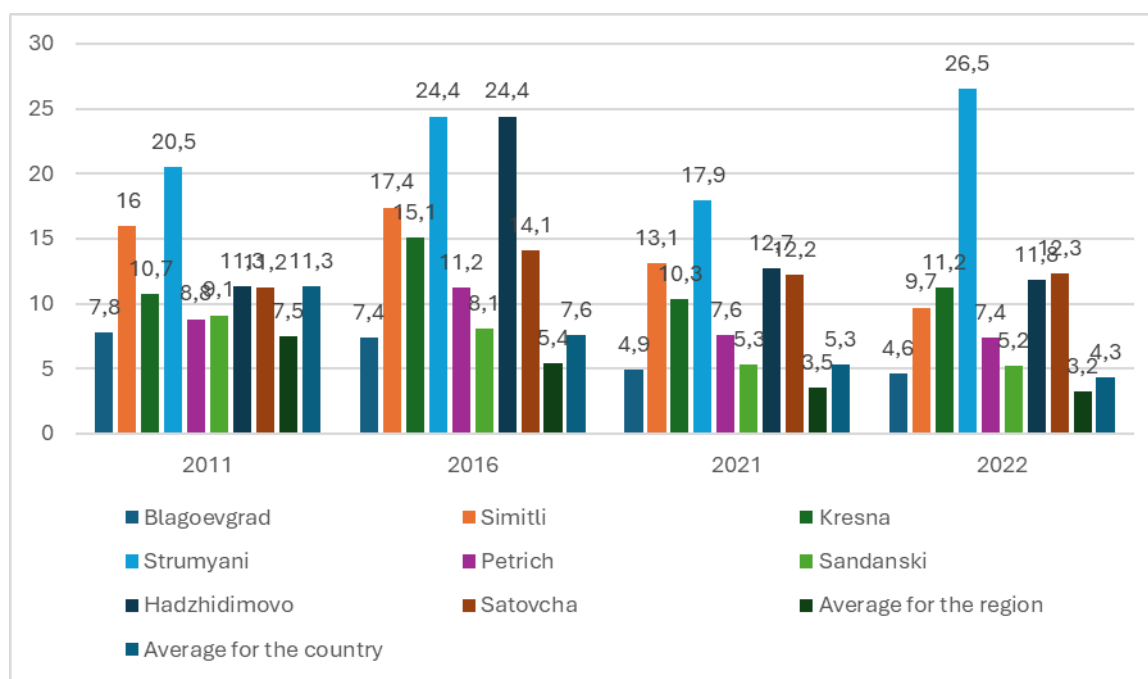


Figure 8: Unemployment Rate in the Western Border Municipalities of Blagoevgrad Province (in %)

Long-Term Unemployment and Social Vulnerability

Figure 9 illustrates the share of long-term unemployed among all unemployed persons in 2023 – an indicator of critical importance for assessing the social resilience and adaptability of local labor markets. The data reveal a troubling trend: in several municipalities, more than one-third of all unemployed individuals remain detached from the labor market on a long-term basis.

The highest shares are observed in Kyustendil (50%), Treklyano (45%), Trŭn (46%), and Strumyani (41%), which indicates structural unemployment and limited opportunities for reintegration into employment. These municipalities lack stable private investment, and the available jobs are predominantly in the public sector or in low-paid seasonal activities. The inability to secure permanent employment leads to social apathy, migration, and further deterioration of the demographic structure.

At the opposite end of the spectrum are municipalities such as Dragoman (8%), Sandanski (10%), and Hadzhidimovo (13%), where the share of long-term unemployed is significantly lower. This reflects a more flexible and adaptive labor market, greater opportunities for seasonal or temporary employment, and higher workforce mobility. Blagoevgrad, Simitli, and Kresna also show values below 15%, which is a positive signal for the resilience of the regional economic structure.

The pronounced divergence between municipalities with persistently high long-term unemployment and those with relatively low levels underscores the spatially uneven capacity of local economies to absorb and retain labor. In structurally weak territories, long-term unemployment becomes self-reinforcing: prolonged detachment from the labor market erodes skills, reduces motivation, and limits the effectiveness of active labor-market policies. Moreover, these municipalities often lack the institutional and business environment necessary to create sustainable jobs, which deepens dependence on social assistance and accelerates outward migration among the working-age population. Conversely, municipalities with lower levels of long-term unemployment benefit from stronger private-sector activity, better connectivity to regional labor centers, and more diverse employment opportunities, making them more resilient to demographic and economic shocks.

The contrast between these two groups highlights the need for territorially differentiated strategies aimed at reintegration, upskilling, and the creation of stable employment in vulnerable border areas.

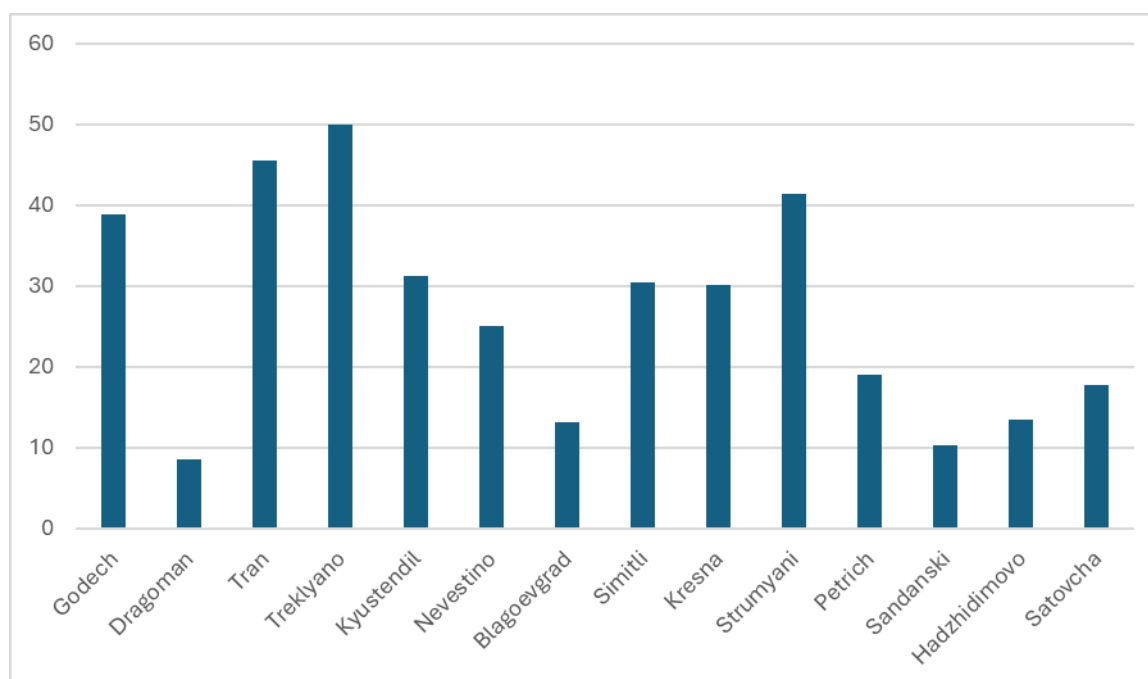


Fig. 9 Share of Long-Term Unemployed Among All Unemployed, 2023 (in %)

Regional Interdependencies and Conclusions

The analysis of unemployment in the border municipalities of the Southwestern Region highlights profound territorial contrasts between economically active urban cores and peripheral, mountainous territories. Municipalities with well-developed infrastructure and access to larger markets (Dragoman, Blagoevgrad, Sandanski, Petrich) demonstrate low unemployment levels and higher social resilience.

In contrast, sparsely populated and isolated municipalities such as Treklyano, Trŭn, Strumyani, and Satovcha remain “zones of chronic unemployment,” where the lack of economic alternatives fosters dependence on social assistance and leads to long-term emigration.

There is also a direct relationship between the high share of long-term unemployed and the degree of depopulation – the longer the population remains detached from the labor market, the greater the likelihood of migration or social exclusion. In this context, national and regional policy should focus on:

- stimulating local entrepreneurship and microbusiness development
- expanding social and seasonal employment opportunities
- programs for retraining and digital skills acquisition
- improving transport accessibility and connections to labor centers

In conclusion, unemployment in the border municipalities of the Southwestern Region is not merely an economic indicator but an expression of deeper social and spatial inequalities.

Overcoming it requires an integrated approach combining economic diversification, infrastructural improvement, and an active employment policy tailored to the local specificities and potentials of each municipality.

Wages

In 2023, the average gross monthly wage in Bulgaria reached 2,077 BGN in the public sector and 1,990 BGN in the private sector, reflecting the sustained growth of the national economy and the

strengthening of income levels in the country. Against this backdrop, the border municipalities of the Southwestern Region emerge as territories with a clearly expressed economic peripherality, where wages remain below the national averages and indicate limited economic activity and a relatively weak potential for the development of local labor markets.

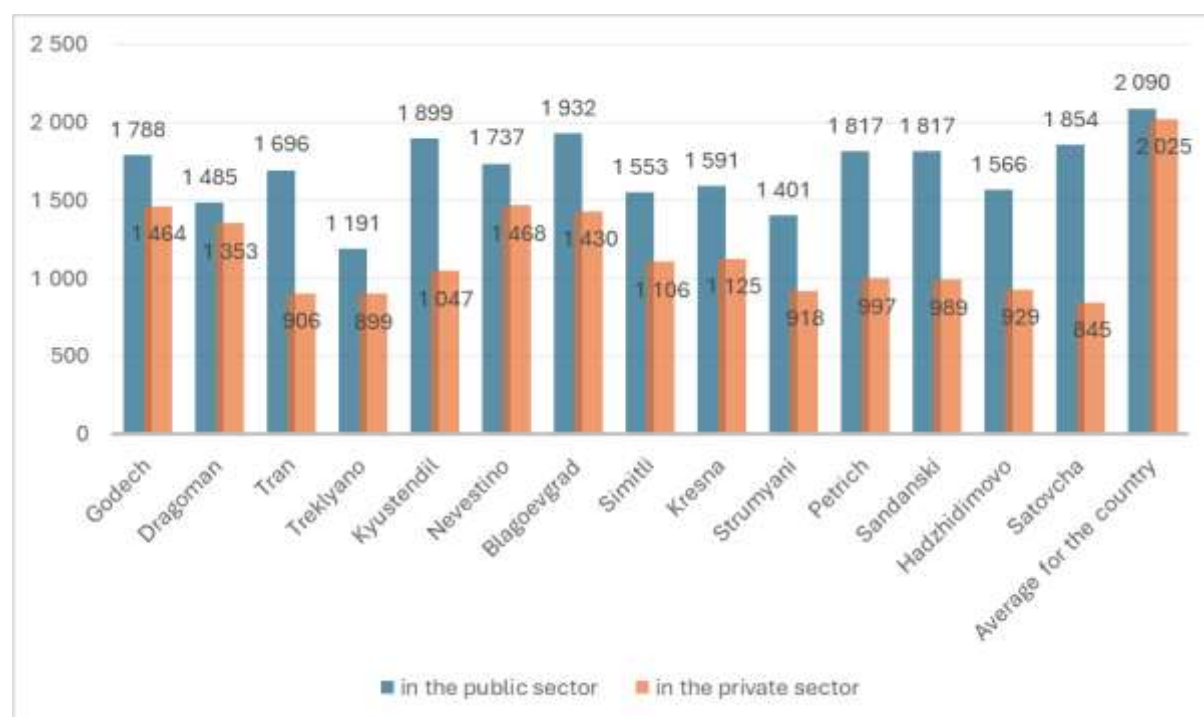


Fig. 10 Average Gross Monthly Wage in the Public and Private Sectors in 2023 (in BGN)

General Trends and Regional Differences

In more developed and territorially accessible municipalities such as Blagoevgrad, Kyustendil, Petrich, and Sandanski, higher levels of public-sector wages are observed. This can be explained by the concentration of institutional functions as well as the presence of a broader range of state and municipal services. These municipalities act as regional hubs where public-sector employment is stable and well-structured, while the presence of universities, cultural institutions, and hospitals contributes to higher average wages.

In the private sector, the highest remuneration is recorded in Godech, Dragoman, Nevestino, and Blagoevgrad. These values stem from the diversity of economic activities and the proximity of Godech and Dragoman to Sofia, which functions as a powerful economic core and attracts labor flows from peripheral territories. This pattern confirms the influence of major centers on peripheral municipalities and demonstrates how spatial connectivity and regional integration raise income levels.

At the opposite end of the spectrum are small, mountainous, and demographically vulnerable municipalities such as Treklyano, Strumyani, Hadzhidimovo, and Satovcha. In these territories, economic activity is limited to low-paid, low-value-added sectors – traditional agriculture, seasonal employment, small-scale entrepreneurship, and basic services. The private sector in these municipalities is weak and underdeveloped, resulting in considerably lower average wages. At the same time, the public sector in some of these municipalities maintains relatively higher salaries due to nationally determined standards.

This is particularly evident in Satovcha, where the high share of public-sector employment compensates for weaknesses in local production but also increases economic dependence on state funding. Thus, income disparities reflect not only the current economic situation but also a broader pattern of structural peripherality shaped by geographical, demographic, and infrastructural factors.

Relationship between the Public and Private Sectors

The analysis of wage differentials between the public and private sectors reveals one of the most persistent and stable characteristics of labor markets in the border municipalities. In all of them, the public sector offers higher wages than the private sector – an indicator of the limited economic base and low productivity of local enterprises. This disproportionality appears at varying scales, and in some municipalities – such as Satovcha, Petrich, and Sandanski – the difference reaches 800–1000 BGN, highlighting the dominant role of the budgetary economy in maintaining local living standards. Here, the public sector serves as the main generator of stable income, while the private sector is heavily constrained by the small local market, lack of investment, and shortage of skilled labor.

In other municipalities, such as Godech, Nevestino, and Blagoevgrad, the differences between the two sectors are smaller – an indicator of higher economic dynamism, a more active labor market, and greater opportunities for private-sector development. In these cases, the private sector operates more flexibly and offers remuneration closer to that in the public sphere. The reasons lie in better transport connectivity, access to external labor markets, higher economic diversification, and a more substantial presence of commercial and industrial activities.

Particularly noteworthy are Petrich and Sandanski, where the large gap between the two sectors is not due to a weak private sector but to relatively higher wages in the public sphere and the specific economic profile of these municipalities, oriented toward tourism, trade, and cross-border interactions. This shows that sectoral wage differences must be analyzed not only quantitatively but also qualitatively – through the lens of local economic functions and their role within the regional system.

Additionally, in several agrarian areas of Southwestern Bulgaria, including Sandanski and Petrich, the influence of the informal agricultural sector must be taken into account. Unregistered seasonal work, characteristic of fruit and vegetable production, leads to an underestimation of actual income and distorts comparisons between the two sectors, as part of labor remuneration remains outside official statistics. This phenomenon not only lowers recorded wage levels in the private sector but also reinforces the image of local economies as dependent on low-paid, unstable, and often informal employment, further complicating the assessment of real economic activity in the region.

Spatial Dependencies and Conclusions

The spatial distribution of wages in the border municipalities reveals a complex model of interaction between geography, infrastructure, demography, and economic activity. Municipalities located near major economic centers exhibit significantly higher wage levels compared to remote and mountainous territories. The presence of transport corridors, access to road and rail networks, proximity to large labor markets, and access to cross-border routes all stimulate private-sector development and help maintain higher remuneration.

In contrast, municipalities suffering from demographic ageing, outmigration of the working-age population, and limited infrastructural connectivity display low wage levels and strong dependence on public-sector employment. This model reinforces peripherality and deepens socio-economic disparities across the region. Low private-sector income results in limited consumption, low levels of entrepreneurship, and an inability to achieve sustainable development, which in turn accelerates migration processes and contributes to demographic decline.

Of particular importance is the persistent mismatch between average wage levels and the actual socio-economic needs of the population across almost all peripheral territories. Although the cost of living is lower in small municipalities, low income levels weaken access to quality education, healthcare, transport, and other essential services. In this context, economic disparities translate into social ones, increasing the risk of further regional imbalance.

The analysis of average wages in the border municipalities of the Southwestern Region outlines a clearly structured and persistently reproduced economic polarization. Municipalities with favorable geographical location, strong transport connectivity, and functional integration with major labor markets achieve higher wages and more competitive economic environments. In contrast,

mountainous, ageing, and remote municipalities remain heavily dependent on the public sector and exhibit low private-sector dynamism, low income levels, and limited economic diversification.

Overcoming this structural unevenness requires targeted regional policies aimed at stimulating investment, increasing workforce skills, improving transport accessibility, and building a sustainable local economic environment. Equally important is systematic action to combat the informal sector, which in many border municipalities – particularly in agriculture – limits development potential, distorts labor statistics, and undermines the competitiveness of officially operating enterprises. The presence of unregulated employment not only lowers recorded income levels but also results in loss of social rights, public revenue, and investment security, further complicating socio-economic stabilization in peripheral territories.

Without such interventions, disparities between central and peripheral municipalities will continue to deepen, with long-term consequences for both demographic sustainability and socio-economic cohesion in the region.

CONCLUSION

The analysis of the labor market in the border municipalities of Southwestern Bulgaria reveals a deeply rooted and structurally reproduced pattern of socio-economic peripherality that continues to shape the development trajectories of these territories.

By integrating statistical data, comparative territorial analysis and document-based interpretation, the study demonstrates that the border zone remains characterized by persistent demographic decline, weakened local economies, limited employment opportunities and strong dependence on public-sector structures. Despite the potential for cross-border cooperation, tourism expansion and agricultural specialization, the majority of municipalities continue to function as marginal spaces within regional labor systems.

The employment analysis highlights a sharply differentiated territorial structure. Municipalities such as Dragoman, Godech, Blagoevgrad, Petrich, Sandanski and Kyustendil possess relatively higher employment rates and more diversified economic profiles, benefiting from better transport accessibility, proximity to regional centres and integration into broader labor markets. In contrast, small and mountainous municipalities such as Treklyano, Trŭn, Satovcha, Strumyani and Hadzhidimovo demonstrate chronically low employment levels, reflecting limited economic bases, demographic shrinkage and insufficient private-sector development.

These territories display features typical of “silent depopulation zones,” where an ageing population, reduced economic activity and insufficient infrastructure reinforce peripheral status.

The structure of employment between the public and private sectors further deepens this divide. In a significant part of the border municipalities, the public sector dominates, functioning as a stabilizing mechanism in the absence of private enterprises able to generate sustainable employment. In places such as Treklyano, Trŭn and Nevestino, public employment accounts for more than half of the workforce, indicating structural dependence on state-funded jobs. Conversely, municipalities closer to economic centres or located along major corridors – Godech, Dragoman, Petrich and Blagoevgrad – exhibit stronger private-sector participation, suggesting higher economic dynamism and a more favourable business environment. New regional-development paradigms increasingly emphasize cross-border functional linkages and labour-market restructuring as key mechanisms for overcoming peripherality (Pugalis & Gray, 2016; Copus & de Lima, 2015)

Labor mobility reveals crucial functional dependencies within the region. Municipalities such as Dragoman, Simitli, Godech and Blagoevgrad act as nodes of labor concentration or transit zones, attracting or redistributing workforce flows. Others – Nevestino, Strumyani, and Treklyano – serve predominantly as labor donors, with large shares of residents commuting daily to seek employment elsewhere. The correlation between inbound and outbound migration patterns confirms the presence of a clear core-periphery structure, shaped by geographical accessibility, infrastructural capacity and

economic attractiveness. Importantly, mobility also reveals the inability of certain municipalities to retain their workforce due to the lack of competitive job opportunities.

Unemployment trends reinforce the structural vulnerabilities of the region. Although national unemployment rates have decreased significantly over the last decade, the border municipalities continue to exhibit values far exceeding national and regional averages. In some areas, long-term unemployment affects more than 40% of all unemployed individuals, indicating deep labor-market detachment and limited reintegration potential.

These patterns reflect accumulated structural disadvantages – insufficient investment, low educational attainment, narrow employment specialization and demographic ageing. At the same time, municipalities with stronger economic structures – Dragoman, Sandanski, Blagoevgrad and Petrich – show comparatively low unemployment and better social resilience.

Wage analysis confirms the broader polarization of the region. Municipalities integrated into larger economic systems exhibit higher average wages, especially in the private sector, benefiting from spatial proximity to Sofia or to major regional centres. Meanwhile, remote and mountainous municipalities remain characterized by low private-sector income, limited consumption potential and strong reliance on public-sector salaries. This disparity not only limits local economic growth but also reinforces outward migration and demographic erosion.

Taken together, the results demonstrate that the labor market in the border municipalities of Southwestern Bulgaria is shaped by a combination of structural, geographic, demographic and institutional factors. The border location itself is not the primary barrier; rather, it is the interaction between peripherality, limited connectivity, demographic collapse and weak economic diversification that produces persistent inequalities. Overcoming these challenges requires a coordinated, territorially tailored policy approach that moves beyond uniform national strategies.

In this context, several strategic directions emerge:

1. **Diversification of local economies**, especially in municipalities where agriculture or budgetary employment dominate, through the promotion of microbusiness, family enterprises and value-added production.
2. **Investments in human capital**, including vocational training, digital skills programmes and adult education, aimed at increasing labor-market adaptability.
3. **Strengthening transport and digital infrastructure**, enabling functional integration with regional centres and facilitating employment access.
4. **Encouraging cross-border economic cooperation**, particularly with North Macedonia and Serbia, through joint labor-market initiatives, cluster development and cross-border commuting frameworks.
5. **Targeted support for private-sector development**, especially through incentives for SMEs, social enterprises and seasonal employment schemes.
6. **Measures to reduce informal employment**, especially in agriculture, which obscures real income levels and limits local tax capacity.

Looking ahead, the future of the border municipalities will depend on their ability to integrate into broader economic networks while developing internal capacities. If current trends persist – low private-sector wages, demographic decline and dependence on public employment – several municipalities risk further depopulation and functional collapse.

Conversely, with adequate policy intervention and efficient use of EU and national instruments, border regions can transform from peripheral spaces into active participants in regional development.

Ultimately, the findings of this study underscore the need for a spatially sensitive, multi-level governance model that aligns national, regional and local efforts. Only through such an integrated approach can the labor markets of Southwestern Bulgaria's border municipalities achieve sustainable development and contribute to the socio-economic cohesion of the region.

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