

## NON-AGRICULTURAL GAPS IN THE PROFILE OF THE REGIONS OF THE REPUBLIC OF MOLDOVA

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### Abstract

*The study addresses the issue of developing non-agricultural activities in the Republic of Moldova, a region defined by the polarizing power of an area, through the convergence of current and historical socio-economic relations, which made urban areas the right choice for developing the methodology for establishing the role of non-agricultural activities in regional development. The paper aims to highlight the polarizing potential of some rural regions, which adds to the influence potential of predominantly urban regions. The non-agricultural rural economy offers the theoretical model. For the analysis, the complexity of non-agricultural activities was used, through which we identified three levels of development of these activities in the communes under study. The case study highlights how the urban area polarizes the labor force from the nearby rural area.*

**Key words:** non-agriculture, rural development, gaps, Republic of Moldova

### INTRODUCTION

The Central Region of the Republic of Moldova significantly contributes to the national economy, representing approximately 20-22% of the country's GDP.

With a population of about 1.2 million, the region is characterized by diversified agriculture, including grape, fruit, and vegetable crops. The wine sector is vital, with the area being known for the production of quality wines. The local industry includes food production, textiles, and building materials. The unemployment rate in the Central Region is relatively low, at around 3%. Infrastructure is better developed compared to other regions, facilitating access to services and markets. Foreign direct investments and projects funded by the European Union and other international organizations support regional development, promoting infrastructure modernization and increasing productivity in agriculture and industry.

Rural disparities in the Republic of Moldova are deepened by several key issues affecting the quality of life and economic development of rural communities [3].

Many rural communities in Moldova face severe shortages in basic infrastructure, including paved roads, water and sewerage networks, and access to electricity and internet. Access to quality medical and educational services is limited in rural areas, with a small number of hospitals and schools, and those that exist are often underfunded and under-equipped [10].

The poverty rate is significantly higher in rural areas compared to urban areas. Employment opportunities are limited, with few industries and jobs available outside the agricultural sector [8].

Agriculture remains the main source of livelihood for many rural inhabitants, but productivity is low due to outdated technologies and inadequate infrastructure.

Table 1. Indicators Characterizing the Level of Development and Economic Potential of the Central Region of Moldova in the year 2022

Indicators	Central Region	Regional Average
I. Overall level of economic development		
GDP per person (2022) (euro)	2,561	4,301.8
II. Infrastructure		
1. Density of public roads/100 km (%), (2023)	34.0	18.8
2. Share of national roads in total public roads (%), (2023)	64	65.4
3. Localities with sewerage system (%)	12.2	27.34
4. Localities with hot water network (%)	-	-
III. Labour resources and employment		
1. Average number of employees, of which:		
- in agriculture (thousands)	8.8	6.76
- in industry (thousands)	26.3	25.8
2. Share of employed population/total population	18%	26.2%
IV. Unemployment		
1. Unemployment rate (%)	2.5	13.6
2. Female unemployment rate (%)	1.6	11.66

Source: National Bureau of Statistics of the Rep. of Moldova [9].

The macroeconomic development in terms of its specific indicators was also analyzed in the Republic of Moldova by [7].

Young people leave villages in search of job opportunities in cities or abroad, leaving behind an aging and vulnerable population. Access to credit and other financial services is limited, hindering the growth of small and medium enterprises in rural areas. Women in rural areas face multiple barriers to education and employment opportunities, contributing to the perpetuation of poverty. Waste, pollution, and unsustainable agricultural practices can worsen environmental problems in rural areas, affecting the health and well-being of communities. Modern technologies, such as high-speed internet and other technological innovations, are rarely available in rural areas, limiting access to information and opportunities. Many rural development projects rely on external funding and infrastructure, which may not be sustainable in the long term. These issues reflect the serious challenges faced by rural communities in

Moldova and require effective government strategies and policies to promote sustainable development and inclusion in all regions of the country. The development of the rural area in the Republic of Moldova requires a multidimensional approach, including investments in infrastructure, education, and health, effective agricultural support policies, and programs to combat migration and support the return of those who have left. Additionally, good governance and the fight against corruption are essential to ensure that available resources are efficient and benefit rural communities.

In this context, the purpose of the paper is to identify and highlight the economic and social gaps between non-agricultural regions compared to the average of the regions, highlighting the differences between agricultural and industrial activities, together with establishing a model for monitoring and evaluating economic progress, so that policies and implement measures to be more effective and sustainable.

## MATERIALS AND METHODS

Evaluating the development gaps between the Central Region and other regions of the Republic of Moldova can be approached through various methodologies and analytical tools, such as:

- Using a diverse set of socio-economic indicators to measure regional performance in areas such as GDP per capita, unemployment rate, access to education and health, infrastructure, etc.
- Comparing the performance of different regions based on relevant socio-economic indicators to identify regions with low levels of development and potential for interventions.
- Using the Human Development Index (HDI), which combines income, education, and health indicators, to assess the quality of life and human development in regions.
- Using Geographic Information Systems (GIS) to map and analyze the distribution and accessibility of infrastructure, resources, and services in different regions.
- Using economic modeling to assess the impact of various economic and development

policies on regions and to forecast potential economic growth.

- SWOT analysis (Strengths, Weaknesses, Opportunities, Threats): Identifying strengths, weaknesses, opportunities, and threats for each region to develop appropriate regional development strategies and policies [1].
- Conducting comparative studies between similar regions in the Republic of Moldova and other countries or regions with comparable socio-economic situations to extract lessons and best practices.
- Involving the local community in the evaluation process and identifying development needs and priorities to ensure the relevance and sustainability of proposed policies and projects.
- Using economic models and forecasting technologies to estimate future trends and the potential impact of various interventions and regional development policies [6].
- Implementing a continuous monitoring and evaluation system of the progress made in addressing development gaps to adjust and improve policies and projects as the situation evolves.

These methodological approaches can be applied in an integrated manner to achieve a comprehensive evaluation of development gaps between the regions of the Republic of Moldova and to guide regional development efforts in the right direction.

## RESULTS AND DISCUSSIONS

In this context, we aimed to analyze the stage of development of non-agricultural activities in the Central Region compared to the regional average and each region within it compared to a reference level - the regional average [3].

The adopted method allows the quantification of the state of an economic process based on its actual manifestation parameters, expressed through a multitude of specific technical-economic indicators, supplemented by qualitative data and information.

For the use of the multi-criteria diagnostic method in the analysis of regional agricultural development, the available indicators were ordered into 8 groups or typologies or directions of analysis as shown in Table 2 [13].

The disparities were closer between the North and South regions regarding trade activities (Figure 1).

This is due to the high heterogeneity of the regions in this country in terms of natural conditions, which will produce a series of economic effects on the population's living standards and the development of secondary economic sectors – the food industry, agritourism, etc.

Table 2. Importance coefficients/specific weights by criteria for calculating the global estimator of regional non-agricultural development in the Republic of Moldova

Indicators	Specific weight
Average number of employees	0.1
Turnover	0.2
Gross value added of activities	0.18
Household structure	0.17
Area per individual farm	0.06
Availability of Human Resources in agriculture	0.15
Food industry activities	0.08
Animal density	0.16
Total	1.0

Source: own calculations.

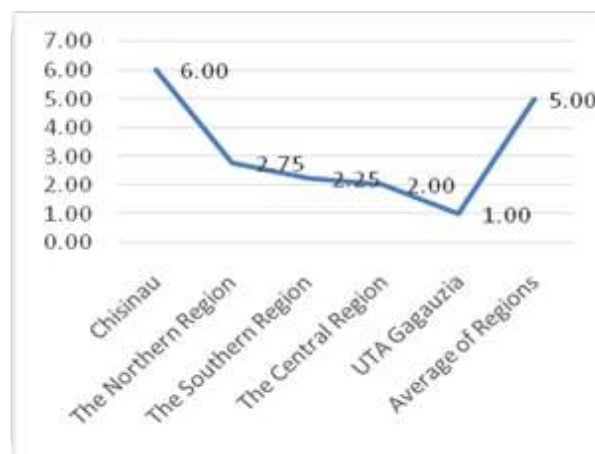


Fig. 1. Disparities in the number of employees in non-agricultural activities between the regions of the Republic of Moldova

Source: own processing based on [9].

The North region has some industrial centers, but most are small and medium-sized, and the infrastructure is often less developed compared to the central region, with roads and public facilities needing modernization [11].

The community in Chişinău municipality can become more attractive by increasing the

probability of real earnings from non-agricultural activities.

Very large disparities between Chişinău Municipality and the Central Region refer to all selected categories of economic activities (Figure 1). For salaried employees, the disparity is 6 to 2 in favor of the former.

The turnover from non-agricultural activities in Moldova (Figure 2) is an important indicator of the diversity and resilience of the country's economy. The non-agricultural sector significantly contributes to the national GDP, providing jobs and stimulating economic development through innovation and investments. Supportive policies, foreign investments, and integration into the global economy are key factors that will continue to positively influence this sector [5]. Very large disparities between Chişinău Municipality and the Central Region refer to all selected categories of economic activities. For turnover, the disparity is 6 to 1.6 in favor of the former.



Fig. 2. Disparities in turnover of major non-agricultural activities by region  
 Source: statistical data consultations [9].

Moldova benefits from a strategic position, facilitating the transit of goods between Eastern and Western Europe. The transport and logistics sector significantly contributes to GVA due to import-export and transit activities. Although affected by the COVID-19 pandemic, the tourism and hospitality sector has the potential to generate considerable GVA as it recovers.

Microenterprises and small and medium-sized enterprises (SMEs) play a crucial role in Moldova's economy, generating significant GVA and contributing to job creation. Compared to the regional average, Chişinău Municipality ranks highest in accommodation

and food services, trade, and transport activities, while other regions are below the regional average for each category. The average aggregated score (AAS) for GVA in Moldova is 5.0, with the disparity between the specific regional AAS and the minimum AAS from the North Region being 5.0 to 1.0 in favor of Chişinău Municipality [2]. These results indicate that for the GVA indicator group, regional disparities are significant compared to the regional average (Figure 3). Rural households are often larger, with an average of 4-5 members, frequently including extended family members. Agriculture is the predominant economic activity.

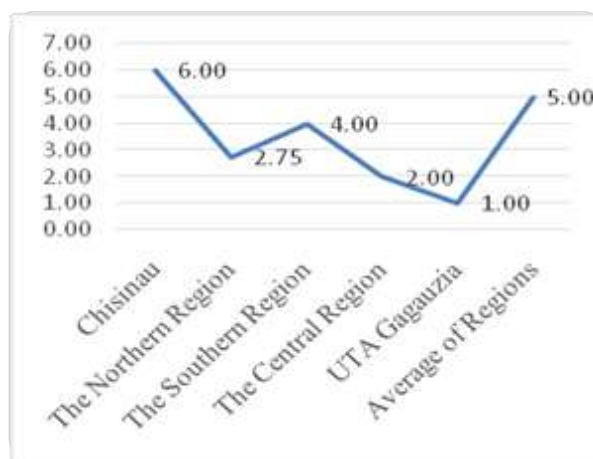


Fig. 3. Disparities in GVA of major non-agricultural activities by region in Moldova  
 Source: own processing based on [9].

Many rural households are involved in land cultivation, animal husbandry, and food production for both self-consumption and sale [12]. Incomes in rural households are generally lower, often supplemented by remittances sent by family members working abroad.

Compared to the regional average, there is some balance in household size. The UTA Gagauzia region lacks data, which is why the regional average is lower in each category. The average aggregated score (AAS) for household size in Moldova is 2.35, with the disparity between the specific regional AAS and the minimum AAS from the Central Region being 2.35 to 4.25 in favor of the Region; the disparity between the specific regional AAS and the maximum AAS from the Chişinău Region is 2.35 to 4.5 in favor of the Region.

Considering these results, it can be stated that for the group of indicators related to household size, the disparities between regions are not large compared to the regional average (Figure 4), with a lack of potential being noted for UTA Gagauzia.

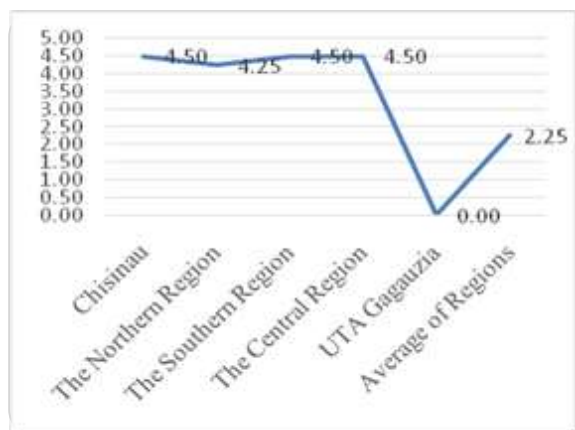


Fig. 4. Disparities in household size by region in Moldova  
 Source: statistical data consultations [9].

Investments in land modernization and consolidation are limited. Access to finance and technology is essential for increasing the average area of farms and improving productivity. Land consolidation policies could help reduce fragmentation and increase the average farm size [4]. These policies should encourage land consolidation and support farmers in this process.

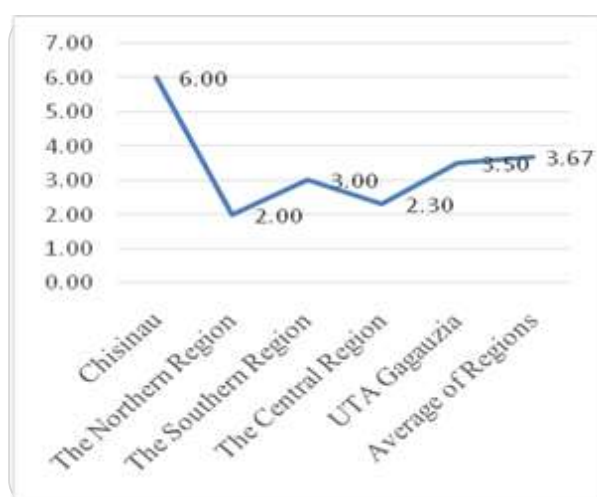


Fig. 5. Disparities in farm area between regions in Moldova compared to the regional average  
 Source: own processing based on [9].

The UTA Gagauzia region recorded the highest rank regarding the area per individual

farm, which is 2.99 ha, with a disparity of 5 to 3 compared to the Central Region at 1.6 ha (excluding Chişinău Municipality) (Figure 5). Very large disparities are recorded between the Chişinău region (low rurality) and the North region, with a ratio of 6 to 1.

Regarding aggregated scores, the disparity between the regional average AAS and the Central AAS is 4 to 3. UTA Gagauzia has a rurality degree (rank 2), which further accentuates the disparities between Regions and the regional average (Figure 6).

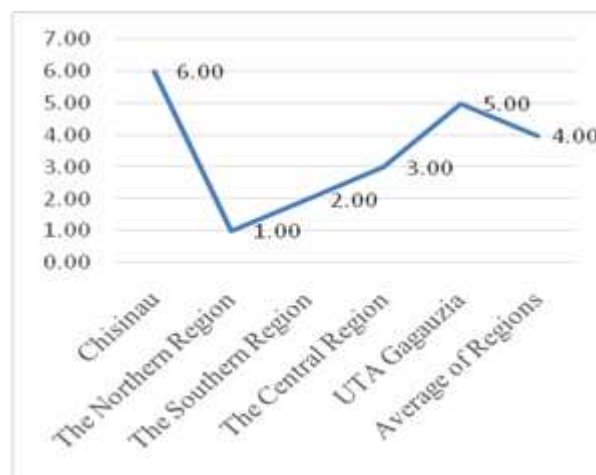


Fig. 6. Disparities in human resources between regions and the regional average  
 Source: statistical data consultations [1].

Agricultural product processing activities, more commonly practiced by agricultural farms, include milling activities (North), followed by meat processing activities (Central), dairy processing activities (UTA Gagauzia), vegetable and fruit processing (North), and grape processing (South). Agrotourism, fish farming, and crafts have a very low share.

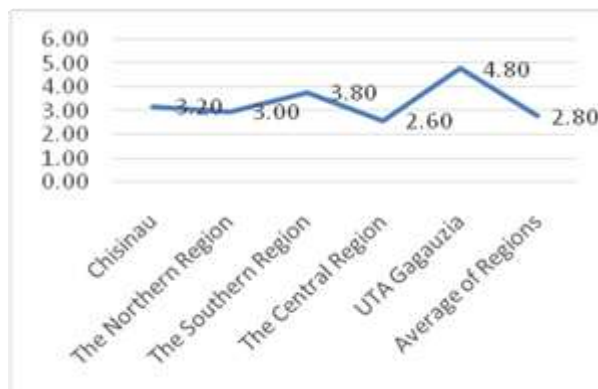


Fig. 7. Disparities in processing activities between regions and their average.

Source: statistical data consultations [9].

The availability and qualification of the workforce can influence the performance of the processing sector. The emigration of skilled labor is a problem.

Investments in modern technology and equipment can improve production efficiency and quality (Figure 7).

Animal density per hectare in Moldova varies depending on the type of animals and specific agricultural practices. In general, density is influenced by resource availability, pasture management, and animal husbandry practices [14].

To ensure sustainable and efficient animal growth, it is crucial to adopt modern and sustainable land and resource management practices.

The study "Agricultural Disparities in the Regions of the Republic of Moldova" analyzed the situation of agriculture and rural development, examining their significant proportion and importance for the national economy, as well as directions for investment in the coming period [15].

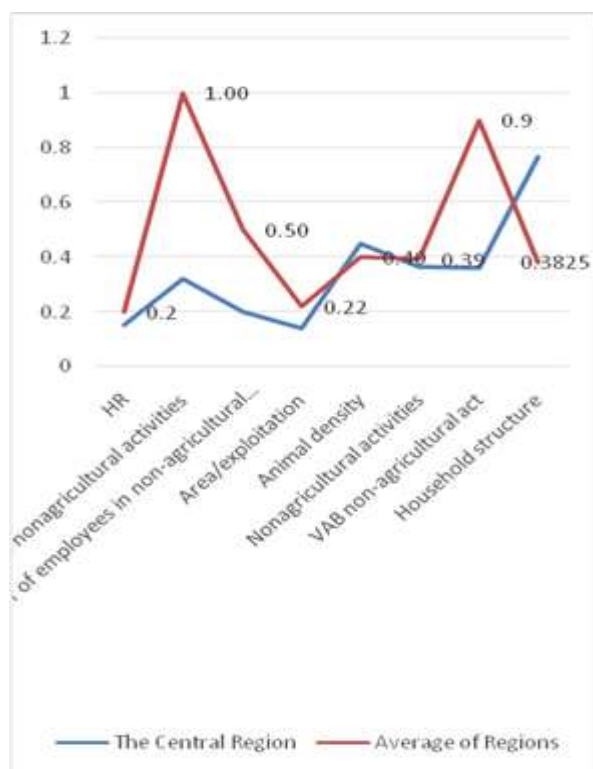


Fig. 8. Summary of non-agricultural potential in the Central Region

Source: statistical data consultations (NBS) [9].

Figure 8 presents a summary of the non-agricultural potential in the Central Region of the Republic of Moldova.

The study's results allowed us to outline some directions for reducing regional disparities, and we consider some aspects of rural development as specified.

Firstly, it is particularly important to increase employment in sectors other than agriculture, which will absorb the workforce released from the agricultural economy. Consolidation of agricultural farms will increase their economic efficiency in response to market pressures.

## CONCLUSIONS

The major problems of non-agricultural activities in Moldova are driven by small and medium-sized enterprises (SMEs) in rural areas, which often face difficulties in accessing credits and financing necessary to start or develop non-agricultural activities.

The lack of adequate infrastructure, including roads, telecommunications networks and public utilities, is a significant barrier to the development of non-agricultural activities.

Managerial capacity and reduced skills:

The lack of entrepreneurial and managerial skills among the rural population may limit the success of non-agricultural businesses. European experiences have shown that vocational training and continuing education are essential to overcome this problem.

Limited access to markets, both locally and internationally, can restrict the growth of nonagricultural businesses. Promotion of local products and creation of efficient distribution networks are necessary.

Complex bureaucratic procedures and restrictive regulations can discourage entrepreneurial initiative. Simplifying administrative processes and creating a favorable business environment are essential for stimulating non-agricultural activities.

Economic and political instability in the Republic of Moldova may adversely affect investment in the non-agricultural sector and create an uncertain business environment.

To overcome these problems and stimulate the development of non-agricultural activities, coherent government policies, investment in

infrastructure, vocational training programs and support for entrepreneurship are needed. An integrated and coordinated approach can significantly contribute to revitalizing the rural economy and improving the living conditions of the population of the Republic of Moldova.

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