

EXPLORING THE EDUCATIONAL AND LABOUR MARKET ECOSYSTEM ACROSS REGIONS IN THE REPUBLIC OF MOLDOVA

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Abstract

The alignment between education, vocational training, and the labour market is fundamental to the Republic of Moldova's socioeconomic development. Accelerated demographic transformations and significant out-migration are reshaping both the supply of skills and the demand for labour, while regional disparities amplify these challenges.

The present paper examines the education–labour market nexus across Moldova's regions, with a focus on regional diversity in employment and sectoral profiles that shape human capital development and vocational training provision. Using data from national statistical sources, the study applies a descriptive–comparative approach to examine the interaction between education and the labour market. The analysis reveals important imbalances among regions: the capital demonstrates higher employment levels and wage opportunities, while regions struggle with lower employment, higher vulnerability, and uneven access to vocational and technical education.

The findings suggest that bridging the gap between educational outputs and labour market requirements demands strengthening regional labour market matching and supporting diversification of peripheral economies to address the self-reinforcing cycle of disparities.

Keywords: education, labour market, regional disparities, Republic of Moldova

JEL Code: R23, J21, I25

Introduction

Effective alignment between education and the labour market sustains human capital formation, competitiveness, and social cohesion (Lehmann & Muravyev, 2012; OECD 2019a). In the Republic of Moldova, this alignment is strained by demographic decline, sustained out-migration, and structural change (Feldmann, 2005), which simultaneously reduces labour

supply and enhances the value on adaptable skills. The patterns are consistent with post-transition economies where metropolitan centres act as growth poles (ibid). Migration further reinforces territorial gaps, draining skills from low-opportunity areas yet supporting households through remittances (Stanković et al., 2021). This paper examines Moldova's education-labour market ecosystem from a regional perspective, focusing on disparities in employment, wages, and access to vocational education and training.

1 Theoretical framework

The relationship between education and the labour market has long been recognised as a decisive factor in shaping socio-economic development. A well-functioning education system, aligned with labour market requirements, not only produces skilled human capital but also supports economic competitiveness, social cohesion, and resilience in the face of demographic and economic transformations. In countries undergoing transition, such as the Republic of Moldova, this relationship is further complicated by the combined impact of demographic decline, persistent migration flows, and structural economic shifts. These dynamics place additional pressure on the ability of education and training systems to respond effectively to the evolving needs of employers and workers (Kupets, 2015).

The Republic of Moldova provides a relevant case for studying the alignment between education, vocational training, and the labour market. Over the past three decades, the country has experienced profound demographic transformations, marked by a declining and ageing population, as well as extensive out-migration of working-age individuals. These trends have reduced the domestic labour supply while reinforcing the need for more productive, innovative, and adaptable human capital (Kahanec & Zimmermann, 2010). The challenge is not only quantitative but also qualitative, namely, to equip individuals with the skills and competencies required for the economy to advance (McGuinness et al., 2018).

Regional disparities add another layer of complexity. Moldova's labour market is uneven across its four development regions (Chişinău, North, Centre, South). The capital city, Chişinău, concentrates most of the country's economic activity, higher wages, and innovative firms, while peripheral regions often face lower employment opportunities, higher vulnerability among youth, and fewer resources for education and training (Pompei & Selezneva, 2017; Rokicka et al., 2018). These inequalities mirror broader patterns observed in post-transition economies, where urban centres serve as hubs of growth, while rural and peripheral regions remain locked in structural disadvantages (Lehmann & Muravyev, 2012). Exploring such

territorial imbalances allows for a nuanced understanding of how education and labour market ecosystems interact regionally.

In addition, migration continues to shape Moldova's human capital landscape. Out-migration, particularly of young and educated workers, generates skill shortages in certain sectors and regions, while remittances provide important share of income for households. The dual effect of migration – as both a drain on domestic skills and a source of financial support – reveals the importance of analysing education and labour market outcomes in connection with demographic and mobility trends (Fendel, 2016). These challenges can be addressed through stronger collaboration between education systems and employers, supported by a more integrated view of demographic, economic, and institutional change (Lehmann & Muravyev, 2012; McGuinness et al., 2018; Kozhevnikov, 2021).

This study contributes to these debates by examining the education and labour market ecosystem of Moldova through a regional lens. This paper contributes to ongoing debates by analysing Moldova's education–labour market ecosystem at the regional level, where sub-national evidence in research remains neglected. The focus is placed on identifying disparities in employment outcomes and access to vocational education and training across the country's regions.

2 Data and methods

We apply a descriptive–comparative regional analysis using official 2023 aggregates. Labour-market indicators are drawn from the BNS Labour Force Survey (LFS) 2023 with regional breakdowns—employment and unemployment rates, including disaggregation by education level¹. Education and training supply is captured via the distribution of TVET institutions and students by development region (2023), compiled from BNS. Regional wage disparities are assessed using BNS 2023 gross monthly earnings by region and broad activities (agriculture, industry, education, other services). The analysis is cross-sectional (year 2023) and relies on publicly reported aggregates.

¹ Levels of education are classified according to International Standard Classification of Education:

- High – tertiary education;
- Medium – upper- and post-secondary education, including TVET;
- Low – lower-secondary or below.

3 Results

The following section presents the main empirical findings on regional disparities in Moldova's education–labour market ecosystem. We examine regional differences in employment to educational attainment, map the distribution of TVET capacity, and compare wage structures to understand how opportunities and returns vary across regions.

3.1 Regional disparities in employment and unemployment

In the Moldovan context, employment is a more meaningful indicator of regional labour market disparities than unemployment. This is because official unemployment rates remain uniformly low across regions (4–5%), largely reflecting labour market exit and international migration rather than effective integration. By contrast, employment rates vary widely—from 49.1% in Chişinău to only 35.8% in the South—revealing the capital–periphery divide and the structural weaknesses of labour markets across regions.

Tab. 1: Regional distribution of population aged 15 years and over, by employment and unemployment rate, (%)

Employment rate and unemployment rate by regions		
	Employment rate, %	Unemployment rate, %
Total	43.1	4.6
mun. Chisinau	49.1	4.2
North	47.0	4.7
Center	38.2	4.8
South	35.8	4.8

Data source: BNS, Labour Force Survey (LFS), 2023

3.2 Education and labour market access

Tables 2 and 3 confirm the important role of educational attainment in labour market integration. Nationally, 62.3% of higher-educated individuals are employed, compared to only 29.8% of those with low education. Regional patterns reveal that even in peripheral regions, such as the South (58.8%), higher education secures better outcomes, while low-educated

workers remain largely excluded (23.9%). Unemployment rates follow this trend, with higher education associated with only 2.8% unemployment, against 6.1% for the low-educated.

Tab. 2: Employment rate by level of education and regions, (%)

Level of education (%)	Employment rate, %				
	Total	Mun. Chişinău	North	Center	South
Total	43.1	49.1	47.0	38.2	35.8
Higher	62.3	62.7	64.7	60.2	58.8
Secondary	43.3	43.6	48.9	40.2	38.8
Low	29.8	33.0	35.2	27.7	23.9

Data source: BNS, Labour Force Survey (LFS), 2023

These results reveal the strong *education premium* in Moldova, but also point to persistent territorial disadvantages (Stanković et al., 2021): workers in the South and Centre face weaker prospects, reflecting both structural labour market constraints and limited alignment of vocational training with regional demand.

Tab. 3: Unemployment rate by level of education and region, (%)

Level of education (%)	Unemployment rate,%				
	Total	Mun. Chişinău	North	Center	South
Total	4.6	4.2	4.7	4.8	4.8
Higher	2.8	2.7	0.0	0.0	0.0
Secondary	4.9	5.2	4.9	4.8	4.7
Low	6.1	0.0	5.6	5.4	0.0

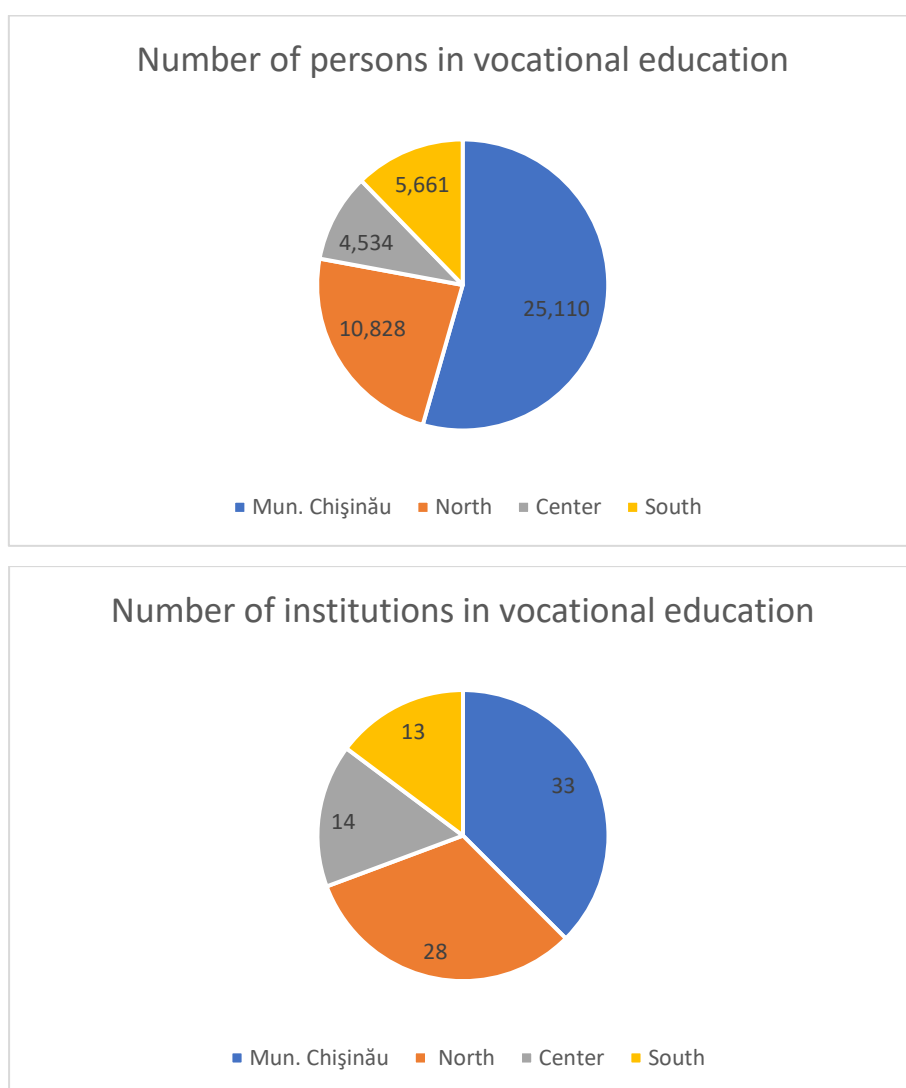
Data source: BNS, Labour Force Survey (LFS), 2023

3.3 Distribution of TVET institutions and students

The comparative distribution of institutions and students (Fig. 1) shows systemic imbalances in the TVET system. Chişinău hosts 37% of all institutions but attracts more than half of all students, reflecting the concentration of both infrastructure and demand. The North, while accounting for 32% of institutions, enrolls only 23% of students, suggesting smaller or less

attractive schools. The Centre and South remain doubly disadvantaged, with both limited institutional presence (16% and 9% respectively) and low enrolment shares (10% and 8%). These disparities confirm the structural imbalance of Moldova’s TVET system and its inability to provide equitable regional access.

Fig. 1: Number of persons and institutions in vocational education by development region



Data source: National Bureau of Statistics of the Republic of Moldova (BNS), Ministry of Education and Research, 2023

3.4 Wages and regional attractiveness

Wages provide a signal of regional labour market attractiveness and reflect the sectoral profile of the economy. In Moldova, regions that specialise in higher-productivity activities (notably

services) offer higher returns to labour, whereas agriculture regions display systematically lower earnings.

Regarding regional wage gaps, the average gross monthly earnings are markedly higher in Chişinău (16,955 lei) than in the North (10,899 lei), Centre (11,193 lei), and South (10,820 lei) (Tab. 4). This capital–periphery gradient mirrors earlier results on employment and education: regions that underperform on employment (Section 4.1) and show weaker outcomes for non-tertiary graduates (Section 4.2) are the same regions with lower wage levels. Across all regions, agriculture records the lowest earnings, consistent with its lower productivity base. Industry and construction are somewhat higher but do not attain the wage levels observed in education and other services, which are concentrated in the capital. Consequently, the Centre and South—where agriculture retains a large employment share—exhibit the lowest wage structures, while Chişinău’s service-oriented profile underpins the highest.

Tab. 4: The monthly gross average earnings by economic activities, lei

	Total	Mun. Chisinau	North	Center	South
Economic activities - total	13990.0	16955.1	10898.9	11193.4	10819.8
Agriculture	9090.6	12135.5	8449.2	9954.6	8817.5
Industry	12617.3	13566.3	11772.6	12029.3	11877.8
Education	11413.7	13636.6	10442.0	10491.9	10074.1
Other activities, incl. services	15376.1	18046.8	10803.8	10933.1	10758.2

Data source: National Bureau of Statistics of the Republic of Moldova (BNS), 2024

The wage structure helps explain the patterns in Figure 1: vocational institutions and enrolments are concentrated where wage prospects are stronger. In Chişinău, higher returns in services and public functions make vocational pathways more attractive for both learners and providers, sustaining larger schools and a broader programme mix. In contrast, the Centre and South face a double disadvantage: lower wages reduce the perceived payoff to training, and the thinner wage premium limits the capacity of local TVET to expand and modernise.

Overall, the evidence points to a capital–periphery gradient: higher employment, stronger education payoffs, denser TVET provision, and higher wages in Chişinău, with systematically weaker outcomes, especially in South and Centre. These results ground

the subsequent discussion of mechanisms and inform the policy options proposed in the next section.

Discussion and conclusions

The findings confirm that pronounced regional disparities shape Moldova's education and labour market ecosystem. Chişinău emerges as the dominant centre of employment and wages, concentrating economic activity and educational opportunities, while the South and Centre face weaker outcomes. Although unemployment rates remain relatively uniform across regions, employment levels and wage structures reveal significant gaps, underlining the capital–periphery divide that characterises many post-transition economies (Lehmann & Muravyev, 2012; Stanković et al., 2021).

Education plays a central role in explaining these outcomes. Higher levels of attainment are consistently associated with stronger labour market integration, confirming the education premium. Yet, regional contrasts remain visible even among better-educated groups, suggesting that structural and spatial factors limit the equalisation effect of education.

Overall, the evidence confirms the need for a more systemic perspective on education–labour linkages (McGuinness et al., 2018). The ecosystem lens suggests that education and labour markets operate through feedback loops: regions with dynamic demand create incentives for training and innovation, while weaker labour markets discourage investment in skills and repel younger cohorts. Moldova's regional disparities show how fragile ecosystems can reinforce disadvantage, making it difficult for education alone to compensate for structural weaknesses (OECD, 2019b; Pompei & Selezneva, 2017).

Policy implications follow consequently. First, the modernisation of TVET should be prioritised, with greater emphasis on geographical balance and alignment with regional economic structures through innovation. Second, labour market monitoring needs to be strengthened at the regional level to identify mismatches early and support evidence-based planning. Third, investment incentives and targeted development strategies could help diversify regional economies beyond agriculture and low-wage services, enhancing skills and reducing out-migration. Finally, partnerships between employers, educators, and local authorities are essential to build more responsive training systems and to expand opportunities outside the capital of the country, fostering more balanced regional development.

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Acknowledgments

The paper was developed within the framework of the 25.80012.0807.26TC Project for Young Researchers “Valorisation of human capital through mechanisms of social inclusion and sustainable development in the context of the innovative technological ecosystem” (2025-2026), funded by the National Agency for Research and Development (ANCD).

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