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TENDENCIES IN THE POST-PANDEMIC LABOR MARKET IN REPUBLIC OF MOLDOVA IN REGIONAL ASPECT

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Abstract. COVID-19 pandemic had far-reaching consequences on global economies, labor market being one of most affected areas. Moldova, a country with a diverse economic structure and significant regional disparities, experienced shifts in employment patterns, workforce distribution, and economic activity from 2019 to 2023. Utilizing data from NBS (National Bureau of Statistics) of Moldova and applying a composite index this study provides a labor market analysis across various Moldova regions. Findings reveal significant disparities, with urban areas like Chisinau showing stronger recovery due to more diversified economy and better access to resources, while rural areas, especially in South region, continue to face considerable challenges. The composite index integrates key indicators like employment and NEET (Not in employment, education or training) rates, average real wages, workplace accident costs, highlights the uneven nature of recovery. This index is a valuable tool for policymakers to identify regions requiring targeted interventions to promote inclusive growth. The article was developed within the framework of 23.70105.0807.10T Project for Young Researchers "Development of new working models in the context of post-pandemic consequences and strengthening of job-specific skills for occupations and areas of smart specialization in the Republic of Moldova".

Keywords: *Moldova, labor market, regional disparities, post-pandemic recovery, employment, workforce.*

JEL code: *E24, J21, J28, R11*

Introduction. The labor market in Moldova, as in many other countries, has been deeply impacted by the pandemic. The disruptions caused by COVID-19 led to abrupt changes in employment, with some sectors and regions more affected than others. This research focuses on mapping the labor market situation across Moldova, assessing the shifts that have occurred since the pandemic's onset, and identifying the key factors driving these changes.

The main objective of this research is to provide a comprehensive analysis of the labor market by focusing on the regional differences that have emerged during the post-pandemic recovery phase. The study covers the years 2019 to 2023, a period that includes the pre-pandemic era, the pandemic period itself, and the subsequent recovery. By analyzing these different phases, we can gain insights into how various regions and sectors have responded to the crisis and what challenges remain.

The labor force in Moldova has been shaped by various socio-economic factors, with the pandemic serving as a significant disruptor. Prior to the pandemic, Moldova's labor market was relatively stable, with consistent employment rates across different regions. However, the onset of COVID-19 in early 2020 led to significant disruptions, particularly in urban areas where economic activities were more vulnerable to lockdown measures and social distancing policies.

Literature review. There are a significant number of scientific papers that analyze and discuss complex labour market composite indicators. Alaimo and Seri (2021) [1] reviews various composite indicators used to monitor the main aspects of social and economic life. The review discusses how different indicators are constructed to reflect multiple dimensions of social and economic realities, focusing on methodologies that aggregate information for both national and international comparisons. Arriagada (2018) [2] proposes a Multidimensional Quality of

Employment Index using labor survey data from Central America. The index assesses multiple dimensions of employment, such as income security, employment security, and work conditions. It focuses on capturing not only quantitative employment data, but also qualitative aspects that contribute to workers' overall well-being. Chaaban, Irani and Khoury (2016) [3] introduced the Composite Global Well-Being Index (CGWBI) as a multidimensional measure of human development. It integrates indicators across health, education, and economic status to provide a comprehensive measure of global well-being. Elmetwally (2022) [4] presents a Multidimensional Approach to Measuring Decent Work across five countries using count panel data models. It introduces a composite indicator focused on decent work, combining seven sub-indicators that assess workers' capacity to manage work and personal life while balancing social and economic aspects. Leschke and Watt (2014) [5] presents the European Job Quality Index, a multidimensional measure that combines multiple indicators of job quality across Europe. The authors highlight the challenges of constructing such an index due to the variability in labor market conditions across the EU. Mazziotta and Pareto (2013) [6] explore different methodologies for constructing composite indices, particularly focusing on whether a single method fits all phenomena or if different methods should be employed depending on the context. They stress the importance of tailor-fitting the methodology to the type of users and socio-economic phenomena under study. Saisana (2024) [7] entry in the Encyclopedia of Quality of Life and Well-Being Research elaborates on Composite Indicators and their construction methodologies. The focus is on providing guidelines and best practices for creating reliable composite indicators that can be used in policy-making to improve quality of life assessments. Stephany, Kässi, Rani & Lehdonvirta (2021) [8] presents the Online Labour Index 2020, which measures the world's remote freelancing market. The index reflects the growing trend of online labor markets and offers insights into the distribution of freelancing across sectors and regions. It also serves as a measure of digital labor's economic impact globally. Terzi, Otoi, Grimaccia, Mazziotta and Pareto (2021) [9] addresses several open issues in composite indicators, particularly focusing on state-of-the-art challenges in their construction and use. It examines key methodological concerns, such as weighting, aggregation, and the interpretability of indices in socio-economic studies. Yu (2019) [10] develops a Multidimensional Employment Quality Index for the South African labor market, incorporating 18 indicators. This index measures not just employment rates, but the quality of employment, focusing on aspects like job security, income stability, and working conditions.

The use of composite indicators in socio-economic research provides valuable insights into complex issues like employment quality, labor market dynamics, and well-being. Each index addresses multiple dimensions, offering a more holistic view than traditional single-dimension measures. These tools are instrumental in informing policy decisions and improving our understanding of economic and social phenomena. They also can be adapted to the specifics of countries. Further we will build such a kind of indicator for Republic of Moldova, after analyzing the recent context of the labor market in the country.

Regional employment characteristics. In the pre-pandemic period, the year 2019 marked a period of relative stability for Moldova's labor market. Employment rates were consistent across the country, with urban areas like Chişinău showing robust economic activity. The employment rate in 2019 was 40.1%, with variations across regions (NBS (2024) [11]). Urban areas had higher employment rates due to more diverse economic activities, while rural areas, which are heavily dependent on agriculture, had lower rates.

The pandemic, however, changed this dynamic dramatically. In 2020, the first year of the pandemic, Moldova saw a sharp decline in employment across the board. The number of employed individuals dropped significantly, particularly in urban regions where the impact of the pandemic was most severe. According to the National Bureau of Statistics, the employment rate in 2020 fell to 38.8%, with urban areas experiencing the most significant declines.

Rural areas, while also affected, saw a less dramatic drop in employment. This can be attributed to the nature of economic activities in these regions, which are less dependent on sectors like retail, hospitality, and services that were hardest hit by the pandemic. However, the recovery in rural areas has been slower, reflecting deeper structural issues that predate the pandemic.

As Moldova began to emerge from the pandemic, the labor market started showing signs of recovery. By 2021, the employment rate had begun to improve, though it remained below pre-pandemic levels. The recovery was uneven, with some sectors and regions rebounding more quickly than others.

Urban areas, particularly Chişinău, led the recovery. The employment rate in Chişinău increased from 48.8% in 2020 to 49.2% in 2021, signaling a gradual return to normalcy. However, this was still below the 52.6% recorded in 2019, indicating that the city had not fully recovered from the pandemic's impact.

In contrast, rural areas, particularly in the Northern region, showed a slower recovery. The employment rate in the Northern region was 45.0% in 2022, an improvement from the 42.5% recorded in 2019, but still indicative of the ongoing challenges faced by these regions. The slower recovery in rural areas highlights the need for targeted interventions to support these communities, which are more vulnerable to economic shocks.

The period from 2019 to 2023 has been marked by significant fluctuations in Moldova's labor market. The trends observed during this period reflect the broader economic uncertainties brought about by the pandemic, as well as the resilience of certain sectors and regions.

One of the most notable trends during this period is the fluctuation in employment rates. In 2022, the employment rate in Moldova was 40.5%, close to the pre-pandemic level of 40.1% in 2019. However, this overall stability masks significant regional disparities.

In Chişinău, the employment rate in 2022 was 50.6%, down from 52.6% in 2019. This decline suggests that while the city remains a hub of economic activity, it has not fully recovered to its pre-pandemic strength. The lower employment rate can be attributed to the continued challenges faced by sectors such as retail and hospitality, which have been slow to recover.

In contrast, the Northern region saw an increase in its employment rate from 42.5% in 2019 to 45.0% in 2022. This suggests a more robust recovery in certain rural areas, driven by the resilience of sectors such as agriculture and construction. However, the overall employment rate in the Southern region remains below pre-pandemic levels, reflecting the ongoing challenges faced by these areas.

The composition of the workforce has also changed during this period. There has been a noticeable shift in the age and educational profile of the employed population. The number of employed individuals with higher education has increased, particularly in urban areas, as more people sought to improve their skills during the pandemic. However, the number of employed individuals with secondary or vocational education has declined, particularly in rural areas, highlighting the challenges faced by these regions in adapting to the changing economic landscape.

A sectoral analysis reveals significant disparities in how different industries have been affected by the pandemic and subsequent recovery. Some sectors have shown remarkable resilience and even growth, while others continue to struggle.

The construction sector has been one of the standout performers during this period. Between 2019 and 2022, the sector expanded by 8.3%, with rural areas experiencing a higher growth rate of 10.1% compared to 6.1% in urban areas. The growth in the construction sector can be attributed to ongoing infrastructure projects and increased demand for housing, particularly in rural areas where there is a need for improved living conditions.

Similarly, the transportation and communications sectors have shown strong growth, driven by increased demand for logistics and communication services during the pandemic. The sector grew by 6.5% between 2019 and 2022, with urban areas, particularly Chişinău, seeing the most significant gains.

However, other sectors have not fared as well. The retail and hospitality sector, in particular, has struggled to recover from the impact of the pandemic. Employment in this sector dropped by 6.8% from 2019 to 2022, with rural areas experiencing a more severe decline of 11.3%. The slow recovery in this sector reflects the ongoing challenges faced by businesses in adapting to the new normal, with reduced consumer spending and continued uncertainty about the future.

The public administration, education, health, and social services sector also saw significant changes during this period. In urban areas, employment in this sector decreased by 9.1%, reflecting

the impact of budget cuts and the shift towards remote working. However, in rural areas, employment in this sector increased by 9.2%, as the government and NGOs ramped up efforts to support vulnerable communities during the pandemic.

To gain a deeper understanding of the regional disparities and the overall state of the labor market, we introduce a labour composite index designed to provide a holistic assessment of the labor market by integrating several key indicators (Figure 1 and Figure 2), based on other scholar works discussed earlier.

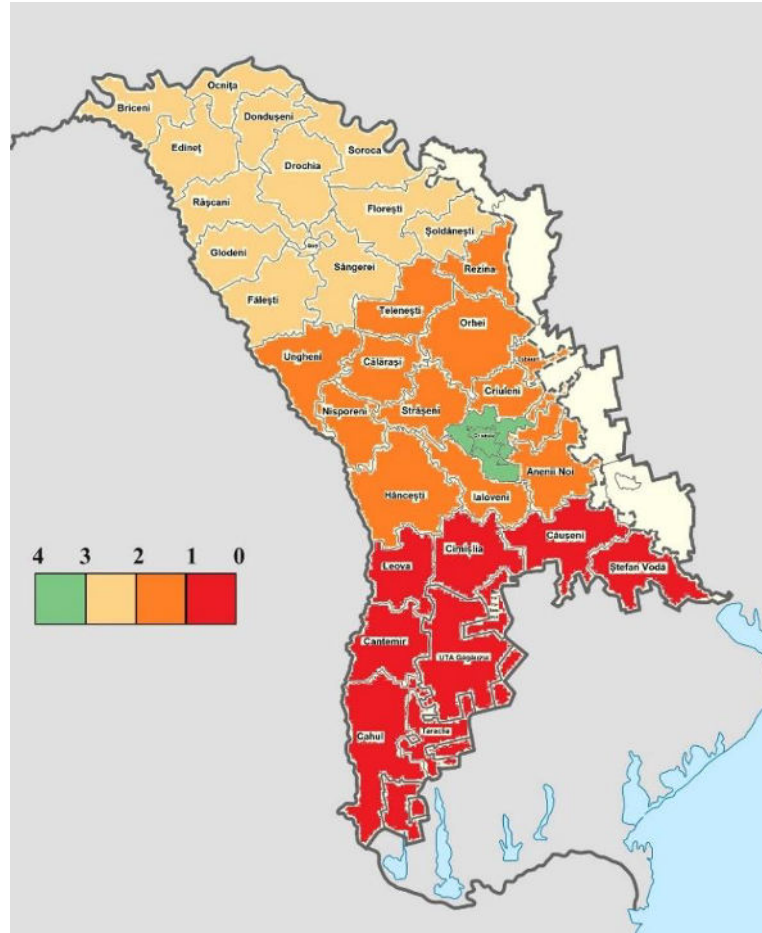


Figure 1. The labour index value in the statistical regions of the Republic of Moldova, year 2019

Source: Elaborated by author based on NBS data from [11]

The index was developed by the author to address the need for a comprehensive measure that can capture the multifaceted nature of the labor market. It combines four key indicators: the employment rate, the proportion of young people not in employment, education, or training (NEET), average real wages, and the costs associated with workplace accidents.

The design of the index is based on a normalization process that converts raw data into comparable units. For example, the employment rate is treated as a positive indicator, where higher values indicate better labor market conditions. In contrast, the NEET rate and accident costs are considered negative indicators, with higher values reflecting more significant challenges. These indicators are then combined, with each given equal weight, to produce an overall score for each region.

The normalization process ensures that the index is both comprehensive and comparable across regions and time periods. By combining positive and negative indicators, the index provides a balanced view of the labor market, highlighting areas of strength as well as those in need of improvement.

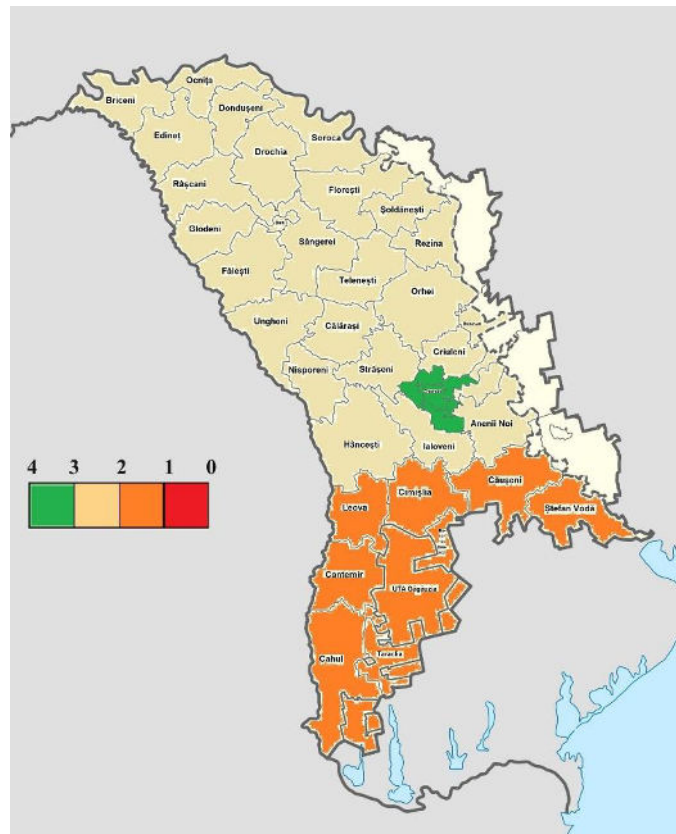


Figure 2. The labour index in the statistical regions of the Republic of Moldova, year 2023

Source: Elaborated by author based on NBS data from [11]

The labour index was applied to the regions of Moldova to assess the state of the labor market from 2019 to 2023. The results reveal significant regional disparities, with some regions showing strong recovery and others continuing to face challenges.

In 2023, Chişinău scored higher on the labour index than other regions, reflecting its relatively strong labor market recovery. The city's high employment rate, coupled with relatively low NEET rates and accident costs, contributed to its higher score. This indicates that Chişinău has been more successful in adapting to the post-pandemic economic landscape, thanks to its diversified economy and better access to resources.

The Northern region, while showing improvement, still lags behind Chişinău in terms of its labour index score. The region's lower average wages and higher NEET rates suggest that more work is needed to support the labor market in this area. The Southern region, however, continues to face considerable challenges. The region's low employment rates, coupled with high accident costs, contribute to its lower index score, indicating ongoing difficulties in achieving economic recovery.

The application of the labour index highlights the uneven nature of Moldova’s labor market recovery. While some regions have rebounded quickly, others remain mired in challenges. The index provides a valuable tool for policymakers to identify areas in need of targeted interventions, whether through job creation programs, education and training initiatives, or measures to improve workplace safety.

Conclusion. The post-pandemic labor market in Moldova presents a mixed picture of recovery and ongoing challenges. While certain sectors and regions have shown resilience, others continue to struggle with the aftereffects of the pandemic. One positive trend is the reduction in unemployment among individuals with primary or no education, from 13.3% in 2019 to 2.4% in 2022. This indicates that some of the most vulnerable populations have found new opportunities in the evolving labor market.

However, significant regional disparities remain. Rural areas, particularly in the South, face more substantial hurdles in terms of employment and economic recovery. The labour index offers a

comprehensive framework for assessing these disparities, providing insights that can guide future policy decisions.

As Moldova continues to navigate the post-pandemic landscape, the focus must remain on addressing these regional imbalances, supporting vulnerable populations, and fostering a more inclusive and resilient labor market. Future research should explore the long-term impacts of the pandemic on Moldova's labor market and develop strategies that can sustain and accelerate the recovery in all regions.

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