

LABOR MARKET DYNAMICS IN ROMANIA AND THE ROLE OF VOCATIONAL RETRAINING ECOSYSTEMS IN JOB CREATION AND INCREASING COMPETITIVENESS

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Abstract

The Romanian labor market faces multiple challenges stemming from skills shortages, demographic changes, digitalization, and the rapid economic transformations of recent years. In this context, professional retraining and skills development are becoming essential for supporting employment and boosting economic competitiveness. The purpose of this study is to analyze the main indicators of the Romanian labor market and to highlight the role of professional retraining ecosystems in reducing structural imbalances and creating jobs. The research methodology is based on a descriptive and exploratory approach, utilizing comparative and interpretive analysis of relevant labor market indicators, such as the employment rate, labor force participation rate, unemployment rate, hours worked, and the labor force. The data used are drawn from official national and international sources, such as Eurostat, the World Bank, and the National Institute of Statistics. The research findings highlight a moderately positive trend in labor market indicators for the period 2023–2028 but also point to the persistence of structural vulnerabilities related to skills shortages and low labor market participation. The analysis shows that developing an integrated ecosystem for professional retraining can help increase employment and adapt the workforce to the demands of a digital and sustainable economy.

Keywords: labor market; professional retraining; employment; digital skills; economic competitiveness; Romania

JEL classification: J21, J24, J68, O33

Received on: 12 April 2026

Accepted on: 22 April 2026

Released on: 30 May 2026

INTRODUCTION

The labor market is one of the key factors influencing a country's economic and social development, reflecting both the economy's ability to generate jobs and the workforce's adaptability to economic and technological changes. In recent years, Romania's labor market has been shaped by complex processes driven by digitalization, automation, demographic shifts, and the effects of the COVID-19 pandemic - factors that have contributed both to the emergence of new economic opportunities and to the exacerbation of structural vulnerabilities. Although Romania saw positive trends in employment prior to the COVID-19 crisis, employment rates and labor force participation remain below the European and OECD averages. According to the OECD (2025), the employment rate for the population aged 15 to 64 was approximately 63% in 2023, compared to the OECD average of 70%. At the same time, the EURES report highlights significant disparities among different social groups, particularly among women and young people, reflecting the persistence of structural challenges regarding labor market integration (see EURES_Report).

In the literature, one of the main issues identified is the skills gap and the mismatch between educational offerings and labor market demands. Marinescu (2023) shows that the Romanian economy faces significant gaps in the cognitive, digital, and professional skills of the workforce, while Chivu et al. (2020) highlight the growing labor shortage in numerous economic sectors. At the same time, digitization and automation are bringing about profound changes in the structure of the workforce and in labor relations, creating a need for policies focused on continuing education and professional retraining (Paun, 2026).

The COVID-19 pandemic has accelerated these transformation processes, driving the expansion of digital activities and remote work, as well as the need to rapidly adapt professional skills to new economic and technological conditions (Ilie, 2020). In this context, reskilling and skills development are considered essential

tools for reducing structural imbalances and increasing labor market flexibility (Brezina, 2016). International research shows that retraining programs can have a positive impact on employment and income, provided they are tailored to the actual needs of the economy (Busso et al., 2022). At the same time, the development of strategic economic sectors such as green energy, the digital economy, infrastructure, and advanced manufacturing creates significant opportunities for job creation and increased economic competitiveness. Petrescu (2025) argues that developing an integrated ecosystem for professional retraining could enable Romania to create over 500,000 jobs by 2027, with approximately 60% of these positions filled by retrained workers, thereby helping to transform structural vulnerabilities into sustainable competitive advantages.

The purpose of this article is to analyze the main indicators of the Romanian labor market and to highlight the role of professional retraining in supporting employment and economic competitiveness. With this objective in mind, the study aims to answer the following research question: To what extent can the development of a professional retraining ecosystem help reduce structural imbalances in the labor market and increase employment in Romania?

I. THEORETICAL BACKGROUND

The Romanian labor market has undergone significant changes in recent decades, shaped by economic, technological, and social processes that have created both opportunities and structural vulnerabilities. Although the period leading up to the COVID-19 crisis was marked by rising employment, Romania continues to have low levels of employment and labor force participation compared to developed European countries and the OECD average. According to the OECD (2025), the employment rate for the population aged 15 to 64 was approximately 63% in 2023, below the OECD average of 70%, a situation mainly attributed to low labor force participation. Furthermore, the positive trends observed prior to the pandemic have slowed in recent years, highlighting the persistence of structural imbalances in Romania's labor market (see OECD).

Data presented in the EURES report show that in 2023, over 8.2 million people were active in Romania's labor market, but the employment rate remained 7.4 percentage points below the European Union average; at the same time, the differences between population groups are significant: the employment rate among women was 54.3%, while for men it reached 71.7%, and for young people only 18.7%, with all figures falling below the European average (see EURES Report). These discrepancies highlight persistent difficulties in integrating certain social groups into the labor market and the need to develop active employment and professional inclusion policies.

The literature highlights that one of the main vulnerabilities of the Romanian labor market is the skills gap and the mismatch between labor supply and demand. Marinescu (2023) highlights the existence of major gaps in the cognitive, socio-emotional, and professional skills of the workforce, as well as significant differences between skill levels and the current demands of the economy. The author notes that the workforce in Romania is relatively less educated compared to other European Union member states, and regional disparities exacerbate existing imbalances. Furthermore, the effects of the COVID-19 pandemic have contributed to a decline in skills and amplified difficulties in professional integration, amid the suspension of economic and educational activities (Marinescu, 2023). Structural problems in the labor market were identified even before the pandemic. Chipea (2011) shows that young people represent one of the most vulnerable social groups, frequently facing difficulties in entering the workforce, taking low-paying jobs that are incompatible with their level of training, as well as limited prospects for professional development. Similarly, Chivu et al. (2020) argue that the Romanian labor market has become increasingly tight, with labor shortages being felt in numerous key economic sectors. The authors believe that the persistence of these imbalances points to systemic problems, which have been highlighted not only by academia and international institutions but also by employers and labor unions.

The COVID-19 pandemic marked a significant turning point for the labor market, accelerating digitization and organizational changes. Ilie (2020) emphasizes that, in addition to the negative effects caused by reduced income and increased economic uncertainty, the crisis has also created opportunities for development, particularly through the expansion of remote work and digital activities. The adoption of telework has highlighted the need to develop digital infrastructure, technological skills, and new forms of work organization. At the same time, the pandemic has accelerated the process of reducing bureaucracy and has spurred the adaptation of traditional sectors to new economic and technological conditions (Ilie, 2020).

In the context of digital transformation and automation, professional retraining and lifelong learning are becoming essential for the workforce to adapt to new economic demands. Paun (2026) asserts that digitization brings about not only quantitative changes in employment but also profound transformations in occupational structure and labor relations. In this context, the author highlights the need to implement public policies focused on digital education, continuing education, and reducing regional disparities to ensure a sustainable transition to the digital economy. The importance of professional retraining is also supported in the international literature. Migunova et al. (2020) argue that professional development must become a continuous process, as economic and technological changes require the constant updating of skills. The authors emphasize the need for flexible

vocational training systems based on cooperation between the educational sector and the business sector. Furthermore, Busso et al. (2022) demonstrate, through a meta-analytic study, that retraining programs can have positive effects on the employment and income of individuals affected by economic changes, but their effectiveness depends on their adaptation to the actual needs of the labor market. Similarly, Biliamin (2025) highlights that vocational training and retraining contribute both to increased organizational performance and to employee satisfaction and professional development.

In European literature, strategies to support vocational education and retraining are considered essential tools for reducing structural imbalances in the labor market and increasing labor force flexibility. Brezina (2016) shows that professional retraining programs contribute to the integration of vulnerable groups and to improving workers' adaptability in the context of economic and technological changes. Thus, the Romanian labor market faces persistent structural challenges, driven by low employment rates, skills gaps, regional disparities, and the impact of digital transformations. In this context, the development of an effective ecosystem for professional retraining and lifelong learning can serve as an important mechanism for economic adaptation, increased competitiveness, and sustainable job creation.

In this study, the professional retraining ecosystem is understood as an integrated system comprising public policies, educational institutions, continuing education programs, partnerships between academia and the business sector, as well as mechanisms for aligning skills with labor market demands. Such an ecosystem aims to develop human capital and facilitate the transition of the workforce to economic sectors with high growth potential, thereby helping to reduce structural imbalances and strengthen economic competitiveness.

A review of the literature highlights that the main vulnerabilities of the Romanian labor market are skill shortages, low employment rates, and difficulties in adapting to digital and technological transformations. In this context, the development of active policies focused on professional retraining and continuing education becomes essential for increasing economic competitiveness and reducing structural imbalances. Based on these considerations, *Table 1* presents a strategic model for job creation and employment based on the development of high-potential economic sectors and the integration of a professional retraining ecosystem. The proposed model aims to align the demand for skills in the economy with training and professional retraining programs, with the goal of creating over 500,000 jobs by 2027. At the same time, the initiative highlights the importance of filling these positions with a retrained workforce, thereby helping to transform the labor market's structural vulnerabilities into sustainable competitive advantages.

Table 1. Strategic Plan for Job Creation and Employment – Sectoral Objectives

Sector	Estimated jobs created	Percentage of retrained workers	Key Activities
Green Energy and the Environment	100,000	65%	Wind and solar farms, modernization, grid upgrades, green hydrogen, forest and park management
Construction and Infrastructure	80,000	50%	Urban development, public-private partnerships in rail and road transport, housing construction, EU-funded projects
State-of-the-art manufacturing	75,000	60%	Nearshoring centers, robotics/automation, incentives for local sourcing
Digital Economy and IT	90,000	70%	Software, cybersecurity, e-government, shared service centers
Health and Social Services	60,000	50%	Nurses, technicians, elder care, telemedicine
Agribusiness and food processing	35,000	60%	Supply chain logistics, vertical farms, EU-certified processing
Creative industries and tourism	30,000	40%	Ecotourism, digital content, heritage conservation
Education and Skills Development	30,000	60%	Vocational trainers, adult educators, and digital skills instructors
Estimated total jobs: 500,000–530,000			
Workers retrained or upskilled: 300,000–315,000			

Note: This combination balances Romania's comparative advantages (renewable energy sources, low-cost manufacturing, and agriculture) with high-value growth sectors (such as digital IT, green energy, and critical minerals).

Source: authors adaptation after Petrescu (2025)

The data presented in Table 1 show that the greatest job creation opportunities are concentrated in the digital economy and IT, green energy, and infrastructure sectors - areas considered priorities in the context of the transition

to a digital and sustainable economy. The green energy and environmental sector could generate approximately 100,000 jobs, 65% of which would be filled by reskilled workers, underscoring the importance of developing the technical and digital skills associated with the green transition. Similarly, the digital economy and the IT sector have the highest estimated percentage of retrained workers (70%), highlighting the central role of digital skills and lifelong learning in adapting the workforce to new economic demands. Similarly, the advanced manufacturing, agribusiness, and education sectors require extensive reskilling processes, confirming that future economic development depends significantly on the capacity of the education system and public policies to support reskilling. Overall, the proposed sectoral structure reflects the Romanian economy's shift toward high-value-added sectors and suggests that investments in human capital and continuing education can become key drivers for increasing employment and strengthening economic competitiveness. According to Petrescu (2025), creating over 500,000 high-impact jobs by the end of 2027, with 300,000 retrained workers, is not only possible but represents the cornerstone of Romania's future economic resilience. This ensures that the transition to a digital, green, and industrially competitive economy is inclusive, forward-looking, and grounded in the development of human capital. By combining sector-specific job creation with a comprehensive ecosystem for professional reskilling, Romania can ensure that 60% of these jobs are filled by Romanian workers with enhanced skills—turning structural vulnerabilities into competitive strengths.

II. RESEARCH METHODOLOGY

This study takes a descriptive and exploratory approach to the Romanian labor market, with the aim of analyzing key employment indicators and highlighting the role of professional retraining in job creation and increasing economic competitiveness. The study is based on an analysis of statistical data for the period 2023–2028, using both observed values and estimates and projections regarding labor market trends. The following indicators were analyzed in the study: hours worked annually, average hours worked weekly, employment rate, labor force participation rate, unemployment rate, and the population aged 15 to 74. Data were collected from official international and national sources, such as Eurostat, the World Bank, and the National Institute of Statistics, to ensure the comparability and relevance of the information used. The analytical method employed is comparative and interpretive, based on the observation of trends and variations in labor market indicators. At the same time, the research incorporates a conceptual approach to the development of a professional retraining ecosystem, analyzing how investments in continuing education and skills development can help reduce structural imbalances and increase employment rates in Romania.

III. RESULTS AND DISCUSSION

The purpose of this study is to analyze the main indicators of the Romanian labor market and to highlight the role of professional retraining in supporting employment and economic competitiveness. The study aims to identify the relationship between structural changes in the labor market and the need to develop a tailored ecosystem for continuing education and professional retraining. The data presented in Table 2 show a moderately positive trend in the main indicators of the Romanian labor market for the period 2023–2028. The employment rate is estimated to rise gradually, from 63% in 2023, suggesting a slow improvement in the economy's ability to integrate the working-age population into the labor market. At the same time, the labor force participation rate is projected to rise from 51.5% to 53%, indicating a possible expansion of the labor force and higher participation in economic activity.

Table 2. The Labor Market in Romania

Indicator	2023	2024 (estimated)	2025 (projected)	2026 (proj.)	2027 (proj.)	2028 (proj.)
Hours worked (per year)	1826	0.04%	0.02%	0.03%	0.03%	0.03%
Average number of hours worked (per week)	40.2	0.2%	0.0%	0.2%	0.0%	0.2%
Employment rate (%)	63.0	0.0%	0.3%	0.5%	0.3%	0.3%
Labor force participation rate (%)	51.5	52.0	52.2	52.5	52.7	53.0
Unemployment rate (%)	5.6	-1.8%	-1.8%	-3.7%	-1.9%	-2.0%
The population aged 15 to 74	14,561	0.0%	-0.1%	-0.1%	-0.1%	-0.1%

* thousands of people, percentages, and year-over-year percentage change

Source: authors adaptation from World Bank, Eurostat, INSSE

Another important aspect is the gradual decline in the unemployment rate, which may reflect both the effects of economic adjustment and digitalization, as well as the impact of policies aimed at professional retraining

and skills development. Reducing unemployment can contribute to greater economic stability and alleviate the social pressures caused by occupational exclusion.

Regarding working hours, the average number of hours worked per week and the annual hours worked remain relatively constant throughout the period analyzed, indicating stability in the structure of the work schedule and the intensity of economic activity. At the same time, the population aged 15 to 74 is declining slightly, a trend linked to negative demographic trends and population aging. In this context, increasing employment and supporting labor market participation are becoming essential objectives for maintaining long-term economic sustainability. Overall, the evolution of indicators suggests that the development of an effective ecosystem for professional retraining and skills adaptation can contribute to improving labor market performance and strengthening the competitiveness of the Romanian economy in the context of digital and technological transformations.

The moderately positive trend in Romania's labor market indicators, as shown in Table 2, confirms the existence of gradual economic and occupational adjustment processes; however, the pace of these changes remains relatively slow compared to the economy's structural needs. The slow growth in the employment rate and labor force participation suggests that the labor market continues to be affected by persistent imbalances, a point also highlighted in the specialized literature. The OECD (2025) emphasizes that the levels of employment and labor force participation in Romania remain below the average of developed countries, reflecting structural difficulties regarding labor force integration and the adaptation of skills to the demands of the contemporary economy. The research findings support the idea that the skills gap represents one of the main vulnerabilities of the Romanian labor market. The slow evolution of employment indicators can be associated with mismatches between educational offerings and the actual demands of the labor market, particularly in sectors affected by digitalization and automation. Marinescu (2023) points out that the Romanian economy faces significant gaps in the cognitive, digital, and professional skills of the workforce, as well as significant regional disparities. In this context, the persistence of moderate employment levels may indicate the difficulty of rapidly integrating workers into new high-value-added economic sectors.

The gradual decline in the unemployment rate observed during the period under review can be interpreted as a result of economic adjustment processes and accelerated structural transformations following the COVID-19 pandemic. At the same time, the reduction in unemployment may reflect the impact of the expansion of digital activities and the increased flexibility of labor relations. According to Ilie (2020), the pandemic accelerated the development of remote work and the digitization of certain economic and administrative sectors, contributing to the emergence of new employment opportunities and the adaptation of economic activities to new technological conditions. However, the author emphasizes that these transformations require significant investments in digital infrastructure and the development of the working population's technological skills. The results presented in Table 2 also highlight the fact that the relative stability of working time, expressed by the constant average number of hours worked weekly and annually, indicates a certain continuity in the structure of economic activity. However, this stability may mask significant differences between economic sectors and among categories of workers. Chivu et al. (2020) show that the Romanian labor market is characterized by growing tensions and labor shortages in numerous economic sectors, suggesting that the problem is not solely a matter of the number of available jobs, but also of the distribution and adaptability of existing skills.

An important finding highlighted by the research results is the slight decline in the population aged 15 to 74, a trend associated with demographic aging and net emigration. This development may intensify pressures on the labor market and contribute to an increase in labor shortages in certain economic sectors. In the literature, these trends are considered factors that reduce long-term economic sustainability and necessitate the development of active employment and vocational training policies (OECD, 2025). In this context, the research findings underscore the importance of developing an integrated ecosystem for professional reskilling and lifelong learning. The data presented in Table 1 indicate that economic sectors with high growth potential, such as the digital economy, green energy, and advanced manufacturing, require extensive processes of professional retraining and skills adaptation. Migunova et al. (2020) argue that professional development must be a continuous process capable of responding rapidly to economic and technological transformations. Similarly, Busso et al. (2022) demonstrate that professional retraining programs can have positive effects on employment and income, provided they are tailored to the actual needs of the labor market.

At the same time, the research findings confirm that digitization and automation will continue to influence the occupational structure and skill requirements. Paun (2026) highlights that digital transformations are bringing about profound changes in labor relations and economic organization, which necessitates the development of public policies focused on digital education and continuing training. In this regard, professional retraining should not be viewed solely as a measure to reduce unemployment, but as a strategic tool for increasing economic competitiveness and supporting the transition to an economy based on innovation and advanced technologies. The importance of retraining programs is also supported by the international literature on the effectiveness of vocational training. Biliamin (2025) emphasizes that training and retraining employees contribute to increased organizational

performance and the professional development of workers, while Brezina (2016) considers retraining strategies to be essential tools for reducing structural imbalances in the labor market and integrating vulnerable groups. Therefore, the development of coherent policies for continuing education and professional retraining can represent a sustainable solution for improving the performance of the Romanian labor market and for strengthening long-term economic resilience.

The research findings suggest that the development of an integrated ecosystem for professional retraining can significantly contribute to reducing structural imbalances in Romania's labor market by facilitating the adaptation of skills to the demands of the digital and technology-driven economy. The positive trend in employment and labor force participation indicators, coupled with the need to expand high-value-added economic sectors, highlights the importance of investing in continuing education and professional retraining. At the same time, the sectoral analysis presented in Table 1 indicates that fields such as the digital economy, green energy, and advanced manufacturing can become important sources of job creation, but the effectiveness of these processes depends on the capacity of the educational system and public policies to support the development of the necessary skills. In this context, professional retraining can serve not only as a tool for reducing unemployment but also as a strategic mechanism for increasing economic competitiveness and strengthening the resilience of Romania's labor market.

IV. CONCLUSIONS

This study has highlighted that the Romanian labor market continues to be characterized by a number of structural vulnerabilities, stemming from low employment rates, limited labor market participation, skills shortages, and the effects of technological and demographic changes. An analysis of labor market indicators for the period 2023–2028 suggests a moderately positive trend in employment and labor force participation, alongside a gradual decline in the unemployment rate. However, the pace of these improvements remains relatively slow compared to the needs of the economy and the accelerated transformations driven by digitalization and automation. The research findings confirm that one of the main challenges facing Romania's labor market is the mismatch between available skills and the economy's current demands. In this context, professional retraining and continuing education become essential tools for supporting employment and adapting the workforce to new occupational requirements. The analyzed literature highlights that investments in skills development and continuing education can contribute both to reducing structural unemployment and to increasing economic flexibility and competitiveness.

At the same time, the sectoral analysis presented in the study shows that sectors such as the digital economy, green energy, infrastructure, and advanced manufacturing can generate significant job creation opportunities in the coming years. In this regard, the development of an integrated ecosystem for professional retraining, based on cooperation between educational institutions, the business community, and public policies, can facilitate employment and harness Romania's economic potential. From a strategic perspective, professional retraining should not be viewed solely as a mechanism for reducing unemployment, but as an essential factor for increasing economic resilience and strengthening competitiveness in an economy undergoing continuous transformation. By developing digital, technological, and professional skills and by adapting the education system to the demands of the labor market, Romania can transform the structural vulnerabilities of the labor market into sustainable competitive advantages.

As for the study's limitations, the analysis focused primarily on macroeconomic indicators and a conceptual approach to reskilling, without including an in-depth econometric analysis or empirical studies at the sectoral level. Future research could examine the concrete impact of reskilling programs on employment and productivity, as well as regional differences in adapting skills to the demands of the digital economy.

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