

## Romania's Labor Market Prospects: Indicators for 2010 – 2020 and Estimates for 2030

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### Abstract

*For an adequate view over the Romanian labour market statistical data was explored, data sets published by INS Romania, EUROSTAT and CEDEFOP. On the topic of the future of the labor market, the interdependent dimensions of future work the number of available and the quality of occupations, discrepancy among the remunerations, social protection, employment relations and social communication. Data collection by economical active citizens - employment and unemployment rate underlined a low employment rate due to high number of inactive people, mismatched priority occupations, low qualifications and lack of needed skills for the job. The data collection considering forecast of the future work by occupations, economy sectors, job openings identified the same issues. Millions of jobs are transformed or jeopardized as a result of automation implementation. Other types of professions are created, and the routine assignments are taken over by artificial intelligence. The new careers request non-cognitive and digital capabilities.*

**Key words:** labour market, mismatch, skills, employment growth

**J.E.L. classification:** E24, J21, J23

### 1. Introduction

The current economic crisis requires finding solutions to increase the employment rate through national and European programs and strategies guided toward workforce improvement. Updating the school curriculum and vocational training adapted to the needs of the labor market, forming an entrepreneurial culture and lifelong learning are the ways to increase employment and reduce long-term unemployment.

The economic development of a society is determined by the degree of qualification, emphasizing continuous training and updating the skills needed for human capital, increasing of the workforce and rise of employment rate, the investment in education, professional training, research, innovation and development and the integration and advancement of digital technologies.

The institutional environment, accessible resources and capitalizing on the potential of artificial intelligence are the main components of economic progress.

### 2. Literature review

The study of the labor market requires the survey of employment rate (ER), productivity, the cost and the quality of work, unemployment rate (UR) and the level of training of the work force (WF). Changes in the structure of the labor market (LM) are given by the transfer of WF between the three sectors, primary secondary and tertiary, agriculture-forestry, industry - construction and services.

#### 2.1. Share of the employed population

The recovery from the economic crisis and its impact on the work force requires to identify changes and trends among the labour market.

Statistical data provides an overview of the value of the employment rate (ER) and the unemployment rate (UR) over the last 20 years. For the year 2000 Romanian employment rate registered a value of 63.6% and 6.9% unemployment rate, for 2010 ER was 60.2%, UR 7.0%, for 2015 ER reached 61.4% and 6.8% UR, for the year 2020, 3rd quarter the ER was 65.2% and UR 5.4%. According to statistical data published by the National Institute of Statistics (INS) Romania and EUROSTAT. It can be noted a decrease in the ER during the financial crisis post 2008 by 3.4% and a slight increase in 2015. After 2015, there was an increase in the number of employed population due to economic growth, but a slight decrease can be noticed since early 2020 following the COVID health crisis -19. (INS Romania and EUROSTAT)

In the primary sector, the population employed in agriculture represented 30.1% in 2010, the secondary sector, industry, was represented by an ER of 28.7%, tertiary sector, services, 41.2% population. In the growth and economic development of Romania, the industry sector remains a fundamental pillar. Increasing the share of the services sector in the labor market as well as in GDP contributes to long-term economic development. (National Commission for Strategy and Forecast)

Following the statistical data for 2010 and 2019 published by the National Institute of Statistics (INS) Romania, there can be distinguished differences in the structure of the WF and structural gaps. For 2019, the ER in agriculture registers a decrease of 9% compared to 2010, reaching 21.2%. There is a decrease of the ER in industry for 2019 by 5.6% compared to 2010, the value being 30.1%. The tertiary sector, compared to 2010, registers an increase of 7.5% of the ER, the value for 2019 being 48.7%. (INS Romania, 2011 and 2020a)

## 2.2. The structure of the Romania’s labour market

Table no. 1 gives an overview of the Romania’s economically active population, employed and unemployed, particularly women and urban area, for the years 2010 to 2019. A decrease in the number of persons is observed, due to demographics changes and labour force migration.

Table no. 1. Romania 2010 – 2020– evolution of the Economically active population, employment and unemployed (thousand persons)

	2010	2014	2015	2019	2020 – 2nd quarter
Economically active population - total, of which:	9965	9243	9159	9033	8987
- Female	4416	4015	3916	3852	3839
- Urban	5538	5078	5013	4951	4905
Employment - total, of which	9240	8614	8535	8680	8505
- Female	4128	3770	3687	3722	3644
- Urban	5032	4669	4662	4783	4655
Unemployed – total by international definition, of which:	725	629	624	353	482
- Female	288	245	229	130	195
- Urban	506	409	351	168	250

Source: INS (National Institute of Statistics Romania)

Over the period 2010 – 2019, decreasing trends can be observed in the number of economical active people, 932 thousand, a 9.35% difference, and employment, 560 thousand, a 6.06% reduction. Good progress can be observed of the unemployment decline.

Employment rate (ER) – population age 15 to 64 years, for the year 2010 it was registered a 58.8% ER and 7.3% UR, 2015 registered an increase, ER was 61.4% and UR 6.6%, for the 2019 ER was 65.8% and UR was 3.9%, a progress of 7 % over ten years of the ER. Low UR, seen in the table no 1 and percentages listed above, shows that does not imply a high ER. In Romania there is still a significant number of persons among the economically active population that are inactive.

Table no. 2 offers a picture of the Romanian employment market by main activities, according to the data researched from the National Institute of Statistics Romania.

Table no 2. Employment, by main activities of the national economy – Romania  
(thousand persons)

Activity (CANE Rev. 2 sections)	2011	2015	2019
Total	9180	8535	8680
Agriculture, forestry and fishing	2450	2184	1844
Industry (total), of which:	1577	1792	1895
Mining and quarrying	73	73	57
Manufacturing	1504	1551	1641
Electricity, gas, steam and air conditioning production and supply	110	82	84
Water supply; sewerage, waste management and decontamination activities	78	86	113
Construction	667	636	715
Wholesale and retail; repair of motor vehicles and motorcycles	1124	1149	1271
Transport and storage	419	475	512
Hotels and restaurants	174	186	222
Information and communication	161	173	178
Financial intermediation and insurance	128	105	116
Real estate activities	19	22	21
Professional, scientific and technical activities	199	185	215
Administrative and support service activities	256	204	227
Public administration and defence; compulsory social security	490	442	419
Education	369	355	359
Human health and social work activities		388	427
Arts, entertainment and recreation	65	57	69
Other activities of the national economy	171	182	190

Source: INS (National Institute of Statistics Romania)

Agriculture, forestry and fishing, manufacturing industry, wholesale and retail and repair of motor vehicles and motorcycles and construction are top four activities in the national economy. A slight decrease in numbers of people employed can be noticed, the highest change among agriculture, mining jobs, human health and social work. (see table no 2)

### 2.3. Distortions of the labour market

Mismatch on LM refers to inadequate training, the skills acquired do not match those needed to perform the tasks of the job. The following lines present some mismatches of the LM with the one of professional training, data provided by CEDEFOP.

Mismatch priority occupations for Romania's LM given by the European Centre for the Development of Vocational Training's reports (CEDEFOP, 2020b):

Shortage occupations:

- *ICT professionals*
- *Health professionals*
- *Sales, marketing and public relations senior officials*
- *Financial professionals and legislators and senior officials*
- *Professional services managers*

- *Forestry and related workers*
- *Administration services professionals*

#### Surplus occupations

- *Market-oriented skilled agricultural workers*
- *Client information workers*
- *Clerks*
- *Retail and wholesale trade managers*
- *Street vendors (excluding food)*
- *Building and housekeeping supervisors.*

Increasing productivity in the agricultural sector through the use of digital technology reduces the ER in the primary sector and the migration of this labour force, often unpaid, living on the brink of poverty, to other branches of the economy.

Among the most vulnerable groups of a society, the youth is also included, because the road between graduating from school and employment has become longer. The lack of skills needed in the current context of the LM and the inadequacy of abilities and competences formed during school with those necessary for employment are causes of rising unemployment among young people.

Youth unemployment represents a major European preoccupation reflected in the policies and strategies adopted by the European Union. The rise of unemployment has long-term negative effects at the individual, family and community levels. Unemployment among young people, 15-24 years old, for 2020 has reached the level of 15.4% in Romania. The causes of rising unemployment among the youth needs a more detailed separate study. (INS RO)

Temporary and seasonal employment contracts predominate in the employment of youth, the consequence being the segmentation of the labor market for young people through the alternation of the periods when they are unemployed or employed. The efficiency and formation of human capital among young people as a means of economic growth cannot be achieved due to this fragmentation of the labor market. (Albu, L., 2012)

Expenditures on social protection are increasing in the context of the extension in the number of unemployed and the dropout rate. These are also the source of the increasing number of people living on the limit of subsistence. The implementation of programs among young people among integrated actions that include apprenticeship, skills training, counseling and guidance can use the potential of the young adults to become integrated into the LM, a sustainable development and beneficial to the individual and society.

### **3. Research methodology**

Research methodology proceeded in literature review of the themes described and data collection.

The purpose of this paper is to identify the trends and the future opportunities and challenges of the Romania's labour market. The hypotheses are that: a low employment rate does not imply a high employment rate; mismatched priority occupations combined with low qualifications cause distortions in the LM.

For the literature review diversified titles, articles, strategy national documents, statistical data published reports were explored, the references' section names them. For an adequate view over the Romanian LM, statistical data was explored, data sets published by INS Romania, EUROSTAT and CEDEFOP, data collection by economical active citizens - employment and unemployment rate, main activities in the economy, employment by CANE sections.

### **4. Findings**

In the coming years, the most significant changes in the labor market will take place in developed and developing countries. The determining factors of these changes are analyzed in several articles that highlight the trends and results of the future work. On the topic of the future of the labor market, the interdependent dimensions of future work the number of available and the

quality of occupations, discrepancy among the remunerations, social protection, employment relations and social communication. (Balliester, T., Elsheikhi, A., 2018)

Millions of jobs are transformed or jeopardized as a result of automation implementation. Other types of professions are created, and the routine assignments are taken over by artificial intelligence. The new careers request non-cognitive and digital capabilities. Among the non-cognitive abilities requested by the employer are adaptation to change, create solutions to problems, willingness to be trained and to learn, work as a team. (CEDEFOP, 2020a)

The environment of the labour market is transformed by economic structures, integration of digital technologies and employment institutions. (Arregui Pabollet, E., et al., 2019)

For Romania, for employment expansion for 2021 – 2030 the forecast stands at 0.90% annual growth. (CEDEFOP, 2020) Detailed projections for Romania period of 2020-2030 forecast job openings, future needs amidst sectors employment growth in table no. 3.

*Table no. 3 Sectors employment growth forecast for Romania in 2020-2030, in percents*

<b>Sectors</b>	<b>Increment</b>
Accommodation & food	42.8
Administrative services	-18
Agriculture, forestry & fishing	-24.5
Arts & recreation	3.9
Construction	12.9
Education	15.3
Energy supply services	7.7
Finance & insurance	23.6
Health & social care	47.4
ICT services	9.8
Manufacturing	6.5
Mining & quarrying	-12.8
Professional services	18.7
Public sector & defence	9.3
Transport & storage	39.2
Water and waste treatment	-17.9
Wholesale & retail trade	30

*Source:* CEDEFOP, Indicator Future employment growth , CEDEFOP Skills Forecast,

Forecast of the future work by occupations, economy sectors, job openings identified the same issues, mismatched priority occupations alongside low qualifications and lack of needed skills for the job produce distortions in the LM.

Labour force projection for the years 2021 – 2030, the CEDEFOP study reports an annual rate modification of 2.20 % growth for low qualifications, a contraction of 2.20 % for medium qualifications and an increase of 4.10 % for the high qualifications. In table no. 4 it can be seen a major decrease in farm and related workers. The agriculture work is changing on account of adoption of technologies, less manual work, more use of science for weather forecast and bioengineering for productivity. Detailed projections for Romania period of 2020-2030 forecast job openings, future needs by occupation in table no. 4.

Table no. 4 Romania in 2020-2030 - job openings - future needs by occupation

Pillar	Occupations	Number
New/lost jobs	Associate professionals	78,800
Replacements	Associate professionals	141,300
New/lost jobs	Clerks	65,700
Replacements	Clerks	109,800
New/lost jobs	Elementary workers	56,200
Replacements	Elementary workers	222,000
New/lost jobs	Farm and related workers	-452,100
Replacements	Farm and related workers	818,400
New/lost jobs	Managers	14,100
Replacements	Managers	55,300
New/lost jobs	Operators and assemblers	194,300
Replacements	Operators and assemblers	284,200
New/lost jobs	Professionals	453,400
Replacements	Professionals	438,300
New/lost jobs	Service and sales workers	349,900
Replacements	Service and sales workers	378,500
New/lost jobs	Trades workers	-29,000
Replacements	Trades workers	421,400

Source: CEDEFOP, Indicator: Future needs (total job openings) by occupation in Romania in 2020-2030

Romania's labour expansion forecast for years 2021- 2030, leading large segments of the economy: motorized vehicles, land transportation, electrical equipment, residential management and community service, food and beverages.

Romania's employment growth according to the occupations, projection for 2021 - 2030:

- *Health professionals*
- *Personal care workers*
- *Legal, social and cultural professionals*
- *Business and administration professionals*
- *Legal, social, cultural and related associate professionals*
- *Street and related sales and service workers*
- *Sales workers*
- *Personal service workers*
- *Food preparation assistants*
- *Assemblers*

There is a qualification deficiency which requests a correlation between economic sectors, professions and skills training. Lack of trained workers causes vacancies among certain professions that cannot be filled. Uneven functions of the economy can occur due to negative impact upon welfare systems and economic progress attributable to long term unemployment.

Increasing the employment rate alongside reducing poverty can be accomplished by investments and flexibility of the labour market. Initial education followed up by skills and professional training is mandatory in the context of the lower request for low skilled jobs. It is mandatory to develop abilities to become a long-life learner as many present jobs will disappear on account of digitalization and artificial intelligence use. Encouraging investment environment is given by socio-economic stability, creative and innovative abilities and qualified human capital.

## 5. Conclusions

Labor market statistics provide estimates for the future, identifying job opportunities in each economic sector, increase in the number of the jobs demand for a profession or an economic sector, a mismatch in the skills, vacancies and hard to find specialists. The environment of the labour market is transformed by economic structures, integration of digital technologies and employment institutions. (Arregui Pabollet, E., et al., 2019)

It is necessary for Romania to develop a strategy in the field of employment, policies and national reform programs, emphasizing the implementation of those effective measures to increase the potential of the economy, achievement of the proposed targets, including the inclusion of vulnerable people and reducing the number of citizens at risk of poverty, development of a sustainable economy for the benefit of every citizen. Furthermore, coping with changes and foresee solutions applied by the 3Es actors among the LM, the employee, the employer, and the employment organizations.

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