
STRUCTURAL CHANGES OF LABOR IN ROMANIA AFTER 1990

PhD Lavinia-Ștefania ȚOȚAN

Academy of Economic Studies, Bucharest

PhD Candidate Marinela GEAMĂNU

PhD Gabriela TUDOSE

National Institute for Labor and Social Protection

Abstract

The labor market is an important component of the entire economic system and for social-economic development. However, the labor market is known as the most inflexible of markets, the existence of the phenomenon of permanent labor mobility. After 1990, the Romanian society has experienced a series of economic and social transformation, new reforms covering all areas of activity. Simultaneously, the transition process faced many difficulties, claiming the high social costs in terms of inflation, unemployment, income polarization, reducing purchasing power etc. We believe that one of the directions in which it is necessary to focus the labor market recovery work, its efficiency, optimize the quality of human resources, improving education and training, reducing poverty and unemployment, improve the health of the population. Labor issues are several years unsolved human potential is an outstanding factor in economic and social landscape of the country and local level.

Key words: employment, economic development, labor market, analysis.

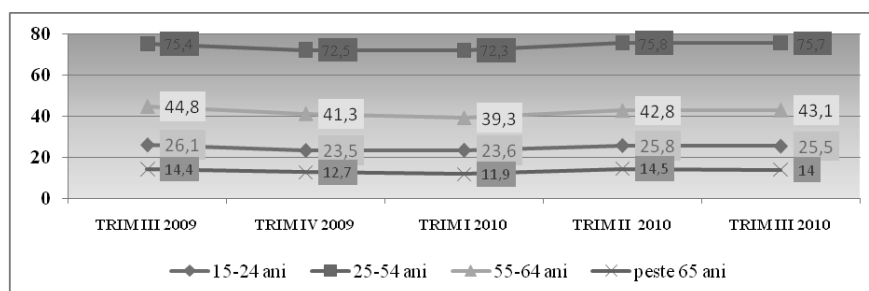
Statistical data and information obtained by registering investigated the characteristics of units in general, a large number of variants, which prevents the formation of concrete images and complete on some communities, appearing ordering units required depending on development level features. Method of grouping / classification is one of important statistical methods used for data processing. Such as how groups / classifications made depends largely qualitative highlighting and understanding of the types is outlined in the socio-economic communities and communities structure. To calculate different specific weights after previously employed population was grouped / classified by characteristics such as gender, age, residence, education level, duration of work, activities of national economy, professional status, ownership, occupation groups. Dynamic analysis highlights the structural changes occurring in the population occupied by each grouping of

characteristics established in the period 1990-2010. Romania is a country with great potential for employment. In 2009, the population aged 15 years and over represented 84.8% of the total population, respectively 19,303 thousand compared with 1999, when the same indicator represent 81% of the total population, 18,227 thousand. After 1990, following the passing of the old mechanisms of centralized socialist economy to a market economy based on free competition, change and employment model. The transition to a market economy was based on extensive legislative and institutional reforms of the labor market, focusing on three main elements:

- Partnership in managing labor market;
- Decentralization of employment services and openness to collaboration on a competitive contract with private employment services;
- Employment is a tense area of human development landscape. “In the third quarter 2010 employment rate of working age population (15-64 years) was 60.2% and the ILO unemployment rate of 6.9%.

The data presented shows that only age group 25-54 years, the employment rate increased by 0.3% in the third quarter 2010 compared with third quarter 2009. For other age groups there was a decrease in the employment rate by 1.7% for the age group 55-64 years, 0.6% for age group 15-24 years and 0.4% for those 65 and peste. Pe 1990-2009 period, the data reflects a continuing precarious employment, employment descreștere. Numărul registering a decreased average employment per year to 127 840 people (22.4%) decrease due to involutions made overall economy. There is a reduction in the level of employment, the employment rate, but also job security amid unemployment chronicity.

Evolution of the employment rate of the population over 15 years old and over, by quarters in 2010 (%)



Source: [4]

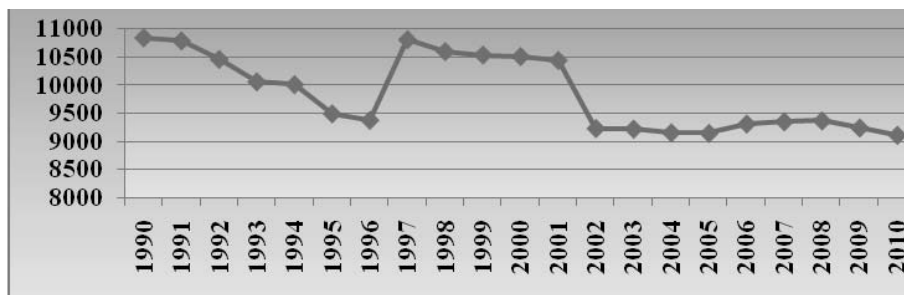
Between 2000 and 2009 the activity rate of total population decreased by 0.1% from 63.2% in 2009 to 63.1% in 2000. At the same time, the number

of employees decreased by 155 000 people in 2009 compared to 2005 from 4,774,000 people in 2009 to 4,623,000 people in 2000. There is a decrease in 2009 compared with 2008 the number of employees by 336 000 persons, from 8.411 million people in 2009 to 8,747,000 people in 2008. Active population decreased by 20,000 people in 2009 compared to 2008, from 9,924,000 people in 2009 to 9,944,000 unemployed people in 2008. A increased (from 575 000 people in 2008 to 709,000 persons in 2009). Active population decrease was due to the number of unemployed and employed due to a shrinking population. Decrease the unemployment rate was lower (decreasing by 5.4%) decrease of employment rate (which was 3.9%). In 2009 the proportion of employed persons in the total population was 59%. To analyze the concentration of employment in national economic activities were calculated Gini coefficients and concentration Struck (for 1990 and 2009).

The results are: ($C_G^{1990} C_G^{1990}=0,4855$; $C_S^{1990} C_S^{1990}=0,4077$; $C_G^{2009} C_G^{2009}=0,4135$; $C_S^{2009} C_S^{2009}=0,3092$).

The highest concentration of employment in national economic activity was registered in 1999. ($C_G^{1999} C_G^{1999}=0,4964$; $C_S^{1999} C_S^{1999}=0,4218$). There were many redundant employees, increasing unemployment and decreasing the number of employees in the country at the time). It was recorded for both 1990 and for 2009, a fairly intense concentration of employment in national economic activity, concentration is more pronounced at the beginning than at the end, because in 1990 nearly 50% of total employment was concentrated in agriculture. In the period 1990-2010 the number of employed population in Romania had the following evolution presented in graphical representation. Restructuring of industries, started a few years ago, but accelerated in the second half of 2010, coupled with a series of active policy measures as well as private sector support for the creation of a surplus in places work, are expected to lead to change the trend.

The evolution of employment between the period 1990-2010



Source: [2]

It was tested the statistical significance of the differences between the employment rate from the different regions. It was used the ANOVA method with the Fisher test. Although intuitive graphical representations can offer equality environments for several populations, graphic process does not provide sufficient arguments to make decisions in this regard, with a dose of subjectivity. In agreement with this method, a statistical hypothesis testing model removes subjectivity and add scientific rigor of the analysis.

We worked the following data: total population by county employment by counties, which were calculated employment rates by region:

$$r_{oc}^{ij} = \frac{P_{oc}^{ij}}{P^{ij}} * 100 ,$$

where P_{oc} (employment), P (total population), iar „j” (county), iar „i” (region).

The average rates at the region:

$$\bar{r}_{oc}^i = \frac{\sum_j P_{oc}^{ij}}{\sum_j P^{ij}} * 100 .$$

The total employment rate at the country level:

$$\bar{R}_{oc} = \frac{\sum_i \sum_j P_{oc}^{ij}}{\sum_i \sum_j P^{ij}} * 100 .$$

The null hypothesis claims that there are significant differences in average employment rates across regions and alternative hypothesis claims that at least two media are different from each other.

$$H_0 : \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6 = \mu_7 = \mu_8$$

H_1 : least two means are different.¹

μ_j represents the average rate of employment for the region level, $j=1-8$

The used test:

$$F = 0.085 < F_{0.05;2;23} = 2.65.$$

For a level of significance of 5% ($\alpha=0.05$) and a probability of 95%, accept the null hypothesis and reject the alternative. It can be said that there is no significant difference between the employment rates of people in different parts of the country. The region with the highest employment rate represents Bucharest (63.8%) and North East (60.6%). Regions with the lowest employment rates were the central (55.1%) and North West (55.2%), due to the low economic region. However, considering the data series on the employment rate of the population in the counties, it can be noted that the average employment rate of 55.1% for the whole country, we obtained a standard deviation of 3.14%, with a coefficient of variation of 5.69%. ratio was averaged and representative data series on employment rates county population was homogeneous with less variation.

The hierarchy of development regions

It were established five criteria and was carried ranking regions for 2008: GDP / capita (current prices), the employment rate of the population (%) of adult literacy (%) Life expectancy (years) and rate gross enrollment at all levels of education. Indicators were important for the region, influencing the degree of economic development. Ranks given distribution by regions of PIB/habitant, employment rate, adult literacy rate, life expectancy and gross enrollment rates at all levels

| Regiuni statistice | Ranguri acordate pentru: | | | | | Distanța medie | Rang final | Poziția față de unitatea cu performanța maximă |
|--------------------|--------------------------|-----------------|------------------------|-------------------|--------------------------|----------------|------------|--|
| | PIB/locuitor | Rata de ocupare | Gradul de alfabetizare | Speranța de viață | Rata brută de cuprindere | | | |
| Nord-Est | 0,254 | 0,917 | 0,980 | 0,990 | 0,724 | 0,696 | 8 | 71,1 |
| Sud-Est | 0,341 | 0,937 | 0,961 | 0,987 | 0,728 | 0,739 | 6 | 75,4 |
| Sud | 0,343 | 0,944 | 0,967 | 0,990 | 0,700 | 0,737 | 7 | 75,2 |
| Sud-Vest | 0,319 | 0,981 | 0,989 | 0,991 | 0,751 | 0,746 | 5 | 76,1 |
| Vest | 0,447 | 1,000 | 0,989 | 0,977 | 0,791 | 0,807 | 2 | 82,3 |
| Nord-Vest | 0,367 | 0,972 | 0,983 | 0,980 | 0,765 | 0,765 | 4 | 78,1 |
| Centru | 0,395 | 0,989 | 0,996 | 1,000 | 0,744 | 0,780 | 3 | 79,5 |
| București-Ilfov | 1,000 | 0,907 | 1,000 | 0,997 | 1,000 | 0,980 | 1 | 100 |

It was a hierarchy of regions after the five criteria listed above, using **the method of ranks and distance relative to peak performance.**

a) **The method of ranks** - involves assigning ranks for municipalities each, in turn, the value of each indicator taken as a criterion for ranking: the highest quality or performance unit receives rank 1, the next unit leading 2, 3, ... n (rank n equals the number of units being assigned to the series investigated unit records minimum quality level of each variable). By summing the ranks assigned units to obtain a score. Administrative-territorial unit with the lowest score is the most efficient in terms of all criteria under study and obtain final rank 1. As the score increases, and final rank until they reach the rank 'n' given administrative unit which obtained a maximum score. In 2008, on the basis of five criteria and the application method ranks shows that the region better positioned in relation

to these criteria is Bucharest (rank 1), followed by the West (rank 2), central region (rank 3) and among the most disadvantaged regions in this fall: North-East (last position - rank 8), the South (rank 7) and Southeast (rank 6). It's true that this method provides facility and assessing the application, but it presents the main drawback double smoothing variable size differences between units by replacing them with an arithmetic progression with ratio 1. As a result, it loses much of the quality of information, different distances between successive units being systematically replaced with difference 1 between successive ranks.

b) the method of relative distance to peak performance

In 1997, on the basis of five criteria and the application method ranks shows that the region better positioned in relation to these criteria is Bucharest (rank 1), followed by the West (rank 2), central region (rank 3) and among the most disadvantaged regions in this fall: North-East (last position - rank 8), the South (rank 7) and Northwest (rank 6). Hierarchy regions has not changed significantly in 2008, compared to 1997. Singura region had a favorable outcome was North West of the 6th place in 1997 to 4th in 2008, due to increased investment in the area, increased the rate of employment in the region. By applying this method to obtain a clearer hierarchy of administrative units. This method involves ranking each criterion, determining the distance of each unit relative to that which recorded the maximum. This distance is expressed as relative measures of coordination subunit (as is chosen as a basis for comparison with maximum performance unit). Relative sizes of coordination that characterize a same territorial unit is combined by calculating their geometric mean, which expresses the average distance that is administrative-territorial unit to a hypothetical unit which is defined in that same time get maximum performance all criteria.

Ranks given statistical distribution by regions PIB/habitant, employment rate, the level of adult literacy, life expectancy and gross enrollment rates at all levels

| Region | Ranks: | | | | | Average distance | Final rank | The position towards maximum performance unit (%) |
|-----------|--------------|-----------------|----------------|-----------------|----------------------|------------------|------------|---|
| | PIB/habitant | Employment rate | Adult literacy | Life expectancy | Gross enrolment rate | | | |
| NE | 0,533 | 0,897 | 0,980 | 0,990 | 0,724 | 0,804 | 8 | 82,5 |
| SE | 0,733 | 0,922 | 0,981 | 0,987 | 0,728 | 0,862 | 5 | 88,4 |
| South | 0,651 | 0,931 | 0,960 | 0,990 | 0,700 | 0,834 | 7 | 85,5 |
| SV | 0,686 | 0,976 | 0,967 | 0,991 | 0,751 | 0,864 | 4 | 88,8 |
| West | 0,807 | 1,0 | 0,989 | 0,977 | 0,791 | 0,908 | 2 | 93,1 |
| NV | 0,631 | 0,965 | 0,983 | 0,980 | 0,765 | 0,852 | 6 | 87,4 |
| Centru | 0,724 | 0,986 | 0,996 | 1,0 | 0,744 | 0,880 | 3 | 90,2 |
| București | 1,0 | 0,885 | 1,0 | 0,997 | 1,0 | 0,975 | 1 | 100 |

Under this method, the region is also the most advantageous position Bucharest, followed by the western and central. In last place is situated North-East and South. The results are similar to those obtained in the previous analysis method. On employment' analysis in territorial can give some guidance regional policies, without no power to take decisions in the administrative-territorial units.

Conclusions

For the further restructuring and privatization, increasing openness of the national economy, foreign trade, employment problems at territorial level will increase complexity due to reasons such as:

a) existence of a high birth rate and hence important labor resources in the north-east and east of the country. Dynamics jobs but do not reflect these tensions on the labor market;

b) enrollment rates at all levels are higher in the western area of Bucharest;

c) literacy of the population is the highest in the region Bucharest.

d) the most developed region of the country is Bucharest-Ilfov (,s highest GDP per capita and the lowest rate of unemployment).

Notes

1. Țoțan L., „Proiecția deficitului de ocupare”, ASE, București, 2011;
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3. Raportul Național al Dezvoltării Umane/1999;
4. „Ocupare și șomaj(trim . III/2010)-Cercetarea statistică asupra forței de muncă în gospodării-AMIGO”-Comunicat de Presă /5.01.2011/INS.
5. Vergil Voineagu și colectiv, „Teorie și practică econometrică”, Editura Meteor Press, 2007;

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1. Țoțan L., „Proiecția deficitului de ocupare”, teză de doctorat, 2011, ASE;
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