

The Labor Market in Romania, between Supply and Demand

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ABSTRACT

„The purpose of this paper is to highlight the harmonization between the supply of job vacancies by major groups of occupations in the Romanian economy, and the demand for jobs of unemployed from different age groups in the period 2005-2013. On the other hand, we can also have an interpretation of how different occupations may or may not be compatible with the skills of those who are looking for a job. The method used is panel data econometrics. Quarterly data are used for the eight regions. The analysis results show that relatively developed regions tend to have vacancies in sectors paid less, while the relatively poorer regions, recorded surpluses of labor in most segments of the labor market.”

Introduction

The realities they designate by the concept of labour market and the functioning of its underwent many changes over time.

The new labour market theories have their origins in traditional methodology developed by the neoclassical school, represented by Alfred Marshall, Milton Friedman, Paul Samuelson, John Hicks, keynsist (John Maynard Keynes) and its precursors. The Marxist approach, the essential feature of the labour market is that the centre is not working but exchange labour, i.e. labour capacity further, "what the worker sells his labour but not direct its workforce which currently offers available ... "(Karl Marx., 1969 b). If labour we understand that all existing physical and intellectual skills in human personality and that it put into operation when creating economic goods, means that the work is labour-conscious spending. The two concepts, form a coherent whole, so that the synonymous use of the two expressions, the labour market or the labour market in economic theory and practice is beneficial for the decision their situation into the mainstream economy. From an economic perspective, unemployment can be regarded as an unused labour capacity and potential mismatches between skills and availability to those who are unemployed and those sought by employers, increasing unemployment is reflected in a loss of income for individuals, increasing the pressure in terms of public spending on social benefits and a reduction in tax revenue. On the other hand, demand from those who benefit from this ability to work is the job vacancies. So, can coexist the labour market segments which show a surplus labour force (those that offer higher wages and better working conditions) and segments where there is shortage of manpower, which is characterized by the persistence of a high number job vacancies (those

where wages are close to the minimum wage and working conditions are difficult). Reducing the degree of compatibility between vacancies and unemployment stands out in the economy progresses record low macro process. Unemployment, labour market indicator is most widely used because of international comparability and availability in time. This indicator is used by the European Commission, other institutions, and the media, the banking institutions which can use data for business cycle analysis, and the general public interested in changes in the labour market. In addition to unemployment, job vacancies, respectively, job vacancies rate, also provides useful information on labour market developments.

One of the most popular tools for monitoring the relationship between the two indicators is the Beveridge curve. Beveridge Curve reflects the negative relationship between vacancies and unemployment. Structural changes in the economy can generate changes in the Beveridge curve. Empirical analysis of the curve can be challenging because both movements along and shifts curve could occur simultaneously with different intensities. Beveridge curve made in the paper "Development of scenarios for the loss of labour and human capital of Romania" Research Contract no. 91-050 / 21.09.2007, PN II - Partnerships in priority areas of ASE., Dir. Dorel Ailenei. Show an alternation between compatibility between vacancies and unemployment in different periods. These situations are due to macroeconomic stabilization in Romania. Moreover, economists prestigious Nobel laureate Peter Diamond and Aysegul Şahin from the Federal Reserve Bank of New York, believes the Beveridge curve could not say anything useful, during the recession, or as a result of the economic downturn, because even if the rate of job increase, the unemployment rate remains at a high level. In this paper we aim to highlight the relationship between the supply of job vacancies by major groups of occupations in the Romanian economy, regional demand jobs of unemployed part in different age groups in the period 2005-2013, ante crisis during the crisis, and post economic crisis. On the other hand, we have a different interpretation of how occupations may or may not be compatible with the skills they hold those who are keep looking for a job.

Econometric Model

Data used in the model

To achieve the analysis, we considered four models with software Eviews panel 8, we studied the impact rate of job vacancies by major groups of occupations, the ILO unemployment rate for age groups: 15-24, 25-34 years, 35-54 years and 55-64 years. The data used are quarterly periodicity sourced National Institute of Statistics, the statistical and research from workforce Survey (AMIGO), for eight Development Regions of Romania. The independent variables are: Job vacancy rates for for workers in agriculture (W_agr), workers in industrial activities (W_ind), service workers (W_serv), unskilled workers (W_unSK), workers in public administration (W_pa) and highly qualified Specialists (HQS).

Descriptive statistics

If you take a picture of the labor market in Romania in the last period that analyzed, we find that employment rate was down from the previous quarter to 0.74%, but 0.55% higher than the rate of job than the year before. The major groups of occupations, the highest rates were recorded for specialists in various fields (1.16%), plant operators and machines; assemblers of machines and equipment (0.80%), unskilled workers (0.74%), technicians and other technical professionals (0.69%), administrative officials (0.63%), members of the legislative body, of executive, senior government leaders, managers and senior officials (0.59%), workers in the service sector (0.57%), skilled workers in agriculture, forestry and fishing (0.50%), skilled workers and assimilated (0.40%).

In the regions, the rate of job respectively unemployment rate is presented in Figure 1.

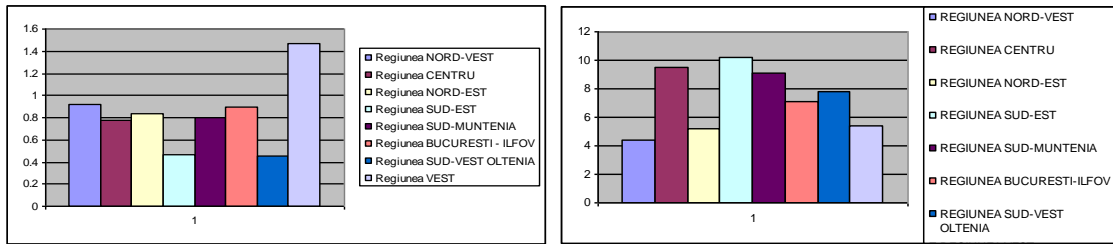


Figure 1: The rate of job vacancies and unemployment in the developing regions in Q4 2013.

During the entire analyzed period, the unemployment rate and the rate of job vacancies was evolution in Figure 2. We see a similar trend in that with increasing rateil vacancies, unemployment is found at a lower level.

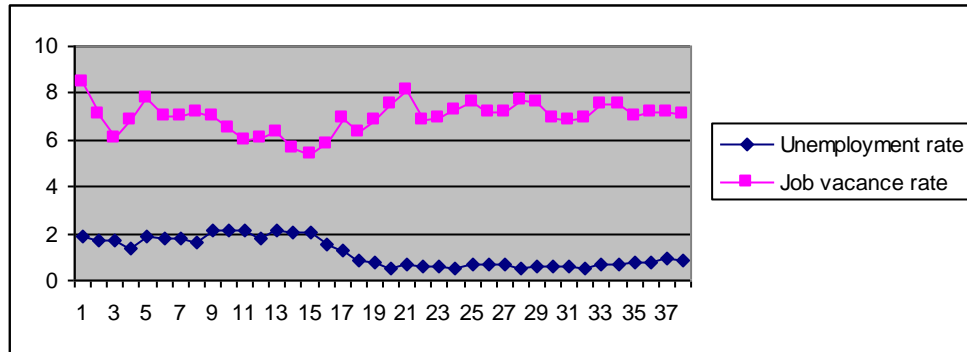


Figure 2: The unemployment rate and the rate of job vacancies in 2005-2013.

If we look at the graph in Figure 3 we notice that in Bucharest Ilfov, but also in the Central region (but and in other), the rate of job vacancies, decreases sharply during 2008, keeping a very low level until the end of the period. The unemployment rate, as shown by records and reversed it starts to grow from 2008 to 2012, then decreases, but not keeping pace with growth.

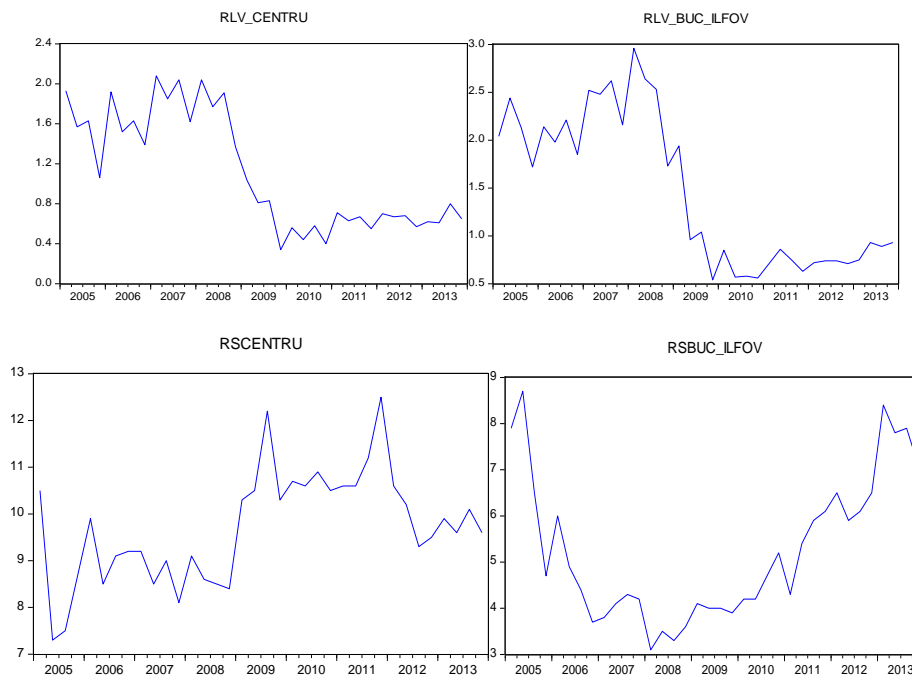


Figure 3: Job vacancies rate and unemployment rate in B-I and Centre region

Econometric analysis

The econometric analysis is based on estimating the four models on panel data in Eviews 8 for age groups 15-24, 25-34, 35-54 and 55-64. A panel data regression has a double index on its variables.

For the four estimated models the equation has the form:

$$rs_{it}^j = c_0 + c_1 X_{1,it} + c_2 X_{2,it} + \dots + c_n X_{n,it} + \alpha_i + \beta_t + u_{it}$$

The dependent variable is rs_{it}^j = unemployment rate for the j age group, in the region i, at the time t. The independent variables are $X_{1,it}$ = the rate of vacancies (JVS) in the region i, at time t, for the six major categories of occupations

$c_0 \dots c_n$ = the coefficients (parameters) of the model,

α_i = individual effects

β_t = period-specific effects

u_{it} = individual random effects, in period t
j = 1-4, i = 1-8, t = 1,36.

There is the possibility of using several types of panel data models. Model with fixed effects (FE) model aleatoare effects (RE) and a simple regression, if it denies heterogeneity units crosssectionale. Main difference is between models with fixed effects (FE) and random effects (RE). In models with fixed effects, ai error component can be correlated with the regressors xit. In RE models, it is assumed that ai is totally random error, a stronger assumption, which implies its correlation with regressors (Baum, 2001).

The first step in the estimation of a panel is to determine whether the regression is a panel model with fixed effects (FE) or random effects model. The test is used to determine what kind of effect used is Hausman test. The test has the null hypothesis random effects (RE) and the alternative hypothesis model with fixed effects (FE).

Baltagi suggests that should be considered, both possibilities (RE / FE) so that it can estimate both models and can choose the best model taking into account the criteria information and / or economic context. When analyzes are conducted in the counties, provinces - often it is preferable to use a fixed effects model (Wooldridge, 2002). The analysis presented in this paper starts by linearizing variables involved in the model, by logarithm operation.

The results of Hausmann test for the four models are presented in Table 1.

Table 1: Correlated Random Effects Hausman

	Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f	Prob.
15-24	Cross-section random	1.639438	6	0.9497
25-34	Cross-section random	10.773508	6	0.0956
35-54	Cross-section random	10.442210	6	0.1072
55- 65	Cross-section random	5.080770	6	0.5335

These results lead us to not accept the null hypothesis, namely that the proposed models are random effects model (RE), and accept the alternative hypothesis, namely that the models available are models with fixed effects (FE).

The results are summarized in Table 2

Variable	15-24 Years	25-34 Years	35-54 Years	55-64 Years
LL_IND(coefficient standard deviation)		-0.218782 (0.074229)	-0.213677 (0.066916)	-1.072219 (0.457813)
LL_AGR(coefficient standard deviation)				
LL_SRV(coefficient standard deviation)	-1.607010 (0.783003)			
LA-AP(coefficient standard deviation)	-0.721971 (0.340086)	-0.165994 0.065302	-0.149110 (-0.149110)	
LL_NC(coefficient standard deviation)			0.105837 (0.041696)	
L_SPEC(coefficient standard deviation)		0.104218 (0.050690)	0.110776 (0.045096)	
\bar{R}^2	0.57	0.60	0,62	0,50

Table 2: The Variables statistically significant for the four models estimated

Following these results estimated four models with fixed effects (FE) and application redundancy test (Likelihood) showed their robustness (table 3).

	Effects Test	Statistic	d.f	Prob.
15-24	Cross-section F	40.945460	(7,249)	0.0000
	Cross-section Chi-square	201.449777	7	0.0000
25-34	Cross-section F	44.008581	(7,249)	0.0000
	Cross-section Chi-square	211.772906	7	0.0000
35-54	Cross-section F	54.962349	(7,249)	0.0000
	Cross-section Chi-square	245.689409	7	0.0000
55-64	Cross-section F	23.170959	(7,249)	0.0000
	Cross-section Chi-square	131.925752	7	0.0000

Table 3: Redundant Fixed Effects

The results of estimating panel models for eight regions, as shown in table 2, indicate that the variables that passed the significance threshold of 0.05% are for the age group 15-24 years, places work in major group of occupations denoted by L_ serv, which includes jobs in services, trade, tourism, personal care, health, etc., and jobs in the local and central public administration, education, in a relationship reverse unemployment.

L_ind, vacancies that addresses workers with secondary education, foremen, skilled workers, operators of machines and tools, is related to reverse unemployment rate for all those in search of jobs over 25 years. Note is that for people over 55 years are jobs only in the above mentioned, which is seeking qualified individuals with secondary education. Employment for occupations in the field of public administration is also an area that is in harmony with the demand for those who are looking for a job, for people between 15 and 54 years. We also observe significant presence in the labor market, the supply for unskilled workers, but also for specialists in various fields, which however, being in a direct relationship with unemployment. One possible explanation would be that these are jobs that lead to a frictional unemployment. They are poorly paid job, compared to expectations of those who are looking for a job.

Conclusions

It finds that unemployment is a lagged indicator to events in the economy. When there is economic recession, the unemployment rate begins to increase after a few months, when the economy starts to recover employers usually remain cautious about hiring new staff and can take several months until unemployment starts to fall.

The analysis shows a mismatch between supply and demand of jobs. This incompatibility can be solved by the application of active policies on the market. We may provide assistance to the unemployed that will improve their chances of getting a job. Employment Agencies workforce can contribute to meeting the unemployed and available jobs announced by economic agents by providing training courses since vacancies may require different qualifications from those who can provide them unemployed. Lack of compatibility of qualifications can be a particular problem for long-term unemployed, for the unemployed over 50 years, whose general qualifications can be damaged from lack of their use and / or specific job qualifications cannot be transferable to future employers. A similar incompatibility can affect young people who leave school without having the required qualifications on the labor market. This work represents part of a larger study dedicated to the influences of various factors, social and economic effects on unemployment phenomenon. An identification of the multidimensionality of the phenomenon, the identification of patterns, a comparative analysis with developments seen in other EU countries.

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