# RESEARCH CONCERNING THE EFFECTS OF THE PUBLIC POLICIES ON THE UNEMPLOYMENT AMONG THE YOUNG PEOPLE IN THE NORTH-EAST REGION OF ROMANIA

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#### Abstract

This paper has the goal to identify the specific role that various regulatory institutions of the labor market have on the variation of the macroeconomic indicators which describe the employment situation of the young people on the labor market in the North-East Region of Romania. In this research we have used statistic data provided by the National Institute of Statistics of Romania among which we have selected a series of relevant variables regarding the characterization of the public policies for the labor market and the legislation of employees' protection. Their influence on the variation of the unemployment rate and the employment rate concerning the young people in the North-East Region was studied using the method of the statistics regression, undergoing a filtration using the Stepwise procedure, implemented within the informatics program SPSS.

**Key words:** Nord-Est Region, unemployment, youth, public policies, regression analysis

JEL Classification: J1; J2.

#### I. INTRODUCTION

The studies realized by Nunziata&Ochel (2005) and Bassanini, Nunziata&Venn (2009) pointed out the role that the regulatory organizations of the labor market and the legislation of employees' protection have.

The social protection systems differ in terms of:

- the relative proportion of the pro-active support scheme unlike the ones of the type passive income;
- the direction and the intensification of the expenses allocated by the national budgets;
- the dimension and the types of fiscal stimuli for the young people employment.

Concerning the active policies regarding the work force occupancy, the studies presented in the specialty literature are not conclusive enough regarding their impact on the perspectives of the youngmen hiring (Heckman et al., 1999 and Kluve, 2006).

The sum of the public costs for the active policies concerning the work force occupancy fluctuates very much in the countries from the euro area, but it seems that it has no influence on the relative efficiency of the policies from these countries.

Kluve (2006) interprets the empiric disposable proves, namely, the lack of some clear positive aspects regarding the youngmen occupancy, by the fact that the "youngmen seem to be, especially, difficult to assist".

According to Vogel (2002) and Pastore (2015), in terms of the mix between the social politics in relation to the education system and the professional preparation, the European countries can be grouped differently in terms of the transition school-active life regime.

The countries in the North of Europe generally have a low flexibility of the labor market. In return, the labor market agencies have a growing efficacy, representing an optimal option in looking for a job. Also, these countries are characterized by a high degree of syndication and benefit of a well-developed system of social protection (Pastore&Luca 2015). We can find schemes of passive aid but the active measures are also generally implemented. The unemployment among young people in these countries is relatively reduced.

The Anglo-Saxon countries have implemented a flexible system of the labor market which offers a low cost of employment/reduction of the labor force. The level of syndication was high in the past, but lately we have registered a decreasing trend. The employment agencies are mostly private. The internships are only present for the disadvantaged/vulnerable groups but these people must proof that they are actively looking for a job. The unemployment rate among the young people is relatively reduced compared to the rest of the European countries. Also, the relative disadvantage between the young people towards the adults concerning the employment possibilities is relatively reduced.

In the Southern European countries one of the most used methods by the young people in finding a job are the informal networks, among families and friends.in Italy, for instance, until 2011 it was not possible to make internships. These countries presented a high rate of unemployment over the years.

In the countries which have recently entered the UE we can register a flexibility of the labor market, and also, the level of the budget expenses for the active and passive aid measures has increased. However, during the last period, at the level of these countries, the debate has been oriented towards the problem according to which, even with an excellent education system, the unemployment rate among young people has remained generally high.

A study undertaken by the Organization for Cooperation and Economic Development showed that the regulations for protecting the employees have a negative aspect on the absorption of the unemployed on the work market, especially of the young people. The study reveals the insignificant aspect of the protective measures on the unemployment on its whole, contrary, it seems that they have a significant aspect on the demographic structure of the unemployment, the unemployment rate among adults tends to be lower than the one registered among youngmen (OECD, 1999).

Generally, an increased degree of regulation for the employees' protection seems to be to the detriment of the youngmen in terms of the aspects which will be presented further.

According to another study realized by OECD, in 1994 it was promoted the idea according to which the growing possibilities to find a job by the young people and, consequently to eliminate the experience disparity between the young people and the adults can be realized only within a flexible labor market. This thing was argued by the fact that a more flexible labor market gives the young people the possibility to change a job with another one and thus, the experience disparity between the two age categories is reduced. Thus, if this enunciated principle is correct, the labor market regulator can approach two strategies in order to make the labor market flexible.

The first one would be the growing possibility for the young people to find a new job, immediately after they start the unemployment period. A part of the economists claim the idea that the longer the unemployment period is, the lower the employment probability of the fellow is. This thing can be explained by the fact that once the unemployment period grows, the possibility that the respective fellow forgets/loses his knowledge/abilities also grows. Also, it must also be taken into consideration the fact that the human resources managers during the interviews and the recruitment period have in view the duration during which the interviewed people haven't been working. The more a young person has spent a long period being unemployed/ inactive, the more this can be considered by the employers as being a sign of a low work motivation. (Pastore&Luca 2015)

In conclusion, the politics concerning the labor market should offer the young people more possibilities to gain experience through temporary jobs. In fact, the specialty literature mentions some disadvantages of the temporary jobs (Booth et al 2002, Ochel 2008):

- -Temporary jobs allow the young people to test and find the optimal compatibility with different employers
  - -The employers can allocate low costs for low productivity
  - -The employers have the possibility to test the young people before a long term engagement.

Another important aspect which must be taken into consideration by the regulatory authorities of the labor market is to minimize the mechanisms of imposing the salary values at national level, like the establishment of a minimum salary. Through this kind of measures a salary threshold is imposed for all the employees, regardless their abilities, age or specific demands concerning the job. Under these conditions, the enterprises are a lot more reticent to employ inexperienced young people who will produce less than an experienced adult. A solution would be to establish some differentiated salary levels for the inexperienced young people who produce low levels of productivity.

Concerning the regulation of the minimal salary, some studies based on economic models indicated the fact that establishing a minimal salary blocks the young workers' hiring (Neumark şi Wascher, 2004). Pereira (2003) analyzed the strong increase of the minimal salaries for the youngmen aged between 18-19 years from Portugal in 1987 and he could show that this policy had a negative aspect on the degree of the work force occupancy among young people, comparing to the one registered among the adult population, aspect that indicates that the employeers tend to replace the young employees with aged employees if a discriminatory policy is applied.

Another approach could be the reduction of the employment costs, respectively, dismissal for the enterprises which want to employ young people. The increased costs associated to an action of dismissal of the employees tend to discourage the economic workers in making hires during the periods of economic increase, because it will be too expensive to dismiss those employees if that economic trend will not be a tenable one for a long period. A protective legislation will force the employers to occupy the vacant jobs only with experienced employees. This aspect will surely disadvantage the young unemployed, as long as the employers do not have detailed information concerning their abilities and skills.

On the other hand, there are opinions expressed by the economists who claim that the flexibility of the labor marketand the temporary jobs would not represent pertinent solutions to eliminate the experience disparity between young people and adults.

Studies realized by Heckman &Borjas (1980) and by Heckman & Singer (1984) have shown the fact that the probability to find a job does not lay in an inverted relation with the unemployment period, in other words the probability doesn't decrease continually, but after a certain level it becomes constant. Thus, the long term unemployment is a consequence of the lack of motivation and of abilities of the unemployed and not of the unemployment duration. Under these conditions, the politics mentioned before could be viable only if the young unemployed people are motivated. However, if we look more carefully at these motivated young people we can say they are still not employed because they haven't found their most adequate employment option yet.

Thus, the regulatory authorities of the labor market should orientate their efforts on the less motivated young people, in order to help them find a job by implanting some employment politics and by programs of active stimulation of the labor market for a short term. For a long term, the best solution is to increase their education and preparation level.

The Nobel Prize laureate Gary Becher thinks that the opportunities for temporary jobs could be a solution in order to eliminate the experience disparity between the young people and the adults. But, this outlines the fact that concerning the workplaces for which specific knowledge/abilities are required, the reduction of the salaries in relation with the implantation of some specified period contracts won't lead to an improvement of the unemployment situation because the employers will prefer the experienced adults against the young people who are at their first experience in the labor field. On the other hand, the specified period contracts and the reduced salaries will discourage the young people to invest in getting some specific competences. In this context, the formal education is more important than the salaries reduction or the stimulation of the short term jobs to obtain a growth of the employment rate.

The presented ideas could indicate the fact that sometimes the short term jobs can be stressful for the young people and sometimes they can force them remain captive in a low remuneration system, more exactly, the young people tend to accept the bad paid jobs and remain in these conditions for a long period of time, instead to accumulate experience and reduce the experience disparity.

Thus, from what we have presented, as well as from the studies realized by Bassanini, Nunziata& Venn (2009), we can conclude that none of the 2 presented ideologies (flexibility vs. rigidity) can offer solutions for all the situations. It is necessary to realize an optimal mix between the different instruments which have in view not only the flexibility degree of the labor market, but also the education, the professional preparation, the social protection system and the system of fiscal stimuli in order to facilitate the employment of the poorer prepared groups of young unemployed people.

#### II. RESEARCH METHODOLOGY

So as to the econometric characterization of the way in which the variables afferent to the regulations afferent to the labor market develop their influence on the variation of the variables which describe the situation of the labor market, concerning the young people in the North-East Region, we have used the method of the multifactor linear regression.

The aim of the multiple regression is to point out the relation between a dependent variable (explained, endogenous, resultative) and a mass of independent variables (explicative, factorial, exogenous, predictors) by using the multiple regression we often try to get the answer for one of the questions: "which is the best prediction for ...?", "which is the best predictor for..?" (Clocotici 2014),

The linear models can be expressed by relations such as

$$y=x~\alpha+\epsilon$$

# Where

- y is a dependent variable (explained, endogenous, resultative),
- x is the vector of the independent variables (explicative, exogenous), with the dimension  $1 \times p$ ,
- $\alpha$  is the vector of the coefficients, with the dimension p×1, the parameters of the model,
- $\epsilon$  is a variable, interpreted as an error (perturbation, measurement error, etc.) In other words,

$$y = \alpha_1 x_1 + \alpha_2 x_2 + \ldots + \alpha_p x_p + \epsilon$$

which expresses the linear relation between y and x.

The processing data was realized using the informatics program SPSS ver. 20. In order to identify the best prediction (model) we used the selection procedure "step by step" (stepwise regression). The procedure starts by including in the model of the independent variable having in view the biggest correlation coefficient with y variable. Within each following step, another variable is analyzed, not included yet in the model through a sequential test F and we can extend the model by including that variable which has a maximal contribution (the critical probability of the F test is the smallest). At a future step of the regression it is allowed the elimination of a variable. A variable eliminated from the model becomes a candidate to be included in the model, and a variable

included in the model becomes a candidate for the exclusion. So that the process does not start an infinite cycle, it is obligatory that  $P_{IN} \leq P_{OUT}$ .

The concept of young person is defined by the United Nations Organisation as representing the person aged between 15 and 24 years. Concerning the unemployment analysis on age groups, it could be noticed that young population under 25 years old represents the most affected group of population.

In order to characterize the situation of the labor market at the level of unemployed people between 15-24 years old we have chosen the following variables:

- •The rate of employment at the level of the North-East Region, on the whole, respectively divided taking into consideration the residence area (urban and rural) (Code ER, ER\_U, ER\_R)
- •The unemployment rate BIM at the level of the North-East Region, on the whole, respectively divided taking into consideration the residence area (urban and rural) (Code UR, UR U, UR R)

The data is taken from the statistics realised by the National Institute of Statistics of Romania within the Labor Force Survey in Menages (AMIGO).

ER U Year ER ER R UR UR U UR R 1996 47,4 43 22,4 57,6 23,8 13 1997 43 21,3 21,3 44 58,6 11,8 1998 43 37,1 22,1 58,4 17,4 9,5 1999 42,3 22 57,7 16,7 35,2 9,1 2000 41,7 22,9 56,5 31,7 9 15,8 22,1 7,7 2001 40,1 54,8 14,7 30,7 2002 36 19,9 33,7 11,5 49,4 18,4 2003 41.9 31.4 18,8 26,6 8,3 14.1 2004 33,2 19.5 45,4 17,2 31.9 9.8 2005 28,1 16 39,3 16,8 32,6 8,7 2006 25,9 36 14,8 17,8 34,5 9,1 2007 26,5 15,8 36 14,7 27,4 8,6 26,5 2008 16,9 34,6 14 26,4 7,5 2009 27,7 15,6 37,6 16,2 34,7 7,3 31,2 2010 18 41,4 13,2 29,5 5,9 2011 32 17,3 42,6 11,9 28,5 5,5 29,3 2012 14,1 39.8 12.3 32 5,6 2013 30,6 16,7 39,6 12,4 27,8

Table 1 – The evolution of variables which describe the labor market (lei)

Source: (INS, 2015)

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At the level of the dimension - The Regulations afferent to the labor market, we have assumed from the official statistics the following variables:

- The yearly expenses with social protection of the unemployed people in the North-East Region -Unemployment benefit (unemployed people without experience) - values comparable to the year 2014, the unemployment benefit (according to the Law no. 76/2002 concerning the insurances system for the unemployment and the stimulation of the employment)represents a partial compensation of the incomes which are allowed to the unemployed people as a consequence of losing a job or to the graduates of an education institution. (Code UB)
- The yearly expenses with social protection of the unemployed people in the North-East Region Expenses for the professional preparation - values compatible for the year 2014. The expenses for the professional preparation represent the expenses for qualification, requalification, perfection and specialization of the people who are looking for a job; the professional preparation is realized through courses, internships and specialization, organized on levels of preparation, on the basis of the national plan of professional preparation. (Code PP)
- The yearly expenses with social protection of the unemployed people in the North-East Region the graduates' payment - values compatibles for the year 2014. The graduates' payment represents the sum allowed to the employers who have offered a long term job to the graduates of an education institution.
- The yearly expenses with social protection of the unemployed people in the North-East Region payment to stimulate the graduates – values compatible for the year 2014. Since 2006, the young graduates who get a job with a normal work schedule for a period longer than 12 months receive a non-chargeable gratification equal to the value of the social reference indicator operative at the date of their employment. (Code SG)

- The yearly expenses with social protection of the unemployed people in the North-East Region payment for the stimulation of the unemployed people who get a job before the unemployment period ends values compatible for the year 2014. The payment for the stimulation of the unemployed people who get a job before the unemployment period ends represents the sums paid in addition to the salary to the unemployed people (with experience at the workplace and to the graduates of an education institution). According to the Law no. 76/2002 art. 72 and art. 73 with the ulterior modifications and completions. (Code SU)
- The yearly expenses with social protection of the unemployed people in the North-East Region payment for the stimulation of the labor force mobility values compatible for the year 2014. The payment for the stimulation of the labor force mobility represents the sums allowed as installation gratification to the unemployed people who get the job before the period during which they receive the unemployment benefit ends, in a place which is situated to a distance further than 50 km from their normal residence and as installation gratification to the unemployed people who find a job before the period during which they receive the unemployment benefit ends, in another place and, as a consequence, they change their residence. (Code SM)

Table. 2 - The evolution of the variables that reflect the dimension - The Regulations afferent to the labor market

Year	UB	PP	GP	SG	SU	SM
1996	180423441	9238522	15024200	-	-	-
1997	123773612	17014273	9820970	-	-	-
1998	153290385	14662758	32054748	-	-	-
1999	148164483	13312698	34561086	-	-	-
2000	133168926	10843972	32146416	ı	-	-
2001	115961417	6463463	31689318	ı	-	-
2002	98487516	8833440	43879585	ı	25702891	3604680
2003	73507686	12223039	67330447	ı	52518918	8119127
2004	96244525	17160435	82726728	ı	57621210	11527385
2005	17247733	3432847	17146421	ı	2741792	1143994
2006	11443433	4128649	14187198	480558	2744714	832693
2007	9409936	3646623	14537348	849465	2368295	924883
2008	9039454	3571677	12038960	940445	2068605	920957
2009	16163502	2926796	11342670	517035	2115231	687286
2010	25916323	2587208	6311931	551237	3157757	942646
2011	15826749	2222158	7600806	500385	2268376	556672
2012	13676097	2216644	7866681	518676	1167212	489206
2013	14312714	2354042	7309157	529632	1596253	613495
2014	13860849	2611040	7578916	566323	1568001	513278

Source: (INS, 2015)

#### III. RESULTS OF DATA ANALYSIS

The econometric modulation of the relation between the employment rate and the variables afferent to the dimension - Regulations afferent to the labor market

The best found model to estimate the value of the employment rate for the young people in the North-East Region is:

EM = 35,620 - 6,806E-7\*GP

Table 3 – Model summary

Coefficient of determination	Ractorial variables	Unstandardized coefficients	Standardized coefficients
	Constant	35,620*	
0,877	The yearly expenses with social protection of the unemployed people in the North-East Region – the graduates' payment	-6,806E-7*	-0,937

<sup>\*</sup> significant from a statistic point of view at a level of 0,05

The found model manages to surprise approximately 88% of the employment rate for the analyzed period.

By analyzing the regression coefficients we can outline that the growth by a standard deviation of the yearly value of expenses afferent to the graduates' payment led to a decrease for the analyzed period, on the average, by approximately 0,9 standard deviations of the employment rate among young people.

The found situation can be explained through the following arguments:

- The decision the labor force employment is not a decision generated by the social aid schemes applied by the Government
- According to the law no. 76/2002, on the basis of which these subsidies are offered, the employer, in order
  not to be penalized to return all the obtained sums, must not interrupt the work rapports with the employee for
  at least three years. This aspect is considered a too big risk for the employer, especially in an uncertain
  economic environment.
- The bureaucracy from the Romanian public institutions, respectively the continually modified legislation, discourages the employers to look for the estate support when they initiate/develop an entrepreneurial project which needs to accumulate labor resources.

The analysis of the influence of the variables afferent to the dimension Regulations afferent to the labor market on the variable the employment rate divided in terms of residence environment (urban-rural) didn't lead to significant different results.

# The econometric modulation of the relation between the unemployment rate and the variables afferent to the dimension - Regulations afferent to the labor market

The best found model to estimate the value of the unemployment rate for the young people in the North-East Region is:

$$UR = 8.71 + 3.003E-6*PP - 5.773E-6*SG$$

1 abie 4 – Model Summary							
Coefficient of determination	Kactorial variables	Unstandardized coefficients	Standardized coefficients				
	Constant	8,710*					
	The yearly expenses with social protection of the unemployed people in the North-East Region - Expenses for the professional preparation	3,003E-6*	1,067				
	The yearly expenses with social protection of the unemployed people in the North-East Region – payment to stimulate the graduates	-5,773E-6*	-0,495				

Table 4 – Model summary

The found model manages to surprise approximately 88% of the unemployment variation rate for the analyzed period.

By analyzing the regression coefficients we can outline:

- The expenses for the professional preparation are directly related to the unemployment rate, thing which is explainable by the fact that the unemployed are obliged to attend qualification and requalification courses organized by the County Agencies for Employment.
- The is an inverted correlation between the estate expenses to stimulate the graduates and the unemployment rate, thing that indicates the fact that this type of subsidy offered to the graduates has the expected effect on the evolution of the unemployment rate, more clearly, it stimulates the graduates to keep their job for a longer period than 12 months.

The analysis of the influence of the variables afferent to the dimension Regulations afferent to the labor market on the variable the rate of unemployment divided in terms of residence environment (urban-rural) didn't lead to significant different results.

### IV. CONCLUSION

Concerning the regulations afferent to the labor market, the experience of different countries has outlined the fact that the legislative measures which impose certain standards on the labor costs for the young people do not manage to accomplish the efficient goal, moreover, they sometimes discourage the economic organizations to employ young people.

<sup>\*</sup> significant from a statistic point of view at a level of 0,05

The identified models managed to surprise a significant proportion of the variation of the indicators which describe the employment situation of the young people on the labor market in the North-East Region of Romania

By analysing the value of calculated regression coefficients (all of them very significant from a statistic point of view at a level of 0,05) we could outline the isolated influence of the factorial variables. Thus, we can conclude that:

- By analyzing the regression coefficients we can outline that the growth by a standard deviation of the yearly value of expenses afferent to the graduates' payment led to a decrease for the analyzed period, on the average, by approximately 0,9 standard deviations of the employment rate among young people. The found situation can be explained by the fact that according to the Romanian law no. 76/2002, on the basis of which these subsidies are offered, the employer, in order not to be penalized to return all the obtained sums, must not interrupt the work rapports with the employee for at least three years. This aspect is considered a too big risk for the employer, especially in an uncertain economic environment. Also, the bureaucracy from the Romanian public institutions, respectively the continually modified legislation, discourages the employers to look for the estate support when they initiate/develop an entrepreneurial project which needs to accumulate labor resources.
- The expenses for the professional preparation are directly related to the unemployment rate, thing which is explainable by the fact that the unemployed are obliged to attend qualification and requalification courses organized by the County Agencies for Employment.
- The is an inverted correlation between the estate expenses to stimulate the graduates and the unemployment rate, thing that indicates the fact that this type of subsidy offered to the graduates has the expected effect on the evolution of the unemployment rate, more clearly, it stimulates the graduates to keep their job for a longer period than 12 months.

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## V. REFERENCES

- Bassanini, A., L. Nunziata and D. Venn (2009), "Job protection legislation and productivity growth in OECD countries," Economic Policy, 24(58): 349-402.
- Booth, A.L., M. Francesconi and J. Frank (2002), "Temporary Jobs: Stepping Stones or Dead Ends?", Economic Journal, 112(480): F189-F213
- 3. Contini, B (2010). Youth Employment in Europe: Institutions and Social Capital Explains Better then Mainstream Economics, Discussion Paper No.4718. University of Torino
- 4. Clocotici Valentin (2014), Regresia liniară multiplă, Accessed at http://profs.info.uaic.ro/
- 5. Eurostat (2015). Regional statistics by NUTS classification. Accessed at http://ec.europa.eu/eurostat/web/regions/data/database
- 6. Hapenciuc Cristian Valentin, Condratov Iulian (2015), Empiric findings of the analysis in the dynamics of the youth unemployment in the North-East Region Romania European Union, The USV Annals of Economics and Public Administration, Vol 15, No 2(22)
- Heckman, J. L. (1999). The economics and econometrics of active labour market programs, in: Ashenfelter, O. and Card D. (eds.), Handbook of Labour Economics, Vol. 3. Amsterdam: Elsevier.
- 8. Heckman, J. J., G. J. Borjas (1980), "Does Unemployment Cause Future Unemployment? Definitions, Questions and Answers from a Continuous Time Model of Heterogeneity and State Dependence", Economica, 47(187): 247-83.
- 9. Heckman J. J., B. Singer (1984), A Method of Minimizing the Impact of Distributional Assumptions for Duration Data, Econometrica 52, 271–320.
- 10. Isengard, B (2003). Youth Unemployment: Individual Risk Factors and Institutional Determinants: A Case Study of Germany and the United Kingdom. Journal of Youth Studies, 6 (4), 357-77
- 11. INS. (2015). Baza de date TEMPO. Accessed at http://statistici.insse.ro/shop/
- 12. Kluve, J. (2006). The effectiveness of European Active Labour Market Policy. RWI Discussion Paper (37).
- 13. Nickell, S., L. Nunziata, W. Ochel (2005), "Unemployment in the OECD since the 1960s. What do we Know?", Economic Journal, 115 (500): 1-27.
- 14. Neumark, D. W. (2004). Minimum wages, labour market institutions and youth employment: a cross-national analysis. Industrial and Labor Relations Review, 57(2), 223-248.
- Ochel, W. (2008), "The Political Economy of Two-Tier Reforms of Employment Protection in Europe", Cesifo Working paper, n. 2461.
- 16. OECD (1994), "The OECD Jobs Study", OECD Publications, Paris.
- 17. OECD (1999), OECD Employment Outlook
- 18. Pastore Francesco, Luca Giuliani (2015), The determinants of youth unemployment. A panel data analysis, Discussion Papers-CRISEI, University of Naples "Parthenope", Italy,
- 19. Pastore, F. (2015), The Youth Experience Gap. Explaining National Differences in the School-to-Work Transition (2015), Physica Verlag, Heidelberg.
- 20. Pereira, Sonia C. (2003), "The Impact of Minimum Wages on Youth Employment." European Economic Review, Vol. 47, No. 2
- 21. Vogel, J. (2002). European Welfare regimes and the transition to adulthood: A comparative and longitudinal perspective. Social Indicators Research, 59(3), 275–299.