ANALYSIS REGARDING THE INFLUENCE OF THE ECONOMIC ENVIRONMENT ON THE UNEMPLOYMENT VARIETY AMONG THE YOUNG PEOPLE IN THE NORTH-EAST REGION OF ROMANIA

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Abstract
The specialty literature pointed out the fact that the unemployment represents a dysfunction of the labor market and among the main factors of this, a central role is represented by the economic factors. Moreover, especially for the unemployed between 15-24 years old we could identify a more increased influence.
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 economic environment in the North-East Region. 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: *unemployment, youth, Nord-Est Region, Romania, regression analysis, economic environment*

JEL Classification: *J1; J2.*

I. INTRODUCTION

According to Contini (2010), the unemployment among youngmen represents a function of the macroeconomic conditions of a country, of the existent conditions within the work market, respectively, of the existent regulations within the work market. The countries with increased rates of economic development offer the basis of creating new jobs and, so, at the possibility of fast assimilation of the work force disposable.

The unemployment among young people tends to be more sensitive at the economic cycles than the unemployment among adults, the number of unemployeed youngmen tends to increase faster during the recession periods and to decrease, in the same way, during the periods of economic increase, than the number of unemployed adults. The most studies conclude the fact that the aggregated economic performance represents a decisive factor of the unemployment rate among youngmen. (Blanchflower și Freeman, 2000).

The countries with a low rhythm of economic development where the business environment doesn't encourage the start-ups present increased rates of unemployment among young people (ILO, 2011).
The study realized by Dimian (2011) investigates the performance of work market at the level of young population and their influence on the future development in the economic and social sphere within the countries from Central and East Europe. The undertaken analysis shows the fact that the dole and the rate taxes applied to the force market have impact on the unemployment rate registered at the level of the young population. Also, the study identifies that the countries which present increased percentages of young employees in the agriculture domain don't confront problems concerning the unemployment at the level of this population category.

Other empiric researches on the unemployment problem among youngmen also contain the study realized by Dimitrov (2012) who examines this aspect among the young population and some factors like the early school abandon, the weak quality of the educational system and the economic cycles which have represented the key determinants of the increased unemployment among young people. The study also shows that the social statute and the family historical have an important impact on the unemployment among young people. If both parents or one of them are part of these categories: unemployed people, inactive people, people with a low educational degree, people without qualification or abilities, people with low incomes, people who belong to ethnic groups, there is a bigger risk for their descendants to confront the same problem.

The study undertaken by Bruno & Cazes (1998) presents the unemployment situation in France. The study results indicate an increased rate of the unemployment among youngmen as a consequence of the specific conditions from the work market related to the general level of the economic activity. The study also shows that the lack of qualifications, the increased costs of the work force , the imbalanced competition among youngmen and adults for occupying a job, the disadvantaged salary system determine the aggravation of the unemployment problem among young people in France.

A comparative study related to the unemployment among youngmen realized in Germany and Great Britain also provides proves concerning the increased rates of the unemployment at the level of this population category. The study shows that the young women are in an disadvantaged position concerning a job finding, when in Great Britain the men are the disadvantaged ones (Isengard, 2003).

Baccaro&Rei (2005) studied the institutional factors as determinants of the unemployment in 18 OECD countries using series of data for the period 1969-1998. The research was realized using the method OLS. The conclusions of the study have shown that the real rate of the interest, at the level of monetary politics, is a predictor with positive influence on the unemployment and the variation of the index of the consumption price has a negative influence on the unemployment.

Noor et. al (2007) analyzed the presence , in Malaysia, of Okun relation between the unemployment and the output, using the data for the period 1970-2004. The study used the Okun method of first degree differentiation and the causality test Granger and it has pointed out that in the case of Malaysia, there is an inverted relation between the economic growth and the unemployment.

Ray (2011) realized a study regarding the applicability of Philips curve at the level of the economic data, from India, in the period 1970-2010. The study was realized using the Generalized Method of the Moment (GMM) method and it has pointed out the fact that there is a direct relation between the economic growth and inflation. The identification of the Philips curve could be realized only in short periods of time.

In the study entitled Empiric findings of the analysis in the dynamics of the youth unemployment in the North-East Region - Romania - European Union (Hapenciuc, Condratov, 2014) we have highlighted, on the basis of the statistics data provided by Eurostat, the fact that the evolution in the period 2007-2013 of the indicators which characterize the unemployment, respectively the degree of employment, of the young people in the North-East Region was different from the average values of reference in the UE and even form the values aggregated in Romania.

The unemployment rate registered in the North-East Region during the period 2008-2013 tends to be reduced yearly, given the conditions of crossing the period of the worst financial crisis, while to a national level, respectively the level of European Union, there is registered a worrying rise of the values indicator. Although, we must emphasize the significant discrepancy between the values of the activity rate registered in Romania, respectively in the North-East Region. If in the North-East Region the percent of the activity rate registered values of even 36, 3% in 2011, reported to the level of the national average that didn't overcome the value of 31, 2% during the whole analyzed period, though it is far from the registered value in Europe (UE-28 countries) that, even if it is on a slightly descendant line, it didn't diminish under the percent of 42% during the analyzed period.

Thus, a very high interest has been represented by the identification of the significant economic factors which led to this divergent evolution from the other territorial unities.

II.   RESEARCH METHODOLOGY

So as to the econometric characterization of the way in which the variables afferent to the economic environment 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

$$y = x\,\alpha + \varepsilon$$

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

In other words,

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

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.

The North East Region covers mostly the historical regions of Moldova and Bucovina, representing 15,5% of Romania's total area. The region is comprised of 6 counties: Bacău, Botoşani, Iaşi, Neamţ, Suceava and Vaslui.

The assessment of the data for previous years shows that the gross domestic product per capita in the Nord-Est Region has, up to the present time, the lowest level of the 8 regions, with a maximum of 72.3 % and a minimum of 68.39% from the value of the GDP/capita recorded nationally, placing it last from this perspective. It is however common knowledge that the Nord Est Region is the last in the hierarchy of European regions, from the perspective of the GDP/capita. (Păuna, 2010)

Constructions and transport are the branches generally recording an economic increase starting with 2000, due, on one hand, to the high demand for the creation, restoration and development of the physical infrastructure, and, on the other, to the intensification in the commercial flows.

Commerce ran a long period of decline, with decrease amounting to 14% in 2000, followed by a sudden increase by 35%, in 2004, when the population purchasing power increased.

Services (except constructions, commerce) are the ones who generally counterbalanced the negative evolution of the main sector, due to their positive contribution.

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 environment (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 environment (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).

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

Year	ER	ER_U	ER_R	UR	UR_U	UR_R
1996	43	22,4	57,6	23,8	47,4	13
1997	43	21,3	58,6	21,3	44	11,8
1998	43	22,1	58,4	17,4	37,1	9,5
1999	42,3	22	57,7	16,7	35,2	9,1
2000	41,7	22,9	56,5	15,8	31,7	9
2001	40,1	22,1	54,8	14,7	30,7	7,7
2002	36	19,9	49,4	18,4	33,7	11,5
2003	31,4	18,8	41,9	14,1	26,6	8,3
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	14,8	36	17,8	34,5	9,1
2007	26,5	15,8	36	14,7	27,4	8,6
2008	26,5	16,9	34,6	14	26,4	7,5
2009	27,7	15,6	37,6	16,2	34,7	7,3
2010	31,2	18	41,4	13,2	29,5	5,9
2011	32	17,3	42,6	11,9	28,5	5,5
2012	29,3	14,1	39,8	12,3	32	5,6
2013	30,6	16,7	39,6	12,4	27,8	7

Source: (INS, 2015)

Concerning the dimension of the economic environment we have considered relevant the following variables:

• The monthly average gross earning in the North-East Region – values compatible for the year 2013-Ron. (Code GE)

The monthly average gross earning represents the proportion between the sums paid to the employees by the economic agents in the reference month, regardless the period for which they are due, and the average number of employees. The average number of employees represents a simple arithmetic average calculated on the basis of the daily effectives of employees in that month.

• The monthly average gross earning in the North-East Region in the sector of agriculture, forestry and fishing -values compatible for the year 2013-Ron. (Code GE_A)

• The monthly average gross earning in the North-East Region in the sector of industry- values compatible for the year 2013-Ron. (Code GE_I)

• The monthly average gross earning in the North-East Region in the sector of constructions - values compatible for the year 2013-Ron. (Code GE_CN)

• The monthly average gross earning in the North-East Region in the sector of commerce - values compatible for the year 2013-Ron. (Code GE_CM)

• The monthly average gross earning in the North-East Region in the sector of hotels and restaurants - values compatible for the year 2013-Ron. (Code GE_HR)

• The number of the active enterprise in the North-east Region – total. (Code AE)

The enterprise is a group of legal units which constitutes itself as an organisational entity of goods of production, commercial services or social services which benefits of decision autonomy, especially in order to ensure its current resources.

The active enterprise is the entity which, economically is active (during the observation period), respectively it realises goods or services, registers expenses and elaborates a balance sheet.

• The number of active enterprises in the North-East Region in the sector of agriculture, hunting and forestry (Code AE_A)

• The number of active enterprises in the North-East Region in the sector of industry (Code AE_I)

• The number of active enterprises in the North-East Region in the sector of commerce (Code AE_CM)

• The number of active enterprises in the North-East Region in the sector of construction (Code AE_CN)

• The number of active enterprises in the North-East Region in the sector of hotels and restaurants (Code AE_HR)

• The proportion of GDP obtained in agriculture, hunting and forestry in total regional GDP (Code GDP_A)

• The proportion of GDP obtained in industry in total regional GDP (Code GDP_I)

• The proportion of GDP obtained in constructions in total regional GDP (Code GDP_CN)

• The proportion of GDP obtained in commerce in total regional GDP (Code GDP_CM)

Table 2 - The evolution of variables that describe the dimension of economic environment

Year	GE	GE_A	GE_I	GE_CN	GE_CM	GE_HR	GDP_A	GDP_I	GDP_CN	GDP_CM	AE	AE_A	AE_I	AE_CM	AE_CN	AE_HR
1996	1147	909	1234	1226	844	683	21%	28%	5%	10%	-	-	-	-	-	-
1997	895	641	989	896	621	455	23%	28%	5%	10%	39191	1522	5090	875	27034	1269
1998	888	638	943	834	557	469	21%	24%	5%	12%	39414	1505	5356	992	26807	1278
1999	846	713	863	758	529	450	19%	24%	4%	12%	38631	1485	5558	1057	25823	1237
2000	851	661	884	718	507	461	17%	23%	5%	16%	37001	1287	5592	1151	24074	1183
2001	949	776	968	791	591	596	19%	25%	5%	15%	37387	1206	5866	1375	23213	1239
2002	1012	834	990	823	640	631	19%	24%	6%	14%	37992	1271	6330	1596	21426	1620
2003	1084	823	1054	943	730	664	17%	22%	6%	15%	41103	1330	6651	1945	21699	1761
2004	1212	1038	1165	1033	875	701	16%	23%	6%	17%	45962	1401	7189	2299	23367	1963
2005	1309	1036	1241	1074	908	764	14%	22%	6%	17%	49985	1493	7386	2767	24497	2198
2006	1453	1149	1320	1214	980	800	13%	20%	7%	19%	53140	1650	7452	3419	25173	2372
2007	1712	1313	1546	1397	1276	1009	8%	20%	9%	20%	57168	1788	7591	4706	25733	2589
2008	1965	1547	1714	1580	1300	1054	9%	19%	10%	19%	60898	1903	8530	5135	26317	2813
2009	1964	1628	1759	1627	1340	1052	9%	19%	10%	18%	59051	2056	7151	6164	23580	3266
2010	1845	1625	1796	1540	1369	1083	9%	25%	9%	14%	53165	2022	5075	5075	21431	2948
2011	1760	1591	1806	1477	1351	1026	10%	24%	8%	12%	48591	2004	5871	4534	19340	2605
2012	1746	1558	1817	1440	1290	1023	7%	21%	9%	16%	50298	2099	5977	4642	19672	2755
2013	1808	1614	1796	1366	1313	1027	-	-	-	-	51395	2149	5979	4803	19723	2880

Source: (INS, 2015)

III. RESULTS OF DATA ANALYSIS

The econometric modelation of the relation between the employment rate and the afferent variables of the dimension – the Economic environment

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

$$ER = 4,255 + 84,821 * GDP\_I + 0,003 * AE\_A$$

Table 3 – Model summary

Coefficient of determination	Factorial variables	Unstandardized coefficients	Standardized coefficients
0,958	Constant	4,255*	
	The proportion of GDP obtained in industry in total regional GDP	84,821*	0,857
	The number of active enterprises in the North-East Region in the sector of agriculture, hunting and forestry	0,003*	0,319

* Significant from a statistic point of view at a level of 0,05

The found model manages to surprise aproximately 96% of the variation rate of employment during the analyzed period.
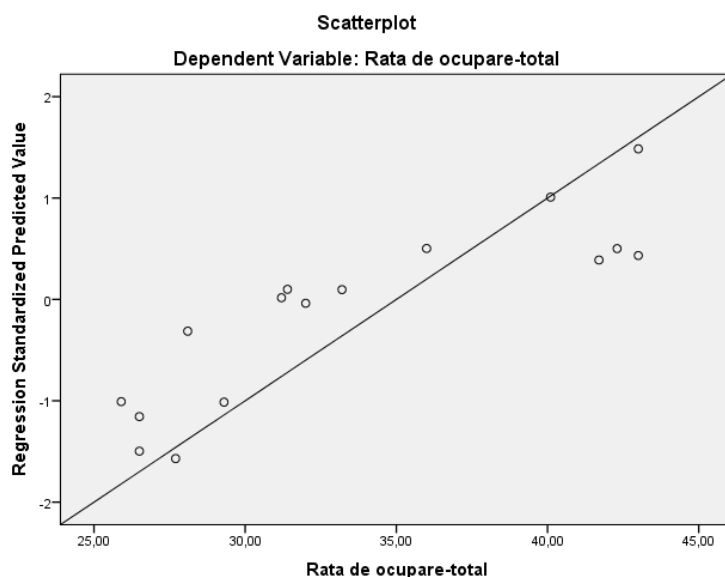
Figure 1: Scatterplot between the observed values of the variable - the employment rate and the estimated standard values

The Scatterplot graphic outlines a group compact around the bisector of the coordinating points represented by the observed values of the variable - the employment rate of young people between 15-24 years old and of the standard values estimated using the model. This thing reiterates, this time in a graphic way, the fact that the identified model is relevant and approximates relatively in a truthful way the statistic relation between the presented variables.

Analysing the value of the coefficients of regression we can point out the isolated influence of factorial variables:

- The growth by one percent of the industrial sector in the regional GDP leads to an yearly average growth by 85% of the employment rate of the young people
- The growth by one unit of the number of active enterprises in the sector of agriculture, hunting and forestry leads to an yearly average growth of the employment rate of the young people by 0,003%.

It is obvious that the intensification of the activity in these two main sectors, agriculture and industry, leads to a growing employment rate of the young people in the North-East Region.

The rest of the variables afferent to the dimension of the economic environment have been eliminated because they didn't bring any improvement to the prediction power of the model, respectively, their inclusion could lead to the situation of multicollinearity.

The regression analysis applied on the data divided taking into consideration the residence environment (urban-rural) didn't lead to significantly different results.

The econometric modelation of the relation between the unemployment rate and the afferent variables of the dimension – the Economic environment

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

$$UR = 20,798 - 0,007* GE\_HR$$

Table 4 - Model summary

Coefficient of determination	Factorial variables	Unstandardized coefficients	Standardized coefficients
0,429	Constant	20,798*	
	The monthly average gross earning in the North-East Region in the sector of hotels and restaurants - values compatible for the year 2013-Ron	-0,007*	-0,655

* significant from a statistic point of view at a level of 0,05

The found model manages to surprise approximately 43% of the variation rate of unemployment during the analyzed period.
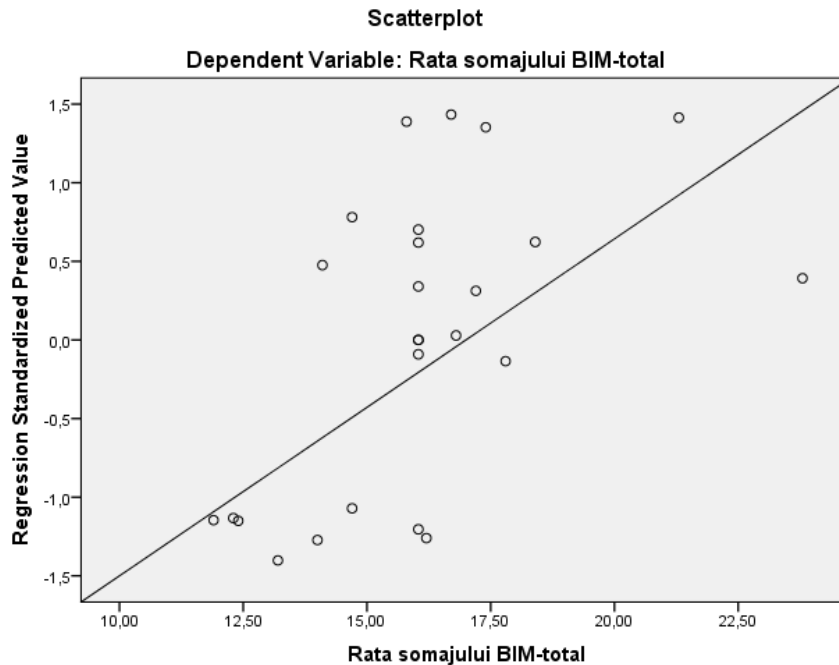
Figure 2: Scatterplot between the observed values of the variable - the unemployment rate and the estimated standard values

The Scatterplot graphic outlines a group, relatively compact around the bisector of the coordinating points represented by the observed values of the variable-the unemployment rate of young people between 15-24 years old and of the standard values estimated using the model. This thing reiterates, this time in a garphic way, the fact that the identified model is relevant and approximates relatively in a truthful way the statistic relation between the presented variables.

Having in view the differentiation of the measurement units of the analyzed variables, respectively of the dimension order of the associated values, in order to interpretate the regression coefficients it is better to analyze the standard coefficient. Thus, we can say that a growth with a standard deviation of the monthly average gross earning (values compatible for the year 2013) in the sector of Hotels and Restaurants led to a decrease during the analysed period, on an average, with approximately0,7, standard deviation of the unemployment rate of the young people.

The sector Hotels and Resturants was one of the main economic sectors which contributed to the absorption of the labor force offer among young people.

The rest of the variables afferent to the dimension of the economic environment have been eliminated because they didn't bring any improvment to the prediction power of the model, respectively, their inclusion could lead to the situation of multicollinearity.

The regression analysis applied at the level of divided data considering the residence environment led to the following results:

- For the data afferent to the unemployment rate for the young people form the urban environment we didn't get significantly different results.
- For the data afferent to the unemployment rate for the young people form the rural environment – the monthly average gross earning in the sector of agriculture, forestry and fishing was the one which led to obtain the best model of prognosis.

Table 5 – Model summary

Coefficient of determination	Factorial variables	Unstandardized coefficients	Standardized coefficients
0,593	Constant	12,315*	
	The monthly average gross earning in the North-East Region in the sector of agriculture, forestry and fishing - values compatible for the year 2013-Ron	-0,004*	-0,770

* significant from a statistic point of view at a level of 0,05

The found model manages to surprise approximately 60% of the variation rate of the unemployment among the young people from the rural environment during the analyzed period.

Scatterplot

Dependent Variable: Rata somajului BIM-rural
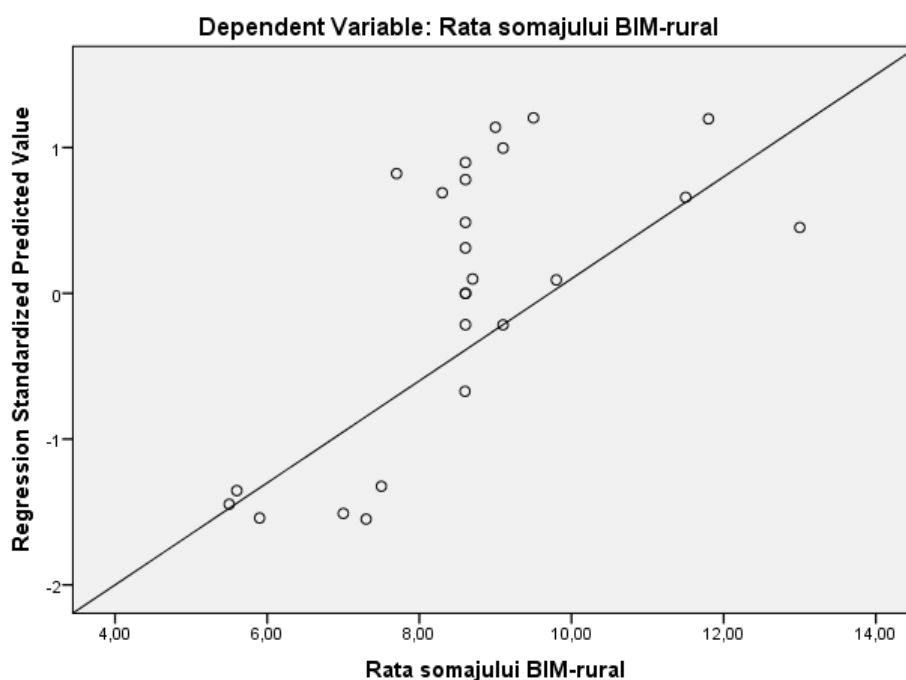
Figure 3: Scatterplot between the observed values of the variable - the unemployment rate in rural area and the estimated standard values

The Scatterplot graphic outlines a group, relatively compact around the bisector of the coordinating points represented by the observed values of the variable-the unemployment rate of young people between 15-24 years old from rural area and of the standard values estimated using the model. This thing reiterates, this time in a graphic way, the fact that the identified model is relevant and aproximates relatively in a truthful way the statistic relation between the presented variables.

The analysis of the value of the standard regression coefficient associated to the factorial variable. The monthly average gross earning in the sector of agriculture, forestry and fishing leads to the conclusion that a growth with a standard deviation of the monthly average gross earning in the sector of agriculture, forestry and fishing leads to a decrease of the unemployment rate among young people in the rural area during the analyzed period with 0,77 standard deviations. The model outlines a known relation between the earnings in the agricultural

sector and its attractivity for the young people. The development of the agriculture sector, which can allow to produce higher earnings could be one of the solutions that can lead to reduce the unemployment and to grow the life quality in the rural area.

IV.   CONCLUSION

The general economic environment has a significant influence on the variation of the unemployment rate among young people. This aspect could be pointed out by the relatively high levels of the determination coefficients calculated within the identified models of regression.

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:

• The growth by one percent of the proportion of the industrial sector in the regional GDP leads to an yearly average growth by 85% of the employment rate of young people.

• The growth by one unit of the number of the active enterprises in the sector of agriculture, hunting and forestry leads to an yearly average growth of the employment rate of young people by 0,003%.

It is obvious that the intensification of the activity in these two main sectors, agriculture and industry, leads to a growing employment rate of the young people in the North-East Region.

The regression analysis applied on the data divided taking into consideration the residence area (urban-rural) didn't lead to significantly different results.

• The growth with a standard deviation of the monthly average gross earning (values compatible for the year 2013) in the sector of Hotels and Restaurants led to a decrease during the analysed period, on an average, with approximately 0,7, standard deviation of the unemployment rate of the young people.

The sector Hotels and Resturants was one of the main economic sectors which contributed to the absorption of the labor force offer among young people.

The regression analysis applied at the level of divided data considering the residence area led to the following results:

- For the data afferent to the unemployment rate for the young people form the urban area we didn't get significantly different results.
- For the data afferent to the unemployment rate for the young people form the rural area – the monthly average gross earning in the sector of agriculture, forestry and fishing was the one which led to obtain the best model of prognosis.

Taking into consideration all the things presented in this study, we can reconfirm the conclusions presented in the specialty literature concerning the influence generated by the development conditions of the economic environment of a country/territorial administrative unit on the variation indicators which characterises the working maket from that territorial area.

V.   REFERENCES

1.   Ahmed Raza Cheema, Ambreen Atta (2014), Economic Determinants of Unemployment in Pakistan: Co-integration Analysis, International Journal of Business and Social Science Vol. 5 No. 3;
2.   Adewale, B. S. (2011). The determinants of urban unemployment crisis in Nigeria: An econometric analysis. Journals of Emerging Trends in Economics and Management Sciences, 2(3), 184-192.
3.   Blanchflower, D.B. and Freeman, R.B. (2000), Youth employment and joblessness in advanced countries, The University of Chicago Press, Chicago.
4.   Buccaro, L.,&Rei, D. (2005).Institutional Determinants of Unemployment in OECD Countries.A Time series Cross-sectional Analysis (1960-98).International Institute for Lab Studies.
5.   Bruno Catherine, Sandrine Cazes (1998), French youth unemployment: An overview, Employment and training papers 23, International Labour Office Geneva,
6.   Contini, B (2010). Youth Employment in Europe: Institutions and Social Capital Explains Better then Mainstream Economics, Discussion Paper No.4718. University of Torino
7.   Clocotici Valentin (2014), Regresia liniară multiplă, Accessed at http://profs.info.uaic.ro/
8.   Dimian, G.C (2011), The Role of Education in Explaining Youth Labor Market Inbalances in CEE Countries. Journal on Efficiency and Responsibility in Education and Science, Vol.4, No.3, pp. 105-115

9.   Dimitrov, Y (2012). Youth Unemployment Trends In Bulgaria: Friedrich-Elbert-Stiftung
10.   Khan.T., Yousaf.F. (2012). Determinants of Unemployment Duration of First Time Job Seekers in Pakistan: A Case Study of Bahawalpur. International Journal of Business and Economics, 1(1), 1-12.
11.   Eurostat (2015). Regional statistics by NUTS classification. Accessed at http://ec.europa.eu/eurostat/web/regions/data/database
12.   Esra Kabaklarli, Perihan Hazel Er, Abdülkadir Buluş (2011), Economic determinants of turkish youth unemployment problem: cointegration analysis, International Conference On Applied Economics – ICOAE
13.   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)
14.   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
15.   INS. (2015). Baza de date TEMPO. Accessed at http://statistici.insse.ro/shop/
16.   ILO (2011),Global Employment Trends 2011 The Challenge of Jobs Recovery, Geneva,www.ilo.org acces:14.06.2011
17.   Türkyılmaz, S. and Özer,M. (2008) A Time Series Analysis of Turkish Unemployment, MIBES Transactions, Vol 2, Issue 1
18.   Mahmood, Z., Akhtar, N., Amin, M., &Idrees, M. (2011). Causes of Unemployment Among The Educated Segments In Peshawar Division, Pakistan : A Statistical Study. Sarhad J. Agric, 27(1), 139-142.
19.   Noor Mohd, Zaleha and Mohamed Nor, Norashidah, Abdul Ghani, Judhiana (2007) The relationship between output And unemployment in Malaysia: does Okun's Law exist? International Journal of Economics and Management, 1 (3)
20.   Pastore Francesco, Luca Giuliani (2015), The determinants of youth unemployment. A panel data analysis, Discussion Papers- CRISEI, University of Naples "Parthenope", Italy,
21.   Păuna Carmen Beatrice (2010), Romanian Macroregion 2 - A Challenge for the European Regional Development, DEMIFER Demographic and migratory flows affecting European regions and cities, The ESPON 2013 Programme,
22.   Ray Lipsa, Bhabni Bhusan Ray (2011), Estimation of Phillips curve in indian context, International Journal of Economics and Research.