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PRODUCTIVE EMPLOYMENT IN ROMANIA: A MAJOR CHALLENGE TO THE INTEGRATION INTO THE EUROPEAN UNION

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Abstract

It is widely accepted that productive employment represents an essential element of inclusive economic growth, and it can be a driving force in reducing gaps between countries (especially experienced by productivity and income) in order for these to integrate into the European Union. The aim of the article is to highlight the process of integration from the perspective of productive employment and its main determinants, in Romania, in the period following accession to the EU and integration into the European economic structures, the 2007-2014 period respectively. The results of this paper highlight a low level of productive employment in Romania determined mainly by low labour productivity, low wages, high vulnerable employment, high and inefficient employment in agriculture and a low level of employment in knowledge-intensive activities. The existence of large gaps, in terms of productive employment and economic development, between Romania and the developed EU countries, as well as the existence of the highest in-work poverty risk in EU emphasizes the need to accelerate productivity growth, which requires a real structural transformation, a shift from low-productivity sectors to high-productivity sectors. However, it is very important that poor workers should significantly benefit from the gains in labour productivity. The findings of this study can be useful for policy makers in order to support the improvement of productive employment so that productive employment contributes efficiently to the real integration of Romania into the EU.

Keywords: productive employment, integration, inclusive growth, Romania, labour productivity, working poverty, EU

JEL Classification: O47, J21

Introduction

The European Union aims “to become a smart, sustainable and inclusive economy delivering high levels of employment, productivity and social cohesion” through the Europe 2020 Strategy (EC, 2010a). This strategy puts forward three mutually reinforcing

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priorities: smart growth, inclusive growth and sustainable growth. *Inclusive growth* aims, at EU level, to raise the employment rate, to achieve better educational attainment of the European citizens, to modernise the labour markets and welfare systems, to guarantee everybody access to the benefits of economic growth (EC, 2010b). Romania, as a EU member state that wishes to continue its social and economic development through integration and nominal and real convergence, adapted the 2020 Europe strategy to its specific situation and set through the National Reform Program (G.R., 2011) the following national targets for inclusive growth: an employment rate of 70% aged 20-64 by 2020, 5 percentage points (p.p) below the EU target; reducing school drop-out rates to 11.3% (above the EU target of 10%), increasing the rate of population aged 30-34 years that graduates a form of tertiary education to 26.7% (below the EU target of 40%) and reducing the population at risk of poverty or social exclusion by 580,000 persons.

According to the specialist literature (Szirmni et al., 2013; Schmid, 2014; Islam and Islam, 2015; WEF, 2015) inclusive growth consists of the following essential elements: rapid, stable and sustainable GDP per capita growth; sustained reduction in income poverty and inequality; growth in productive employment; sustainable improvement in human development indicators; and basic social protection for all. *Productive employment* is considered an essential element of inclusive growth, both for translating the benefits of economic growth into poverty reduction and for reducing inequality of income distribution (ILO, 2012). Productive work is also the main source of income for the vast majority of people and the driving force for sustainable development (Anker et al., 2002). The concepts of productive employment and its antonym – the working poor and the unemployed – achieve the interplay between productive employment and decent work on the one hand and reducing of poverty on the other hand, states ILO (2012). Working poverty (or in-work poverty) is a complex concept. This complexity derives, on the one hand, from mixing two different dimensions, work and poverty, and, on the other hand, from combining two levels of analysis (individual and collective level), respectively the working status of individual and the income status of the household in which he lives, which is below the poverty threshold (Lohmann, 2009; EU, 2012; Herman, 2014). Working poverty represents “a critical barrier impeding progress in addressing poverty through sustainable employment” (EAPN, 2013) and is seen as a real socio-economic challenge of EU member states and not only (EU, 2013; Herman, 2014). It is widely accepted that productive employment provides “the key linkage between economic growth and development and poverty reduction and, together with social protection, offers the main vehicles for reducing poverty” (ILO, 2012).

The experience of the countries that managed to integrate into the EU, succeeding in achieving real progress in terms of reducing economic gaps (especially GDP per capita, labour productivity, income) and reduce poverty points out the important role of high rates of economic growth combined with high rates of employment growth. At the same time, this experience underlines that high rates of economic growth, highly necessary in catching-up processes in the EU, on their own “are insufficient to assure that poverty reduction will occur unless the benefits of economic growth are more equitably distributed” UN (2013). Thus, “the creation of productive employment plays a key role in this regard as a critical nexus between growth and poverty reduction” UN (2013). Reducing the gaps between Romania, as an EU member state, and the EU, felt especially through productivity and incomes requires the creation of a framework favourable to productive employment, which assures economic well-being.

A broad analysis of the current level of the macroeconomic indicators (for the year 2014), illustrates, on the one hand, the efforts of the Romanian economy in the integration process, and, on the other hand, the position of Romania among EU countries (Eurostat, 2015). Thus, Romania records a GDP per capita and labour productivity (GDP per person employed), slightly over the half of the EU-28 average, 55%, respectively, 56.7% of EU-28 (of 100%). It is worrying that Romania did not manage to advance towards more favourable positions, ranking last but one in the EU, both before and after the accession to the EU. Moreover, it records the highest at-risk-of-poverty rate after social transfers from EU, 25.4% respectively. Considering that Romania occupies *the first position* in terms of working poverty, vulnerable employment, employment in agriculture, and *the last position* in terms of the share of tertiary education employment, services employment and employment in knowledge-intensive activities (in total employment), proves the fact that inclusive growth and creating productive employment represent the real challenges for Romania in the process of EU integration and convergence.

In this context, *the aim of this article* is to highlight the process of integration and convergence from the perspective of productive employment and its main determinants, in Romania, in the period following accession to the EU and integration into the European economic structures, the 2007-2014 period respectively, in order to identify some actions needed to be taken so that productive employment contributes efficiently to the real integration of Romania into the EU.

The remainder of the paper is organized as follows: the first section consists of a review of the specialist literature, synthesising the main results from the previous empirical and theoretical literature on productive employment, the influence factors and the role of productive employment in the process of real integration; the second section presents the research methodology and it is followed by the third section which presents the results of the research. The last section contains the conclusions.

1. Review of the scientific literature

Reaching the socio-economic cohesion objective in the European integration context, by reducing real gaps between the member states and regions entails creating conditions for smart growth, inclusive growth and sustainable growth. According to WEF (2015), the economic growth which is sustained over decades, is broad-based across economic sectors, creates significant productive employment and reduces poverty is called inclusive growth. One of the major challenges that national economies face is a lower capacity to generate employment growth during a process of economic growth (Herman, 2012; Bodea and Herman, 2015). This idea is supported by empirical evidence which indicates that although many countries recorded economic growth, the desired rate of growth in productive employment has not been reached (Islam, 2013). Therefore, the pace and pattern of economic growth are important in the case of inclusive growth, as the essential measure of the inclusiveness of a society's growth model is given by the extent to which it produces broad gains in living standards before social transfers (WEF, 2015).

ILO experts (ILO, 2015a) state that the lack of inclusive economic growth and development determines a high level of poverty and inequality and insufficient productive opportunities of employment. On the contrary, a lower level of inequality can increase aggregate demand by directing income to those who tend to consume more, which in turn can generate an

increase in economic growth (Stiglitz, 2013; ILO, 2015a) and, consequently, an increase in productive opportunity employment.

Islam and Islam (2015) underline that productive employment is central to achieving inclusive growth. Productive employment is seen as “employment yielding sufficient returns to labour to permit workers and their dependents a level of consumption above the poverty line” (ILO, 2012) and “is composed of three dimensions: remuneration, stability of employment and working conditions (Szirmni et al., 2013).

The importance of productive employment and decent work as a key policy objective is widely recognised in countries across the globe, no matter the level of development. Thus, the achievement of “full and productive employment and decent work for all, including women and young people” has been adopted as a target by the United Nations, in the context of the Millennium Development Goals (UN, 2010). A high level of economic well-being, which can express the performance of national economies involved in an integration process, implies the existence of decent and productive employment, which stimulates demand in the economy and provides the crucial link between economic growth and poverty reduction, thereby contributing to more equitable and socially coherent societies (Anker et al., 2002). ILO Report (ILO, 2014) highlights that national and international policies will not lead to development if efforts are not made to enhance employment and decent work opportunities and if working poverty is not approached seriously. Under the circumstances of a high level of working poverty, creating better jobs is more important than creating more jobs (Herman, 2014), as high quality jobs are drivers of development and matter for development (WB, 2012; ILO, 2014). Thus, the only effective and sustainable way for working-age population to escape poverty is a productive and fairly paid job (ILO, 2015b)

Empirical research (Andreß and Lohmann, 2008, Guillen and Dahl, 2009; Crettaz and Bonoli, 2010; Fraser et al., 2011, EU, 2012; Bodea and Herman, 2014; Herman, 2014) prove the influence of multiple factors which affect the level and dynamic of working poverty, which represent a form of deficit in productive employment (ILO, 2012) such as: different dysfunctions of the labour market, low wage and earnings (which is usually associated with low levels of productivity), personal characteristics and professional status of employed person, household structure of the person working, welfare states regimes etc.

In order to measure the progress towards the achievement of the Millennium Development Goal - “full and productive employment and decent work for all” - ILO (2012) uses four indicators, specifically and directly related to employment issues: growth rate of labour productivity, employment rate, working poverty rate, vulnerable employment rate (the proportion of own-account and contributing family workers in total employment). Productivity growth is associated with reductions in working poverty and in vulnerable jobs because new jobs create a favourable environment for a shift from low-productivity sectors to middle- and high-productivity sectors or because some areas of activity record higher wage earnings as they have become more productive (UN, 2010). To achieve high rates of growth in productive employment, structural transformation is required from low productivity sectors like agriculture and other traditional sectors to modern manufacturing, transport and communication, and modern services (Islam, 2013).

Empirical evidence (ILO, 2014) shows a positive relationship between wage employment and higher levels of household consumption, as well as between wage employment and

labour productivity. Thus, it is wage employment rather than vulnerable employment that generates higher earnings that can boost the living standards for workers and their families. Labour earnings are critical to drive decent incomes for the poor (WB, 2012), wage level being a key indicator of job quality and of vital importance for reducing working poverty (UN, 2010). Global Wage Report (ILO, 2015b) emphasises that labour market institutions and policies- including minimum wages and collective bargaining- have an important effect on income distribution, in terms of reducing inequalities.

The analysis of the results of previous studies guided us to formulate *the fundamental research question of this study*: Which are the characteristics of productive employment in Romania and to what extent the productive employment can be a driving force in reducing gaps between Romania and other EU countries for a successful integration in the European economic structures?

2. Research methodology

For identifying *the characteristics of productive employment in Romania, between 2007 and 2014, first of all*, multiple aspects of *inclusive growth* have been analysed based on the following indicators: employment growth (annual variation of employed population -%), economic growth (annual variation of real GDP -%), labour productivity growth (annual variation of GDP/ employed population-%), employment rate (20-64 years), unemployment rate, youth unemployment rate (15-25 years), at-risk-of-poverty rate before and after income transfers. At-risk-of-poverty rate represents the share of people with an equivalised disposable income below the at-risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income after social transfer, according to (Eurostat, 2015). *Secondly, productive employment* has been analysed through the following indicators related to employment issues: labour productivity (GDP per employed person), wage employment, employment by activity sectors, employment in knowledge-intensive activities (KIA) and monthly minimum wage (euro/employee). The share of vulnerable employment (sum of own-account and contributing family workers) in total employment and in-work at-risk-of-poverty rate are used for analysing the *deficit of productive employment*. For working poverty, the European definition has been used, according to which in-work at-risk-of-poverty rate shows “the share of persons who are at work and have an equivalised disposable income below the risk-of-poverty threshold” (Eurostat, 2015). It is worth mentioning that in the working poor category there are also employed people who might be poor precisely because of the household context they live in (Herman, 2014).

In order to identify gaps, in terms of economic development (GDP per capita) and productive employment, between Romania and other EU member states, a comparative analysis has been made on a sample of 28 countries from EU, pentru anul 2014. In order to study the intensity of the relationship between the analysed indicators, at the level of this sample (Tabel no. 1), we have applied the Pearson correlation coefficient (r). We employed the simple regression analysis for identifying a functional relationship between GDP/capita (dependent variable) and labour productivity (independent variable), as well as the relationships between labour productivity (dependent variable) and indicators which are specific to productive employment (employment in services and employment in KIA).

Table no. 1. Variables included in the analysis of gaps at EU-28 level, 2014

Variables	N	Min.	Max.	Mean	Std. deviation
GDP per capita (in PPS) ¹ - %	27*	47	134	91.59	25.89
Productive employment					
Labour productivity (LP) (GDP/employed population) ¹ - %	27*	43.7	143.9	91.71	23.59
Employment in services (EMP_services) ² - %	28	42	83	70.83	9.63
Employment in KIA ^{**} (EMP_KIA) ² - %	28	19.5	60	36.06	7.19
Wage employment (Wage_EMP) ² - %	28	64	91.2	83.96	6.42
Monthly minimum wage (MMW) ³	21**	173.8	1921.1	751.1	537.68
Deficit of productive employment					
Vulnerable employment ^{****} (Vulnerable_EMP.) ² - %	28	5.4	30.9	11.99	6.26
Employment in agriculture (EMP_agriculture) ² - %	28	1.2	29.4	6.38	6.22
In-work at-risk-of-poverty rate (In-work RPR) ² - %	28	3.6	19.6	8.32	3.49

Note: ¹% of EU-28 = 100%; ²% of total employment; ³ euro/employee; *EU-28 without Luxembourg (This country records extreme values in terms of GDP/capita and labour productivity); **EU-21 contains only the member states with a statutory minimum wage (without Austria, Denmark, Finland, Germany, Italy, Cyprus and Sweden); *** "An activity is classified as knowledge intensive if tertiary educated persons employed (according to ISCED97, levels 5+6) represent more than 33% of the total employment in that activity" (Eurostat, 2015); **** Share of own-account and contributing family workers in total employment.

Source: Own calculations based on Eurostat, 2015

The statistical data on the variables analysed in this article were collected from the Eurostat database (2015). For data processing and analysis, the SPSS software package was used.

3. Results and discussion

An important route in the EU integration process a national economy must take consists in a process of inclusive and sustainable economic growth, so that it achieves a high level of sustainable economic development and high living standard of the inhabitants, thus reducing gaps between EU countries. Between 2007 and 2014, Romania, as an EU member state, continued the economic growth process which it had started in 2000. This process was interrupted because of the global economic crisis, as well as because of a complex of internal factors, in 2009-2010 period (Figure no.1). Although Romania has made some progress in terms of economic development, the current level of GDP/capita accounts for only 55% of the EU-28 average (Table no. 2) providing Romania only position 27 of 28 in EU. An *inclusive and sustainable economic growth*, such as the one the EU, and implicitly Romania, aimed for through Europe 2020 Strategy, entails, on the one hand, that economic growth is accompanied by employment growth, and, on the other hand, requires the benefits of economic growth to be more equitably distributed. Based on the data provided by Figure no.1, in Romania, in 2007-2014, the process of economic growth was not accompanied by employment growth. Thus, a negative employment elasticity of economic growth was notable: Real GDP recorded an annual average increase of 2.1%, whereas employment recorded an annual average decrease of 1%. Previous studies (Herman, 2012) show that a negative elasticity was also recorded in the previous periods of economic growth.

Table no. 2. Indicators of “inclusive growth”

Indicators (%)	2007		2014	
	RO	EU-28	RO	EU-28
GDP per capita in PPS	42	100	55	100
Labour productivity per person employed	42.5	100	56.7	100
Labour productivity per hour worked	49.3	100	58.9	100
Employment rate (20-64 years), [Romania's Target =70%; EU Target =75%]	64.4	69.8	65.7	69.2
Unemployment rate (15-74 years)	6.4	7.2	6.8	10.2
Youth unemployment rate (15-25 years),	20.1	15.5	24	22.2
At-risk-of-poverty rate (RPR) before income transfers	30.9	25.8	28.5	26.1
RPR after income transfers	24.8	16.5	25.4	17.2
In-work at-risk-of-poverty rate	18.3	8.4	19.6	9.5

Source: Eurostat, 2015

At EU-28 level, in 2007-2014 period, statistical data (Eurostat, 2015) confirm the ‘jobless growth’ process, pointing out the small capacity of economic growth (annual average economic growth of 0.525%) to generate employment (annual average employment growth of 0.11%). In the same period, in Romania, the annual average *labour productivity growth* was higher than the EU average, but in Romania, employment fell, whereas at EU level, employment rose. The understanding of the driving forces behind labour productivity is important for formulating policies to support economic growth. Although, labour productivity rose in 2007-2014 period (Table no. 2), Romania, had a labour productivity slightly over half of the EU-28 average in 2014 (EU-28=100), the second lowest labour productivity from EU. In the same year, Bulgaria occupied the last position in EU, both in terms of labour productivity and economic development (GDP per capita).

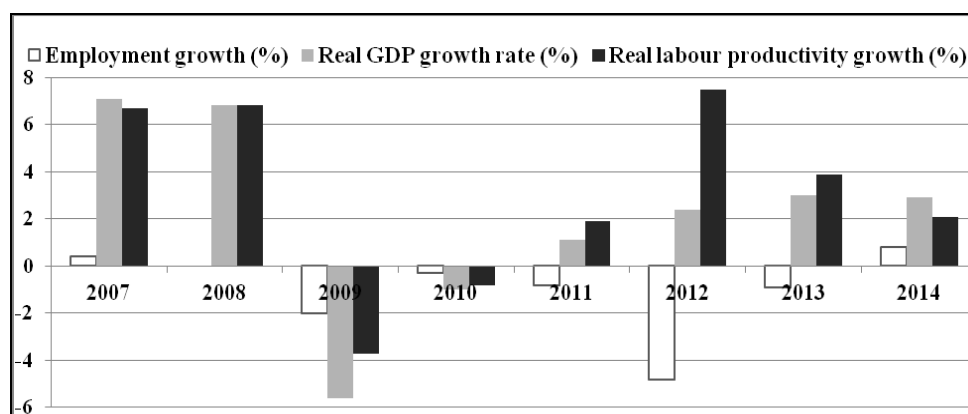


Figure no. 1. Real economic growth, employment growth and labour productivity growth, in Romania, 2007-2014

Source: Own processing based on Eurostat, 2015

The existence of a strong positive correlation at the EU-28 level, ($r = +0.930$, $p < 0.01$, Figure no. 2 and Table no.3) was identified between economic development (GDP per capita) and labour productivity (LP). Thus, ten countries from the EU-15 got results over the EU-28 average for both indicators. Italy and Spain recorded values over the EU-28

average only for labour productivity, and the rest of the EU countries recorded lower values in relation to the EU-28 average for both indicators.

Table no. 3. Multiple correlation matrix

Variables	1	2	3	4	5	6	7	8	9
1. GDP/capita	1.0	0.93*	0.72*	0.75*	0.33	0.93*	-0.33	-0.66*	-0.42**
2. LP		1.00	0.76*	0.77*	0.20	0.92*	-0.20	-0.64*	-0.37
3. EMP_services			1.00	0.78*	0.42**	0.77*	-0.42**	-0.82*	-0.40**
4. EMP_KIA				1.00	0.45**	0.85*	-0.45**	-0.69*	-0.31
5. Wage_EMP					1.00	0.19	-0.98*	-0.57*	-0.53*
6. MMW						1.00	-0.19	-0.55*	-0.21
7. Vulnerable_EMP							1.00	0.62*	0.57*
8. EMP_agric.								1.00	0.61*
9. In-work RPR									1.00

Note: *Correlation is significant at the 0.01 level; **Correlation is significant at the 0.05 level (2-tailed).

Source: Own calculations based on Eurostat, 2015

The results of the simple regression analysis [$R^2=0.864$; $F(1,25)=159.35$; $\text{sig}=0.000$; regression coefficient (β) = +0.930] reflect the positive influence of labour productivity on GDP/capita, at EU-28 level. Thus, the gaps between the EU member states, in terms of economic development, can be explained by the differences recorded in terms of labour productivity.

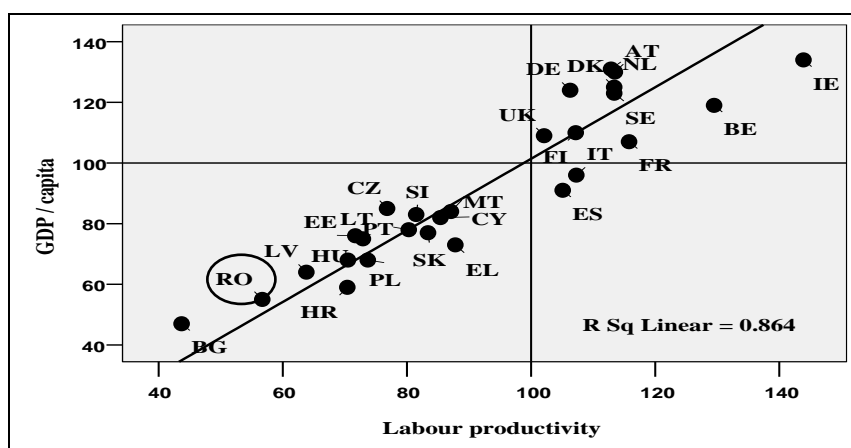


Figure no. 2. Positive correlation between economic development and labour productivity, in EU-28, 2014

Source: Own calculations based on Eurostat, 2015

Statistical data from Eurostat (2015) regarding the compilation of *GDP by income approach* show that compensation of employees represents only 32.5% of total GDP (decreasing by 4.1 p.p. compared to 2007), 15.2 p.p. below the EU-28 average. At the same time, the data illustrate that gross operating surplus and mixed income occupy a high share in GDP (56.1%), and are increasing. This fact proves that Romanian workers receive only a third of what they produce, whereas more than half of the GDP is intended for the capital compensation. Moreover, these data show that the benefits of economic growth are not equitably distributed, having negative consequences on overall poverty and working poverty.

When the Europe 2020 Agenda was launched in 2010, the *employment rate (20-64)* in Romania was below the EU average level (64.8 % against 68.6 % EU-28), ranked 17 of 27 countries. By 2014, the employment rate rose by 0.9 p.p, Romania occupying only the 23rd position out of the 28 (Table no. 2). Despite this slight increase in the employment rate, Romania, lost 703.8 thousand jobs in this period, the number of employed persons decreasing from 9,364.8 to 8,661.4 thousand. Although Romania records a low level of *the unemployment rate* (below the EU average, Table no. 2), this level can hide unproductive employment, vulnerable employment, informal employment, working poverty etc., and as shall be shortly shown, the Romanian problems in terms of labour market are far from being solved. Unemployment among youth (less than 25 years) remains a challenge in Romania and whole EU. In 2014, the Romanian youth faced an unemployment rate of 24% (higher than the EU28 average of 22%), 3.5 time higher than adults.

There is a higher incidence of *risk of poverty in total population in Romania* than in EU-28, both before and after the social transfer (Table no. 2). Therefore, in 2014, in Romania, 28.5% of total population was faced with the risk of poverty, before social transfers, and 26.1% after social transfers. At EU-28 level, due to the effects of social policies, an at-risk-of-poverty rate after social transfers of 17.2% was recorded, by 8.9 p.p. less. In Romania, the difference between the two rates is smaller, respectively of 3.1 p.p, fact which reflects, on the one hand, the low level of social expenditure % of GDP (14.8% of GDP in 2013, occupying the last but one position in EU) and, on the other hand, the inefficiency of social policies. Furthermore, data show that the risk of poverty is lower among working people than among total population, which confirms that having a job represents a way of protection against poverty and social exclusion (Bodea and Herman, 2014). At the same time, statistical data (Table no. 2 and Figure no. 3) show the existence of a high level of *in-work at-risk-of-poverty rate* in Romania, the highest in EU-28 (19.6% against 9.5%).

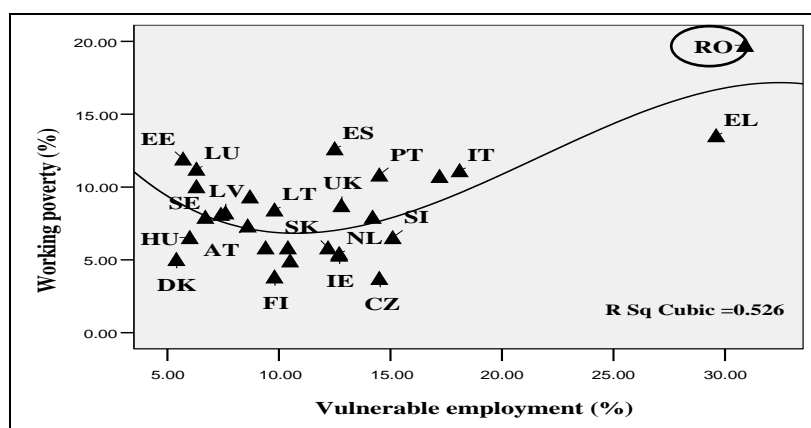
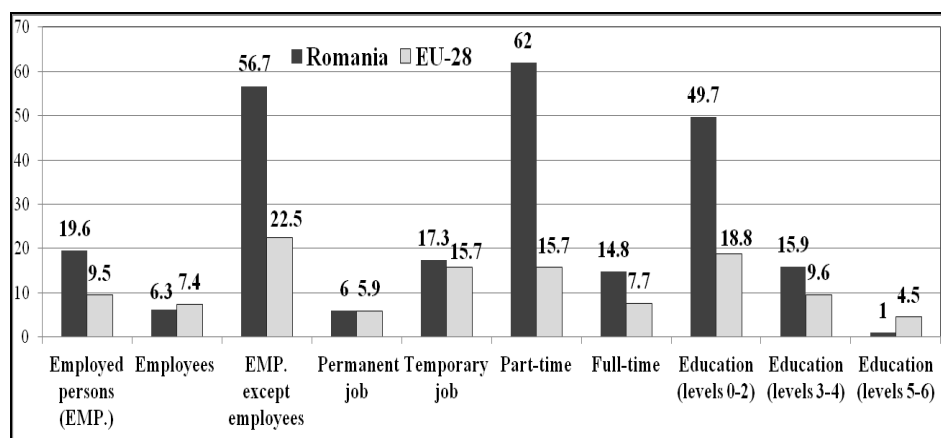


Figure no. 3. Working poverty and vulnerable employment, in 2014, in EU-28

Source: Own calculations based on Eurostat, 2015

This proves that a job is not a guarantee against the risk of poverty, the need for productive jobs, which help the worker to escape from the poverty trap, being highlighted. In 2014, 19.6% of the employed persons (18 years or over) faced in-work poverty risk. Moreover, an increase in working poverty can be noticed, in 2007-2014, both in Romania and at EU level (Table no. 2). Statistical data from figure no. 4 argue that the level of in-work poverty rate is influenced by individual employment characteristics. Thus, a high in-work poverty rate is

manifested in self-employment, part-time employment, temporary job and in employment with low educational level. In Romania, a high in-work poverty risk in flexible work (temporary contract and part-time job), considering that most of this work is involuntary, shows that using these ways of making work more flexible and reducing unemployment go hand in hand with underemployment and working poverty.



**Figure no. 4. Gaps in working poverty rate by employment characteristics:
Romania vs. EU-28, 2014**

Source: Own processing based on Eurostat, 2015

The *vulnerable employment* rate is significantly higher in Romania than the EU-28 average (31% against 12.2%), Romania being first in EU-28, being followed by Greece (29.6%), Italy (18.1%) and Poland (17.2%), according to Figures no. 3 and no. 5. In Romania, in 2014, 31% of total employed persons are vulnerable workers. A major problem for Romania is the persistence of a high share of unpaid family workers (11.6% in 2014 and 12.6 % in 2007). Alarming, 35.4% of total unpaid family workers from EU-28 (2814.5 thousand people) are in Romania (995.1 thousand people).

Working poverty rate among EU-28 countries positively correlates with vulnerable employment ($r = +0.57$; $p < 0.01$, Table no. 3) and employment in agriculture ($r = +0.61$; $p < 0.01$, Table no. 3). On the contrary, working poverty rate negatively correlates with wage employment ($r = -0.53$; $p < 0.01$) and employment in services ($r = -0.40$; $p < 0.05$). Therefore, in the EU countries where there is a high level of vulnerable employment and employment in agriculture, the in-work poverty rate is high as well (for example: Romania, Greece, Italy, Poland, Portugal) and vice versa (Figure no. 3).



Figure no. 5. Employment structure by professional status

Source: Own processing based on Eurostat, 2015

In Romania many of those in vulnerable employment work in agriculture. 88.2% of agriculture employment is self-employment, including unpaid family workers (Eurostat, 2015), and are likely to be among the working poor. From the point of view of the employment structure by activity sectors, Romania finds itself in a peculiar situation among EU member states, recording the highest share of the employed population in agriculture, but also the lowest employment in services (Figures no. 6 and no. 7), with strong social and economic consequences on convergence and real EU integration.

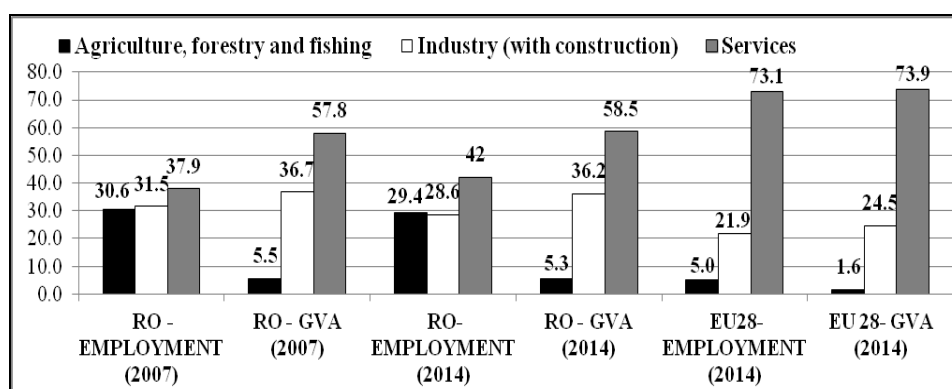


Figure no. 6. Employment and GVA by activity sectors, 2007-2014

Source: Own processing based on Eurostat, 2015

Although, a tendency of reducing employment in agriculture and of increasing it in services was recorded in 2007-2014 period, the process of structural transformation of the Romanian economy remains insufficient and unfinished. In 2014, agriculture accounted for 29.4% of total employment and 5.3% of GVA, compared with the EU average of 5%, respectively 1.6%, fact which reveals a very low labour productivity in agriculture and low productive employment in this sector. The ratio between each sector's contribution to GVA and employment represents an additional proof of the low productive employment in Romania. The values of this ratio calculated for each sector in 2014, based on data in Figure no. 6 (in services=1.39, in industry=1.26 and in agriculture=0.18) prove that services generate more productive jobs related to industry or agriculture. At EU level, this ratio is higher for industry than for services (1.11 against 1.01).

Corroborating these results with the negative link between labour productivity and employment in agriculture ($r=-0.641$, $p<0.01$) and the positive link ($r=+0.756$, $p<0.01$) between labour productivity and employment in services (Figure no. 7, Table no. 3), it is proved that in EU member states, workers in vulnerable employment and agriculture are more likely than workers in wage employment and in employment in services to be trapped in a vicious circle of low-productivity employment and low remuneration. These workers have limited abilities to invest in their families' health and education, which will consequently make it more difficult for the future generations to be more productive and generate more income (ILO, 2014). The results of the simple regression analysis show that the level of labour productivity, at EU-28 level, is positively influenced by the level of employment in services [$R^2=0.572$; $F(1.25)=33.41$; $\text{sig}=0.000$; $\beta=+0.756$]. This fact reflects the need to make the sectorial structure of employment more efficient in Romania in order to really integrate it in the EU.

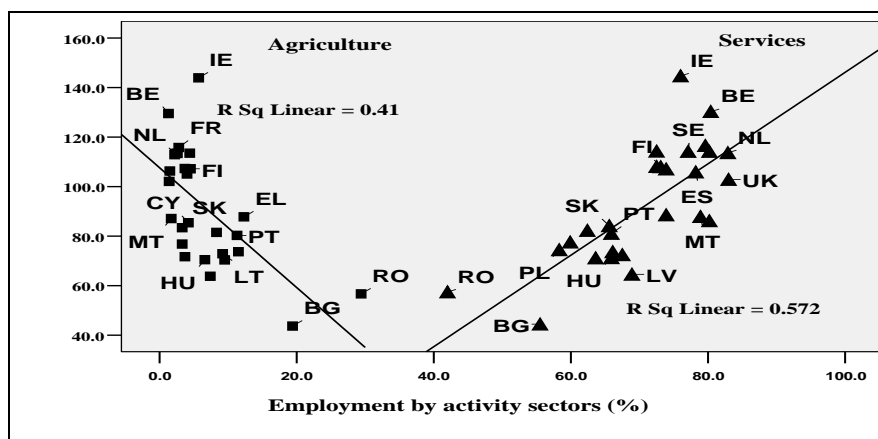


Figure no. 7. Correlation between labour productivity and employment in agriculture and services, in 2014, in EU-28

Source: Own calculations based on Eurostat, 2015

The strong positive correlation between *minimum wage and labour productivity* identified among EU-21 countries, in 2014 ($r = +0.919$, $p<0.01$), highlights that low level of minimum wages can be explained by low level in labour productivity (Table no. 3). Romania recorded the second lowest monthly minimum wage in EU, 205.34 euro respectively, in 2014.

Gaps between Romania and EU in terms of labour productivity can be explained by the level of education of workers, too, taking into consideration that “people’s living standards depend on labour productivity, and workers are more productive if they work with better equipment and are more efficient if they benefit from education and training” (Baumol et al., 2009). According to data from Figure no. 8, Romania has a low share of workers with tertiary education in total employment, only 18.4% in comparison to the EU-28 average of 32.6%. A low level of employment in knowledge-intensive activities (KIA) entails the existence of a low level of education and vice versa. Furthermore, in terms of employment in KIA (as % of total employment), Romania occupies the last position in EU-28, with a value a little over half of the EU-28 average (19.5% against 36%). Thus, significant gaps can be noticed between Romania and the EU developed countries, as well as between Romania and the new member

states (Figures no. 8 and no. 9). The slow pace of growth for these indicators in 2007-2014 period is alarming.

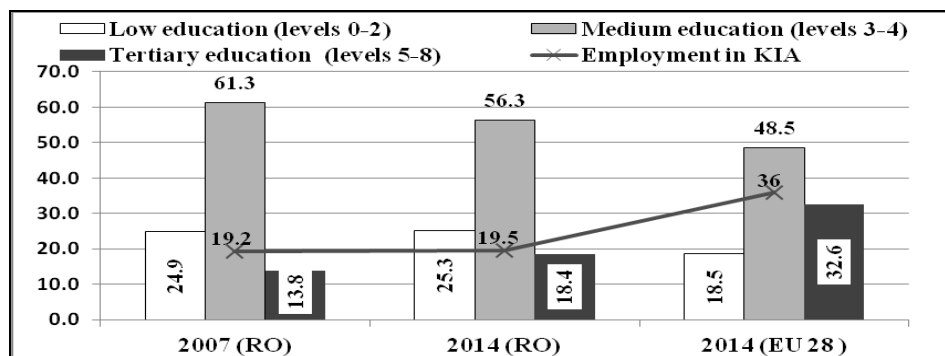


Figure no. 8. Employment by education level and employment in KIA (%)

Source: Own processing based on Eurostat, 2015

The results of the correlation analysis ($r=+0.767$; $p<0.01$; Table no. 3.) and the regression analysis [$R^2=0.642$, $F(1,25)=35.64$, $\text{sig}=0.000$, $\beta=+0.767$] reflect the positive influence of employment in KIA on labour productivity, among the EU-28 member states, pointing out that a high level of education of workers represents an important source of worker productivity, and, implicitly, a way of reducing gaps between countries.

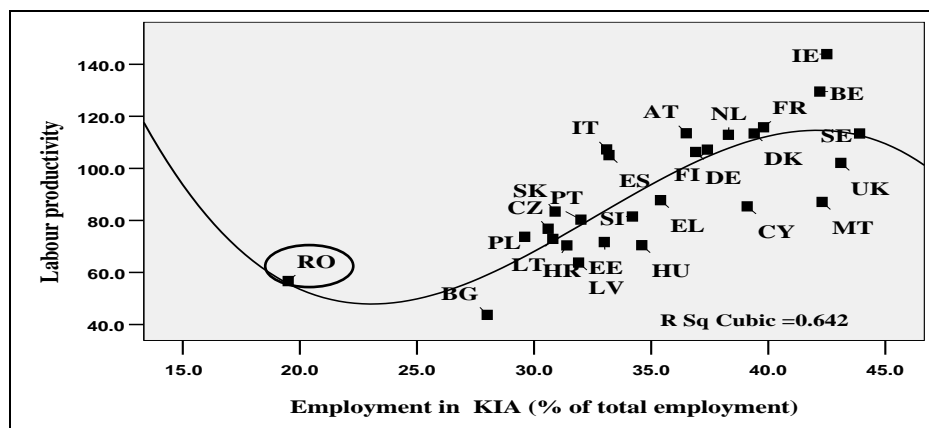


Figure no. 9. Positive correlation between labour productivity and employment in KIA, in 2014, in EU-28

Source: Own calculations based on Eurostat, 2015

Increasing overall employment in accordance with the Europe 2020 Strategy appears to be a *main challenge for the Romanian labour market*. Moreover, the current state proves that further actions are needed in order to reach the quantitative targets. These will lead to an increase in employment which will consequently diminish the income gap and thus will ease the European integration of Romania.

Conclusions and implications

This study investigated the process of integration from the perspective of productive employment and its main determinants in Romania, in 2007-2014 period. It is important to assess productive employment and to identify key opportunities and obstacles to the creation of productive employment considering that productive employment represents an essential element of inclusive economic growth and can be a driving force in reducing gaps between countries in order for these to integrate into the European Union.

Results indicate that *economic growth is less inclusive in Romania*. Thus, the process of economic growth has not been accompanied by employment growth; the employment rate as inclusive growth target recorded an insufficient increase; at-risk-of-poverty rate is the highest in the EU, and it is increasing; Romanian workers benefit the least of what they produce (of GDP) compared to workers from EU countries, fact which determines a high risk of in-work poverty. Despite a long term process of economic growth (2000-2014, exception 2009-2010) results indicate large gaps in GDP per capita and labour productivity between Romania and the EU-28 average. Moreover, we find that Romania is characterized by a *low level of productive employment* determined mainly by low labour productivity, high vulnerable employment, high and inefficient employment in agriculture and low share of worker with tertiary education. Furthermore, low wage generated by low labour productivity is an important driver of low productive employment. Consequently, in terms of working poverty, the antonym of productive employment, Romania ranks first in EU, fact which questions Romania's real integration into the European structures. The results of the regression analysis reflect, on the one hand, the positive influence of labour productivity on GDP/capita, and, on the other hand, the positive influence of the level of employment in services and of employment in knowledge-intensive activities on labour productivity. These results prove that productive employment represents a driving force in reducing economic and social gaps between the member states and implicitly in the real integration in the EU.

The existence of large productivity gaps between Romania and developed EU countries and at the same time the existence of a low level of productive employment, accompanied by a very high risk of in-work poverty in EU emphasizes the need to accelerate labour productivity growth, which requires a real structural transformation, a shift from low-productivity sectors to high-productivity sectors. It is very important that poor workers should significantly benefit from the gains in labour productivity. In order for Romania to really integrate into EU and to achieve the inclusive growth target, we consider that the *increase in productive employment* needs to be placed more clearly at the core of the European and Romanian strategies. The findings of this study can be useful for policy makers in order to support the improvement in productive employment.

The research limitations refer to the analysis of a limited number of indicators specific to productive employment, as well as to the methods of statistical analysis used based on simple correlation and regression. These limitations will be the starting points of future research which will investigate productive employment on a deeper level, and will include indicators that reflect the activities specific to the industry and service sectors. The future research may analyse, based on economic modelling, what mechanisms and causes determine employment in industry (from a quantitative, qualitative and structural perspective) in premature de-industrialization period and if re-industrialization of economy, implicitly of employment, can be an efficient solution for increasing productive employment in Romania for a real integration in the EU.

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