The Influence of Investment in Education on Inclusive Growth - Empirical Evidence from Romania vs. EU

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Abstract

With approximately 80 million people with low or basic skills, 19 million children at risk of poverty, very high school drop-out rates, and more jobs requiring higher qualifications, the EU needs inclusive growth. Inclusive growth means more and better jobs, investment in skills and training, modernizing the labor market. The aim of the paper is to test the influence of the investment in training on others macroeconomic indexes, such as unemployment rate, GDP, lifelong learning, medium wage for the EU countries. We compare the indexes from 2008 with the one from 2010-2011 to see how the targets from Europe 2020 strategy were affected by the crisis and to determine which countries are closest to achieve the targets. Using these indexes we group the countries into clusters to see similarities and differences between them and to determine which politics should be suitable to adopt.

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1. Introduction

The Europe 2020 strategy promotes a smart, sustainable and inclusive European economy. There are some major priorities to be pursued, as follows: employment, innovation, education, social inclusion and climate/energy. The targets are set for the European Union (EU), overall, as well as for each EU member. Out of the four dimensions of the Europe 2020 strategy, we will focus only on inclusive growth; it aims to increasing Europe’s employment rate, investing in skills and training, and ensuring that the benefits of growth reach all parts of the EU.

Smart growth targets are: decrease of people in or at risk of poverty and social exclusion by at least 20 million. To achieve this target, the European agenda stipulates acquiring new skills, adapting to a changing labor market, raising employment and labor productivity, reducing unemployment, investing more in training and helping people to find a job and to have access to social benefits. In this context education should be a priority for every EU country.

The analysis starts by highlighting the characteristics of the labor market for the EU countries having a statuary minimum wage level. The reason is that inclusive growth means raising Europe’s employment rate, investing in

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skills and training, ensuring the benefits of growth reach all parts of the EU. Although only a small number of workers earn the minimum wage level, it is a very important index on the labor market. For instance, in the Netherlands, the Government decided to decrease the minimum wage level in 1981, 1983 and in 1984. Dolado, Kramarz, Machin, Manning, Margolis, Teulings, Saint-Paul and Keen, M. (1996) have studied the effects of those decisions and have found that the number of the young employees have increased by 3%.

Fortunately, the crisis has a good part (Rodriguez-Pose, A., Vilalta-Buf, M., (2004)) that caused the reduction of investment in education: the recovery of a part from the human capital stock lost in previous years by emigration. The labor market in developed countries has narrowed substantially, and those who have worked abroad returned to their home countries.

2. Characteristics of the EU labor market

Only 20 EU members have a statutory minimum wage, but the modalities for setting it and also its level vary a lot from country to country. In some countries, the minimum wage is determined separately for each economic sector through collective negotiations (Cyprus, Italy), in others, it varies with age, education, occupation and marital status (Greece). Furthermore, young employees benefit from favorable minimum wage levels in Belgium, Slovakia and Poland. Governments have varying prerogatives in setting the minimum levels, limited power being characteristic to Ireland, Slovakia and Slovenia.

In the second semester of 2008, the minimum wage level in the EU varied from 112€ (in Bulgaria) to 1610 € (in Luxembourg). In 2010 there was an increase of the minimum wage level overall, spanning from 123€ (in Bulgaria) to 1725 € (in Luxembourg). In fact in all EU countries considered from the analysis the minimum wage level increased, but because of the depreciation of the local currency it looks like the level decreased (in Czech Republic, Hungary and Poland).

The EU targets are 75% employment rate in 2020, for the 20-64 age segments. This contrasts to a 64.3% employment rate in 2011, and down from a peak of 65.9% in 2008. The countries with the highest employment rate in EU were the Netherlands (75.3%) and Germany (73.3%), whereas the countries with the lowest employment rate were Spain (56.8%), Romania (57.9%) and Bulgaria (58.7%).

During the crisis, the EU-27 unemployment rate increased by 2.7%. The greatest increase was in Spain (from 11.3% to 21.7%), followed by Greece (from 7.7% to 17.7%) and Lithuania (from 5.8% to 15.4%). Only in Luxembourg the unemployment rate decreased.

Eurostat data shows that, with a 59% employment rate in 2008, Romania ranked the 24th among the EU countries, followed by Italy (58.7%), Hungary (56.7%) and Malta (55.3%). Between 1997 and 2011, the employment rate in Romania dropped from 65.4% to 57.9%. Similar developments happened in Poland and Slovakia. However, in the EU-27, overall, the employment rate increased from 60.7% in 1997 to 65.9% in 2008.

The highest absolute gap between the target and the employment rate (see Table 1) in 2011 is in Hungary (18.5%), followed by Bulgaria (17.3%) and Greece (16.5%). The ranking remains similar if we consider the absolute gap between the target and the employment rate in 2008. The highest value we can find was in Hungary (18.3%), followed by Bulgaria (12%) and Belgium (10.8%).
### Table 1: The gap between the 2008 and 2011 employment rates and the EU 2020 strategy targets

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The average working time in EU-27 was 39.66 hours per week in 2010. Luxembourg (40.8), Germany (40.5), Poland (40.5) and Great Britain (40.5) averaged the highest number of worked hours per week. The lowest number of work hours per week was in Ireland (38.1). If we compare the stipulated numbers of worked hour with the effective ones we can see that in Malta and in Lithuania the employees worked less than the legal level. In Great Britain the people worked more than the stipulated level with 3 hours per week and in France and Czech Republic with 2.4 hours per week.

### 3. Cluster analysis

All the countries considered for analysis are signatory countries engaged in the process towards a European Higher Education Process Area. This was a first step to reach the Europe 2020 strategy included in smart growth, meaning to remove the obstacle to student mobility across Europe and also to support the mobility of teachers and researchers. For this, a system of transferable credits (ECTS) was established to promote the accreditation of prior learning outside of higher education contexts. The importance of being all Bologna countries is that although they increased the investments in R&D and ancillary services, the expenditure on educational goods and services increased at a lower rate.

In the EU-27, almost a third of population aged 25-34 has completed higher education. This share has an increasing trend for the younger generation. Sometimes high educational attainment is associated with a high rate of
vertical mismatch for young tertiary graduates, but the connection between these indicators on the labor market is not defined. The trainings play an important role in avoiding this kind of situations.

Deriving from the results obtained by Manafi and Marinescu (2012), the first cluster includes countries having a minimum wage above the EU average, a low unemployment rate, a GDP per capita at purchasing power parity greater than the EU average, and an average working time below the EU average. These countries are: **Belgium, Ireland, France, Luxembourg, the Netherlands and the United Kingdom**.

The second cluster consists of countries with low minimum wage levels but with the highest number of working hours per week. These are: **Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland and Romania**.

The third cluster contains **Greece, Spain, Malta, Portugal, and Slovenia**. Except for Slovenia and Malta, this group recorded the highest increases of the unemployment rates.

To set these clusters, the working variables were: the minimum wage level, the unemployment rate, the employment rate for the education level 0-2, the GDP per capita at purchasing power parity, the average working time, the lifelong learning rate, the employment rate, and the female employment rate.

In 2008 in the EU-27 the total public expenditure on education as % of GDP was 5.08%, increasing from 4.91% in 2000. Out of the countries included in the first cluster Belgium ranked the best with 6.44%, and was followed by Ireland (5.68%) and France (5.62). All the countries in this group have the total public expenditure on education greater that the EU average.

Among the second cluster countries, Slovakia had the minimum total public expenditure on education as a share of GDP (i.e. 3.61%), followed by Romania and Bulgaria. Latvia (5.64) and Estonia (5.59) ranked first and second in this cluster.

In the third cluster Malta and Slovenia had the highest total public expenditure on education as a share of the GDP, with 5.86% and 5.20%, respectively.

Within the clusters, the members are not homogenous if the minimum total public expenditure on education is considered relative to the GDP. However, the clusters are homogeneous by absolute values, namely: the annual expenditure on public and private educational institutions per pupil/student in PPS, for all levels of education combined, based on full time equivalents. In 2008 the countries grouped in the first cluster had the highest levels (the Netherlands ranked first (8082.6), followed by Belgium (7852.2) while the EU-27 is 6457.5). In the second cluster Estonia ranked first (4273.2), while Bulgaria and Romania had the lowest levels. In the third cluster Spain (6992.3) had the highest level.

Although private investment in education is increasing in the EU member states, it is still insufficient compared with the levels in Japan, United States, Australia and Korea. Only in the United Kingdom, Germany and Slovakia the levels of the private investment are higher.

A major source of private investment, which is very hard to quantify, but is relevant for the social dimension especially for higher education, consists of student fees and other contributions. Students can finance their studies with money received from their parents or earned on a job.

An important target in the EU 2020 strategy stipulates that the share of early leavers from education and training should be less than 10%. The situation seems to improve at EU-27 because the share of early leavers from education and training is lower with every year. In 2008 in EU-27 the share was 14.9, while in 2011 it decreased at 13.5%. In the first cluster the countries are homogenous, with the share of early leavers from the system lower than the EU-27 average. The highest decrease of the percent of early leavers from education and training was in Luxembourg (in 2008 there were 13.4%, while in 2011 there were only 6.2%). Also the countries grouped in the second cluster are homogenous, the share of early leavers being around the EU-27 average. Only the countries in the third cluster are not homogenous. For example in 2008 the share of early leavers in Malta was 38.1%, and three years later it was 33.5% while in Slovenia it was 5.1% in 2008 and 4.2% in 2011.
4. The Romanian case

Next, we will analyze the characteristics of the Romanian labor market. Romania’s minimum wage levels in 2007 and 2010 were some of the lowest among the EU countries. The gap towards the EU countries is very significant. Compared to the countries in the second cluster, the differences are not so important; moreover, if the minimum wages are expressed in purchasing power parity, the differences become smaller every year. In 2007 and 2008 Romania had the lowest minimum wage levels, but in 2009 the minimum wage expressed in purchasing power parity increased by 20%.

If we consider the average working time per week, in 2008 Romania ranked first with 41.8, followed by Czech Republic (41.7), Latvia (41.7) and Poland (38.9), while the EU-27 average was 40.4. In Romania, an average employee works 1 hour and 48 minutes more than the stipulated working time.

Romania’s employment rate decreased from 2008 to 2010. If considering the absolute gap between the employment rate and the 2020 targets, Romania (11% in 2008 and 12.1% in 2011) was well placed compared to the countries from its cluster: Bulgaria (12% in 2008 and 17.3% in 2011), Estonia (6.2% in 2008 and 10.2% in 2011), Latvia (4.4% in 2008 and 10.1% in 2011), Hungary (18.3% in 2008 and 18.5% in 2011), Poland (11.8% in 2008 and 11.1% in 2011). We may consider this as a positive signal, meaning there are chances that Romania will reach this EU 2020 target.

Because Romania had one of the lowest percent of total public expenditure on education in GDP, to have a competitive labor force the Government should encourage the investment in trainings and lifelong learning programs. One of the Euro 2020 strategy target means that 15% of adults aged between 25 and 64 years old should participate in lifelong learning. In 2008 in EU the lifelong learning rate was 9.4% while in 2011 in was 8.9%. In Romania the lifelong learning rate is one of the lowest among the EU member states, reaching 1.5% in 2008 and 1.6% in 2011. In the future Romania needs to invest more in education, which is a prerequisite for long-run sustainability of economic growth process.

The share of early leavers from education and training was 15.9% in 2008 while it increases at 17.5% in 2011; deepening the gap between the actual rates and the target (less than 10% in 2020).

5. Conclusions

Based on a previous paper where we performed a cluster analysis for EU members using some macroeconomic indexes, in the present paper we have found out that the countries in the first cluster are more homogenous and stable during the crisis. We expect that these countries would reach the EU 2020 strategy targets for inclusive growth. For the majority of the countries included in the second cluster for the targets stipulated in the EU 2020 strategy the Governments should adopt various policies. The countries in the third cluster proved more vulnerable during the crisis. Except for Slovenia and Malta, they recorded the fastest increase of their unemployment rates. Employees in these countries had the lowest job security during the 2008-2010 crises.

To reach the EU 2020 targets, Romania has to increase its education efficiency by optimizing the school network and training education managers. The quality of education could also increase if the management of human resources is improved. The Government should invest more in lifelong learning and trainings in order to adapt permanently the workers skills to a changing labor market.

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