Investments in Human Capital in Romania

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ABSTRACT

The human capital represents the most important investment made both by state and companies and also individually for the education and development of skills, knowledge, qualifications and capabilities of individuals, in order to obtain various incomes from certain economic activities. Both the expenses made for education and long term benefits influence the value of the investment in education. The analysis performed on the Romanian economy shows that between the educational level and the income, there is a positive relationship as the one, that numbers are showing with no doubt, between the manpower occupancy and the education period (the amount of investments in human capital). Therefore, the analysis of the Romanian labor market shows that the most affected by unemployment are the individuals with a modest education level while persons with a university degree suffer less from this phenomenon.

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1. Introduction

In present economy, investing and training employees are as important as investing in assets [13]. Training the human capital should be approached in the same manner or even better than the physical capital. The human capital caught the eye of economic specialists [1,14,15,21] when it was assessed that, both on the national and the personal level, the greatest profits were owed to the investments made in competences, knowledge and qualifications and less in physical capital.

The purpose of this paper is to analyze two important aspects related to investments in human capital. The first aspect refers to the investment in human capital through education and the second to training employees within the companies.

It has been established that school is playing a very important role in developing the human capital [8] due to the fact that most of the competences, qualifications and knowledge are gained during that period through the educational-instructive process. However, the human capital does not develop only through the education received in schools, but also in family, through research conducted both individually and institutionally. One of the permanent concerns of a company, apart from the profit growth and the increase in the quality of its products or services, should be the training of its employees [3]. Companies should allocate a share of their budget for the training, improving and professional development of the employees because as they are better trained their results will be seen shortly (the employees will become more creative and will have better decisional attitudes).

In the research community today it is widely recognised that investment in human capital is the most critical factor for economic and social development. The provision of education and training for skills leads to better employment prospects, higher earnings and productivity (European Employment Committee 2005). For this reason, knowledge and human capital formation are at the core of the Lisbon Agenda and the European Employment Strategy.

Numerous studies (K. Murphy, R. Tamura, N. Tomes, J. Mincer) [25], are proving the relation between the growth in welfare and the investment in human capital. It was concluded that it is better to invest in educating the employees than in enhancing the economic capital [16].

Now we can state that professor’s Vasile Puscas, the former Romanian chief negotiator with the European Union, statement that “Investments in human capital are representing an essential condition for economic growth and competitiveness” is true because human resources are representing the most important link to obtain profit. As stressed by David White (Director for Lifelong Learning, Education and Training Policies, DG Education and Culture, European Commission), we need to learn new skills and apply ourselves differently if we are going to be able to contribute at and to have a proper place in society. Those who have low skills or no skills are finding that the jobs available to them are moving east and they risk being marginalised in society. Reskilling or skilling those who do not have what is needed is crucial. That is why ministers committed themselves to putting lifelong learning in place in the Member States and most EU countries have already done so. However, there exists a lot of diversity on how different countries put the above research message into practice.

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Figure 1 shows the state and progress towards meeting EU benchmarks on investing in human capital and lifelong learning. The starting point in the year 2000 is set in the graph as zero and the 2010 benchmark as 100.

The results achieved in each year are thus measured against the 2010 benchmark. The diagonal line shows the progress required, i.e. each year an additional 10% of progress would have to be achieved to reach the benchmark. If a line stays below this diagonal line, progress is not sufficient. Thus there has been a lot of progress on the number of mathematics, science and technology graduates (MST), the benchmark having already been overachieved. But there is still a lot to be done regarding participation in lifelong learning, secondary school completion and achievement in reading.

2. Investing in Human Capital through Education

In all countries of the world, more education leads to increased participation in the labour market. In the European Union, the male labour force participation rate of those with lower secondary education is 68%, vs. 81% for those who have completed upper secondary education and 88% for tertiary education graduates[2]. The effect of education on the labour force participation rates of females is even more pronounced, the corresponding participation rates for lower, upper and tertiary education graduates being 47%, 66% and 81%. Once in the labour market, more education translates to higher earnings. In the European Union upper secondary school graduates earn 20% more relative to those whose highest level of educational attainment is lower secondary. And tertiary education graduates earn 50% more than upper secondary school graduates.

Human resources play the role of value creator and of a decisive value within the process of labor. They insure the efficient combination of the other resources needed for the creation of goods and services destined for production and consumption. The diagnosis of the personnel aims on one hand at the aspects referring to the insurance of human resources, the dimensions, the qualifications, the structure and behavior of the personnel during the process of labor, and on the other hand on the efficiency of the users of these resources.

The concept of human capital reflects the investment in education and development of competences and aptitudes that are necessary for the accomplishment of a certain economic activity [6]. The value of this investment in education depends, on one hand on the education expenses, and on the other hand on the future anticipated benefits generated by the knowledge gained through education. The investment in education will be lucrative if the final indexed value of the two components (costs and benefits) is positive, respectively if the future indexed benefits are superior to the indexed expenses.

The education expenses are represented by the funds allocated to the purchase of land and buildings with educational destination, and the benefits of the investment are: an increase in income, lowering the risk of unemployment, increase in the degree of insertion in the work market, increase of productivity that will ensure economic growth, the reduction of social costs through prevention of social exclusion.

Gary Becker proved that investments in human capital, meaning education, training and healthcare reflect in the greatest growth in labor productivity, consequently, in an important contribution to the increase of the gross domestic product[6, 25].

He also presented a theory on human capital: “individual income increases substantially according to the degree of each one's education”. On microeconomic level, the education degree is a key factor for the individual incomes and the situation of the workforce market. Recent studies suggest that one extra school year increases the individual earnings with approximately 6.5% in Europe and up to 9% in member states that have a less regulated labor market, where the salary system should reflect the productivity better. The
literature also makes notice of the fact that the connection between human capital and individual salaries is stronger during the periods of rapid technological changes. Other empirical studies confirm the connection between human capital and productivity within a company[7]. They prove that employees increase the productivity and represent a direct source of long term innovation and competition.

From the constant concern manifested by OECD for the economic growth through programmes for developing the educational capital we conclude that this organization has a great interest in investments in human capital in general, and in educational one in particular. International comparative studies reported for the OECD countries reflect the fact that the benefits obtained by the graduates of superior education forms are higher than those of people with an average education level[19]. The studies show that as the level of education increases, there is also an increase in the possibility for employment, while the probability for unemployment and poverty lowers. Superior education is the one that creates the experts that will lead the Romanian society and economy in the future, representing "the vital element for creating a prosperous economy".

Professor Vasile Puşcaş, the former Romanian chief negotiator with the European Union, claims that "investments in human capital are representing an essential condition for economic growth and competitiveness. The Romanian educational system, despite the numerous “reforms” during the last two decades, is in need for constant significant efforts to generate competitive resources on the labor market, because the “reforms” were focused more on the organizational dimension of the system and less on the necessity for restructuring the substance of the educational act and orienting it towards the demand of the labor market. From this point of view, Romania has to make significant efforts. The alternative would be that these costs continue to be backed up by private sources. At present, in Romania the education funding is based on standard cost per pupil / preschool. In accordance with decision no. 1395, the standard cost per student is determined for each level of education, branch, field, specialization / field, the number of students, language teaching, education and other specific indicators of urban / rural[11] Therefore, the standard cost per student / preschool is an indicator of substantiation necessary funds to cover basic costs of financing. Standard cost level that of each category of expense base funding is determined by physical indicators of human and material resources consumption established by laws and government decisions or regulations issued by ministries and central institutions in the field. The standard size cost and actual cost per student / preschool is determined by at least two reasons:

• Standard cost relates to a school with a standard number of pupils, a number of classes and students/class, a regulated space necessary for a student etc while teaching a particular unit may have a number of students other than standard, different volume of space per student, a certain degree of education, etc. equipped with means.

• Actual costs of staff in a school/ student may be higher or lower than standard depending on the degree of qualification of teachers, average length of education, and number of students per teacher position etc.

These differences between actual costs and standard costs are not related to the objective quality of management or policy management. These differences can be eliminated through a medium and long term policy regarding the school network, concentration and modernization of educational facilities, etc. On average, in the year 2011, the standard cost per pupil / school / day is highlighted in the table below:

<table>
<thead>
<tr>
<th>Nr. Crl.</th>
<th>Level / chain / profile</th>
<th>Type of education</th>
<th>Average number of students per class</th>
<th>Standards of cost per pupil, on average and level education RON</th>
<th>Standards of cost per pupil, on average and the levels*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kindergarten with normal program</td>
<td>with frequency</td>
<td>20 18</td>
<td>1.478 1.617</td>
<td>1.478 1.617</td>
</tr>
<tr>
<td>2</td>
<td>Primary education</td>
<td>with frequency</td>
<td>22 18</td>
<td>1.701 2.027</td>
<td>2.041 2.432</td>
</tr>
<tr>
<td>3</td>
<td>Secondary education</td>
<td>with frequency</td>
<td>25 20</td>
<td>2.230 2.727</td>
<td>2.549 3.117</td>
</tr>
<tr>
<td>4</td>
<td>College</td>
<td>with frequency</td>
<td>28 28</td>
<td>2.119 2.119</td>
<td>2.401 2.401</td>
</tr>
</tbody>
</table>

*Education in minority languages

If we look overall, in reality, the cost of education per student is higher. In the study conducted by Save the Children Organization, in 2010, regarding the cost of education of children at the family level17 has revealed a number of expenses that the family makes for a student during a school year. The average cost spent by parents for a child’s schooling is 1490 RON, and per family is about 2,000 RON. It should be noted that the above amount is calculated taking into account the average costs for parents in the sample budgets, representing a trend as it emphasizes not an absolute value. Also, looking at the results we see that the total cost may reach values of over 4,500 RON per year, per student.

3. The Distinction between Different Kinds of Learning

The distinction between formal, non-formal and informal learning is often used, but not always clearly defined. Lately, an increasing attention was paid to the notion of “learning and developing” to the detriment of that of “education and training”, because it focuses on the educate and the result of the learning activity,
and less on the system. In conclusion, formal learning is taking place within some organized systems of education and training such as schools, universities and adult training centers.

The process of learning is organized in an explicit and organized manner, having a predefined curriculum, and the results are being evaluated and certified (stating for example, the competences obtained). Non-formal learning includes courses, educational programmes, with variable duration, organized by different institutions and/or at the workplace, where the individuals are attending willingly. Non-formal education supposes the voluntary and intentional participation, in an organized educational frame (having well defined objectives, duration and support), but outside the formal educational system, and usually it is not certified. The last category, the informal learning, presupposes that one receives information and develops abilities and skills not necessarily in a structured manner, through everyday experience (related to work, family or leisure), without attending any classes[22]. Informal learning is determined by individuals or groups that choose to get involved without anybody setting any criteria or restraints; it can be performed by a more experienced colleague from whom one can learn, or it can be obtained by auto-driven study, when one is trying willingly to learn something.

For Romania, promoting the principle of a permanent education through a lifelong learning is represents a very important direction for action [23], given the great delay regarding the participation in different professional qualification, reconversion or training forms (over 5 times less than the EU average).

In year 2009 in Romania the share of graduates with superior studies was comparable to the average UE27 – 74,7%, but the education level is lower in rural areas. The quality of labor education influences economic development, and continue preparation is the main instrument to accede to a good job. In Romania, compared with UE27, the evaluations reveal that the participation of adults in training courses is still very low.

### Table 2. Persons covered in professional training in Romania (source N.S.I.)

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of persons</td>
<td>65.031</td>
<td>64.093</td>
<td>59.703</td>
<td>44.347</td>
<td>39.987</td>
</tr>
</tbody>
</table>

It is noticed that, although at national level the number of persons included in professional training course is decreasing, in parallel it begin to grow the number of participants in training courses free of charge, due to the implementation of some projects financed from European funds intended for the rural environment.

### Table 3. Number of participants from rural environment to professional training projects

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>target 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base 2005</td>
<td>96.790</td>
<td>0</td>
<td>0</td>
<td>3.174</td>
<td>12.122</td>
<td>........</td>
</tr>
</tbody>
</table>

During the period 2007-2011, the number of projects implemented to ensure the qualification of rural population, especially of those involved in subsistence agriculture, has increased up to 95, both strategic and grants, in total amount of 724,056,252,9 RON.

The main indicators for the evaluation in education are: the degree of attendance of the population between 25 to 64 years in the activities for a lifelong learning, the structure of the attendance of adults aging 25 to 65 to the lifelong learning activities, the degree of attendance to lifelong learning activities, including formal, non-formal and informal education.

Learning refers to people between 25 and 64 years of age who said that they had received education or training during the four weeks preceding the survey (counting) performed by Eurostat[25]. The denominator consists of the total population in the same age group, with the exception of those who did not answer to “attendance to professional education and training”. Both the numerator and the denominator were taken from the European Union’s Manpower Enquiry. The collected information refers to all forms of education or professional training.

In those countries that have managed through well targeted policies to increase the level of manpower competences, it was found that even the overall economy is more developed. On the contrary, in those where the investments in developing the human resources were more modest, it was observed that they did not benefit from the same economical growth and development opportunities, thus falling into the trap of a low level of qualified manpower and of a low productivity. EU admits that the best education and training for the manpower are vital for the economical growth and for creating more and better jobs. The estimations of the European Commission reveal that increasing the average school period by one year will contribute to an increase of productivity with 4-9%.

A flexible and adaptable manpower is a precondition for a sustained economical growth. For this purpose, the development of the human resources will play a key role in training a manpower that is capable to cope with the changes of the labor market, and to ensure a proper employment level[9]. Therefore, the continuous investment in developing the human resources is essential for the reduction of the Romania’s differences from the other member states so as to ensure the economic prosperity, the general goal of the strategy for Romania’s sustainable development.

In Romania, the education expenses represent 4.24% of the gross domestic product from which 2.53% are the public expenses. In the developed member countries of The Organization for Economic Co-operation and
Development (OECD), the education expenses vary from one country to another, the largest share is the one of Denmark – 7.81%, and the lowest is that of Liechtenstein – 1.92%.

According to the standards established by the Romanian Government in the Official Monitor, a pupil costs somewhere between 1,900 Lei (for a pre-schooler) and approximately 2,700 Lei (for a theoretical high school), while a student reaches the sum of 4,000 Lei.

The costs vary according to the education levels, forms, the rural and the urban arias and cover the salary expenses, the allowances, the benefits and all other financial privileges that are given to the employees of the state pre-university system.

The Management Authority of The Sectoral Operational Programme Human Resources Development (MA SOP HRD) has asked for project demands.

The total value of the project is 2,343,978.91 Lei, the most important expenses covered by these funds being the ones related to human resources (923,300 Lei), the participant students (765,176 Lei), and the ERDF expenses from the eligible value of the project (225,000 Lei).

In conclusion we can state that education plays an essential role in instructing the human capital and in giving it a new chance from the economic perspective. The higher and better a person's degree of education, the better will be his chances and economic perspectives. Education increases an individual's anticipated earnings throughout his entire life because it is perceived as a long term effort.

Even though companies have reduced the training programmes, they could not give them up entirely because the Labor Code forces them that at certain time intervals, according to the size of the company, to send a part of its staff to training: "The employers are obliged to ensure the attendance to training programmes of their staff, as it follows:

a) at least once at 2 years, if they have at least 21 employees;

b) at least once at 3 years, if they have less than 21 employees" (art. no.194 – the compulsoriness of training programmes).

These training programmes can be organized at the employees' demand, a time during which they benefit from their incomes and their length of service because it is considered to be a contribution period in the state insurance system. The employees that have attended a course or a training programme are obliged to work for their employer for a period of time, mutually agreed on in an additional act to the labor contract signed before the beginning of the course. The employees that do not respect the clauses set are forced to pay the entire cost of their training, proportionally with the period that they did not work.

The companies that have employees with a superior intellectual capital will gain substantial incomes for a long period. We can see on a day to day basis, the battle led by the small and big investors to lure in their own team as many specialized and highly educated people as possible that can face the future demands and requirements of economy and society.

If at the beginning it was perceived just as "a fashion" brought by the multinational companies that have extended their businesses in Romania, for the firms that wanted to reach a long term development, the need
to motivate their employees to reach higher performances, has become obvious. Therefore, training has become a mandatory condition for the development of the company on a medium and long term.

When dealing with organizing such activities, if Romanian companies have still a lot of questions to ask, at the international level, to have a training department as part of that of human resources, has become a mandatory demand of the contemporary management[26].

“There is a clear increasing tendency from the part of the companies to lean towards personalized programmes (68.7%) adapted to their specific goals, and not towards open programmes (31.3%) that can be attended by employees from different companies.”

Figure 2. The Share of the personalized/open programmes.

When evaluating the need for training, the interview with the manager plays a significant role. 87% of companies favor this method to establish the training programmes. Some other tools used in this purpose are: the performance evaluation questionnaire (73.9%), interviews with the employees (54.3%), and discussions with the consultant of the training companies.

5. The Manpower Costs

The manpower cost was defined as representing the employer’s expenses per employee[17]. They include: the salary, training courses and other expenses (such as the cost for recruitment, for uniforms, for the labor tax). The level and structure of the cost are important macroeconomic indicators, used as decisional factors in order to evaluate the situation of demand and offer present on the labor market.

The average hourly labour costs were estimated to be €23.1 in the EU271 business economy2 in 2011, and €27.6 in the euro area1 (EA17). However, this average masks significant differences between Member States, with hourly labour costs ranging from €3.5 to €39.3. Labour costs are made up of costs for wages & salaries, plus non-wage costs such as employer’s social contributions[14].

In 2011, the highest hourly labour costs were estimated for Belgium (€39.3), Sweden (€39.1), Denmark (€38.6), France (€34.2), Luxembourg (€33.7), the Netherlands (€31.1) and Germany (€30.1). The lowest hourly labour costs were estimated for Bulgaria (€3.5), Romania (€4.2 in 20103), Lithuania (€5.5) and Latvia (€5.9). While comparing labour cost estimates in euro over time, it should be noted that data for those Member States outside the euro area are influenced by exchange rate movements.

Table 4. Labour cost per hour in national currency (countries outside the euro area)

<table>
<thead>
<tr>
<th>Country</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria (BGN)</td>
<td>5.0</td>
<td>5.6</td>
<td>6.2</td>
<td>6.8</td>
</tr>
<tr>
<td>Czech Republic (CZK)</td>
<td>233</td>
<td>245</td>
<td>249</td>
<td>258</td>
</tr>
<tr>
<td>Denmark (DKK)</td>
<td>264</td>
<td>271</td>
<td>280</td>
<td>288</td>
</tr>
<tr>
<td>Latvia (LVL)</td>
<td>4.2</td>
<td>4.2</td>
<td>4.0</td>
<td>4.2</td>
</tr>
<tr>
<td>Lithuania (LTL)</td>
<td>20.7</td>
<td>19.4</td>
<td>18.4</td>
<td>19.0</td>
</tr>
<tr>
<td>Hungary (HUF)</td>
<td>2000</td>
<td>2040</td>
<td>2020</td>
<td>2130</td>
</tr>
<tr>
<td>Poland (PLN)</td>
<td>26.3</td>
<td>27.7</td>
<td>28.0</td>
<td>29.3</td>
</tr>
<tr>
<td>Romania (ROL)</td>
<td>15.2</td>
<td>17.0*</td>
<td>17.7*</td>
<td>:</td>
</tr>
<tr>
<td>Sweden (SEK)</td>
<td>325</td>
<td>337</td>
<td>344</td>
<td>353</td>
</tr>
<tr>
<td>United Kingdom (GBP)</td>
<td>16.8</td>
<td>16.8</td>
<td>17.2</td>
<td>17.5</td>
</tr>
<tr>
<td>Norway (NOK)</td>
<td>311</td>
<td>322</td>
<td>332</td>
<td>345</td>
</tr>
</tbody>
</table>

Source: 2008 - Labour Cost Survey

According to the data published on September, 17th, by Eurostat, Romania occupies the first position among the EU countries, with an increase of over 7%, on what concerns the annual growth of the manpower costs, unlike some other countries like Ireland and Netherlands that have shown the smallest increase, 0.4%, respectively 0.5%. For Romania, data were found only for 2010, which places our country on the last but one
place among the EU countries, after Bulgaria. The branches of activity with the highest average hourly manpower costs are presented in the table below.

Table 5. Branches of activity with the highest average hourly costs - € -

<table>
<thead>
<tr>
<th>Branch of activity</th>
<th>Year 2009</th>
<th>Year 2010</th>
<th>Year 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>The extractive industry</td>
<td>9.89</td>
<td>8.22</td>
<td>8.22</td>
</tr>
<tr>
<td>Electricity, gases, hot water and air conditioning</td>
<td>7.78</td>
<td>8.23</td>
<td>8.23</td>
</tr>
<tr>
<td>Information and communication</td>
<td>6.56</td>
<td>7.13</td>
<td>7.13</td>
</tr>
<tr>
<td>Finances and Insurances</td>
<td>8.55</td>
<td>8.82</td>
<td>8.82</td>
</tr>
</tbody>
</table>

6. An empirical study regarding the connection between the income and the education/professional training level

This approach had as a main goal the emphasis of the fact whether between the monthly income and the education/qualifications level is a tight connection.

So, in order to reach this goal, a set of seven question was created:
1. What is your age?
2. What is your education level?
3. Do you have a job at present?
4. During the last year, have you attended any training programmes?
5. Your length of service is:
6. Your monthly income is:
7. Do you believe that the monthly income depends on the education level or even of the qualification level?

The analyzed sample was made up of 50 people with ages varying between 18 and 65 years old. They were chosen randomly. The results show that 78% of the interviewees went to university, 17% to post-university, and the other 5% went only to high-school. These results can be seen in the chart below.

On what concerns the attending of training programmes in the last year, 50% of them answer that they did get training, while the other 50% said they did not. At the last question, regarding the ratio between income and education, 83% think that the income varies according to the education level, while 17% do not think that the two are interdependent.

Immediately after graduation, young people come with expectations far beyond the labor market can offer in terms of salary, but then adjust their expectations according to demand. Thus, recent graduates would like to hiring a salary of at least 1500 lei, quite large amount compared to what is offered in reality. Seniority plays an overwhelming wage increase, salary is higher as age increases.
7. Conclusions

The results of this analysis should make the population, the firms and the state to invest more and more in education and in training the human resources because they represent one of the engines of development both at the individual and at the community and social level. The more one invests in the human capital the better will get the economical performance. Pupils, students and teachers should be aware of the importance of education because the ascending competitiveness on labor markets makes people want to acquire new knowledge. The state invests in education by ensuring the conditions needed in schools, high schools and faculties, and by offering some tax free scholarships.

The education costs borne by the employer represent his obligation established by The Labor Code. One of the costs borne by the employer is the employees’ training. This is an important demand for the employees’ development and training and implicitly, for increasing the company’s competitiveness. To make the investments in human capital a priority may offer to it the competitiveness needed to cope with the situation that emerges because of the all so changing economy. In the Romanian society, there are still people that think that education is not directly proportional with the incomes. The present study showed that this is incorrect, and that education and the qualification levels have a major influence over incomes.

The development of the human capital by means of investment educational processes is a responsibility of all individuals and governments. Without understanding this responsibility, it will be hard to get rid of the label that was attributed to us in the last years, that of „the economic periphery” of the European Union.

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