EMPIRICAL REFLECTIONS REGARDING THE BENEFITS OF THE HUMAN CAPITAL

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Abstract

Starting from the hypothesis that the impact of the human capital on the economic performances does not only depend on the quality, quantity and type of the human resources, but also on a large number of other factors, such as the meeting between the work demand and supply, the degree of satisfaction obtained at the place of employment, the capacity of a country to attract high qualified people from other countries or the measure in which the companies train their employees, the present paper tries to highlight the direct and indirect effects generated by the education.

From the perspective of individuals, the economic benefits of the human capital are the increase of the incomes; the wage earnings increase with each level of education. Those who reached the high school, post high school or university level enjoy substantial advantages in comparison with people of the same sex that did not graduate from high school. Also, the wage earnings offered by the education grow at the same time with the age; to those with university studies, the incomes are relatively bigger, but at an advanced age. With few exceptions, women earn less than men, with similar levels of education.

From the perspective of national economies, it was noticed that the more educated the countries are, they develop faster because the superior level of training gives the possibility to the workforce to innovate new technologies and to adapt the existent ones to the local production.

Besides the economic benefits, education can bring other individual benefits, such as: the growth of the health and nourishment level, a more favorable environment , a better political and community participation, a lower criminality rate, the growth of life expectancy, a larger movement liberty, etc.

Keywords: human capital, education, health, wage earnings, economic growth, social welfare.

JEL Classification: I 2

INTRODUCTION

In the 21st century, there were multiple debates regarding the benefits of the educational systems and their capacity to produce new generations of people with appropriate abilities. Those who are not cultivated will be disadvantaged at their place of employment and, as a consequence, they will not have the chance to enjoy the life standard of those who possess abilities. The life standards that the citizens of a country enjoy, depend on the workforce productivity. The workers are more productive if they work with more and better equipments. At the same time, they are more efficient if they benefit from education and training. Education can increase the welfare not just by enlarging the economic opportunities, but also by its indirect benefits, improving the level of health, nourishment, offering personal fulfillment opportunities and developing certain individual abilities. As long as these skills / abilities are unequally distributed, the same thing will happen to the incomes. The standard solution for correcting these educational unbalances is, of course, the investment of more funds; still, which is imposed to be remarked, is the fact that, for the economic growth and development, more important than the quantity of resources meant for education is the way in which they are allocated between the primary, secondary and tertiary cycle.

The present paper, by form and content, proves the direct and indirect effects, from a micro or macroeconomic level that education generates. The research measure will be carried out cyclically, from theory to practice, from observable and palpable to explicative and theoretical.

ECONOMIC BENEFITS OF THE HUMAN CAPITAL

Which are the economic benefits of the human capital? There are two ways in which we can answer to this question, meaning from the individual's perspective and from the perspective of national economies (at macroeconomic level).

The students' number increased in many countries beginning with the 1800s, UNESCO estimating that there were 500.000 students in universities worldwide in 1900 and, a century later, the number was of almost 100 millions. The following graphic offers an image on this evolution.

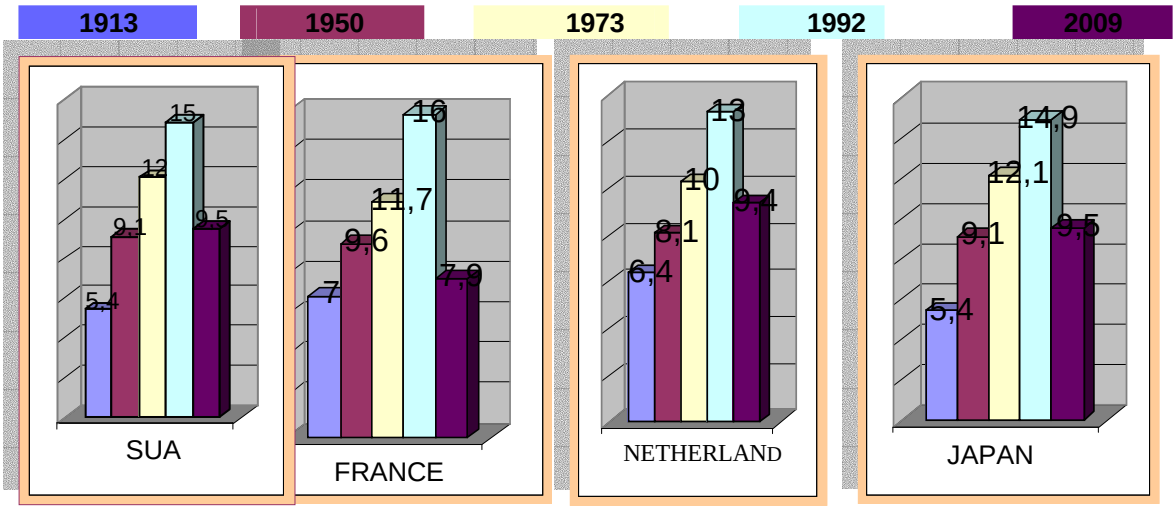


Figure no. 1. The growth on average of the educational years per adult in USA, France, Netherlands and Japan

(According to Barro-Lee Data – the average of the adults' educational years is the formal school years received on average by adults over the age of 15).

Source: Angus Maddison, *Monitoring the World Economy, 1820-1992*, Washington, DC: Organization for Economic Cooperation and Development, 1995 and UNESCO via NationMaster – www.nationmaster.com/red/graph/edu_ave_yea_of_sch_of_adu-education

From the individuals' perspective, the economic benefits of the human capital- such as increasing a person's income- must be balanced in comparison with the acquisition cost of this capital, firstly. These costs include money that is not earned when they studied, and also the price of education itself- study fees, etc. In many countries, this thing is not cheap at all; families make big sacrifices to send young people to university, while the graduates can still pay for the loans that were financed their school and after they start working.

In essence, all these investments will be paid, eventually, by themselves. Indeed, it is not imperiously necessary for the individuals to attend university studies in order to enjoy the economic benefits of education. For example, a person that graduates from high school (usually, concluding school at the age of 18), is more likely to have a job than someone who graduated from middle school (those who leave school around the age of 15 or 16). Of course, in which concerns the third level of education, among those with higher studies, the rate is bigger than in the case of high school graduates.

And after that, there are the incomes (earnings); here, again, a person with a higher level of education has, from the economic point of view, a net superior situation. In figure no.2, it is suggested by a comparative manner the wage earnings of those with superior education and those that did not graduate from high school.

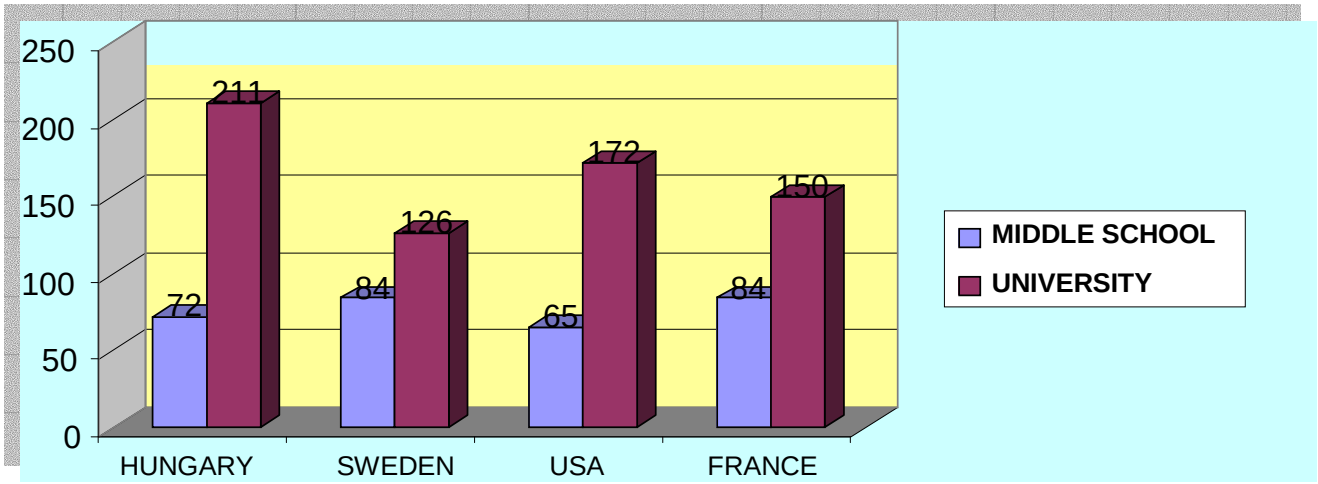
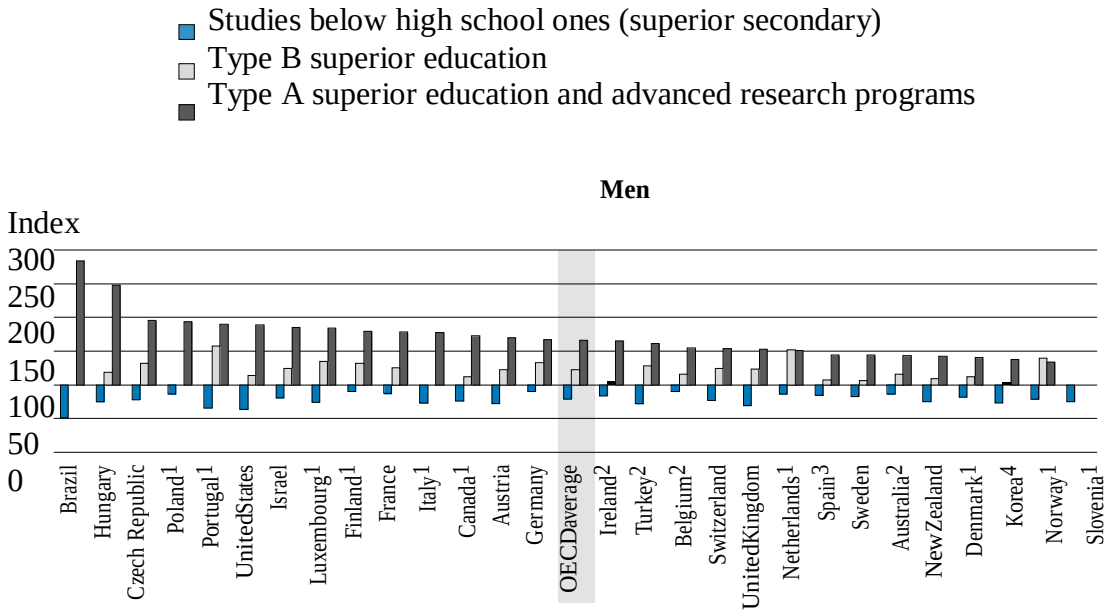


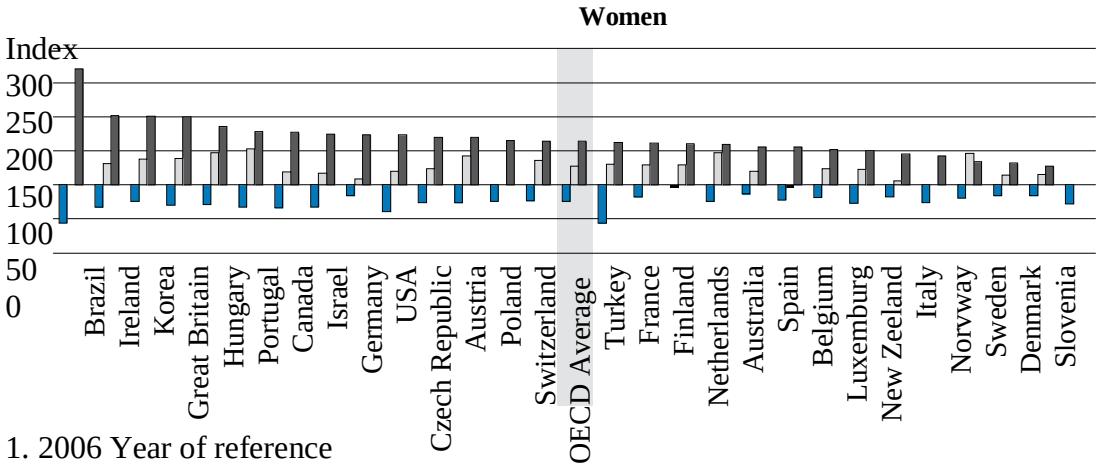
Figure 2: The evolution of relative earnings for the adult population (1997-2007), according to the studies level, for people with ages between 25-64 (superior secondary level (high school) and post- secondary (post- high school)=100)

Source: Education at a Glance, OECD 2009, www.oecd.org/edu/eag2009

The wage earnings grow with every level of education. Those who reached the high school, post high school or university level enjoy substantial advantages in comparison with people of the same sex that did not graduate form high school. The earnings, for those who graduated from university are bigger, in most of the countries, and exceed 50% in 17 from 28 OCDE member countries (OECD, 2009, 14).

Relative earnings in work (2007)- according to the level of education and sex for 25-64 years- (superior secondary and post-secondary non-tertiary education=100)





1. 2006 Year of reference
2. 2005 Year of reference
3. 2004 Year of reference
4. 2003 Year of reference

Source: OECD. Table A7.1a. (Annex 3 www.oecd.org/edu/eag2009)

According to the data given by OCDE, the people of male sex with type A superior studies or those involved in advanced research programs have a significant income in Hungary and Brazil, where the earning bonus exceeds 100%; in the Czech Republic, Poland, Portugal, USA, Israel, these people earn 80% or more in comparison with those with high school and post high school level, while in Hungary, Ireland, Korea, Great Britain and Brazil, women have a similar advantage.

The wage earnings offered by the education increase at the same time with the age; to those with university studies, as I mentioned before, the incomes are relatively bigger, but at an older age, in all the countries, excepting Australia, Italy, New Zeeland, Turkey, Great Britain and Israel. The people who do not have high school studies, generally, form the point of view of earnings, are disadvantaged at the same time with the age.

With few exceptions, women earn less than the men with similar levels of education; for all the levels of education, the average income earned by a woman with the age between 30 and 44 differs from 51% from the men in Korea to 88% in Slovenia. With all these, for women who do not have high school studies in New Zeeland and USA, and also for those who graduated from high school in the Czech Republic, the earnings difference reached more than 10% in the last decade.

The unemployment risk decreases, sometimes dramatically, as long as people accumulate more studies; for example in the Czech Republic, 19.2% of the people who did not graduate from high school are unemployed in comparison with a percentage of 1.5% for the people with superior studies. Graphically synthesized, the unemployment risk, on the three levels of education on the whole OCDE area, is presented as it follows:

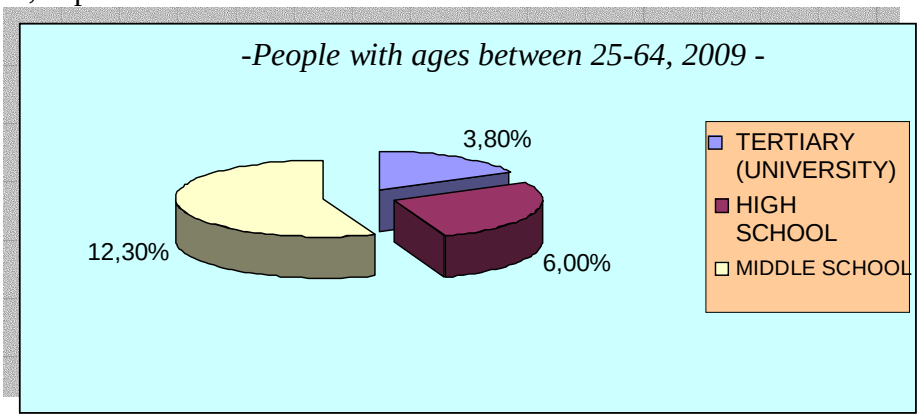


Figure no.3. Who does not work? The people percentage, at each level of education, which are unemployed in the whole OCDE area

Source: Education at a Glance 2009

What do these high earnings represent? In a word, productivity. In the real world, productivity has multiple meanings. Simplifying in a way, productivity represents the economic value of what is carried out by a worker (or by a piece of land or by any kind of capital form). A high productivity has the tendency, also, to support the economic growth that brings us bigger economic benefits. A more educated workforce increases the productivity at a local level, fact that, apparently curious but justified, implies an increase of the land price (Popescu, Pohoață and others, 2007, 8). It was established that a supplementary year of school, of medium level, increases the rents with almost 13%, a higher medium level of the human capital increases the global productivity, a fact reflected in the value of the land and also in wages (Rauch, 2005, 9).

Even if the economists believed long time ago, that there really was a connection between education and the economic growth, the calculation and the impact of this connection was not easy. The human capital, eventually, is a factor, an important one that influences the growth. A common point of view was reached, in which the capital and the economic growth are real and significant. This situation was supported by some members of the OCDE, who proved that, in the case in which the average time spent in education by a population increases with one year, then the production per head of inhabitant increases with 4% up to 6% on a long term. On a consequence path, the level of education influences the economic productivity of a country: the countries that registered a rapid growth of the number of people that enter their names on the school register, experimented a growing productivity and a improvement of the workforce quality (Lange and Topel, 2005, 6).the influence that the education has on productivity was analyzed by Topel (1999), who believes that in a large period of time (15-20 years) the impact estimated of the education on productivity is much bigger than in a short period of time (5 years).

OTHER NON- ECONOMIC BENEFITS

The economic growth is just a part of the human capital equation. Education brings other individual benefits, such as: people with more years of education are probably more available to offer themselves volunteers in the community groups, such as women associations and those parent-teacher organizations. There are, also, proves that the amount of time and money dedicated to charity actions are associated, positively, with the educational degree. For example, in the study entitled *Giving and Volunteering in the United States: Findings from a National Survey*, Hodgkinson and Weitzman established that the university graduates offered themselves as volunteers almost twice as number of hours and donated more than 50% of their income than the high school graduates (Hodgkinson and Weitzman, 1988, 3). In Great Britain, „The National Child Development Study" (NCDS) highlighted a strong correlation between the levels of education and the adhesion to political, environmental organizations or women and charity groups (Schuller and others, 2001,12). Bynner and others (2001, 1) reports that in Great Britain, the superior education graduates have three times more chances to be an active member of a non-lucrative organization than those who have no secondary studies (high school) and almost twice more probable than those who graduated from high school.

Certainly, one of the most visible benefits of education is health. People with a high degree of education enjoy a better health: they smoke less (a supplementary education year means that, on average, a woman will smoke 1.1 cigarettes less/day and a man 1.6 (Wolfe, 2001, 13) and practice more sports (a supplementary year of school corresponds to 17 minutes of extra physical exercise (Kenkel, 191, 4)). Health, as a benefit of education, is due to, in part, choosing a job (the decision to have an occupation with relatively low risks) or localization options (the decision to live in less polluted areas). More people with superior studies are liable to being more capable to identify and use of relevant information for health that, in the end, lead to a better behavior and state of the body (Kenkel, 191, 5). Anyhow, Kenkel proves, using the data from the USA, that the biggest variations can not be explained through the differences of knowledge on health. Education seems to have an effect on health, no matter income, race, social environment or other factors.

Sianesi and Van Reenen (2000), besides those mentioned previously, believe that a high degree of education can be associated with a more appropriate environment, bigger social cohesion and with a lower rate of criminality; even if Freeman (2000) believes that there is no clear connection between education and the criminality rate. On the other side, Kelly (2000) sustains that there was an indirect connection between education and criminality: the training degree influences the level of the incomes, this one generating certain inequalities, that on their turn will determine the increase of criminality. Other options belong to Leight (1998) and Lochner (1999) who see between education and criminality a direct connection.

Even more, the level of studies in one generation has positive effects on the school results of the next generation: the children from mother with a superior secondary level (high school) will graduate from high school more probable than those children from parents with inferior studies (Sandefur and others, 2006, 11). The parents with a higher level of education have children with a higher level of cognitive development, and also children with bigger possible earnings. There are also, proves of the external effects, at a community level; those who live in communities with a superior level of education have a higher probability for their children to graduate from high school (Wolfe, 2001, 13).

Education has a positive influence on making a poll on the workforce market; plausible effect, since, because of the abilities acquired in the use of information, and also the capacity to use the networks with access to these information, determine a series of important connections. Even more, the more educated people are, the more efficient consumers are (Rizzo and Zeckhauser, 10).

The graduated level of education represents a predictive element of more forms of political and social employment. Verba, Schlozman and de Brady (1995) established that education is a constant factor of influence that stimulates the political participation. More than that, the literary abilities among adults showed a positive relation with the participation to voluntariate community activities for more member countries OCDE (OECD, 2001, 15). Bynner et al. (2001), using data for Great Britain, identified higher levels of "social skills" for the high levels of education, a high degree of tolerance for diversity, and also the commitment of chances equality and resistance to political alienation.

The opinions of other analysts are more ambiguous. For example (Helliwell and Putnam 1999, 2) established that a growth of the average of the educational level has as effect the intensification of the level of trust, but it reduces the degree of political participation, while Nie, Junn and Stehlik-Barry (1996, 7) sustain that the "relative" levels more than the "absolute" levels of education are the key factor of the civic participation.

Wolfe, Haveman (2001) and McMahon's (2001) conclusions are those that the effects and social advantages of education are bigger, possibly, more ample than the macroeconomic effects and those from the direct labor market.

CONCLUSIONS

Education, formation and learning can play a remarkable role in building a solid base for the economic growth, social cohesion and personal development. The investments in the human capital need time for developing and bring benefits; as long as the effects can be measured and compared, certain studies suggest that the social impact of education (health, crime, social cohesion) could be as intense as the impact on the economic productivity, if not, even bigger. With all these, a correlation between the absolute indicators of education and different economic-social results does not offer a clue in the correct direction for the formal education, besides the fact that, the growth of the education degree of population is benefic. There is a synergy and a complementarity between education and other dimensions or social, institutional and legal environments. The abilities and skills can have a direct influence, through highlighting the impact of other factors. The superior education in partnership with the public and private interest can play a key role in stimulating research and innovation that could lead to a more rapid growth in the national income.

In fact, the non- economic benefits of education, under the shape of personal welfare and a better social cohesion, are seen by many, as essential, just from the point of view of their impact on the incomes on the workforce market and of the economic growth (OECD, 2001, 16).

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