INVESTMENT IN EDUCATION, THE WAY FOR ROMANIA TO SUCCEED

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Abstract: *The new economical approach highlights more and more the importance of human capital. Presented as giving a big contribution to the social wealth, the accent is putted over the fact that the investment in this direction is one of the most important.*
Under these circumstances we are analyzing the particular case of Romania as a developing country, the investment made in education and the effects of the global crisis in this field.

Keywords*: education, human capital, investment, global crisis*

JEL Classification*: E22, E24, I20. J20*

In the second half of the twentieth century, humanity has experienced unprecedented economic growth, especially due to technological progress increasingly faster and greater international competition.

This progress was possible because of the ability of humanity to control and manage their environment according to their requirements, by reference to science and education, the main drivers of economic progress. Education is no longer defined only in terms of impact on economic growth, but also by the larger perspective of human development, placing it in interdisciplinary concerns foreground of government agencies and national and international NGOs.

After a long time when education and instruction were left to pedagogy and teachers, in the past half century specialists in various fields - economists, sociologists, psychologists, technocrats and politicians - have made a multi and transdisciplinary approach, including in the equations of national, regional and global development strategies, education and training of workers. Besides pedagogical and content components of learning - its mechanisms and dynamics addressed adequately extraordinary progress of scientific knowledge and practical action - the length, structure, financing and management of education fell under the economic approach, being evaluated by economic criteria including cost and results.

New economic approaches of education[1] focused on education for economic demand - reviewed and evaluated by human capital theory - emphasizing the importance of international comparisons of human resources for increased productivity. Connection between the rate of technological progress and quality of human intervention has become increasingly evident, like the preparation of those who play an active role in the economic environment, to use in creative mode and innovative purpose new technologies; in consequence, the second research topic of economic perspective approach to education was to correlate between education and adapt employment and economic growth.

[1] Smith, Adam - Avuția națiunilor, Editura Bucovina, 1937, p.243

The rapid rhythm of change has convinced both the business community and nations that labor flexibility is needed. Every sector, including agriculture, needs a constant update of qualification, combined with the accumulation of knowledge and skills to action.

"This irreversible trend represent a proof of growing importance of" intangible " points in investments field, such as education - as the effects of" intelligence revolution "are felt. " In this case, investment in education becomes a strategic investment.

Therefore, as Jacques Delors said," educational systems must educate in innovative spirit, promote the ability of evolution, adapting to a world rapidly changing, that each individual be able to assimilate. "

The study of these issues has grown considerably in the 60s, reaching a peak in the '70s. Subsequently, interests in economic approaches to education and training have diminished, making only subject to strict professional studies. Deep economic crisis caused the first oil price shock (1973), embodied in numerous and serious imbalances including chronic unemployment, has produced a certain disillusionment about the capacity of education itself and training of human resources to generate economic growth and sustainable employment of labor.

In this context, the core economy of education - human capital theory - has been subject to criticism and dispute both ideas and extensions of the scope and content approaches.

In addressing this issue, essential in terms of economy and sociology of education, the exploitation of human resources potential, we start from the concept - with a wide used today – the human capital.

Thus, Adam Smith - in his famous book "Wealth of Nations" noted that human capital is not only a form of capital, but the most important of them, embody skills acquired from useful members of society, capacities that can be found, both, in each individual property, and also in the "heritage" or the wealth of the society which he belongs. "Perfected skill of a worker may be regarded as a tool to improve work and that, although costs, require a certain expense, however repays after this expense as an income for himself and for the community to which it belongs.

Almost a century later, national and international economic environment challenges caused by highly dynamic technological developments, often less visible, have triggered a wide debate among the scientific community with practical purpose, perhaps insufficiently valued at first, but very dynamic. Emergence and consolidation of its various versions of "human capital school", launched practically following the appearance on the "market science" of the first edition of the work of Gary S Becker, spurred further development - the formal multilateral plans - the human capital school . There are now, beyond some doctrinal differences, and/or methodological consensus on the importance, roles and functions of human capital in sustainable development and, not least in terms of enhancing its role in the new economy, the informational economy.

Human capital is defined, usually as an integrated whole theoretical system of general and specialized knowledge, skills and abilities learned in the process of education and training (formal and informal) or from the work experience, by economic and social behavior that the individual implement in the process of creating goods and services, generation of an income adequate / remunerated for their owner and also to the community where is falling or for the society (see also The Oxford Dictionary for the Business World, 1993).

In connection to this, two remarks appear necessary which have their signification to decipher the investment in human capital. Human capital as stock and flow is multidimensional and multifactorial determined.[2] More specifically, it includes a package of components that belong to different spheres of social activities but that in their interaction / connection leads to what we routinely call "quality of the human factor."

[2] Ciobanu, O., *Educaţia economică în România Prezzent şi perspectivă*, Editura ASE, Bucureşti, 2003, p. 58

Why multidimensional?[3] Because here enter such items as: theoretical knowledge, skills, work habits, character and personality traits, health status, level and structure of consumption, etc... In a sense, each of the elements mentioned - and the list could be bigger, taken separately is the form / aspect of human capital.

Why multifactorial? First, because it has special relevance for macro-and microeconomic decisions regarding the option of saving and investment, the opportunity cost areas, investment allocation based on priority programs and, not ultimately, relations between public policy and action in the field of active market. Even more as market signals act most often delayed compared with future skills needs and therefore may be distorted and / or introduced distortions which become visible, disturbing after few years (first supply and demand qualifications in certain professional market segments are balanced and on the other imbalances occur, sometimes major, in other segments).

Secondly, in terms of training effects, potentiation and autopotentiation. Prestigious research developed especially after 1950, in each of the areas mentioned, but especially in the "economy education" has highlighted the many interdependencies between stock and dynamics of human capital and a series of demo-economic variables, socio-cultural, etc…such as:

- growth rate and quality of economic growth;
- sustainable human development;
- the rate of creation / innovation, development and technology transfer;
- Productivity - competitiveness - employment;
- population demographic behavior;
- size and income distribution;
- Social security systems;
- transfers and intergenerational solidarity, etc..

Thirdly, from the perspective of those who participate/cooperate in training and developing human capital (individuals, families, local communities, undertakings, public power, civil society, external partners).

Since the '60s, a number of theorists have highlighted the significance of human capital for the economical development of a country. Thereby has emerged theories regarding human resources and human capital.

Frederick Harbison has shown that "not the capital, income or material resources but human resources constitute the ultimate foundation of wealth nations. Human beings are active agents that accumulate capital, exploit natural resources and promote national development; ..."[4] a country that is unable to develop the skills and knowledge of their people and use them effectively in the national economy will not be able to develop anything. From his point of view, material and capital resources are passive factors of production that can be activated only through human resources, properly trained (through education and training) and used, gave strength and durability to the national economy.

Regarding human capital, economic analysis distinguished between:

- Human capital acquired[5] through formal education, in which both general cultural elements are present and professional cultural elements (specialized).

- Operator-specific human capital, measured, usually by an indicator that reveals the number of years worked in the same company;

- Occupational-specific human capital, measured, mostly by the number of years assigned to the same occupations.

[4] Harbison, F.H.- Resursele umane ca avutie a natiunilor (trad.), Oxford University Press, N.Y., 1973, p.3

[5] Suciu, Marta Christina - Investiția în educație, Ed.Economică, Bucureşti, 2000, p.45

Old or recent surveys of famous authors have attempted to quantify the contribution of human capital to ensure social welfare, as well as an assessment of training (externalities) of investment in human capital.

In the field of human resources it has made numerous researches on many aspects: economic, sociological, cultural, educational, etc.., including attempts compensating their contribution to economic development. Economic output of a nation depends - besides the processes of absorption or consumption - also of the the degree / level of qualification of its people, achieved both through professional education, and through adequate and sustained economic education.

Investment in human resource - embodied in stock, size and quality of human capital flows, and often expressed through concepts of stock and flows of education and / or knowledge – is acting, in fact on the entire life of individuals and on societal scale over a long period, cause and effect of economic development - social, it prevails, anticipating on various channels and in multiple forms the future development. In an extended approach, investing in human resources should not be reduced only to the acquisition of knowledge and skills, but must include also the population health status and nutritional needs because a decent living lead to a general and individual increase of productivity and in the same time, make investment in human resources more sustainable and profitable.

In a very broad support, according to the concept of human capital, investment in human resources could be defined as all expenditures and activities designed to ensure, to provide the enlargement, the (re) renewal, restructuring and transformation in conditions of transparency of the competencies package (knowledge, skills, abilities, behaviors) that gives the human factor qualities / creative abilities, imaginative, productive and participatory communication, etc.. Defined thus, the investment in human resource covers an extensive area of needs, aspirations and interests consistent with the individual personality.[6]

Th. Schultz, Nobel laureate for economics in 1979 - devoted to human capital term, stressed that human being is a form of capital that can be developed. He also demonstrated that to the growth of a nation contribute not only the amount of land and labor used, but also knowledge and skills that people posses, multiplication of these acquisitions being even one of the most significant features of the economical system. In "Investing in human capital, Th. Schultz started to declare that "the level of some developed countries (eg USA) have a much higher growth rate than the capital would allow conventional (non-human) used for the production of this income (labor, land and capital). He called this discrepancy ”resource productivity" and after further research concludes that increasing income from work is due to a remarkable growth rate of human capital. Th. Schultz calculated the contribution of education to growth based on modern theory of rent.

And economist Edward Denison was concerned by the discovery of that unknown factor - other than work or land - that participate in the increase of production obtained per expended unit of labor. Denison resorting to identify the "residual" factor, by introducing into account the aggregate production function that expresses the total production in the three traditional factors of production, considered to be constant. In "Sources of growth in the United States”[7], Denison seeks to measure the effects of human capital on economic growth, analyzing a period from 1929 - 1957 and considering that growth rate is x% per year for land, y% for qualitative changes and z% for labor and capital changes. To his surprise, found that when multiplied three traditional factors of production with corresponding growth rates, obtained an annual growth average of national income by 2.93% compared with the total increase in expenditures for land, labor and

[6] Marinescu, C., *Educaţia- perspectivă economică*, Editura Economică, Bucureşti, 2001

[7] Denison, E. - In American Economic Review no.52, mai/1962, p.67

capital of 2.0%. So there was an increase of 0.93% of national income per year that could not be justified by the increase registered by traditional factors of production. Subsequently extended the analysis until 1969, using as a tool to measure the contribution of the unknown factor, is analyzed the residual approach. Denison shows, finally, that education and training determine national income growth, including calculating the percentage can be attributed to education. We suppose Denison included in its calculations also elements of economic education, which supports professional training.

Both theorists - T. Schultz, E. Denison - concluded that investment in human capital has the running costs for education made by a person, family, organization or society as a whole, taking into account the possibility of success not only in performance professional, skills and understanding, but also in the event of obtaining additional income in a relative future.

Addressing to human capital in its complexity, Gary Becker, another great theorist of human capital, calculated the effects of human capital investments for both individual and society. Becker and theory developed from a model whose essential assumption is that education increases the productivity of those who possess, even if it involves costs, investment in human capital produces earnings.[8] Human capital theory, productivity is an attribute of the worker, depending on his physical and intellectual capacities, and level of training achieved. After G. Becker, "future productivity can be improved only at a cost, because otherwise there would be an unlimited demand for training. Otherwise expressed, resource allocation for education (teaching) should follow the principles of the neoclassical model of resource use in a market economy. The decision to invest in human capital is influenced by many factors, one of them being the social group which highlights the existence of social barriers and restrictions for certain categories, which led the discussion of social discrimination. Becker, in his work "Human Capital" (Nobel Prize for economics in 1992) warns that economic agents not only pursue profit maximization, but are interested in maximizing satisfaction and utility. This does not exclude, however, that in the short term, some individuals or groups can not achieve this goal, walking, usually in unwanted frequencies, which deepens social polarization. New optical belonging Gary Becker, has caused heated discussions and controversy, especially with Marxists economists. Traditional dichotomy between labor and capital - factors distinct and even opposed ideological theories and ideological - is replaced by a new paradigm based on unskilled labor trilogy - human capital - physical capital (material). Becker considered, like other advocates of human capital theory, the fixed costs of education and individual earnings expected that there is a close relationship addiction.

Human capital, as stock of knowledge, skills and abilities used in the production purpose, plays a major role in growing modern economies. If we bring the discussion in the particular case of Romania, a country that wants to learn in an intense catching-up process of development from western countries, the normative level we could say that we need massive investment in education and training.[9] However, a realistic approach to what exists in fact, the discussion may get only a disturbing twist. We make in first instance a call to the numbers and, according to official statistics (INSS, 2005), we found that only 53.2% of students that enroll in primary and secondary cycles will come also to a higher level of training. If we look at how many young people below the age of 22 years graduated from high school, we find an average of 66.5%, less than 11 percent against the European average (77.3%). In 2006, reported to a school population (enrolled population) of 4.34 million, there were only 185,255 high school graduates, plus 150,187 graduates of vocational schools, which means a rate of 7 71%, well below the European

[8] Becker, Gary S. - Capitalul uman, Ed. ALL, Bucureşti, 1997, p.156

[9] Cămăşoiu, O, *Formarea profesională*, Editura Economică, Bucureşti, 1994, P. 53-56

average exceeding 10%. Neither as regards the preparation still can not say that exists comparison with what we want to be, just 1.6% of Romanian adults following professional training courses, while the EU target is 12 5% (INSS, 2005). If you try to place Romania in the global context as a complex state, such as the combined rate of school enrollment in the year 2007 we are found on the positions 68 in the neighborhood of countries like South Africa or Egypt. In the same time, after human development index, Romania ranked 62 in 2008. However must be said that although the positions are still far from agreed objectives, every year there has been progress that can be justified by increasing the amounts allocated to education, health and social protection.

These are the general conditions under which, in a previous analysis, based on Lucas conclusions (1988) that the gap between growth rates for various states are given the differences in human capital accumulation and, therefore, to tends towards a level of convergence, less developed states have to increase rates of accumulation of human capital both by improving the educational process and by promoting technical progress, we appreciate that Romania needs to invest in the next period in education, prerequisite for long-term sustainability of economic growth process. A low stock of human capital to young people today, combined with one of the lowest rates in lifelong learning training in Europe (1.6%) could foreshadow a situation of continued degradation of the Romanian economy for the future.

Only a change of vision from government and a strong funding of education sector can cause a reversal of situation. Therefore, if the context of the stock of human capital is a damaged one by the precarious state of education system and the leakage to the outside through the migration process extremely powerful, it is necessary that at the macroeconomic level, to pay attention to the educational system, and then, under appropriate funding, to be amplified until a trainer level the quality of education issue.

Modern theories of growth come with optimistic assumption of the technological convergence [Solow 1956], implying that, because of the volatile technological advantage, countries within technological frontier can catch up countries that are on the border opportunities. However, countries or industries from the second division have different capacity to absorb technology (Abramovitz, 1986).

They differ according to national policies on education and research (Romer, 1990). Technology can not be acquired without any education and practical skills necessary to understand and use it. Those skills are gained as a result of complex processes, requiring long and significant investment.[10] Reality shows that there is a convergence in the countries which develop in parallel and human capital stock in a greater degree than developed countries. If this not happens, the technological gap often increases because, even at the same rates of educational and professional growth stock, their application to a different basis will generate quite different results (Mankiw, Romer, Weil, 1992).

For example, a greater number of years of schooling from 6.5 to 6.7 in the case of developing countries will not be similar, as effect on economic growth, with an increase of 10 to10, 2 years in a developed country. If the former increased the number of years training at secondary level in the latter case it is an increase especially at tertiary level. It is known that there are major differences in capacity for innovation in the level of training. If individuals with secondary education are more likely to technological imitation, those with tertiary education are more able to innovate.

[10] Mankiw N.G., Romer D., Weil D.N., *"A Contribution to the Empirics of Economic Growth*", Quarterly Journal of Economics, 107, pp 407+437, 1992

Therefore, an increase of 1% of primary school enrollment rate will result in an increase of 2% of GNP and the same 1% increase in secondary school enrollment rate will produce an increase of 2.5 or even 3% (for developing countries) (Sianesi Van Reenen, 2000).

In other words, for example, although the growth rate of years of schooling is very low in Western countries precisely because of the high level reached so high base reporting a minor increase produces more individuals, are able to innovate, while developing countries will occur more individuals are able to imitate technology. Therefore, that the convergence process exist, it is imperative that the growth of education level to be significantly higher in developing countries. This, however, requires clear policies, targeted toward achieving specific objectives aimed at a level of education specific to the development course cycle.

Referring again to the situation in Romania, we can say that the state of convergence with the EU countries can not occur under current conditions. Strongest argument is related, as I said above, the insufficient level of human capital and less encouraging prospects for subsequent periods of development, arising from poor school figures (Table 1) and quality of Romanian education.

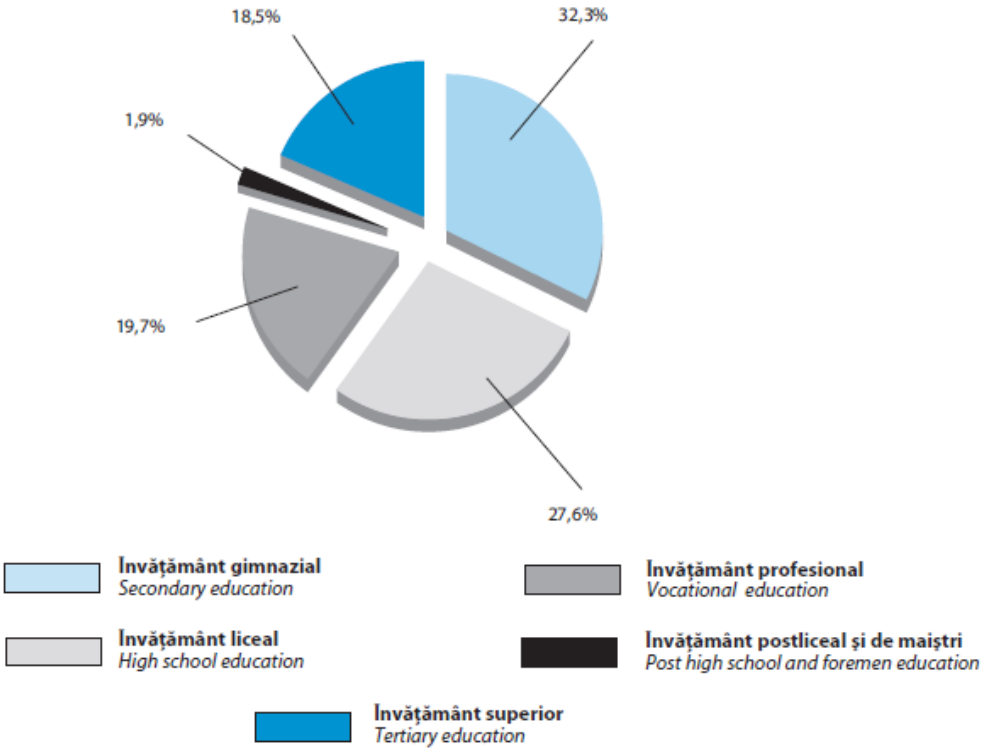
Table 1. **Gross rate of registration in urban education levels / areas (2006)**

School level	Total	Urban	Rural
Preschool	71,8	76,9	67,9
Primary	108,2	108,5	107,9
Secondary	92,2	96	88
Total basic education	99,2	101,1	97,3
Lyceum	54,6	89,8	8,6
Superior	29,9	-	-

Source: Romanian Statistical Yearbook 2007

According to OECD statistics, Romania is behind all its neighbors to assess the level of literacy among young people by 15 years (score 428 out of an average of 500) and the second smallest to assess eighth graders in science and mathematics (score 470 out of an average of 500). It was therefore necessary that in the next period, Romania must accelerate the investment in education in order to recover the disability created by neglecting this issue in the past 20 years. Although 2007 and 2008 gave positive signals, when the education funding significantly increased due to budgetary effort and enlargement of GDP, the process improvement was suddenly interrupted by the emergence of international financial crisis which affected in amplified mode the Romanian economy.

Figure 1. Graduates by level of education in 2006/2007 school (academic) year



Source: Romanian Statistical Yearbook 2008, chapter 8-Education

The gloomy predictions on general economic developments in 2009 led to a rethinking of budget strategies in the context of significantly reducing the spending and investment. One of the sectors in which, contrary to the signals drawn by the World Bank and IMF, the reforms were interrupted, by a significant reduction of funding is the education one. Thus, correction of the budget in April 2009 brought a minus of 811 million, money that can not meet any minimum wage increases promised to teachers and some of the investments started in schools. The decision interrupts, in a certain way, the positive trend of stock accumulation process of education, so necessary in the context of comparison described above. If would be a temporary interruption, the inducing imbalance would not be a major one because of the system inertia. Both positive and negative effects have a certain elasticity in propagation. Lack of adequate funding this year could be offset by a rebound in the next period, if will exist a long term strategic development plan, as there are in many developed countries like USA, Japan, Germany, France.

Fortunately, there is a positive part in the crisis that caused the reduction of investment in education: the recovery of a part from the lost of human capital stock in previous years by emigration.[11] Because of extensive global crisis, the labor market in developed countries has narrowed substantially, making it a good part of those who have a good time working abroad to return. They came not only with an additional amount of money but also with a stock of knowledge, skills and abilities extremely valuable both for themselves and for the national economy. Although the amount of money in the form of remittances is substantial, only in 2008

[11] Rodriguez-Pose, A., Vilalta-Bufi, M., *"Education, Migration and Job Satisfaction: the Regional Returns of Human Capital in the EU"*, BEER paper no. 1, 2004.

exceeded 8 billion, is not the main advantage of temporary migration, but the specialization of labor and human capital accumulation .

There are a lot of discussion about the so-called "circular migration" or "temporary migration. The fact is that migrants from developing countries bring, when they return to their home country, an additional stock of human capital resulting either from technical knowledge gained in the pursuit of new activities or the additional skills gained in the context of the productive act that entails, often in starting new businesses in their home country or between home and host country.

There is also the benefits of additional social capital gained, generated by social contagion effect when a minority get in touch with a dominant majority. It produces a transfer of social norms and customs that, in the context discussed by us, it can be only favorable. Individuals who take contact with the detailed regulations specific of developed countries adapt their behavior, initially consciously and imposed and then subconsciously and unconditionally , becoming after that people with superior automatism behavior, characteristic of social, political and economic culture of host countries. Although to some extent, cultural identity of origin is maintained, it was observed that when the migrants return home, they will want and even be motivated by the possibility to be informal leaders, to spread and apply patterns acquired during migration. This is observed in Romania, especially in rural areas, where people who "go out" is a distinct community, more emancipated, respected and emulated.

CONCLUSIONS

Currently, human capital accumulation process in Romania is subject to divergent trends, being quite difficult to say whether the outcome will be positive or contrary: we can talk, first, of reducing the budget for education and research, due to the actual situation and, secondly, we talk about a reversal of the migration process, a significant part of people come back due to adverse international situation. If in the first case it will be a loss of educational stock, which could be recovered if in the near future the upward trend of investments in education will resume, in the second case will be noticed, on medium and long term, a significant contribution of human and social capital, especially in rural communities where immigration has significantly affected the demographic composition in the previous years.

Romania needs in the next period to increase their support for the education sector in the context in which the state wishes to achieve convergence with the EU average. Although the moment of crisis seems to be unfavorable, we must say that the future belongs only to countries that create favorable environment for innovation, environment that will appear only in the presence of a high human capital stock. Help in this regard may come from attracting and retaining in the country those who have accumulated human capital through temporary migration in the developed economies of the world in prior periods.

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