

The Efficiency of the Public Services

A Classic Approach on the Education System

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Introduction

The continuous improvement of the individual's living standard as well as the economical development of a community cannot be realized without a proper public services, especially without an adequate educational system. For this reason, the educational strategies play an important role in the governmental politics of the developed countries. These strategies, also called preparatory strategies, must be defined over their four components:

- *Objectives* : doubtlessly, the fundamental objective of any educational strategy is that of increasing the education level of the members that make part of a certain community and through this, of improving their living standards;
- *Ways of accomplishment*: there is a great variety of ways of how to practice an educational strategy (increasing the accessibility degree to education for the individuals, improving the level of pedagogical and special education of the teachers etc.). No matter what way we choose, we always have to take into account the objectives of the educational strategy;
- *Resources*: from the point of view of the consumed resources necessary to accomplish a strategy, we have to mention that they generally refer to the financial area (budgetary expenses meant to the education sector);
- *Terms*: any strategy has to have an accomplishment term established. In the case of the educational strategies, these terms are greater than those regarding the economical strategies, reaching even values of 15 to 20 years.

By taking into account these matters, we have to concentrate generally over the educational system and especially over the higher educational system, given the conditions when the latter represents the basis of a real, strong human development.

It is true that the viability of a nation depends on the educational system, a fact that was proved by the history of the entire humanity, in which nations that benefited of education were also the most developed ones. The main entity of the higher education is the higher education institute. This entity can be taken as a system made of more subsystems (didactic, logistic, administrative, organizational etc.) that interact among them and whose main purpose is to raise the society's cultural and civilization level. This fundamental target of the educational system is based on the accomplishment of several objectives:

- The individual's progress, so that he can enjoy his life at the highest level possible;
- The individual's socialization so that he can take part in the development of an activity, together with other persons;

- The insurance of some basic knowledge about other cultures;
- The insurance of some habitudes in different areas;
- The insurance of some basic competences and of some different professional abilities.

The individual cannot but benefit over the accomplishment of these objectives. The same thing is true for the society as well, and the society will use the individual's knowledge, capacities and habitudes in order to promote the economical and social progress. H. R. Bowen [1] best illustrates the target of the educational system, in general, and of the higher education in particular: „*The main goal of higher education is to change people into the desired modalities. In their turn, these changes can have deep effects in economy and society and even in the course of history. But, at first, the goal is to modify both qualities and behaviours of the human beings*”.

During the last decades, once with the informational explosion of knowledge appeared the issue of the educational system efficiency quantification. The importance of its study lays in several aspects, from which we mention:

- A first aspect is represented by the globalization, a phenomenon that spread lately and that affects more or less the life of every person. The national economies and even the national cultures globalize. Through this, we understand that the society's activities (politics, economy, culture, sports etc.) function in a tight dependence at a world wide level and in true time. This phenomenon became possible recently, thanks to the infrastructure provided by the communication and informatics technologies. The globalization implies a high cultural and civilization level of different peoples, which is impossible to accomplish without an efficient and modern educational system.
- Even if the technology and welfare level is higher than in the past, the number of people living in poverty is quite raised. A rehabilitation chance for the underdeveloped countries is represented by the existence of an efficient educational system, able to attenuate the discrepancies among different persons when referring to the living standards issue.
- An individual's educational preparedness is strongly related to unemployment. Generally speaking, the unemployment rates decrease according as the individual's educational preparedness increases. For example, in Great Britain, the unemployment rate is of 9% for the persons between 25 and 64 years old with a primary and secondary education (the equivalent of high-school level in Romania), and of 1.9% for those with higher education (OECD, 2001). Generally speaking, a poor knowledge level, as a result of an inefficient or underdeveloped educational system, is considered to have a great importance in explaining the unemployment level in a country.

Taking into account these aspects that refer to the importance of studying the efficiency in the educational activity, we will present its way of evaluation, from a classical point of view.

1. The Evaluation Perspectives of the Efficiency in the Educational Activity

In the economic reality there are two type of efficiency evaluation: the classical vision (according to which, the evaluation stresses on the registered effects without taking into consideration the efforts) and the systematic vision (according to which the evaluation is based on the rapport between the effects obtained from the system and the consumed resources).

Generally speaking, the “closer” the respective activity is to the social and cultural area, the more important in appreciating the efficiency is the effect quantification (and, eventually, on the efforts) and less on the rapport between them. At the same time, if the respective activity has great economic implications, the accent will fall on the effect-effort rapport.. In practice, there is no

economical activity without social implication as well as there is no social activity with economical consequences. Without a doubt, the methodologies for economic efficiency evaluation (through the systematic vision) are more developed than the methodologies for social and cultural efficiency. Therefore, in the following we will analyze the efficiency of the education system through the classic vision.

2. The Effects of the Educational Activity

The problematic of the educational activity's effects is very complex. Traditionally, the idea that the education is advantageous has been accepted as a generally valid truth. Starting with the '80s the problem of quantifying the unseen effects of the educational activity was raised. In that moment, the difficulty of such an evaluation, due to many methodological and conceptual problems, as well as the amplitude and diversity of the effects resulted from the educational activity have become obvious.

There is an observation from which the evaluation of the educational activity must start. It refers to the fact that educated people (who benefited more or less over the educational system) are different from those who did not. Therefore, the individuals change, as they gain more knowledge. Such changes can be met in different situations: at the individual's working place, in his behaviour, in his health level, in his home activities, in his economical life. Without any doubt, we can ask the following question: where are these changes the exclusive result of education and not of other conjugated factors (maturation, experience etc.). Ideally, we can consider two groups that do not differ but through different educational levels (an educated one and an uneducated one). According to different advantages (economical, social etc.) regarding the educated group in comparison with the uneducated one, we can appreciate whether these benefits are the effect of the educational activity. M. Blaug [2] said the following: „ ... *we start by presenting an incontestable fact: from any two groups of individuals of the same age and sex, one which has a higher education, will have an average income greater than that of the less educated group even if the two groups belong to the same professional category of the same industry...*”. In real life, it is impossible to find such identical groups, an educated one and an uneducated one. First of all, this impossibility resides in the fact that people are different, they have different intellectual levels; they live in different familial environments with different habits and skills. Secondly, in all the civilized countries (that discussed the issue of studying social efficiency) the education, or at least the primary education, is compulsory. Therefore, there are no individuals or groups that have no education at all. That is why in these places (U.S.A., Canada, Europe and Australia) there came into discussion the issue of studying the different advantages registered by persons who benefited of different educational levels.

Obviously, any discussion referring to the effects of the educational activity must be differentiated according to the educational level. The benefit a graduate of primary education gains will be different from that gained by the graduate of a higher education institution. Still, the immediate benefit gained by a primary education graduate is the possibility to reach the higher education level.

The education and its effects behave as economical goods, their value being determined by the offer/request law. So, according as almost all the persons belonging to the society already have information provided by the primary education (or else, they graduated this type of education level) the value of the benefits will be smaller than when a reduced number of persons from the society would possess this information. For example, the Romanian citizens cannot gain great wages only because they know Romanian (a language they assimilated during the primary educational cycle). Contrariwise, they will gain great wages if they know English or if they know how to use a PC (knowledge they learned during the high-school or university). This is why the effects of the educational activity will differ accordingly to the considered educational level, as long as the percentages of people who are able to reach superior educational levels diminish.

The analysis of the educational effects must be made according to several aspects. In the following we will concentrate our attention on the typology of the educational effects and the evaluation mode.

2.1 The Typology of the Educational Effects

According to the specialty literature, there are more types of effects (benefits) of the educational activity: cognitive or affective, quantifiable or non-quantifiable, economical or social.

Obviously, some of these types of effects are easier to identify than others. The economists, from their wish to judge everything from the cost-benefit point of view, tend to observe only the economical effects. That is why they see education as an investment in the human capital where time and financial expenses are made in order to gain education that will grow the individual value on the labour market and eventually, the income.

The human capital theory starts from the idea that the quality and quantity of education gained by an individual contribute to the increase of its value and its working productivity; in the end, this productivity growth leads to greater incomes. Of course, the human capital of an individual also depends on other, extra-educational factors. For example, the fact that a higher education graduate has a bigger wage than a high-school graduate does not have to lead us to the idea that by graduating a faculty we will necessarily have a greater wage.

It is possible for a faculty graduate to be more motivated than the high-school graduate and thanks to these qualities he could obtain a greater income even if he did not graduate a higher education institution. That is why the evaluation of education from the income point of view was made given the ideal conditions where the other factors that affect the incomes were considered as constant. These conditions given, from the older analysis made by G.S. Becker [3] to the most recent made by F. Palafox [4], we reached the same result: if any other factors remain constant, the higher educated persons will earn more during their lifetime.

Even so, in real life, the income-education correlation presents certain lacks. These lacks are represented exactly by the extra-educational factors that influence the incomes level. Among these, we can mention:

- The conjuncture on the labour market that can influence the incomes earned by different persons, no matter their level of education. It is possible for a technical faculty graduate (for example, Constructions) trained for an adverse job on the labour market to have at a certain moment a greater wage than a humanist faculty graduate (for example, Philology), trained for an occupation for which there is always an extra labour force.
- The graduate's future job. This can generate various effects, both financial (incomes) and non-financial. It is possible for a higher education to lead to a very willable job, that does not provide special incomes, but it offers another type of satisfaction (social status, prestige etc.). For example, the Governmental or academic positions are often occupied by persons who earn money from other activities and therefore they are not interested of the incomes provided by these positions.
- Discrimination or subjectivism, which does not allow the productivity to reflect in the high incomes. The affinity of some employers towards a certain kind of employee can generate different effects, at the same higher education level. This way, the less favoured ones will have to work harder in order to obtain the same incomes or they will have to accept smaller salaries at the same productivity level.
- Other factors that influence the incomes belong to the individual area: health, motivation, ability, social status, intelligence etc. It is quite obvious that a healthy individual will obtain during his life a greater income than another individual with a lower health stage, given the conditions of the same superior educational level.

Besides these quantifiable effects (that adopt the form of incomes), there are several other social effects that are hard to identify and once identified, harder to evaluate.

These effects are complementary to the economical ones and, as Adam Smith said, they contribute to the understanding of the “private life’s daily duties” by all the members of the society. The social effects (and generally speaking, the non-quantifiable effects) manifest at two levels: the individual level and the society level as a whole. We have to notice that the effects at the collectivist level are the synergetic result of the individual effects.

A first social effect has been attested by several studies and specialty researches over *fertility*. So, it was determined that education strongly influences the fertility in a family. More precisely, education can increase the age of marriage or of the first birth.

This is due to the action of at least three factors:

- The increase of the opportunity cost of the time meant to child care;
- More efficient contraceptive methods;
- Changes in the life style.

Still, a bigger income means that the family can allow more children maybe with a greater attention for their growth. Although they may seem distinct, the social life offers various examples for each of the two arguments. At a worldwide level in a family with a high income there is a reduced number of children but with a great level of the care expenses for each of them. Such studies have been made by D. H. Sullivan and T. M. Smeedling [5] for the developing countries as well as by R. Herrnstein and C. Murray [6] and R. Haveman and B. Wolfe [7] for the U.S.A.

Another social effect of education is related to the *labour force* market. The labour conditions are usually more convenient for a higher education graduate meaning that his relationship with the superiors is based on a greater trust than in the situation of an uneducated person. This kind of non-salary benefits (work conditions and climate, personal status, promoting possibilities) has a greater importance for the higher education graduate, sometimes as big as that of the wage.

The third type of educational social effects refers to *the individual’s behaviour improvement*. More specific, education can improve the individual’s abilities to make decisions, to be more innovative, to quickly adapt himself to the technological and social changes, to encourage technical progress etc. To support this, we can point out a study realized in the U.S.A. in 1987 by G. D. Wozniak [8], referring to farmers. This way we got to the conclusion that the quick adoption of modern technologies in this area is influenced by the educational level.

Another type of educational social effects is related to *the healthier behaviour of the higher education graduates*. Therefore, it was observed a decrease of drugs and cigarettes consumption in the case of higher educated persons. These effects are especially attributed to education because people tend to consume various goods when they have great incomes obtained as a result of their higher education level. At the same time, according J. R. Behrman [9], the effects of education are also benefic over criminality, environment protection and family structure. Indeed, the amplitude of the educational social effects is very high; an idea also suggested G.S. Becker [10].

The fifth type of social effect is represented by *the dimension of inter-human relationships*. Such effects are represented by the satisfaction offered by the participation to different activities together with the colleagues, by the encounter with the eventual life partner etc.

Lastly, another type of social effects is represented by those directly encountered by the society in its whole. These effects refer to the impact of the higher educated persons over the social welfare and work productivity of all the members of the society, including those who did not benefit of education, a fact that is admitted by the American economist Alfred Marshall: „*We may then conclude that the wisdom of expending public and private funds on education is not to be measured by its direct fruits alone. It will be profitable as a mere investment (on. in human capital) to give the masses of the people much greater opportunities than they can generally avail themselves of... And the economic value of one great industrial genius is sufficient to cover the expenses of the education of a whole town ... One new idea adds as much to England's productive power as the labour of a hundred thousand men.*” Other social effects of education refer to corruption, bureaucracy, society division,

society development and inequality etc. All these areas can be ameliorated with a superior education level.

After an analysis of these social effects, we can conclude that life satisfaction can possibly grow given the conditions of a superior education level. Still, the reality is much more complex and controversial. This way, J. Hartog and H. Oosterbeek [11], by separating the intelligence level from the education level, discovered the education's benefic effects over the health, happiness and welfare degree for different persons from Holland. In the health area, the less educated persons had almost six times greater chances to have a precarious health, in comparison with the higher-educated persons. The situation was almost the same in the case of the happiness degree, and the persons who did not benefit of a higher education had almost five times more chances to be unhappy. In spite of all these, the conclusions of the two authors do not match A. Clark's [12]. The latter realized a similar study in Great Britain and he concluded that the higher educated persons are not necessarily happier, healthier or richer than the uneducated persons. In his opinion, over a certain level of education, school can have adverse effects over the analyzed dimensions (health, happiness and welfare).

2.2 Evaluation Modality of the Educational Effects

Another important aspect referring to the educational effects is their evaluation modality. A first quantification modality is known as "the incidental method". As we have already mentioned, the differences among the individuals having identical or different education levels are not exclusively due to the educational system. The real problem, from the point of view of the education benefits, is represented by the measure in which the changes of an individual are due to the educational system. This involves a certain evaluation before and after the graduation of an educational institution, so that the changes that occurred can be identified and evaluated. In essence, the "incidental method" represents the evaluation of an individual's qualities and abilities before an educational experience and at the end of it. By comparing the final level with the initial one can easily notice the effect (benefit) of the educational system over the individual. Despite all these, the observed effect can still not be completely the result of the educational system. This way, significant changes can appear at the individual level as follow the normal maturation process (a process which takes place both when the education exists and when it doesn't), some special family conditions or as a result of the economic life. That is why we have to take into account some other extra-educational factors as well, factors that influence the changes occurred at the individual level.

Starting from this idea and having another evaluation optic for the education effects, H. R. Bowen [1], in his work „*Investment in Learning*”, discussed the issue regarding the changes suffered by an individual, as a result of the educational process. H.R. Bowen presents five different modalities to evaluate these changes:

- the first quantification modality is that to consider any expenses made for the educational system as a measure of its usefulness („...*the expenses made in the university education must not be made but in the measure that the students, their families and the civil society as a whole consider that the results will justify the efforts made*”);
- Another modality to evaluate the effects is to take into consideration the potential value growths of the human capital as a result of the higher education. Although it may seem quite disgusting, the individuals are evaluated through their lost in case of death or incapacity. Bowen describes the quantification modality of the individuals lives by suggesting that if it is possible to determine the point from which the lives of the higher education system graduates are more “valuable” than the high-school graduates’, then, by summing up all the faculty graduates one can establish the incidental value of the graduates’ lives, thanks to the higher educational system;

- A third evaluation modality of the higher education's effects presented by H. R. Bowen is represented by the study of the economical growth registered by the U.S.A. in a well determined period and how much is education responsible for this growth;
- The fourth modality refers to the evaluation of the investments' profitableness rates evaluation in the higher educational system. The disadvantage of this method is represented by the fact that it only takes into consideration the individuals' incomes or incomes growth as a result of graduating a higher educational institute;
- The fifth modality to quantify the education effects presented H. R. Bowen is to find the subjects' opinion regarding their own university experience. He concluded that "*experience is far from generating a point of view, especially that the subjects did not entirely pay the educational costs. The favourable reaction of the analyzed subjects can be explained only through the fact that something valuable (the education) was assimilated by a great majority of*".

Each of these methods can be applied both at pre-university and university level. The problem is that although some benefits are hard to evaluate, this doesn't have to lead to the idea that they cannot be measurable and therefore that they are not important from the social and economical life point of view.

The effects regarding the social-cultural area (and especially the educational area) are very complex in comparison with those from the economical area. This is due to their very different typology, the multitude of plans they manifest on, the great time interval they are registered on etc. In the next chapters we will analyze some of the aspects that regard the education effects: the contribution of education to the economical growth, the relationship between education-economical growth and the interdependence of education with the society's modernization process.

Conclusions

No matter what approach we choose, the main problem of evaluating the educational activity efficiency (as a part of the *public services*) is correlated to the fact that this is not an economical activity, but a social-cultural one and consequently the effects are hard to be quantified. If the inputs (the resources) from the system are relatively easy to express, the output (benefits) are quite hard to measure; this is due to the fact that they are registered on a longer period of time and they mostly do not adopt the monetary form.

Another important issue refers to the distinction between *the social efficiency* (whose evaluation is based especially on the classical vision) and *the economical efficiency* (whose evaluation is based especially on the systematic vision).

This way, in the case of an economical activity, the maximization of the effects to improve the efficiency without taking into account the volume and the structure of the efforts is nonsense. For a social-cultural activity (such as the educational activity) this thing is possible and it is explained by the fact that a man is both the object and the subject of such an activity. In other words, nothing is too expensive when we strive for a better education and human recreation (the educational and cultural system), a better health of the population (the sanitary system) etc.

In appreciating efficiency, the economists use the concept of "production function" in order to describe the mathematical relations between the production factors inputs (work, nature and capital) and the obtained results. Also, they use the concept of work productivity (the result produced per work unit) and the concept of lucrativity (the cost per unit of benefit).

The notion of production function presumes the fact that the inputs and the outputs can be rigorously and precisely defined. The concept of production function is harder to be applied to the

education (and to the public services, in general); therefore it can produce wrong results. This is due to several aspects, such as:

- The teachers can have different results depending on the environment in which they work, but also the students with whom they work;
- The results obtained in the education field are very complex and are widely different. For this reason, their measuring is hard, if not impossible to accomplish;
- The results of the education, both for the individual and for the society, are not registered exactly at the moment in which each student leaves school, but over his entire life. Only a small part of the benefits can be represented by the performance indicators and only in a certain point of their life. Another question is whether the achievements of the student are consequences of the education received in school or of the experience gained by him before school.

Also, the use of the traditional notion of economic efficiency in education can lead to wrong results. For example, the increase of the number of graduates per teacher (which in the economic language would mean the increase of the teacher's work productivity) does not necessarily mean an increase in the efficiency of the educational activity. More concretely, the fundamental goal of a higher education institute is not the „production of graduates”, but the increase of the level of welfare and of civilization of a society. Therefore, the increase of the number of graduates is insignificant from the efficiency of the educational activity point of view, if they do not find a place to work and do not contribute (by using knowledge and habitudes obtained in the educational process) to his welfare and that of the society. Furthermore, the increase of the number of graduates per teacher is not the result of the increase of the teacher's efficiency, but the result of the conjugated influence of many factors: the improving of the teacher's activity, the improving of the students' activity, the high intellectual level of the students, verification test papers and relatively easy graduating tests etc.

In conclusion, the efficiency (particularly for the educational activity) can be analyzed through the prism of both visions: classic and systematic (although the classic vision, described in this paper, is more adequate). Still, by using „ad litteram” the methods and techniques of evaluating the economic efficiency in order to measure the efficiency of the educational activity can lead to contorted results, hiding the main goals of education.

References:

- [1] **BOWEN, H. R.** (1977) *Investment in Learning: The Individual and Social Value of American Higher Education*, Jossey-Bass, San Francisco, California.
- [2] **BLAUG, M.** (1972) *The correlation between education and earnings: What does it signify?*, Higher Education 1(1).
- [3] **BECKER, G. S.** (1964) *Human Capital : A Theoretical and Empirical Analysis, with Special Reference to Education*, Colombia University Press, New York.
- [4] **PALAFIX, F. & MORA J. G., PEREZ F.** (1999) *Capital Humano, Educación y Empleo*, Fundación Bancaja, Madrid.

- [5] **SULLIVAN, D. H. & SMEEDING T. M.** (1997) *Educational Attainment and Earnings Inequality in Eight Nations*, Luxembourg Income Study Working Paper nr 164. Luxembourg.
- [6] **HERRNSTEIN, R. & MURRAY C.** (1994) *The bell curve: intelligence and class structure in American life*, New York: Free Press.
- [7] **HAVEMAN, R. & WOLFE B.** (1995) *The determinants of childrens attainments: A review of methods and findings*, Journal of Economic Literature 33:1829-1878.
- [8] **WOZNAK, G. D.** (1987) *Human Capital, Information, and the Early Adoption of New Technology*, Journal of Human Resources 22 (1987): 101-112.
- [9] **BEHRMAN, J. R. & STACEY N.** (1997) *The Social Benefits of Education*, Ann Arbor, Michigan University Press.
- [10] **BECKER, G. S. & MULLIGAN G. B.** (1997) *The Endogenous Determination of Time Preference*, Quarterly Journal of Economics.
- [11] **HARTOG, J. & OOSTERBEEK H.** (1993) *Public and private sector wages in the Netherlands*, European Economic Review, 37(1):97–114, January 1993.
- [12] **CLARK, A.** (1996) *Job Satisfaction in Britain*, British Journal of Industrial Relations, 34.