

Education and the Characteristics of Public Goods. Overlaps and Differences

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Abstract. *This paper aims to identify characteristics of the good education, particularly higher education, in terms of pure public goods, mixed goods and merit goods, starting from classical and neoclassical theories on public goods. The experience of several economists showed that the nature of the good education is not seen strictly according to its intrinsic characteristics, but also in relation to the functions and benefits released. So, the conclusion of our study shows that education, particularly higher education, meets limited aspects of pure public goods (non-rivalry and non-exclusion property) in terms of functions performed.*

Keywords: education; public goods; mixed goods; merit goods; private goods; externalities.

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1. Introduction

This paper aims to reinvent the reasons why the good called *education* is classified – from various theoretical perspectives as well as under the aspect of the possible destinations it really has – as "public", "private" or "mixed" goods. The discussion proposed by us is appropriate not necessarily through theoretical novelty but through pragmatic actuality, although, in essence, it remains a revisiting of several basic concepts and not an applied study. Current debates in the Romanian education system, for instance being under the empire of some performances appreciated as inappropriate to the requirements of the European modernity – to the desired structural convergence of the entire Romanian economy – requires more than a series of sterile political imputations; we consider that it is necessary an increased care in the problem-solving of fundamental, conceptual, theoretical aspects that can describe and explain the "alternative" ways – competing, or perhaps complementary – of producing *education*.

The revaluation of the virtues and vices associated with the production of *education* in a public system (often affected by doubtful incentives, endemic to the area of public property as well as by the impossibility to calculate a qualitative and quantitative optimum of the relevant supply), and respectively, in a private system (characterized by institutional incentives and easing calculation tools, but also suspected of a possible social "failure" in terms of accessibility of education among communities) is not historically "overcome". The systemic option for "public", "private" or "mixed" providing of *education* – as a whole or stage differentiated between the cycles focused on building a general culture (specialization's infrastructure) and those oriented to specialization's culture (for the labor market needs) –, is a function depending on the "historical maturity" of the societies that make this choice. But this can not be disconnected from the invariant understanding of the conceptual framework that describes, anywhere and anytime, the economic quality of the "alternative" types of goods in which paradigm can be classified (and finally provided) "*education*".

Subject of research conducted by many disciplines, *education* – a set of measures applied systematically to the formation and development of intellectual, moral and physical characteristics of children and youth, or of people, society⁽¹⁾ – as a result of the links between educated population and productivity is also treated in economic terms.

Thus, at the international level, states became aware of the importance of this system in the socio-economic development as a result of the fact that the educational system in a given state is one of the factors of progress of that society, without which sustainable economic growth and human development could not be reached.

Following the legal provisions of the world states, we can find out that *education* is a national priority for both developed countries as well as for developing countries. In this context, in May 2001 in Prague and in September 2003 in Berlin, ministers responsible for the Bologna process have argued that *higher education* should be considered a public good and a public responsibility (Nyborg, 2003, pp. 355-359). This classification of education in the category of national priorities indirectly leads to the assumption of the public nature of the good.

Also, Stiglitz (1995) identified knowledge, the result of the educational process, among the so-called global public goods. However, the opinions of the economists about the nature of good *education*, particularly higher education, are different.

Thus, the classical and neoclassical theories on public goods have outlined the necessary framework for identifying the characteristics of good *education*.

2. Classical theory versus neoclassical theory regarding the public good education

Although *education* is generally considered a public good arguments brought by a number of economists contradict, more or less this sense. Neoclassical theory of public goods is based on several reference works dealing with the nature of a good in the sense of a public or private good, according to its intrinsic characteristics. However, the characteristics of a public good vary from one author (Samuelson, 1954, 1955, 1958, Musgrave, 1959, 1969, Head, 1974) to another, both as a number and as substance.

Classical theory of public goods reveals through the works of Adam Smith the following perception on public goods and *education*:” A man without the proper use of the intellectual faculties of a man is, if possible, more contemptible than even a coward, and seems to be mutilated and deformed in a still more essential part of the character of human nature. Though the state was to derive no advantage from the instruction of the inferior ranks of people, it would still deserve its attention that they should not be altogether uninstructed (...). The state, however, derives no inconsiderable advantage from their instruction” (Smith, 1937, pp. 739-740).

In his first paper, Samuelson (1954, pp. 387-389) defines “... two categories of goods: *ordinary private consumption goods*, which can be parceled out among different individuals, and *collective consumption goods*, which all enjoy in common in the sense that each individuals consumption of such a good leads to no subtraction from any other individuals consumption of that good”.

However, Samuelson admits that certain goods or services such as *education*, courts, national defense, highways, police and fire protection contain

an element of change for the benefit of an individual at the expense of other individuals (Samuelson, 1955, pp. 350-356).

Musgrave's remark on the fact that much of the goods, including *education*, generates both private benefits and externalities, broadens the horizon to define the nature of the good education. Thus, the good *education* is seen as a mixed good with characteristics of both public and private property goods as a result of the benefits released by the educational process (Musgrave, 1969, pp. 138-139).

In economic terms, *education*, especially *higher education*, may be regarded as a mix of *current consumption* – that is a nice way to spend a few years before an individual assumes responsibilities of daily life, of *consumption capital formation* – development of higher standards, of a critical sense in choosing an optimal alternative consumption and also of *production capital formation* – human capital, its ability to provide competitive services, to hope for a higher income than that obtained in the absence of *education* (Johnson, 1974).

The literature distinguishes four functions of *higher education*: development of scientific research, training a highly skilled workforce, contributing to the development of society, acquisition of critical social spirit by the individuals (Cemmel, 2003, pp. 131-136).

Based on these functions, *higher education* can be regarded as a public good, since the amount of knowledge a student acquires during university studies does not diminish the amount of knowledge available to other students. However, *higher education* also presents some characteristics of a private good. For example, whether certain individuals can not access *higher education* because of the practice of quite large tuition fees or because they are partially excluded from the consumption of this good as a consequence of the reduction of the time allotted by the teacher to the second or third student (Crețan, Lacrois, 2008, pp. 127-134).

This confirms that "however, as well as for pure public goods one can talk about the effect of *congestion*, which determines the transition of pure public goods into another category that implies their exclusion from consumption." (Moșteanu et al., 2005, p. 32)

As a result of the attempts to place, depending on features, a property certain good within the area of public or private goods, Musgrave introduced the concept of merit good, which he defines as that which satisfies certain needs provided through public funds beyond the possibilities of purchasing it on the market. Thus, *higher education* can be regarded as a merit good (Powell, 2005), justifying state involvement in the education system through the fact that society benefits from it. In this case, the social benefit of *education* consumption is higher than the private benefit felt by the consumer.

Viewed from the perspective of a social investment, *higher education* presents a series of benefits from the research activity, from technological

innovation, accompanied by externalities for *higher education*, namely: a state of improved health, social welfare, community reintegration and social cohesion. As the main effects of investment in *higher education* appear benefits such as positive externalities that are the basis of strengthening social and economic development in light of the transition to knowledge-based economy. It also appears that government intervention in financing higher education is not primarily aimed at achieving positive externalities, but rather to correct the failure on the credit market for *education*, and more.

Regarding the private benefits of individuals, these are accompanied by long-term effects of research, technology development, strengthening political stability, improvements in democracy and the creation, namely the transmission of new knowledge.

3. Characteristics of education as public good

As shown in the theory of public goods, *education* can be defined as a public good if it meets two conditions, namely if both is characterized by non-rivalry in consumption and by non-exclusion from consumption.

Speaking of non-rivalry, the consumption of a good by one person does not lead to reducing the amount or quality of the asset, being available to all persons without creating additional costs. On the one hand, the accumulation of knowledge by one student during university studies does not diminish the amount of knowledge available to other students. On the other hand, to some extent, *education* is a rival good in consumption due to the fact that consumption of this good may generate additional costs.

The non-exclusion feature implies the impossibility of excluding an individual from the consumption of a good as long as the benefits associated with consumption can not be divided. However, in the case of *education*, particularly *higher education*, it appears the possibility of consumer's exclusion through price. Much of the capital resulting from scientific research can be accessed by anyone, but also in this case the access to the other party may be restricted by financial factors, or copyright protection or because of confidentiality clauses assumed through the research contracts financed by the private sector.

Measured by the function of training a highly skilled workforce, *higher education* respects, to some extent, the feature of non-rivalry. Regarding exclusion, this has been practiced since ancient times in societies where slave children had no access to the education system or in societies that considered education as a luxury of the nobility financed from private resources, until now through the emergence of the congestion effect as well as through the nature of the access to this level of education.

So, in terms of access, as opposed to compulsory *education*, even going to high school, where individual's access is equal, in higher education we can discuss about the equal access up to the point from which education providers can exclude a number of individuals who can not afford to pay a fee for the offered services.

In these circumstances the good *higher education* complies only in part the non-exclusion feature in the meaning that it can only be provided to an additional consumer up to limit at which either the consumer benefit registers a reduction or the producers costs register an increase.

Thus, the good *education* may not be included in the category of pure public goods, since it partially fulfills the two characteristics attributed to public goods by literature. Yet *education* may be included in the category of mixed goods, more precisely in the category of "public goods with limited capacity" (Kraan, 2005, p. 32).

4. Characteristics of education as mixed good

From the perspective a mixed good – that good characterized by non-exclusion and non-rivalry or exclusion and rivalry –, *education* may present, in some cases, characteristics of rivalry and exclusion.

According to the classification of goods (Nemec, Wright, 1997, pp. 72-73, Moșteanu et al., 2005, p. 33), mixed goods have characteristics specific to pure public goods and as well as to private goods. Thus, goods characterized by non-exclusion and rivalry, namely those characterized by non-rivalry and exclusion have as beneficiaries both individual consumers and society as a whole; there are distributed through the market or by the national public budget, or by local public budgets; a price can be established for them; there is a link between the payment of a price and use of the property; there may be competition between the bidders; there is an impact of consumption on offer; these are produced by private companies or public sector. Also competing in consumption mixed goods, such as *education*, are goods that are consumed collectively, but they are subject to congestion.

Thus, in certain situations, although the amount of knowledge available to other students does not diminish, an increase in the number of students can lead to a congestion of the system and hence to the appearance of a certain cost, while maintaining the same level of performance. The rivalry of this good can be observed when the demand for tertiary education exceeds the supply existing on the market.

Up to a certain level, beyond the possibility of excluding through price, the good *education* can be considered as a good with non-exclusion features since most of the benefits released by education cannot be individualized, but are felt by society at large.

Thus, a number of positive external benefits of compulsory *education*, like the improvement of population health, reduced crime, reduced fertility, etc., appear also

as a result of graduating higher education. Although completion of a program of higher education brings private benefits to individuals such as obtaining a higher wage, society as a whole benefits from a higher level of resources collected to the state budget which is available to finance public utility goods and services.

The impossibility of certainly placing the good *education* in the category of mixed goods can be noted due to the fact that education can be both a rival and non-rival good, depending on interpretation.

5. Education as a merit good

Another perspective offered both by Musgrave and Adam Smith places *education* in the field of merit goods due to the fact that the benefits of education have an impact, especially on the informed, thus justifying the need for state intervention in the financing of this activity (Musgrave, 1959, Smith, 1937).

This type of good is considered so useful that its funding from private sources is supplemented by public funds.

Thus, *education* can be considered a merit good since an educated population provides other benefits than private benefits felt by individuals, meaning that such a population can increase the future value of a nation's potential. Moreover, referring to the possible negative externalities resulting from the exclusion of people from accessing knowledge resulting from research, limiting the possibilities for exclusion and funding research from public generates the occurrence of positive externalities.

6. Conclusions

In conclusion, *education*, especially *higher education*, meets limited aspects of pure public goods namely non-rivalry and non-exclusion of the good, in terms of functions performed by it: the spread of knowledge, training people, service for society and its responsibility.

Given the fact that at the international level education has been declared a national priority by most states, treating the nature of good *education* requires detailed research of the methods and sources of funding for each type of education system. Also, simultaneously funding of higher education from private and public funds determines the possible classification of the good *education* in the category of public goods, mixed goods or in the category of merit goods.

The ambiguity surrounding the classification of the good education in one of three categories of goods discussed above determines the necessity to extend the discussion and to focus attention on the benefits – external effects of education process.

Note

- (1) See Dicționarul explicativ al limbii române, Academia Română, Institutul de Lingvistică „Iorgu Iordan”, Editura Univers Enciclopedic, 1998.

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