

ECONOMIC AND SOCIAL EFFECTS OF THE DYNAMICS OF PUBLIC EXPENDITURE AT A STATE UNIVERSITY

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ABSTRACT: *Our interest in developing this scientific approach has started from the impact that Higher Education has on the social and economic growth which positively affects employability and labour market mobility. In this respect, from the analysis carried out on the dynamics of public expenditure at a State university, we have concluded that it coincides with the evolution at national level, therefore it is necessary that the current economic conditions pay attention to increasing the efficiency of costs on education, Romanian Higher Education is expected and it should play a fundamental role in asserting a national society of knowledge and learning.*

KEY WORDS: *higher education, public expenditure, financing, economic effects.*

JEL CLASIFICATION: *A23, I25, D00, H52.*

1. INTRODUCTION

The dynamics of education expenditure varies not only from one country to another, but also from one individual to another and it is able to provide an image both on a country's ability to support human capital development and on the place it occupies in the long-term development strategies. The fact that at individual level, the expenditure allocated to education is uncertain and variable has resulted in emphasizing the role of the state, of governments in financing the education either totally or partially (Zechlin, 2008). In Romania, education is free at all its levels and it is guaranteed by law to all persons regardless of sex, nationality religion or socio-familial origin. It has become clear that, under the conditions of a poor economic situation, the existence of mere a friendly legislation on education remains insufficient. Romania has entered, like other countries, a vicious circle: a low development level

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has the effect of limiting investment in education and, consequently in human capital, and it reduces labour quality and productivity, the main drivers of economic growth.

The financing of the Romanian education must be in accordance both with the competition law and the state aid and also with the community practice in the field. Thus, in terms of the competitive environment, drawing up financial schemes or applying mechanisms comparable with those at community level should enable free and non-discriminatory access to budgetary funds, be them from the central or local authorities, on competitive basis, open to all education institutions – public or private – and accredited under the law. On the other hand, the evaluation of financing in terms of state aid must be done differentially. Funding the education process on its main components – preschool, primary, secondary, post-secondary and higher education – does not call for measures such as state aid, since education is seen as national priority and as an activity of general interest, the degree of development of a country largely depending on the future of education.

The activity carried out in education, even in financial terms, must highlight and pursue the quality, not the quantity and the execution of financing has to consider the optimization of the educational process, and not just the decrease of expenditure. In this respect, the legislation in the field of education should provide references to the level of study fees in Higher and State Education in strict connection with the level of budgetary allocation per student (Singer, 2006). Contrary to models in Europe and even in the United States, in Romania, Higher State Education offers training to students in exchange for higher fees than the ones in the private sector. This difference reflects the qualitative discrepancy between the two educational offers, but it must be connected with elements of different financial nature.

2. GENERAL ISSUES CONCERNING PUBLIC EXPENDITURE IN HIGHER EDUCATION

The level of expenditure in education, be it at general level or at one's education institution, can be looked at from a static or dynamic perspective and can be analyzed following the indicators: *the volume of public expenditure, the share of public expenditure in GDP (or the total of an institution's expenses), the volume of public expenditure per student. The structure of public expenditure* is studied according to the classifications set out in the legal regulations, the most important being the economic and functional classification. Establishing the structure of public expenditure helps determine the differences of financial policy between different countries, as well as the evolution in time of the weights for various categories of public expenditure in the same state (Popescu, 2011).

Effectiveness analysis of education spending is done by ***reporting the financial efforts to the measurable effects, current or projected*** of the state's funding of some objectives of public interest. When the first term of this report knows a *lag of rhythm*, that is, despite the increase and diversification of the citizens' needs for public assets, the financial resources intended to acquire these goods do not increase at the same rhythm, then a constant insufficiency of resources appears. Evaluating the effectiveness of public expenditure is the responsibility of the decision makers of the

political apparatus, being achieved by using the indicators contained in the annual budget and in the medium and long term programs.

An efficiency of expenditure can be obtained and also lead to a social welfare if the following **measures** are met:

- ✓ *there is the possibility of choice, among several alternatives, of the cheapest version as compared to the final effect obtained on the service that needed improving;*
- ✓ *a modernization in the production of the service takes place and this maximizes the utility felt by the consumer;*
- ✓ *the price paid for this service as well as the cost of use should be minimal;*
- ✓ *the social economic context should be predictable for periods of time large enough.*

A consequence of this type of expenses supported by the state is that there takes place a limitation of the private entrepreneurs' market or, from a different perspective, a delimitation of the economic activity in a dimension of **the free market and of the state**, in a **market** and **non-market** sector, which seeks to achieve some predetermined objectives, the allocation of resources between the competitor users is considered on the one hand, and the value of inputs on the other hand.

The efficiency of public expenditure in education must take into account that the public financial resources are limited and therefore they must be optimized to the maximum (Stanciu & Măcriș 2009). Two variables are important when assessing it:

- ✓ *The allocative efficiency of resources;*
- ✓ *X factor - the efficiency of resources.*

The allocative resource efficiency analysis is based on **Pareto's concept of optimization** which can be carried out in three dimensions:

- ✓ *Exchange efficiency* that allows the adjustment of individuals consumption structure to relative prices; the essential condition is that the marginal rate of substitution between two goods be equal for all consumers;
- ✓ *Technical efficiency*, i.e., the optimal control of production factors, so that the marginal rate of substitution between either two factors be equal for all goods produced;
- ✓ *Omnipresent efficiency* implies that the marginal rate of transformation factors be equal with the common marginal rate of substitution.

Regarding the second X factor – resource efficiency, we can state that it is done when a small cost is obtained in comparison with the costs of inputs absolutely necessary for the production of certain outputs.

Modern studies on the effectiveness of education expenditure recommend that: public services should not necessarily be offered for free and, where there is a possibility, the public services provided by the State should be replaced by private ones; also, the introduction of quasi market mechanisms (vouchers, coupons).

As **evaluative methods of the effectiveness of public spending**, in terms of their efforts and effects, we enumerate:

- ✓ **Cost-benefit analysis**, where in the centre there is the advantage resulted when providing public services; and the criteria for assessing its efficiency is represented by the minimum value of the cost/benefit ratio and the maximum value of the reversed ratio benefit/cost);

- ✓ *Cost-effectiveness analysis* is not a monetary assessment, but one made on a pre-built indicator;
- ✓ *Multi-criteria methods*, when there is a multitude of criteria which cannot be restricted by developing a synthetic indicator, projects can be classified into degrees of effectiveness according to each and every criterion; finally, considering the different degrees of efficacy resulted, they opt for an empirical solution of choosing or rejecting the project (Firescu & Bănuță, 2011).

The benefit cost method has as specific, in public sector, the objective of social maximization, unlike the private one that seeks for profit maximization. Social benefits and costs take into consideration, in addition to those of the private producers, **the externalities** (the shares effect of an economic agent on the welfare of others even if this interdependence is not included in the price). Thus, there is a classification of **benefits and costs** into: real, which can be in their turn direct or indirect; pecuniary – direct or indirect (Călin, et al., 2008).

If an *early assessment of the benefit* is required, then the following factors are available: market, individuals (the use of questionnaires and of marketing experiments is indicated), individual assessments (the deduction of future benefit from the current context).

For an **early assessment of the effectiveness** forecast indicators are developed and they direct in advance the economic activity to obtain maximum benefit from the financial resources that are to be invested. It is necessary that the analysis models take into account any step or goal that is about to be accomplished: study, implementation, operation so as they choose the variant of the aforementioned stages that represents the best cost and benefit ratio.

The post assessment of effectiveness offers at present, after the project has been accomplished, the image of the benefits gained by investing the respective financial resources (public spending). The calculation of economic efficiency involves the use of some indicators of the effective utilization of resources in order to be compared with the predicted results (Păun & Brezeanu, 2013).

To measures costs and benefits, standard market prices are used only if it is true that market price levels are indeed a proper payment of marginal units of the respective goods. If this is not the case, then the market prices will not be used, but *shadow prices* that estimate the real cost of resources and costs much more accurately.

3. DYNAMICS ANALYSYS OF PUBLIC EXPENDITURE IN A STATE UNIVERSITY

Public expenditure on education must pursue a development of public education in accordance with the social and economic context so as to contribute as much as possible to the progress of the society. The factors which determine the financial policy in education are: demographic (population specific structure), economic (the demand for skilled labour and the adjustment of the latest technology innovations and not only), political (the ideological principles underlying the establishment of school policy).

Public expenditure on education is channelled mostly by the Ministry of Education, and by other ministries, too which seek to train their staff in the specific area. Public expenditure on education can be seen from the perspective of their economic content; in this respect, we can speak of the following: *current expenses* (operation and maintenance) and *capital expenses* (endowment and building of new institutions of education). Based on this definition, the below table shows the structure of expenditure in a State University for the last four years. The dynamics analysis of this expenditure is carried out in accordance with the other economic variables involved, such as the number of students.

Table 1. Public expenditure - by categories

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Year	2010	2011	2012	2013
Category of expenditure				
Total expenditure	27,250,670	28,370,128	23,270,848	28,216,697
Current expenditure	25,937,048	20,842,022	19,961,186	23,912,667
Personnel expenditure	17,480,741	14,376,692	13,579,060	16,463,459
Expenses on goods and services	6,412,018	4,517,372	4,662,075	5,555,193
Other expenses (scholarships)	2,044,289	1,947,958	1,720,051	1,894,015
Capital expenditure	1,313,622	836,362	461,774	736,048
Projects funded FEN	-	6,691,744	2,847,888	-
Partners transfers	-	-	-	3,292,282
Social assistance	-	-	-	67,200
Subsidies	-	-	-	208,500

Source: data provided by the Accounting-Financial Service of the Institution

The variation in expenditure recorded at the level of this higher education institution is of 4.1% upwards in the year 2011 as compared with the year 2010, of 18% downwards in 2012 as compared with 2011, respectively 21.2% upwards in 2013 as compared with 2012. These variations occur against the reduction of budget allocation with 21% in 2012 as compared with 2011, the year when the effects of the economic crisis were felt and recorded in our country, too. The reductions of budget allocations took place because of the reduction of the total number of students financed by the budget in the year 2012 as compared with the year 2011 and because of a school dropout that reached alarming levels among students who pay taxes, approximately 60%, a situation reflected at the level of other universities in the country. To conclude, the dynamics of expenditure, excepting year 2012, hasn't been significantly different from previous years.

However, it should be noticed that the dynamics of expenditure in this institution was influenced by the differential allocation of funds based on the results of universities' classification and hierarchy of study programs in accordance with the law, since this institution was placed in the last value ballot. As a result, due to a new regulation (G.E.O. No. 117/2013), starting with the financial exercise in 2014, the

system of differential allocation of financial resources granted to universities was dropped out.

From the analysis of expenditure by categories – current and of capital – one can notice that the variation of current expenses is more reduced than the one of capital expenses.

Table 2. Variation of expenditure by categories

	2010/2011	2011/2012	2012/2013
Variation of total expenditure	+ 4.1%	- 18%	+ 21.2%
Variation of current expenditure	- 20%	- 6%	+ 20%
Variation of capital expenditure	- 46%	- 45%	+ 59%

(%)

Source: the authors' calculations based on the data from the previous table

Thus, one can see that there is a relative constant of direct expenses, especially of personnel, even if there is a decrease of available financial funds, with a preference for capital expenditure reduction. All of the above mentioned expenses represent *investments in human resources* as they have as effect a development of individuals' capacity, a maintenance of physical and mental states at high levels which consequently leads to social and economic growth (Public Annual Report CNFIS, 2013).

In addition to the budget places allocated to University, the toll places have been characterized by a permanent reduction, which has been correlated both with a decrease in the number of high school graduates who pass the baccalaureate exam - mainly reflected in the situation of the first year of undergraduate studies - and with financial difficulties caused by the economic crisis affecting school dropout, even if initially at a lower rate than later on, this reduction has been reflected in the decrease of the level of own revenues collected by this University (Table 3).

Table 3. Financial resources

Financial exercise \ Financial resources	2010	2011	2012	2013
Total resources	31,300,719	32,516,157	26,745,317	31,370,849
Budget allocation	20,614,548	24,003,741	18,878,041	22,444,635
Own income (extra budgetary)	10,686,171	8,512,416	7,867,276	8,926,214

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Source: data provided by the Accounting-Financial Service of the Institution

We can thus conclude that this University has experienced, just like the rest of the public universities in the higher education system in Romania, a steady reduction of

the financial resources allocated by the State. The table below shows the amounts available for this University for the past four years; amounts from both the public budget and the extra-budgetary funds. The data on the amounts available have been structured by years according to the financial exercises and not to the structure of school years.

Considering the above, the average expenditure per student at this University have varied as shown in the below table.

Table 4. Average expenditure per student

	2010	2011	2012	2013
Average expenditure per student	5,807	4,312	3,065	3,821

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Source: the authors' calculations based on the data provided by the Accounting-Financial Service of the Institution

By analyzing the data presented, it appears that this category of expenditure is below the level calculated at national level and it is continuously decreasing as compared to the year 2010. The average allowance per student in Romania is one of the lowest in the European Union, the average values being around 10,600 Euros in the OECD countries in 2010, and about 10,100 Euros in EU21 (*OECD Indicators*, 2013,) while the average allowance in Romania has never exceeded 1,650 euro, being a little above 1,200 euro in 2013.

The expenditure on education takes place at this University on the basis of reorientation regarding the specializations offered, in the context of the socio-economic changes occurred in the respective area. Reducing the capital expenditure can be explained by the transition from the technical specializations specific to the mining education to the specializations from the economic area which has been embraced by a larger number of students. Currently, the area needs retraining and economic specialists restart *the engine of local economy*. We can therefore say that the necessary financial resources for the local education do not represent a final consumption of national income, but rather they generate development, respectively *social profit*.

4. CONCLUSION

The development of education is done in accordance with the requirements of different stages of social and economic development and of equalizing conditions for training and education of all members of the society. Education is called to contribute in an increasingly higher measure to the overall progress of the society. The education system is effective only if it can have a positive impact on social and economic development. At individual level, effectiveness influences the capacity of employment and the labour market mobility. At society level, an effective education process contributes to the increase of labour productivity and, consequently, to the economic growth.

Budget allocations for higher education should increase, but not linearly distributed and they should possibly be accompanied by a greater financial co interest

from the economic agents and the students, too. In Romania, an increased attention should be given to the rise in efficiency and effectiveness of expenditure for education, and also to the increase of employers' involvement in various stages of the education process, from planning to the monitoring and evaluation of results.

REFERENCES:

- [1]. Călin, O.; Man, M.; Nedelcu, M.V. (2008) *Managerial Accounting*, Didactic and Pedagogic Publishing House, Bucharest
- [2]. Fireescu, V.; Bănuță, M. (2011) *Costs, a benchmark in decision making*, Sitech Publishing House, Craiova
- [3]. Popescu, C. (coord.) (2011) *Public Sector Economy*, The ASE Publishing House, Bucharest
- [4]. Singer, M. (2006) *Bologna Process in Romania: a radiograph of stage*, The Institute of Education Science, Bucharest
- [5]. Stanciu, A.P.; Măcriș, M. (2009) *Aspects on Opportunities to Reduce Public Expenditure*, Annals of the University of Petrosani, Economics vol.IX(4), The Universitas Publishing House, Petroșani
- [6]. Păun, A.P.; Brezeanu, P. (2013) *Theoretical Aspects Regarding Public Expenditures*, Annals of the University of Petrosani, Economics vol.XIII(1), The Universitas Publishing House, Petroșani
- [7]. Zechlin, L. (2008) Strategic Planning in Higher Education. In: *International Encyclopedia of Education*, 3rd Edition. - Amsterdam: Elsevier
- [8]. *Public annual report – 2013, The state of Higher Education funding and the optimization measures to be taken*, UEFISCDI – CNFIS July 2014, <http://www.cnfis.ro/wp-content/uploads/2012/08/CNFIS-Report-public2013-final.pdf>, accessed on 5.10.2014
- [9]. Emergency Ordinance No. 117/2013 amending and supplementing the Law on National Education No. 1/2011 and for taking measures on Education, published in the Official Gazette No. 843/30.12.2013
- [10]. *Education at a Glance 2013: OECD Indicators*, OECD Publishing, 2013, <http://static.publico.pt/DOCS/educacao/educationglance2013.pdf>, accessed on 12.10.2014