ANALYSIS OF EVOLUTION EDUCATIONAL SERVICES IN ROMANIA IN THE PERIOD 1992 - 2011

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Abstract: *The services, as a field of research, presents a constantly increasing complexity, especially in the economic plan, synthesizing the results of a large number of activities. Educational services, part of the tertiary sector, are activities provided for the benefit of consumer of education, with or without their direct participation, in order to fulfill specific needs and to produce intellectual gratification. In an educational institution can found educational services such as courses, seminars, conferences, presentations, performances, cultural activities in libraries, extracurricular activities in and out of the classroom. This paper aims to address the wide concern of educational services in Romania in the period 1992-2011, providing a comprehensive, coherent picture, structurally logical elements that give its specificity. For this purpose we use the specialized literature in the field and statistical data provided by the National Institute of Statistics of Romania concerning to the indicators on school population, number of schools, employment, investment in education, etc..*

Keywords: education, educational services, statistics, regression, Romania

JEL Classification: E24, J21, J23, J69

Introduction

Factors, such as the high diversity of educational institutions due to new information and communication technologies, the emergence of private institutions, massification school participation who advanced to upper secondary and university level education, increasing the number of graduates from upper secondary and tertiary education leading to increased competitiveness to fill a job well remunerated and provides opportunities for personal development, increased labor mobility, have acted with intensity and Romanian education after 1990, for which appeared kindergartens, schools and private universities, increased the number of high school students and university students were quickly expanded computer applications in education, increased number of bidders educational services from abroad, etc. [Vlasceanu, 2005]

Education is a complex phenomenon composed of a series of measures, applied systematically to train and develop the intellectual, moral and physical traits of youth (people).

The education system ensures the economy of a country with qualified and able staff to perform various tasks efficiently to future employment. Formation and functioning of educational services are subordinated the general laws of the market economy with some specific features. Educational services present a special kind of commodity, with consumption value which satisfies educational needs. Also, the educational service do not consume in the process of consumer, but contributes to social mobility, there is a genesis of knowledge in the innovation economy that form a triad: knowledge, services, work. [Petru MIHNEV, 2009]

Education is a system of educational goods and it can be regarded as totality of institutions and activities involved in promoting and disseminating its. Education regards the values which refer to human needs. Demand for goods and services in this area are dependent on the intensity of consumer motivation.

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From individual spiritual needs that trigger the motivation of consumers of education, reaching global socio-economic pressure for educational approach. Therefore, we emphasized the idea of A. Noles to take some methods of analysis of the economy in the area of education.

Conceptualizing the notion of educational services

The education is a set of measures applied systematically to train and develop the intellectual, moral and physical of children and young people or people of society (DEX, 1998).

Although in general mode, the education is considered a public good, the arguments brought by some economists argue, more or less, this sense. The neoclassical theory of public goods is based on several reference works which dealing the nature of a good, in the sense of public good or private, depending on its intrinsic characteristics.(Mosteanu si Cretan, 2011)

Education can be looks as a mix of current consumption, exactly a pleasant way to spend a few years before an person to assume the responsibilities of daily life, of the consumer capital formation - development of higher standards, of a critical sense in choosing an optimal alternative consumption and production of capital formation - human capital, its ability to provide competitive services to hope for an income higher than that obtained in the absence of education (Johnson, 1974).

As shown in the theory of public goods, the education can be defined as a public good if it meets two conditions, namely that it is characterized by non-rivalry in consumption and by the non-exclusion. (Mosteanu and Cretan, 2011)

From specialty literature it is known that services, regardless of the category they belong to, are characterized by certain features that distinguish them individually and their material goods. We also find them under the name of educational products, they are basically made up of a range of services, so called global service in the center of which is the act of teaching but cannot take place without additional services which can be security services, cleaning services information, secretarial services, accounting services, counseling services, library services, etc. and are complemented by additional services that contribute to differentiation same services offered by categories schools, kindergartens, universities, etc. In complementary educational services category can include video surveillance services for parents, after school services, transportation services, sports services, etc. This category of services are becoming more common being those that highlight the difference between two competing educational services and contribute concretely to the decision to choose and consume a service or another. Today, when the private sector within this category of services is becoming increasingly visible requires a rethinking of the marketing perspective of educational services and the public sector.

We cannot delimit the technical material educational services that contribute to their good performance setting the value in education must take into account the quality of education, the investments made in providing good conditions of work, the quality of teachers that support education, for complementary services offered, etc.

Within certain limits, educational products can be considered likely to purchase goods, storage, distribution or sale. So educational products are disseminated and acquired products / reception by consumers, which assigns a value based on their marks axiological: Create - educational products - distribution. Consideration of educational goods like any other consumer good, allowing the use of indicators: cost / price, profit.

In most papers, the educational product is associated the services offered by the education market, placing it by territory " the profiles and specializations of study, the curriculum for each specialization (...), the syllabus for each subject, the delivery of courses, seminars, laboratories, the mode of assessment (...), the functioning of the various examinations, competitions etc. ", i.e." the amount of activities designed to meet certain needs, offered all customers appears a global service, consisting of a number of services unit " [I.R.Roman, 2009].

Characteristics of educational services

General characteristics which are found in educational services are: intangibility, heterogeneity, inseparability and perishability, non-sustainability. Intangibility of the educational services consists in the fact that they cannot be characterized with the help of the senses by the time in which they are consumed, as usually happens in the case of material goods. For example, we want to appeal to educational services offered by a particular University, but we have nothing palpable until you become University students. Choosing a university or another, or another school, a kindergarten or another, assuming we have a much higher risk and taking into consideration some aspects that gives us concrete elements such as informations, the ambiance and why not the price (in the case of the private sector or in the case of seats with a charge). Evaluation of quality does it consumers, after realizing the educational benefits. They buy educational act before perceived it value. Of course, taking into account the existing information until that time about a specific unit, but the real value is determined at the end of schooling, according to the performance of the school's graduates who are able. Once evaluated, education service will cause a steady stream of less or more than "customers".

The feature of inseparability bring in discussion the failure of separation the provider's educational service by these consumers, both actors of provision act must be in the same place and time in order to be able to perform service. You can add that information technology can reduce the limits of this feature, as examples in this sense the applicable e-learning platforms, especially in higher education.

Heterogeneity of educational services bring to the fore the fact that they cannot be rendered identically to a benefit to another, making them extremely diverse and impossible to standardize. The services provided by humans for humans, brings into question the uniqueness of each of us, for which the same course cannot be

taught the same from one day to another and cannot be perceived identically by each pupil or student, given that we their temperaments, their feelings, their emotions, etc..

Perishability of educational services involves the impossibility of storing services to be provided when we request. For example, a lecture hall that is not present than the teacher, students were absence, cannot be stored and used tomorrow when we have another course but previous students would like to recover the course. A program of studies for which they were taken out the maximum possible number of candidates to admissions in a year and has no demand, cannot store these places to take them out to the competition next year when demand is double. Such issues may have negative consequences on the proper conduct and quality of educational services offered.

Non- sustainability of educational services refers to the fact that they cannot be acquired in the form of wealth, as a result of their consumption, staying with some physical evidence such as peripherals, receipts for payment of the fee, graduation certificates, diploma student, student, etc. Here we include and the aspect according to which the material and technical base is not owned by the service provider education (teacher, educator, teacher etc) any property of the consumer (pupil, student, etc.), not before and not after completion of service.

Some authors have discussed the characteristics of educational services that include in the category of public goods, they reached at the conclusion that education, especially higher education, brings together aspects of pure public goods namely non-rivalry and non-exclusion of this good, in terms of the functions fulfilled by him: the spread of knowledge, training, service population in favor of the company and its accountability. (T Mosteanu and G Cretan, 2011). Arguments made by authors consist in the following:

- Speaking of non-rivalry, the accumulation of knowledge by the student during university studies does not diminish the volume of knowledge available for other students. On the other hand, to some extent, the education becomes a good rival in consumption, as a result of the extra consumption of this good can generate additional costs.
- Non-exclusion assumes the impossibility of an individual's exclusion from the consumption of an asset as long as associated benefits cannot be divided. However, in the case of education, especially higher education is the possibility of exclusion of consumers through price. A large portion of scientific capital resulting from scientific research can be accessed by anyone, but in this case the other side may be restricted by either the financial factor, or copyright protection, either as a result of confidentiality undertaken in research contracts funded by the private sector.

We can say that educational services represents any activity which provides benefits and takes place at the time of the interaction between supplier and buyer, are intangible until consumption and gives a greater risk assumed by the applicants, are highly perishable and heterogeneous, cannot be accumulated in the form of wealth, etc.

Statistical analysis of educational services in Romania in the period 1992-2011

It is well known that between education and economic development, there is a link of interdependence, in the sense that the level of development can be measured by the number of schools, kindergartens, universities which has positive repercussions on the level of education found later on the labor market where labor productivity may be higher due to a high level of training of the work force.

Thus, at the international level, it was realized the importance of this system in the socio-economic development, as a result of the fact that the education system in a particular state is one of the factors of progress that society, without which growth and sustainable human development could not be achieved. (Mosteanu, 2011)

We will try in this part of the paper to find the degree to which Romania has understood the role of educational services to the social and economic development, and to achieve this aim we use indicators such as: the school population, the number of educational units, the employed population overall and in education, the structure of gross domestic product, investment and others.

Statistical analysis begins with the observation of the evolution of school units between 1992 and 2012 in our country. (Table no.1).

The evolution of school units by forms of ownership in Romania in the period 1992-2011

Table no. 1
Number

	Total Units	Public property	Private property	Co-operative property
1992	29129	29113	11	5
1993	29376	29317	21	38
1994	29327	29262	21	44
1995	29536	29423	72	41

1996	29815	29683	90	42
1997	29084	28809	230	45
1998	29409	29115	257	37
1999	27633	27413	210	10
2000	24481	24222	247	12
2001	24304	24014	278	12
2002	23679	23366	303	10
2003	18012	17664	339	9
2004	14396	14022	365	9
2005	11865	11504	354	7
2006	8484	8099	378	7
2007	8230	7835	388	7
2008	8221	7819	392	10
2009	8244	7820	415	9
2010	7588	7145	434	9
2011	7204	6720	475	9

Source: National Institute of Statistics, Romanian Statistical Yearbook, 2000-2012 editions

Analyzing the data from the table no. 1, we can see that in 1996 there were most of the school, after registering a downward trend which in the year 2011 was at 7204 school, so taking place a decrease of 24,15% compared to 1996. Distribution of school units by forms of ownership, highlights the state monopoly, such in the year 1992, 99.95% of school establishments were public property and only 0.04% privately owned and in 2011 remains the overwhelming proportion of the state, namely the 93,28% of the units were in public school and 6,59% were privately owned.

In Romania, private education is in the process of development, and its development has the merit to mitigate, to some extent, the pressure on the public budget, unable to cover the costs of education. Analyzed in terms of the levels of education, private higher education has developed much faster compared to pre-university education, where private involvement is represented in particular at pre-primary level, followed by primary and secondary school level.

The significant fall of school establishments is mainly due to the school population that has experienced the same downward trend, reaching out in 2011 from 3.823.515 persons compared with 4.703.277 people in 1995, i.e. a decrease of around 20%.

Comparative analysis of the evolution of school units and the school population in Romania in the period 1992-2011

Table no. 2- Number

	School population	**School units**		**School population**	**School units**
1992	4664860	29129	**2002**	4496786	23679
1993	4569285	29376	**2003**	4472493	18012
1994	4594513	29327	**2004**	4403880	14396
1995	4703277	29536	**2005**	4360831	11865
1996	4688311	29815	**2006**	4345581	8484
1997	4643351	29084	**2007**	4404581	8230
1998	4631164	29409	**2008**	4324992	8221
1999	4578383	27633	**2009**	4176866	8244
2000	4565279	24481	**2010**	4029226	7588
2001	4554466	24304	**2011**	3823515	7204

Source: National Institute of Statistics, Romanian Statistical Yearbook, 2000-2012 editions

To analyze the behavior of the two variables we used regression analysis (table no.3) so determining the measure to which the evolution of school units can be explained by the evolution of the school population and how the evolution of other factors.

Regression analysis

Table no. 3

Case of simple regression										
					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson

1	.860[a]	.739	.725	4954.44919	.739	51.020	1	18	.000	.412

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.252E9	1	1.252E9	51.020	.000[a]
	Residual	4.418E8	18	2.455E7		
	Total	1.694E9	19			

Correlation coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-137748.013	22098.806		-6.233	.000
	PS	.035	.005	.860	7.143	.000

a. Predictors: (Constant), PS

b. Dependent Variable: U

The level of school population explains in a proportion of 73,9% from the variance in school units.

The value of R (0,860) shows that between those two variables there is a direct, strong connection and the value of R^2 (0,739) indicates that the linear regression model explaining the relationship between the two variables, a fact also confirmed by the Sig. value = 000 which is lower than 0.05 showing so that the slope of the regression line corresponds to a significant relationship between the two variables.

As a result of data processing computer program SPSS was obtained following unifactorial model which explaining variation of establishments school (U) based on the school population changes (PS):

U =-137748,013+0,035PS or standardized U =0,860PS

As you can see, the using of simple regression model confirms the conclusion that population level of school population significantly influences the evolution of school units.

Another immediate effect caused by the descending trend of the school-age population recorded in recent years has been reducing educational staff (table no.4).

Employed population per total economy and civil education, by the status of the occupied population

Table no. 4

Thousand persons

Status in employment	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
TOTAL																				
Total	10458	10062	10011.6	9493	9379	9022.7	8812.6	8419.6	8629.3	8562.5	8329	8305.5	8238.3	8390.4	8469.3	8725.9	8747	8410.7	8371.3	8365.5
Employee	6627.4	6385.3	6200.6	6047.7	5893.9	5399.1	5181.6	4658.7	4646.3	4613.1	4614.7	4655	4652.7	4790.4	4910.1	5162.9	5232.7	4879.5	4581	4660.5
Employer	392.6	220.7	237.6	219.1	178.5	195.9	173	143.1	165.7	184.5	183.8	179.2	186.2	180.2	169.9	156.9	160.3	125	145.5	126.3
Self-employed	2008.1	2001.2	2288.6	2083.8	1964.5	1995.2	2031.1	2135.2	2263.4	2274.9	2115.5	2140.4	2133.7	2162.2	2134.5	2180.4	2162.5	2080.7	2245	2142.8
Contributing family worker	1429.9	1454.8	1284.8	1142.4	1342.1	1432.5	1426.9	1482.6	1553.9	1490	1415	1330.9	1265.7	1257.6	1254.8	1225.7	1191.5	1325.5	1399.8	1435.9
EDUCATION																				
Total	432.5	432	437	436.4	441.3	426.2	426.1	429.1	421.4	421.8	415	420	429.6	429.7	426.1	428.9	431.9	413	389.6	385
Employee	427.1	426.4	427.1	430	433.6	420.9	414.8	417.8	410.1	409.6	394.1	397	403.1	403	404.9	412.4	411.9	402.8	383.2	374.2
Employer	0.6	0.6	0.5	0.3	0.3	0.5	0.5	0.5	0.5	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.1	0.3	0.3
Self-employed	4.4	4.6	9.4	6.1	7.4	4.8	10.8	10.8	10.8	11.6	20.2	22.2	25.6	25.8	20.3	15.6	19.1	10.1	6.1	10.5
Contributing family worker	0.4	0.4																		

Source: National Institute of Statistics, Romanian Statistical Yearbook, 2000-2012 editions

From the data presented in table no. 4 it can be seen that the total economy recorded a decrease in the number of persons occupied, as regards the occupied population in education does not follow the same trend. Employed population in education has been an oscillating trend between 1992 and 2008, with positive or negative changes from one year to another, and a sharper decline after 2008, when measures to reduce the budget staff are found and in this sector. For a relevant overview of this fact, you can follow figure 1.

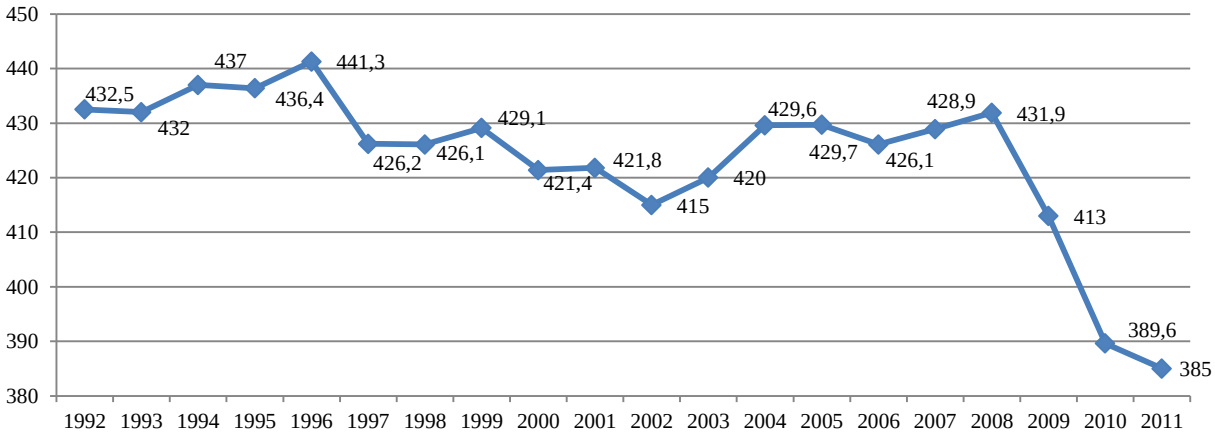

Figure 1 Evolution of the population occupied in education during the period 1992-2011

The main measure which the development level of a country influences education system is the share of GDP allocated to education, with reference to GDP per inhabitant. Unfortunately, in Romania was promoted and supported a policy of chronic underfunding of the education system, being allocated to this vital and strategic area of small funds irresponsibly, so compared to the EU, Romania has the lowest level, as a percentage of GDP spending for education. Currently, the Romanian education has a 5% of GDP, which is not sufficient for a linear development, continuous and stable education, but probably only cover costs.

A quality educational system is supported by investments that you need to consider as a source of future income. In Figure No. 2, we surprised the net's activities investment growth of the national economy in the period 2008-2011 in our country.

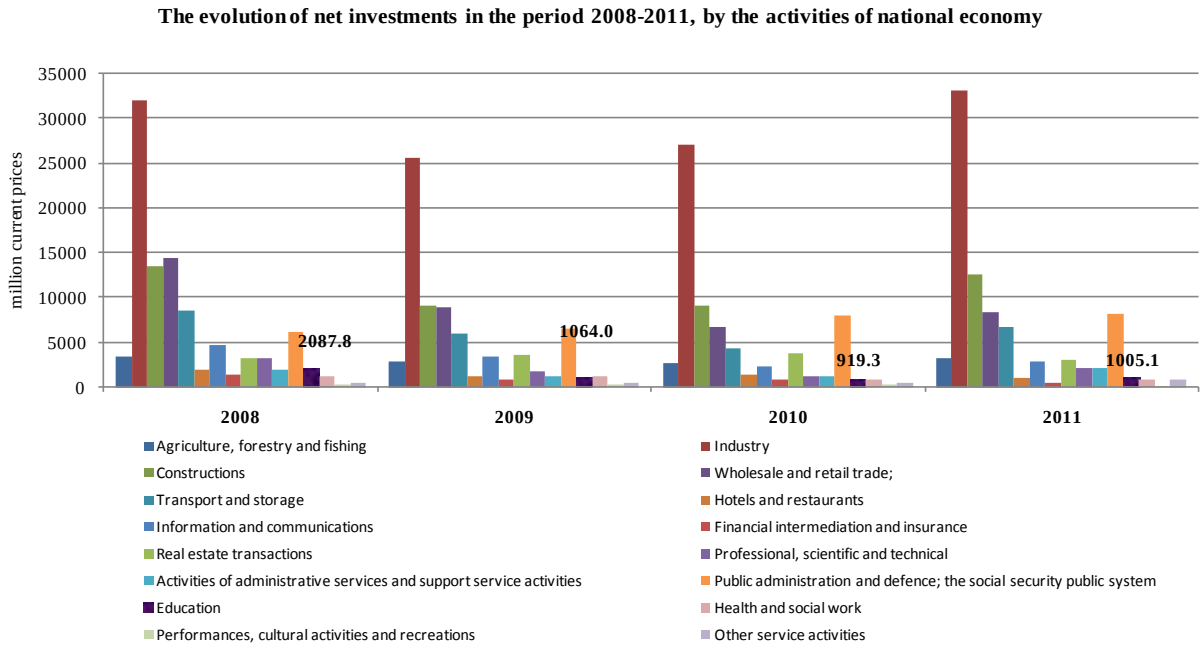

Figure no. 2

In Figure No. 2 it is observed as two strategic areas in the development of any country (Education and health) in Romania are from the point of view of investments allocated for the last places.

The economic crisis has caused a negative budget for education and the dramatic fall in the volume of investments, thus if in 2008 were 2087,8 million lei allocated to education in the next year (2009) they fell by 51%.

An important foothold for the increase of investment in education and thereby the quality of educational services is the division of costs between the various partners involved in education-the State, enterprises and individuals, foundations and alumni-public investment, helping to encourage co-financing from the private

sector. We believe that one of the reasons for the extremely low level of private funds intended for education, is the lack of a strategy to stimulate private investment in the field of the environment.

Conclusions

The dynamic process of transformation and development of society make it hard the entire educational system must continuously adapt to these changes to ensure the satisfaction of its beneficiaries and to provide knowledge, skills and competencies to increase the quality of life and personal development while that part of society and society as a group of people with the same goals.

Over the past 20 years, the Romanian educational system has been in a continuous process of reform and adaptation, on the one hand determined by socio-economic change, and on the other hand the advent of technological progress and information. Unfortunately, the education system has been adversely affected in recent years by the demographic, political instability, crisis began in 2008.

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