

The role of “after school” units in Romania’s rural areas

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Abstract. *The objective of the research is the identification and measurement of benefits related to educational projects implemented in the rural areas. The research type refers to a study that envisions the necessity to establish after school facilities and the economic benefits associated. The analysis of the rural population shows that in Romania there are a much higher number of children aged between 5 and 14 years compared to the one in urban areas, but also a higher frequency of dropout. The result of the research shows an increase of economic and social benefits at the level of population and local administration, both on short and long term, through the development of learning and social networking abilities.*

Keywords: education, after school, rural environment, economic benefits, social benefits.

JEL Classification: I25.

REL Classification: 4D, 15D.

1. An educated kid – a very well trained adult

From the economic point of view, labor force is a product of life duration and also of education and learned abilities. It offers a potential for achieved incomes, and the level of the latter depends on the employment ratio, which in turn depends on the existing companies (in the manufacture, agriculture and service fields).

Among the status indicators that characterize the quality of life, the ones regarding the education degree and health have a special importance for the inhabitants of rural areas. The indicators of education degree are especially important, because they are directly linked, on one hand, to the social-professional category and therefore to the level and incomes that are potentially achievable by the inhabitants, and, on the other hand, to the level of aspirations, of demands, necessities they ask for. Therefore, the attention granted to identify and solve the problems that education and health involve on this territory, must be special.

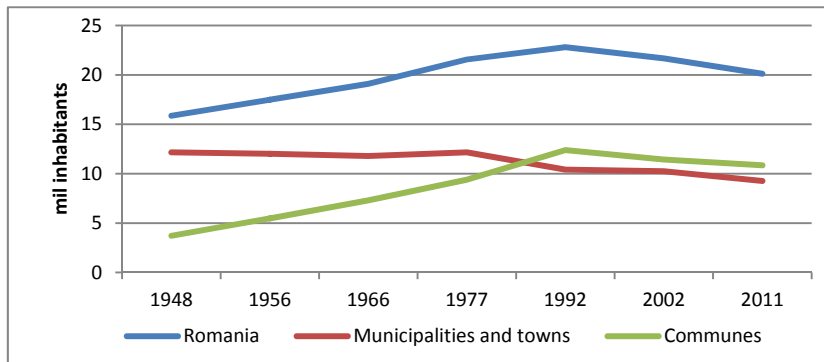
In the rural areas, a series of material difficulties are to be found, as the lack of housings and canteens. These impacts especially on children living in villages where only primary schools exist or that have no school, and the children must go over long distances, sometimes under hard conditions – especially during the winter, to attend the school at the center of the village.

Taking into account the number of hours spent by parents at work and other house activities, that take place in the rural environment, the primary school children are more and more neglected in respect to homework and other educational activities that help them close on the mysteries of learning.

In the recent period, the Ministry of National Education was involved in facilitating the transportation of pupils to the educational units in the rural areas, through acquisition of school micro-buses.

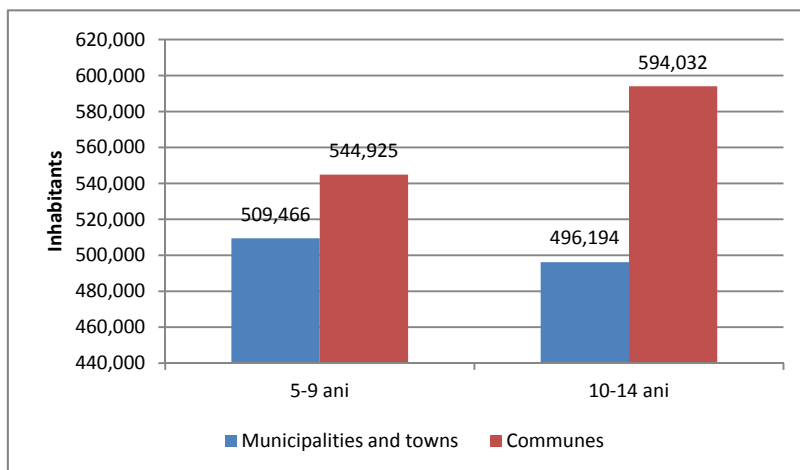
2. An overview on the population of rural areas

According to the 2011 census, the standing population of Romania was 20,121 million persons, of which 10,333 million women (51.4%). As against the situation at the moment of the previous census, the standing population decreased by 1,559 mil. persons (of which, 0,779 mil. women), mainly because of external migration.

Figure 1. Evolution of Romania's population, on total and categories of localities

In municipalities and towns, there are 10.859 thousand persons, representing 54.0% of the total standing population. As against the situation recorded at the previous survey, the weight of standing population in the urban areas increased by 1.3 percentage points on the count of the rural environment.

On October, 20th 2011, children (0-14 years) have a weight of 15.9% in the total standing population, young population (15-24 years) represents a percentage of 12.3%, mature people (25-64 years) form the majority (55.7%), and people of 65 years and above account for 16.1% of the total. Persons of 85 year and more hold a quota of 1.3% in total standing population.

Figure 2. Distribution of the population on age categories in municipalities, towns and communes

In the communes in Romania, there are some 545 thousand children of age between 5-9 years, which represents 2.71% of total population and some 594 thousand children aged between 10 and 14 years, which is 2.95% of total population. Compared to existing population at the level of municipalities and villages, there is a

greater weight recorded for children for age groups 5-9 years and 10-14 years in rural areas (51.68 % for age group 5-9 years and 54.49% for the group 10-14 years).

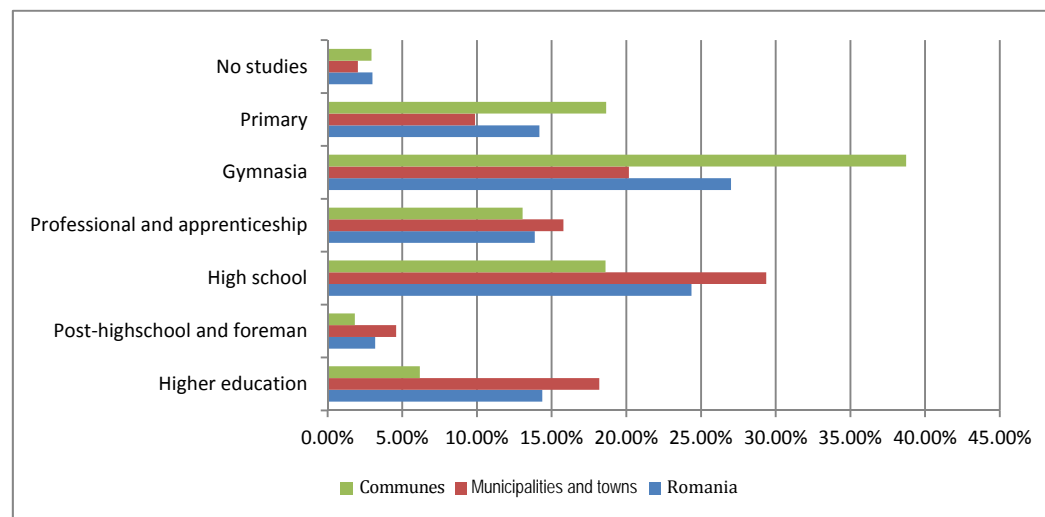
In Romania, out of the total standing population of ten years and older, 44.2% have a low level of education (primary, gymnasia or no school graduated), 41.4% an average level (post-high school, high school, professional or technical) and 14.4% a superior level. On October 20th 2011 there were recorded 245.4 thousands illiterate persons (1.36%).

Table 1. *Distribution of the population on the level of the educational entity graduated*

Name	Superior	Post-high school And technical	High school	Professional and Apprentices	Gymnasia	Primary	No studies
Romania	14.38%	3.19%	24.36%	13.88%	27.01%	14.18%	3.00%
Municipalities and towns	18.19%	4.59%	29.36%	15.79%	20.17%	9.87%	2.03%
Communes	6.18%	1.83%	18.61%	13.06%	38.73%	18.65%	2.94%

From the statistical data for 2011 at the level of communes, it results that 6.18% of total inhabitants have higher education (professors, engineers, medics, economists and other professions) and some 20.44% have high school and post-high school studies (educators, medical staff, technicians, ecology agents and other categories). Of total population, more than 38.73% have graduated general school, 18.65% primary school, and some 2.94% have no studies.

Figure 3. *Distribution of population on the level of educational institution graduated*



At the level of communes, an increasingly high rate of drop-out is recorded in pre-academic education.

3. Role of „after school” in children education

The great number of children in rural area leads to the need to create new proper spaces for education and recreation, which villages Romania lack greatly.

Because the „after school” constructions are an absolute necessity, it is mandatory to realize such investments, which will offer spaces needed for taking over educational and recreational activity for children, outside classes.

The less costly variant for „after school” constructions would be inside school. Generally, educational units in rural environment have terrain endowment that is sufficient to raise such constructions. Also, the opportunity of choosing such location results from the advantageous functional conditions, thus avoiding the movement of children outside the school, from the school to afterschool.

The specific objectives of an “After school program” are the following:

- To offer special educational services, to improve the school adaptation behavior of children;
- To provide support for beneficiaries and their family, through specialized assistance in approaching psychological difficulties;
- Psycho-behavioral optimization of pupils, by using group activities;
- Stimulate and increase in a significant manner of the level of self-esteem, acknowledgement of one’s own identity, of inter-personal communication and relationships.
- Provide a secure environment for leisure;
- Prevent school drop-out and failure, which has a high level in rural areas;
- Integrate in the school programs by increasing adaptability to this type of environment, considering that the life style in rural areas does not involve in a high degree help from parents;
- Increase of accessibility defer for families wishing better alternatives to care for, development and education of children.

In the „after school” centers, children can benefit from a wide array of facilities, among which we can outline the following:

- Support in solving homework for the next classes and additional homework;
- Facilitate inter-personal relations between children;
- Creative workshops, such as: painting, modern and society dancing, theater, music;
- Form and enlarge the knowledge horizon;
- Meditation and consultation for various disciplines.

The cost to realize such construction varies from a location to another, depending on the nature of the terrain they are placed on, the built surface (in turn, depends

on the number of necessary places, that is the number of children), but generally the cost per square meter would be 560 euro/sqm without VAT.

4. Identification of economic benefits for „after school” projects

The „after school” concept is relatively new for Romanian parents and almost non-existing in the rural areas. These centers, which are far from any resemblance with the school or the house, where children learn and entertain, and are a temptation for parents working at least eight hours per day. In such centers, children socialize in a much better fashion, the psychologists recommend the parents to choose after school programs, which they consider to be more beneficial than a nanny. After school should not be “luxurious”, but a necessity, both in the rural and urban environments. Kids do not have to spend their time isolated, but inside a collectivity, the existence of those centers being an ideal occasion to socialize.

The after school centers are developed and managed by local administration, and therefore there will be no fee for services provided there. From the financial viewpoint, they will generate no income, but from the economic and social views, the advantages are multiple for kids, their families and local community.

In synthesis, economic and social benefits for the “after school” projects could be:

Economic benefits

- Reduction of costs at the level of families children come from – adults will be able to run activities (including economic, generating income), without being forced to supervise the children. Also, there is eliminated the necessity to employ some persons for surveillance (more than three quarters of the families potentially beneficiary of services offered by the “after school” children care center have an overall low living standard).

Social benefits

- The increase of the level of endowment for education in the rural areas. Regarding the material endowment for education, it differs from a village to another. Endowment is practically non-existing in small human settlements. At the level of villages, especially ones that are communal centers, the school endowment is relatively small for the number of potential children;
- The attraction of qualified teachers for the education of pupils, by reshaping the enrollment system and the capitalization of possibilities for granting facilities at the level of local community, taking into account the fact that the number of children in need of additional training is high.
- The continuation of the program of area concentration of educational activity with low school population;

- The inclusion, with priority, of schools and children care centers in rural areas in programs of endowment with modern educational tools;
- Awareness of local communities, especially in rural areas, in securing conditions of comfort and some facilities for teaching staff;
- Development of the education and culture degree of children in this area. The establishment of the „after school” children care center will allow the organization of some cultural events for pupils, and also the organization of school clubs, art expositions;
- Prevention of children institutionalization;
- Reduction of the effects of material difficulties, such as the lack of hostels and canteens, effects that are felt with especially high intensity in villages without, children being compelled to go over long distances to pursue classes in another village;
- Awareness of people regarding the importance for education of pupils in an organized framework;
- Increase children social and communicational abilities;
- Monitored diet for kids.

5. Sensitivity analysis of the internal profitability ratio

To emphasize the effects of the variation of elements included in the economic internal profitability ratio (IRRE) and of the net present value (NPV), each component that can influence their value will modify from the base situation as a separate increase or decrease by 1-5%, the other elements remaining constant, and the re-calculation of IRRE and of the percent report between the net present value and the value of the investment. The elements taken into consideration for sensitivity analysis: salaries, economic benefits, expenses related to utilities and maintenance, social effects.

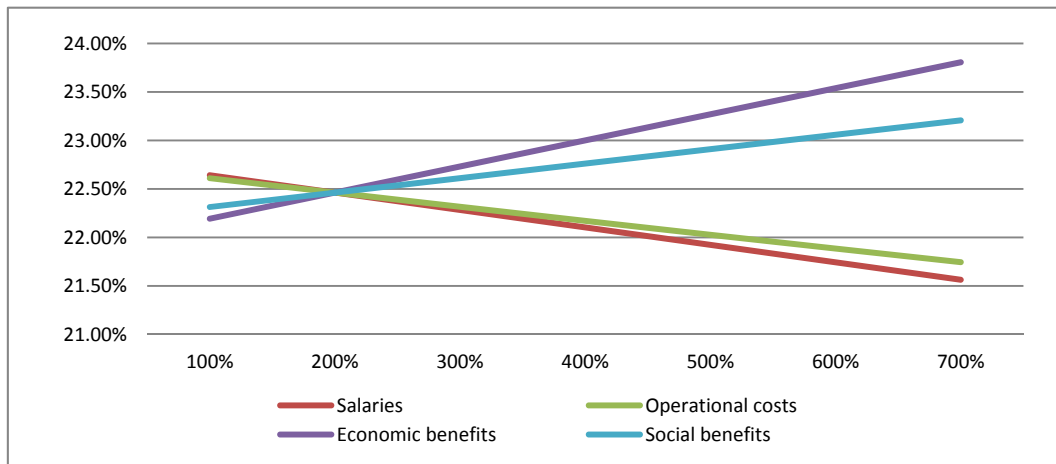
Table 2. Evolution of the economic internal profitability ratio at the modification of variables inside the interval -1%...5%

Variable	-1%	0%	1%	2%	3%	4%	5%
Salaries	22.64%	22.46%	22.28%	22.10%	21.92%	21.74%	21.56%
Operation costs	22.61%	22.46%	22.32%	22.17%	22.03%	21.89%	21.74%
Economic benefits	22.19%	22.46%	22.73%	23.00%	23.27%	23.54%	23.81%
Social benefits	22.31%	22.46%	22.61%	22.76%	22.91%	23.06%	23.21%

Table 3. Percent report between NPV (net present value) and the value of investment (%)

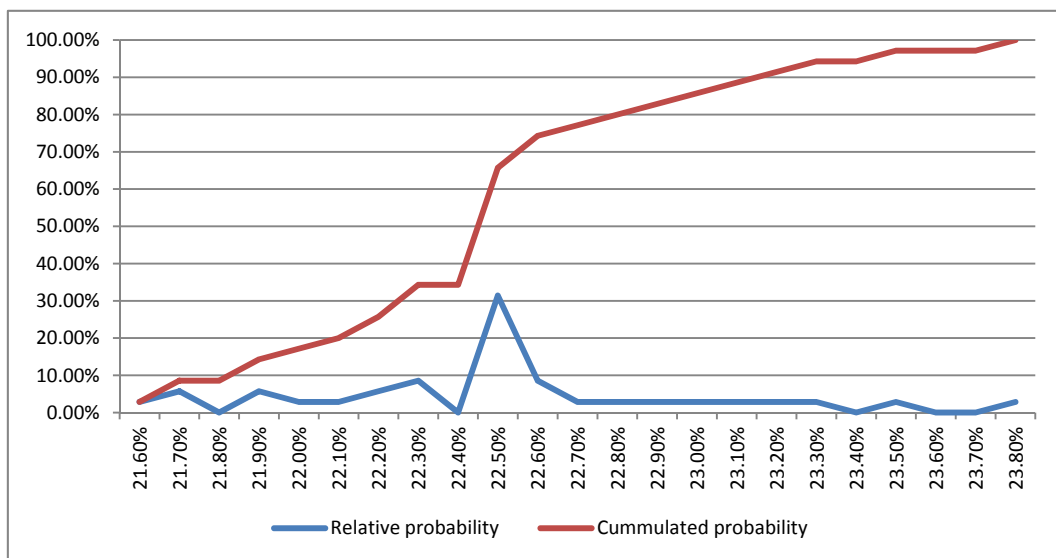
Elements	-1%	0%	1%	2%	3%	4%	5%
Salaries	145.57	143.95	142.34	140.73	139.12	137.51	135.89
Operation costs	144.58	143.95	143.32	142.69	142.06	141.43	140.80
Economic benefits	141.50	143.95	146.40	148.85	151.30	153.75	156.20
Social benefits	142.63	143.95	145.28	146.60	147.93	149.25	150.58

Figure 4. Sensitivity of the economic profitability ratio



The curve of cumulated probability allows us to establish a certain degree of risk, if cumulated probability is higher or lower than the reference value considered critical for the economic internal profitability ratio. Also, the probabilities that this ratio could be higher than a certain value adopted as limit can be evaluated. For the analyzed situation, there is a null probability for the economic internal profitability to fall below 5.5%.

Figure 5. Distribution of relative probability and cumulated probability of the economic profitability ratio



For this type of project, the following factors can be identified, with the specified elasticity type.

Table 4. *Elasticity of critical variables of IRRE*

Parameters	Elasticity	
	min	max
Salaries	-0.8000	-0.7990
Operational costs	-0.6574	-0.6390
Economic benefits	1.1962	1.2019
Social benefits	0.6636	0.6647

The result indicates two categories of elements: one having a high impact on the internal economic profitability ratio and one with a lower impact. In the first category, we can consider the economic effects, and in the second set there can be included: salaries, operational costs and social benefits.

The modification of the variables for benefits and salaries has a negative elasticity, but with a sub-unit value for the internal economic profitability ratio. The increase of the positive intensity of social effects leads to an increase of the internal economic profitability ratio, but with a low amplitude.

6. Conclusions

We can conclude that the existence of a number of children in the rural areas, higher than the one in urban environments, calls for the development of after school facilities. At the level of villages, there is a relatively high rate of dropout in pre-academic education, determined, mainly, by material (economic) conditions. Regardless the size and nature of investments, the indicators achieved have acceptable values for the authorities. By taking into account the nature of these projects, even if they do not generate financial incomes, they allow in turn the achievement of an internal economic profitability ratio much above the reference level. Also, the net present values reach a level which is at most 35% above the value of investments.

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