

REGIONAL DIFFERENCES CONCERNING EDUCATION

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Abstract

Since the late 1980's, in many countries, there has been an increasing pressure on higher education to directly contribute to national economic growth. The output of education and training systems in terms of both quantity and quality of skills at all levels is the main factor of a country's level of productivity and competitiveness.

The identification and measurement of regional differences on education is very important to the design of the educational policies. Although there has been governmental implication, there are still important differences of educational output, between Romania and EU, and also among the Romanian regions. We studied the following indicators: the enrollment rate, the dropout ratio, the average number of teachers/100pupils, and pupils/teacher. One can notice significant regional disparities in educational indicators such as: the average number of teachers/100pupils and pupils/teacher.

Thus, the quality of education in Romania, the skills and competencies in vocational training should reflect the demands of the labor market. This paper offers a quantitative approach to education in Romania.

Key words: education, regional differences, quantitative approach.

1. Introduction

At present Romania is, undoubtedly, a country of glaring contrasts. It is not impossible to leave the modern, Western like center of each of the large Romanian cities and then to find localities – only 10-15 kilometers away from the administrative borders of that city – where people still have the living standards of the Middle Ages.

From a sociological perspective, these differences regarding the development manifest on several levels: at the levels of the *localities* (either urban or rural), at the *intraregional* level – meaning that differences can be found within the same historical region, and at the *interregional* level. Most often quoted among interregional contrasts is the one between North – Eastern Region of Romania, the poorest region, and the Western Region of Romania, the most developed area. Beyond the various historical, economic, cultural considerations the disparities between these regions or, more precisely, the statement that North East (Moldavia) is the poorest area of the country is a reality that cannot be eluded.

In Romania, according the definition in the Law for regional development, development regions are the areas enclosing the territories of certain counties and of the City of Bucharest respectively; these areas are formed according to certain agreements between the representatives of the county councils and the General Council of the City of Bucharest respectively. These areas are not administrative units and do not hold legal personality. These development regions represent the framework for the creation, implementation and assessment of the regional development policies, as well as for the collection of specific statistical data according to the European regulations issued by Eurostat for the second level of territorial classification NUTS 2 (The Law for regional development in Romania). There are eight NUTS 2 development regions (the 42 counties of Romania have been grouped according to sector and global indicators) and 42 NUTS 3 regions namely counties (see Table no. 1). The territorial framework of analysis is the NUTS*.

* Nomenclature of Territorial Units for Statistics

Table no. 1. Regions at level NUTS 2 and NUTS 3

Nr. crt.	Regions at level NUTS 2	Regions at level NUTS 3
1	North-East (NE)	1. NE1: Botoșani, Vaslui, Iași 2. NE2: Bacău, Neamț, Suceava
2	South-East (SE)	3. SE1: Brăila, Galați, Constanța, Tulcea 4. SE2: Buzău, Vrancea
3	South (S)	5. S1: Argeș, Dâmbovița, Prahova 6. S2: Călărași, Giurgiu, Ialomița, Teleorman
4	South –West (SW)	7. SV1:Dolj, Olt, Mehedinți 8. SV2: Gorj, Vâlcea
5	West (W)	9. V1: Arad, Timiș 10. V2: Caraș-Severin, Hunedoara
6	North- West (NW)	11. NV1: Cluj, Bihor 12. NV2: Bistrița-Năsăud, Sălaj, Maramureș, Satu-Mare
7	Center (C)	13. C1: Brașov, Sibiu 14. C2: Covasna, Harghita, Alba, Mureș
8	Bucharest	15. București-Ilfov

Source: Carta Verde a Dezvoltării Regionale, 1997, p. 35.

The identification and measurement of regional differences on education is very important to the design of the educational policies. In this paper, we studied the following indicators: the enrollment rate, the dropout ratio, the average number of teachers/100 pupils, and pupils per teacher.

2. School attainment in Romania

Focusing on the dimension of schooling quantity, many policy initiatives have tried to increase the educational attainment of the population. Data show that there remains a long way to go. The enrollment rate by age and by gender is presented in Table no. 2.

Table no. 2 The enrollment rate by age and by gender

Year	6 years		7 – 10 years		11 – 14 years		15 – 18 years		19 – 23 years and over	
	male	female	male	female	male	female	male	female	male	female
1996	64,8	66,2	94,3	94,5	94,5	94,2	59,9	62,3	23,8	24,3
1997	66,3	67,8	98,0	99,3	99,3	96,6	62,0	61,2	23,5	25,1
1998	67,6	69,6	98,1	98,2	98,2	98,0	61,4	64,6	25,2	28,3
1999	68,3	70,7	96,9	96,9	96,9	97,0	64,0	67,8	27,2	30,7
2000	65,1	67,1	95,5	95,6	95,6	95,4	72,5	76,8	30,4	35,5
2001	71,1	73,5	93,2	93,3	93,3	93,2	71,6	76,3	33,3	39,6
2002	75,5	77,6	94,1	94,0	94,0	94,3	71,4	76,1	37,1	44,5
2003	80,1	82,0	94,2	94,2	94,2	94,2	70,8	75,3	39,4	47,4
2004	80,8	82,5	93,6	93,6	93,6	93,6	72,8	77,1	41,6	50,0
2005	79,6	81,2	96,2	96,2	96,2	96,2	71,5	75,6	46,5	56,1
2006	80,0	81,9	95,0	95,1	95,1	94,9	73,9	77,7	50,5	61,5

Source: Anuarul Statistic al României 2006, 2007, INS, București, p. 331.

Data show that in Romania there is a positive dynamic of school attainment of population: over 95 % for 7-14 years, in the period 1997 to 2000, even over 99 %, for female 7-10 years

and both genders for 11-14 years, in 1997. Very low values were registered for the age over 15 years, but a positive evolution was registered for the age group 19-23 years, from 24%, in 1996 to over 60 %, in 2006.

3. Indicators on education by regions

In the NW Region was registered the highest percent of enrollment (17.69 %) comparing with the other regions, and the lowest percent was registered in the West Region (9.13 %).

Table 3. The structure of the school aged population by regions

Regions	Pupils	Structure of school attending population	Population	Percentage of school attending population within the total population
North-East	771342	17.69	3734546	20.65
South-East	518899	11.90	2846379	18.23
South	580359	13.31	3329762	17.43
South –West	444295	10.19	2306450	19.26
West	398103	9.13	1930458	20.62
North- West	576766	13.23	2737400	21.07
Center	507821	11.65	2530486	20.07
Bucharest	563246	12.92	2208368	25.51
Total	4360831	100	21623849	20.17

Source: Anuarul Statistic al României 2006, 2007, INS, București and authors' computing.

Moreover, these data should be studied in relationship with the population. Therefore, one can see that the highest percents of pupils in population, after Bucharest, were registered in the following regions: North-West, North-East, and West (Table no.3 and Fig. 1).

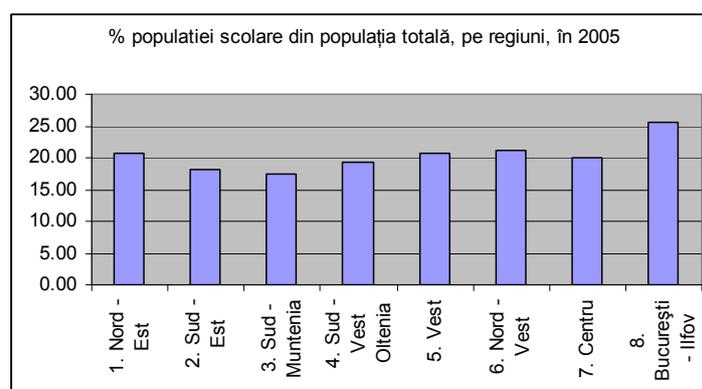


Fig. 1 The structure of schooling population in population

The value of the coefficient of variation ($v = 20.48\%$) shows that there is a medium variation among regions concerning the *school enrollment rate*. This means that there are not very high disparities concerning the school aged population, among regions.

Comparing the eight regions regarding the *dropout ratio* indicator by multiple comparisons procedure, we find that there are no significant differences at any level of education (primary, secondary, vocational, postsecondary or apprenticeship school, post-high schools or foreman schools). High values of this indicator were found in all regions (Table no. 4). The value of the dropout ration in Romania was, in 2005/2006, 1.8 %.

Table no. 4 Dropout ratio by regions

Regions	Total	Dropout ratio		
		Primary Education	Secondary Education	High School Education
North-East	1.7	1.3	2.1	2.7
South-East	2.0	1.7	2.4	3.0
South	1.8	1.5	2.0	2.6
South –West	1.5	1.2	1.7	2.8
West	1.9	1.8	2.0	2.8
North- West	1.5	1.3	1.7	2.4
Center	2.1	1.8	2.3	2.8
Bucharest	2.1	1.8	2.4	2.6

Source: Anuarul Statistic al României 2006, 2007, INS, București.

There are, however, significant differences between the country level and the NV Region level regarding *the average number of teachers per 100 pupils*. Also, in a hierarchy of the regions of Romania according to this indicator, the highest position is that of the Centre Region, with 7.48 teachers/100 pupils, while the lowest is that of the NE region, with 6.50 teachers/100 pupils. At the same time, we can notice that the NE region is the poorest.

The T test shows that there are significant differences only between the North-West Region and the country level, concerning the average number of teachers/100 pupils.

Table no. 5. Number of pupils/teacher by regions

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regiunea	Mean
regiunea NORD-EST	18.7720
regiunea SUD-EST	18.2140
regiunea SUD-MUNTENIA	18.5156
regiunea SUD-VEST OLTENIA	17.4243
regiunea VEST	18.1312
regiunea NORD-VEST	16.4810
regiunea CENTRU	16.1317
regiunea BUCURESTI-ILFOV	18.7174

Source: Anuarul Statistic al României 2006, 2007, INS, București pp. 357-358 and authors' computing.

If we consider the number of students per teacher, the first in the list is the Centre Region, with 16.13 pupils / teacher, followed by the NE Region, with 18.77 pupils / teacher (see Table no. 5). In the EU, the level of this indicator was 15.04 pupils/teacher, in the year 2005.

The T test shows that there are differences concerning this indicator, between the country level and the region level in the following regions: North-East, South-East, South, and South-West. Also, it has been tested whether this indicator displays significant differences as compared to the value at the EU 27 level for primary education. In the regions NE, SE, S and SW, there is a significant difference between the number of pupils enrolled in primary education per teacher and the value of this indicator at the EU 27 level. As for the other regions of Romania, we can say that the value of this indicator does differ greatly from the EU regarding the number of pupils in primary education per teacher in the year 2005 (processed according to the data in the Statistic Yearbook of Romania 2006, 2007, INS, Bucureşti, p. 357).

Conclusions

There are not very high disparities concerning the school aged population, among regions. In the NW Region was registered the highest percent of enrollment (17.69 %) comparing with the other regions, and the lowest percent was registered in the West Region (9.13 %). Also, comparing the eight regions regarding the dropout ratio indicator, we find that there are no significant differences at any level of education. High values of this indicator were found in all regions.

There are, however, significant differences between the country level and the of the NW Region level regarding the average number of teachers per 100 pupils. If we consider the number of students per teacher, the first in the list is the Centre Region, followed by the NE Region. The T test shows that there are differences concerning this indicator, between the country level and the region level on the following regions: North-East, South-East, South, and South-West.

The problem of differences from the educational point of view is an extremely serious one. Exclusion from education in some Romanian regions, especially from the NE area, can be seen both as an effect and a cause of poverty. In short, we can say that:

- Strong decrease in the number of those who successfully graduate compulsory school (either because of the children not being enrolled at school or because of school dropout), in NE region;
- Increase of school dropout at overall pre-university school level (to a greater extent than the rest of the country), in NE region;

The quality of primary and secondary education in the NE Region, especially from rural area is extremely poor. This situation is due to:

- **Old and inappropriate school infrastructure and education materials.** Despite some efforts made by the Romanian government, the education materials and material base generally remain extremely poor in NE Region. There are still many schools that are improperly built (adobe, trellis) with no running water and non-hygienic water closets. The existence of some localities (villages) extremely scattered implies the existence of a very large number of schools (which are extremely costly to upkeep) and which don't offer even the basic study conditions.

• **Inappropriate coverage of teaching positions with qualified teachers.** This problem that is extended at the level of the whole country is even more acute in NE Region. Extended areas of rural poverty make the setting of qualified teachers in these areas very difficult. Moreover, the number of unqualified acting teachers is bigger as the distance from the county capital increases or the road infrastructure is poorer.

Starting from these considerations it can be stated that one of the explanatory factors of the poverty state in the NE region of Romania is the increased lack of education in children and youth, manifested through school dropout, lack of interest, and no motivation. Moreover, the number of pupils who abandon school in these counties is extremely high. The increase in access to education will reduce the disparities among regions.

When quality is also considered becomes apparent the challenge. Educational quality is directly related to school attainment. It is necessary to ascertain how various investments translate into quality and how that quality relates to economic returns. But the investigation of the phenomena that lead to differences among regions is a complex field of research which is beyond the aim of this paper. The target of regional policy rests largely on the measurement of disparities rather than on an analysis of the determinants of these disparities.

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