TRENDS IN HR STRUCTURE OF EDUCATION SYSTEM IN ROMANIA BY RESIDENCE AREA

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Abstract
Except for specific measures (rehabilitation of schools, facilities for transporting pupils from isolated villages, merging of schools, equipping libraries, etc.), development plans specific to rural education cannot be highlighted. Such policies have affected equity and have led to a rural-urban disequilibrium in terms of pupils and conditions for the teaching process. This paper aims to study the trends of the HR structure within education system in Romania by areas of residence, taking into account the rural-urban imbalance that is manifested especially at the level of Romania, the rural environment comprising categories of disadvantaged pupils, being avoided by the qualified and experienced teachers.

Keywords: human resources, education system, areas of residences, Romania

Clasificare JEL : O15, I20

1. Introduction

The school population is changing, the configuration and concentration of the population in the urban and rural regions are extremely flexible, and the variations in the cultural, economic, geographical or social environments of the pupils mean that the teachers must to answer to a varied range of necessities (OECD, 2009, 2012).

In Romania, the tendency to decrease the school population can be observed at all levels of education, except primary school education, but in weights and models differentiated according to the residence areas (MEN, 2019). The enrollment rate in pre-school education in rural regions is significantly lower than in the urban environment, due to the low percentage of young children attending kindergartens in rural regions.

According to the area of residence, the enrollment rate in all level of education system has steadily decreased in recent years, both in the urban environment and in the rural environment (MEN, 2017, 2018). Also, concerning the distribution of human resources education by areas of residence, the rural environment is the disadvantaged, the teachers wishing to have a career in the urban environment (Eurydice, 2018). "While in the urban environment, there has been a rather small increase, in the rural environment there has been a decrease in the number of teachers" (MEN, 2018). Given the importance of human resources in a modern economy, in this paper, we propose to investigate the developments of some indicators that illustrate the human resources in the Romanian educational system.

The work is organized into four sections. In the first part we made an introduction to the research theme. The second section indicates the methodology used and formulates the hypothesis. The third section is dedicated to presenting the results and discussions. The fourth part bring conclusions and explanations for the developments of the investigated indicators.

2. Methodological framework

Starting from the results of previous research, international and national studies, we have formulated a hypothesis concerning the trends in HR structure of education system in Romania by residence area:

The trends of the human resources structure by areas of residence influences the rate between the number of graduates and the school population.

This hypothesis is to be subjected to a validation process that will allow conclusions to be drawn. As research tools we will use descriptive statistics, comparative analysis and correlation analysis.

3. Results and discussions

In order to investigate the validity of the hypothesis, we have collected both data that characterize the indicators regarding the teaching staff, the school population and graduates by residence at the level of Romania.

The synthetic situation at the level of Romania is presented in table no. 1.

Table no. 1. Trends of the teaching staff and pupils by residence area

	Teaching staff		School population		Number of graduates	
	Urban area	Rural area	Urban area	Rural area	Urban area	Rural area
2003	131993	84557	2073428	1141571	420295	149251
2004	133413	86303	1998348	1110286	462330	151830
2005	131741	81995	1959876	1036153	447490	135693
2006	131057	79123	1912951	998262	422907	130665
2007	129787	77750	1874081	972823	428036	124037
2008	126998	78202	1828214	952825	402680	121926
2009	123386	75868	1804326	931098	392629	120252
2010	115776	70078	1772478	910011	359138	128675
2011	114219	67512	1737248	872774	300315	99761
2012	113896	68652	1775345	913245	312553	102735
2013	115039	69333	1752634	896406	297659	102447
2014	111874	69300	1741983	873739	319520	104420
2015	109556	65854	1706729	847132	280844	96257
2016	109168	65076	1701604	822795	282982	93400
2017	109898	64576	1699650	798118	281196	92869

Source: Data collected and processed based on INS, 2019

To illustrate the developments of the teaching staff in education system by areas of residence at the level of Romania, fig. no 1 shows the share of the employees included in this category between 2003 and 2017.
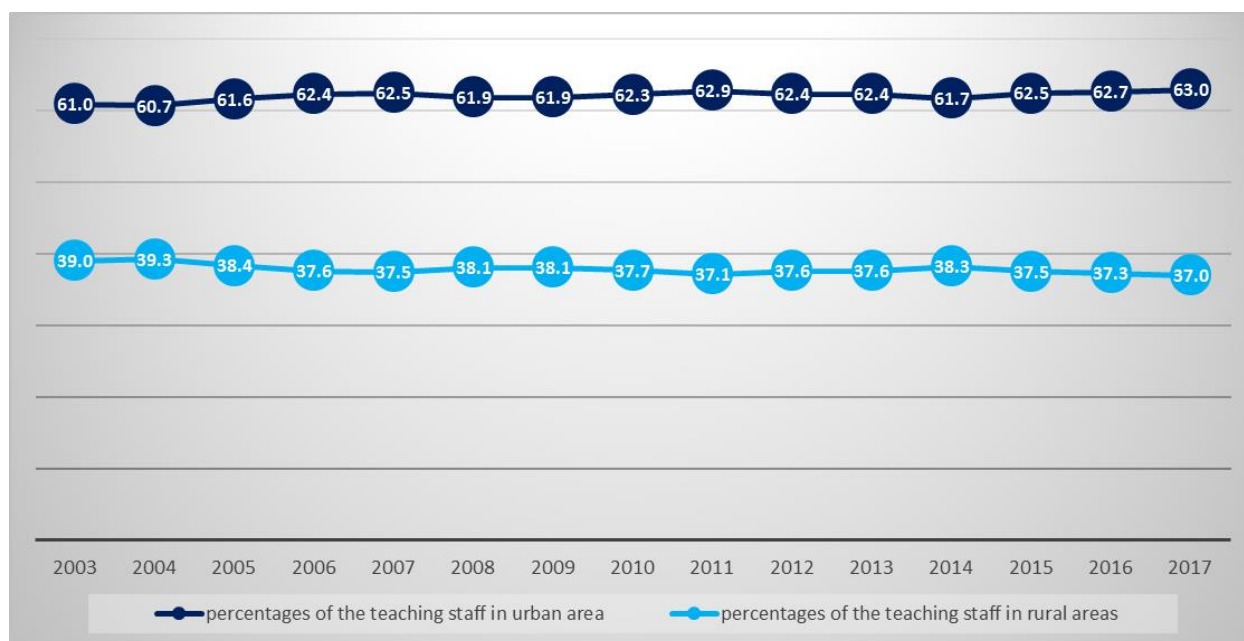
Figure no. 1. Trends of the percentages of the teaching staff education system by residence area in Romania
Source: Data collected and processed based on INS, 2019

Analyzing the data from fig. no. 1 it can be observed that urban employees exceeds rural employees, the two series of data showing contradictory developments. The difference between the two series of data has increased from 22% to 26%, the staff in the urban area approaching the threshold of two thirds.

The trends of the share of the school population by residence area are similar to the developments of the percentage of the teaching staff education system by residence areas, the urban environment registering an increase to the detriment of the rural environment (fig. no 2).
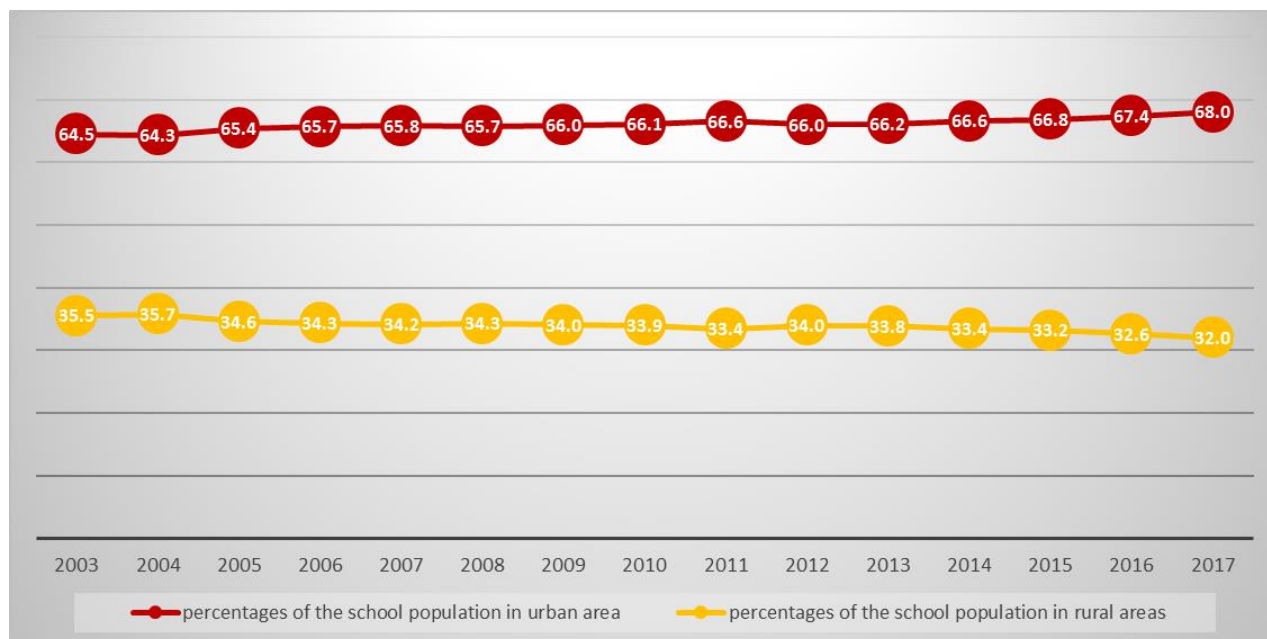

Figure no. 2. Trends of the share of the school population by residence area in Romania
Source: Data collected and processed based on INS, 2019

The gap between the two series of data (36% in 2017) is greater than in the case of the teaching staff, the urban school population exceeding the threshold of two thirds, a phenomenon generated by the rural-urban migration.

To illustrate the developments of graduates by residence level from Romania, fig. no. 3 shows comparatively the percentage of graduates included in this category between 2003 and 2017.
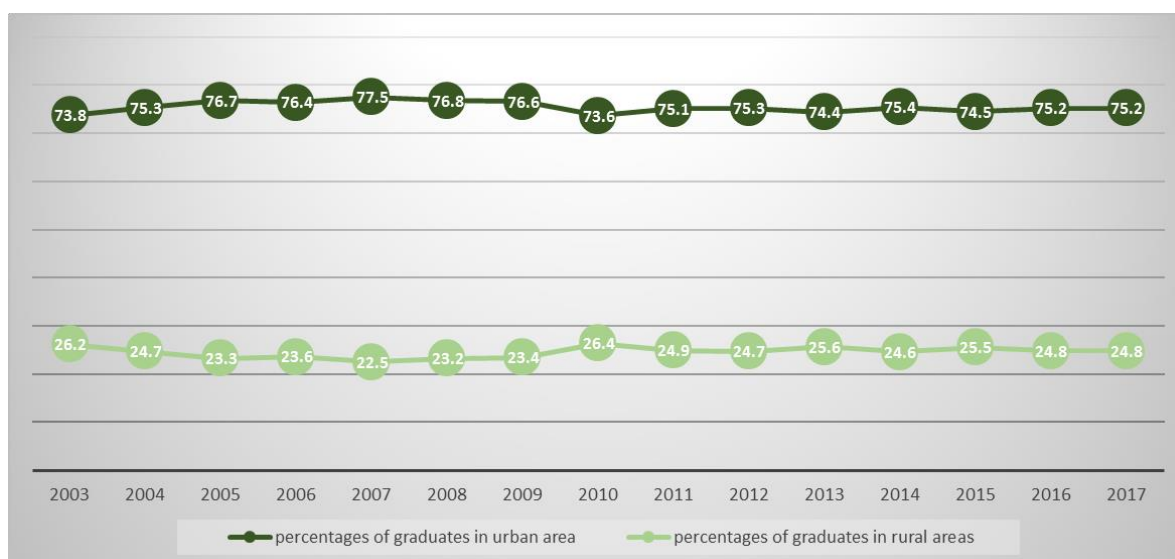

Figure no. 3. Trends of the share of graduates by residence area in Romania
Source: Data collected and processed based on INS, 2019

Analyzing the data it can be observed that trends of the urban graduates registered a slight increase while rural graduates decreased as a share of the total of the graduates. This developments is generated by the school population decrease and lower graduation rate in the rural regions.

The rate calculated by dividing the number of graduates and the school population shows a more pronounced downward trend in the urban environment than in the rural region, the trend recorded by the school population being more pronounced than the trend recorded by the graduates (fig. no. 4).
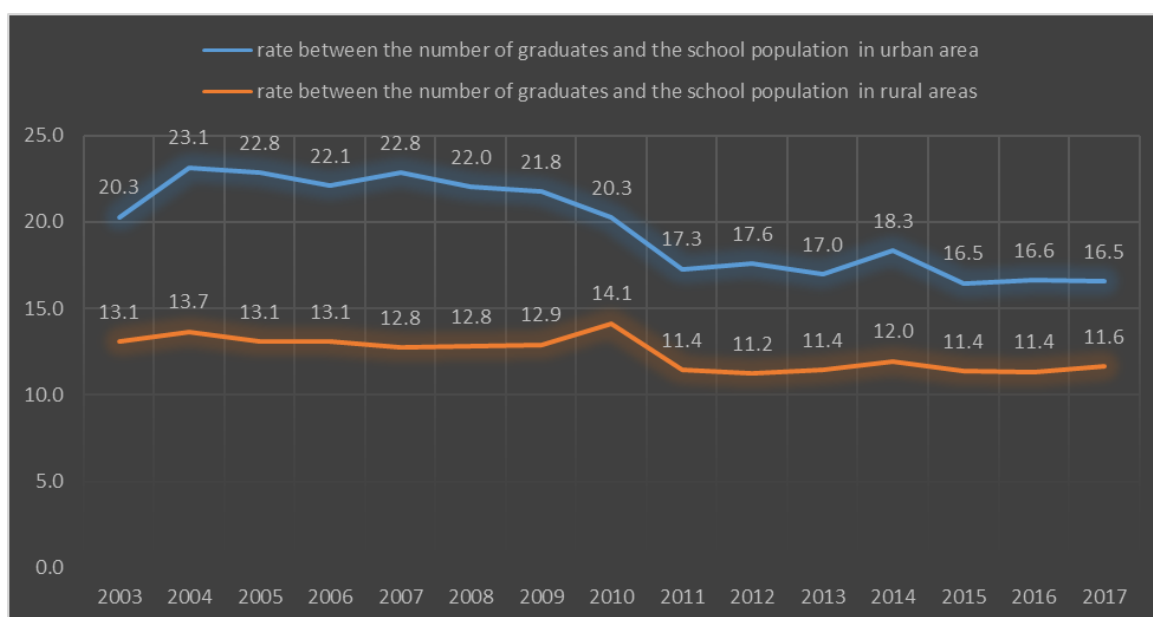

Figure no. 4. Share of the graduates - school population rate by residence area in Romania
Source: Data collected and processed based on INS, 2019

To establish the influence of the HR structure on residence areas on the graduates - school population on residence areas, we calculated the correlations recorded between the developments of the values of these indicators recorded between 2003 and 2017 (table no. 2).

Table no. 2. Correlations among HR structure and the graduates - school population rate by residence area

		Percentage of teaching staff in urban areas	Rate graduates - school population in urban areas
Percentage of teaching staff in urban areas	Pearson correlation	1	-0.601[*]
	Significance		0.018
	Values	15	15
Rate graduates - school population in urban areas	Pearson correlation	-0.601[*]	1
	Significance	0.018	
	Values	15	15
		Percentage of teaching staff in rural areas	Rate graduates - school population in rural areas
Percentage of teaching staff in rural areas	Pearson correlation	1	0.614[*]
	Significance		0.015
	Values	15	15
Rate graduates - school population in rural areas	Pearson correlation	0.614[*]	1
	Significance	0.015	
	Values	15	15
** The correlation is strong; *The correlation is average			

Source: Developed by the authors based on the data collected from INS (2019)

The analysis of the correlations leads to the conclusion that HR structure records an average correlation with graduates - school population rate by residence area. Starting from the data analysis we can conclude that the research hypothesis is validated for the period studied (2003-2017).

5. Conclusions

In this paper we set out to investigate the trends of the HR structure of educational system in Romania by areas of residence. In this regard, we formulated a hypotheses that were subjected to a validation process, during the research. According to the research hypothesis, the trends of the human resources structure by residence area influences the graduates - school population rate. Researching the hypothesis we found that in Romania the personnel employed in the urban environment clearly exceeds the personnel employed in the rural region in the structure of the educational institutions HR, the data series showing contradictory trends. The distance among urban-rural regions has increased from 22% to 26%, the staff in the urban area approaching the threshold of two thirds, due to rural school population decreasing as a result of migration and integration of some rural schools.

The results of the research led us to the conclusion that although the rural region shows decreasing trends for all the analyzed indicators, due to the demographic changes, the graduation rate has a lower tendency in the rural region compared to the urban environment and under the influence of the teaching staff developments on residence areas. There are other factors that influence the graduation rate, such as the educational policies at central and local level, the merging of schools, the economic developments, etc.

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