INVESTIGATING AUTONOMY, ACCOUNTABILITY AND EDUCATIONAL MANAGEMENT PRIORITIES IN ROMANIAN HIGH SCHOOLS; PRELIMINARY RESULTS

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ABSTRACT

In Romania, decentralization of education has been for more than 10 years a declared priority of the educational policies and starting with the Education Act of 2011 should have become a reality of the system. Recent researches indicate that increased school autonomy, when accompanied by accountability measures and supported by a good economic development level of the country, could lead to better students' achievement in mathematics, sciences and reading. However, the Romanian students' results at national exams and standardized tests applied in international studies have constantly been well below expectations. One of the many justified questions arising from this situation is whether the decentralization has indeed become a reality of the Romanian education system and furthermore if decentralization can lead to better educational performances in our case. This study presents the preliminary results of a questionnaire-based investigation conducted in order to assess the actual level of autonomy and the existing accountability measures in Romanian high schools. Considering the increased responsibility of the school principals in a decentralized system, the investigation also included questions regarding the educational management priorities. Preliminary results indicate that school autonomy appears to be still at an emerging level in Romanian high schools, while in most cases principals declare that significant accountability measures exist in their schools. Regarding the educational management, although there is a rather large diversity of priorities and opinions, a number of common themes can be identified: prioritize strategic development, strengthen control, increase the quality and efficiency of the management, accent on rules and regulations, etc.

KEYWORDS: *school autonomy, school accountability, educational management.*

JEL CLASSIFICATION: *I21 Analysis of Education*

1. INTRODUCTION

Decentralization of education has become a reality of the education systems in the European Union and worldwide. In Europe, decentralization of education started practically in the mid '80s (with two notable exceptions: Belgium and Netherlands). The process recorded a significant increase in the number of countries and the extent of the reforms during the '90s, with a last wave after the year 2000 (among which Germany, Romania and Bulgaria). According to Eurydice (2007), transferring decision authority from the central government to regional, local and finally school level was not a tradition in Europe, not even for the federal states. The reasons for this conservatism (e.g. by comparison with the evolutions in the USA) rely in the economic, social, and cultural conditions

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specific to the European space. However, as indicated in Figure 1, by the year 2008 all European countries have been taken at least one important policy/legal measure towards decentralization of education (for Belgium and Netherlands the year is 1959 and is not shown; Denmark and Finland had a progressive implementation with no specified dates; EU standardized symbols for countries).

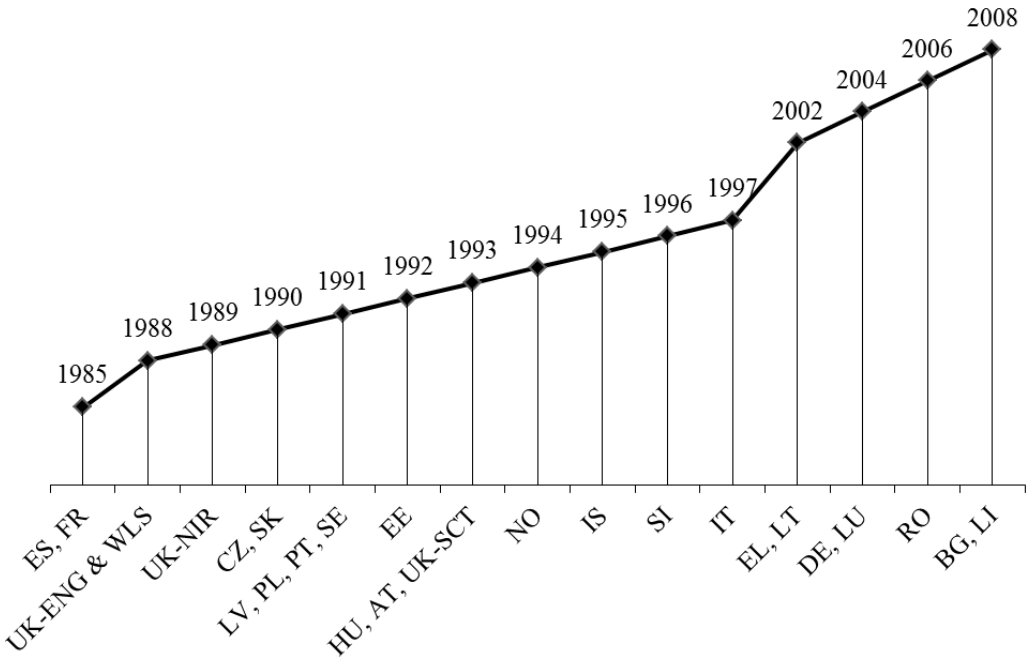

Figure 1. Years of the first major reforms regarding decentralization of education in Europe
Source: adapted from Eurydice (2007, p. 11)

Decentralization of education refers to the transfer of the decision making authority from a higher level to a lower level in the hierarchy of the system (adapted from Welsh & McGinn, 1999). Primarily and theoretically this should lead to an increased level of autonomy at the level of schools. Using this autonomy in a well-regulated system, i.e. with functional accountability measures to avoid opportunistic behavior, should lead to the improvement of the quality, effectiveness, efficiency, and relevance of education. These are the main hypotheses, and at the same time the long-term goals, underlying decentralization policies.

The main question that arises is if the realities of the systems, most importantly students' performances following decentralization, match these hypotheses. For many reasons, answering this question is not an easy task. Researches in the field of education and economics have tried to find consistent and significant relations between the level of school autonomy in different education systems and students' achievement in areas such as mathematics, sciences, and reading. This was mainly possible using the continually increasing databases of the international studies PIRLS, TIMSS and PISA, databases that contain students' scores at standardized tests, as well as very rich contextual information regarding the students, their families, the schools, the teachers, and the education systems. Without a unanimously accepted "theory of learning", the only possible research approach was (and still is) an inductive one, based on empirical models developed using inferential statistics, also referred to as "education production functions" (Hanushek, 2007). Out of the many studies available today in the literature – see (Hanushek, 2011) for an excellent review of such studies – there are two that we consider important to briefly revise here.

The empirical model presented in Woessmann (2004) and developed based on TIMSS 1995, TIMSS 1999 and PISA 2000 leads to soundly reasoned conclusions regarding the influences of central exit exams on students' performances. Woessmann contends that the existence of the central exit exams is one impartial way to strengthen schools' accountability and as such to mitigate the possible opportunistic behaviours determined by the increased level of schools' autonomy following decentralization – see "principal-agent model" in (Laffont & Martimort, 2002). In the above mentioned paper, Woessmann argues that "the performance effects of central exams are heterogeneous, differing along the student, school and time dimensions" and in particular, the results of the empirical model indicate that they have stronger positive effects for schools with higher autonomy level regarding teachers' salaries, budgeting, and curriculum.

The combined effect of school autonomy and accountability is taken one step forward in the empirical model developed in (Hanushek et al., 2011) based on a panel of international data from PISA: 42 countries, 4 waves, and a time period of 10 years. The results of the education production function indicate a statistically significant variance in the international results of the students when considering school autonomy controlled with the level of economic development of the country. In the authors' opinion, the level of economic development of the country is another objective measure of accountability, since well developed countries generally have in place effective and operational institutions, legislation, etc. In our opinion, among other sound results of the model, this is an exceptional step forward in the long-term dichotomy "schools' financing level matters or not for students' performances", basically started with the Coleman Report in 1966. Considering that well developed countries usually have high investments in education (as proved by EUROSTAT data) it appears that these investments are more effective for students' performances if harmonised with an increased level of school autonomy and operational accountability measures.

The overall and relatively common results of studies similar to the ones exemplified above are that school autonomy appears to be indeed performance-conducive, but only if these two other conditions are met: operational accountability measures at the level of the system and the schools, and a good level of economic development.

Allegedly Romania has started an accelerated process to decentralize education in 2006 (Eurydice, 2007), with the Education Act of 2011 strengthening schools' autonomy in areas such as teachers' hiring, budgeting, curriculum, etc. Additionally, the legislation regarding public education, public finances, and public administration and institutions provides for a large number of rather strong accountability measures that should be in place at the level of the entire education system as well as at the level of each school. Therefore, at least at the level of legislation and/or at intentional level, two of the above mentioned conditions should be met: schools should have a reasonable/high level of autonomy, and thorough accountability measures should be in place. Regarding the third condition, things are not all that simple. The economic development level of Romania is rather low compared to many European countries. Furthermore, the Romanian education system suffers from a chronic low financing problem with the share of GDP allocated to education as low as 4% for many years by now (see EUROSTAT and INS time series data). We accept that meeting this third, more challenging condition, is not within the reach of schools' principals and/or even decision makers at various levels of the education system – therefore we will leave this aside for now.

In these conditions, we started from the highly concerning fact that the Romanian students' results at national exams and standardized tests applied in international studies have constantly been well below expectations. As an important example, the TIMSS 2011 results were the lowest ever recorded in our participation in this international study (Martin et al., 2012; Mullis et al., 2012). Are these results determined by a low actual level of schools' autonomy, by the lack of accountability

measures, by the low economic development level… or all of these plus other possible reasons, e.g. related to curriculum, teachers' training, teachers' motivation, educational management, etc.? Answering such a difficult and comprehensive question requires a systematic approach and we cannot stress strongly enough how important is to find both answers and improvements in the very near future. Drawing on the results of the recent studies regarding the possible influences of school autonomy and accountability on students' performances, considering the ever increasing importance of educational management in a decentralized system, and finally in line with the idea of a systematic approach we decided to look for answers to the following three questions:

1) What is the actual level of school autonomy in Romania?
2) Are there indeed accountability measures in place at the level of the Romanian schools?
3) What are the current priorities of the educational management in Romanian schools?

On the one hand, with an interest in students' recruitment for engineering faculties, and on the other hand considering the communication and administrative issues when involving all the schools in Romania in such a study, we decided to address our investigation only to high schools, meaning schools with 14-18 years old students, and grades from 9 to 12 (Education Act, 2011).

We should also mention in this introductory part that in separate research we analyzed the level of school autonomy in Romania strictly based on the provisions of the legislation. Parts of the results of this research are presented in (Duse & Negrea, 2013a). This refers to the "intentional level" of school autonomy and it was estimated in 8 different areas using an independent school autonomy scale with three possible levels: low, medium, and high. Our findings are synthesized in Table 1 and the results are consistent, although more detailed, with the ones obtained using the School Autonomy and Accountability Scale (SAAS) developed by the World Bank (Arcia et al., 2011).

Table 1. Estimation of school autonomy in Romania – intentional level

No.	Area	Estimated school autonomy (intentional level)
1	Schools' network	Medium
2	Enrollment	Medium
3	Curriculum	Low
4	Time management	Low
5	Facilities and resources	High
6	Budgeting	High
7	Human resources	Medium
8	Monitoring and evaluation	High
Overall		**Medium**

Source: authors' independent school autonomy scale – intentional level

2. RESEARCH METHOD

In order to achieve the objectives of the study and to find possible answers to the three main questions mentioned in the previous section, we decided that the best method would be to use a questionnaire-based investigation. The main reason underlying this decision was the intention to find what is actually happening at the level of the schools, how schools' principals perceive autonomy and accountability, and what are their priorities in managing their schools. Adding the results of the study to the previously estimated level of school autonomy strictly based on the

provisions of the legislation would give an overall image on the issue, as well as the possibility to identify eventual differences between the intentional level and the reality of the system.

2.1. The target population and the sampling frame

The target population of the investigation consisted of the principals of all the high schools in Romania. According to the data provided upon request by the Ministry of National Education, in October 2013 there were 1,514 high schools in Romania. We should mention that these were the high schools recorded in the National Database of Education (BDNE). There are two aspects of interest regarding the target-population: the territorial distribution, including urban/rural distribution, and the distribution across the fields of study established by the legislation.

The territorial distribution follows the population density and the school-population density and is presented in Figure 2 by the 8 development regions of Romania (NUTS-II). Out of the total number of high schools, 17% are in rural areas and 83% in urban areas.

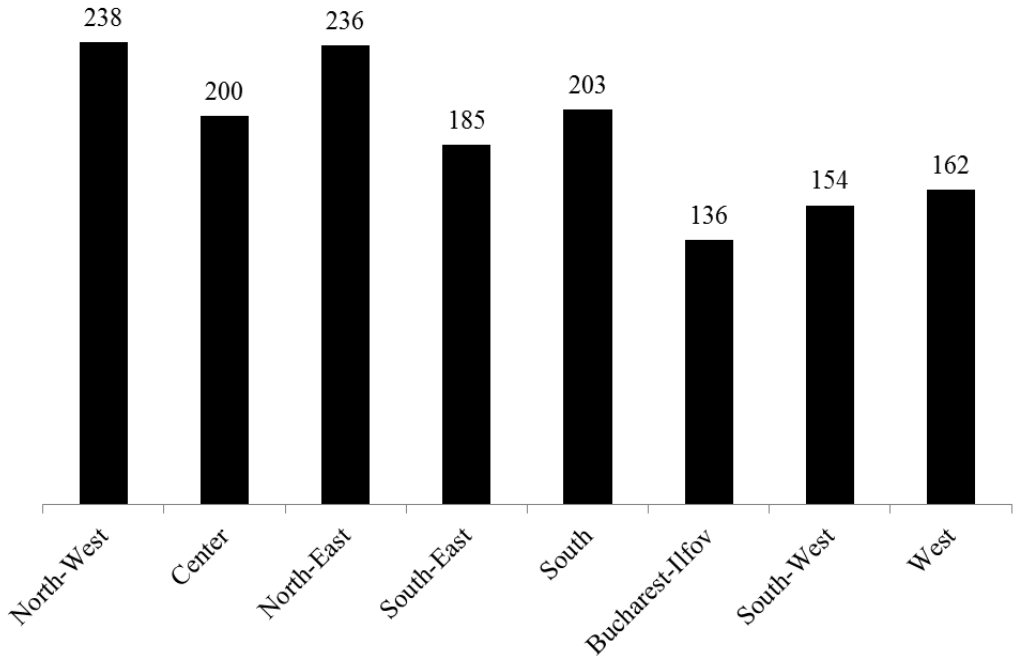

Figure 2. Territorial distribution of the Romanian high schools by development regions
Source: primary data provided by the National Database of Education (BDNE)

The fields of study for the Romanian high schools are Technological (TEH), Theoretical (TEO), and Vocational (VOC). We mention that "Vocational" has a rather different meaning in the Romanian education system than it has in the EU countries, for example. In the Romanian education system, "Vocational" refers strictly to the following high school specializations: military, theological, sports, arts, and pedagogical.

In order to better adapt the educational offer to the local population/economy requests and to increase the efficiency of the system, a number of high schools offer two or even all three fields of study. The distribution by fields of study is presented in Figure 3. Out of the total number of high schools in Romania, 29% are Technological, 23% are Theoretical, and 7% are Vocational. Regarding the high schools offering combinations of the fields of study, again out of the total number of high schools, 27% offer Theoretical and Technological studies (TEO+TEH), 8% offer Theoretical and Vocational studies (TEO+VOC), 4% offer all three fields of study (TEO+THE+VOC), and 2% offer Technological and Vocational (THE+VOC) studies.

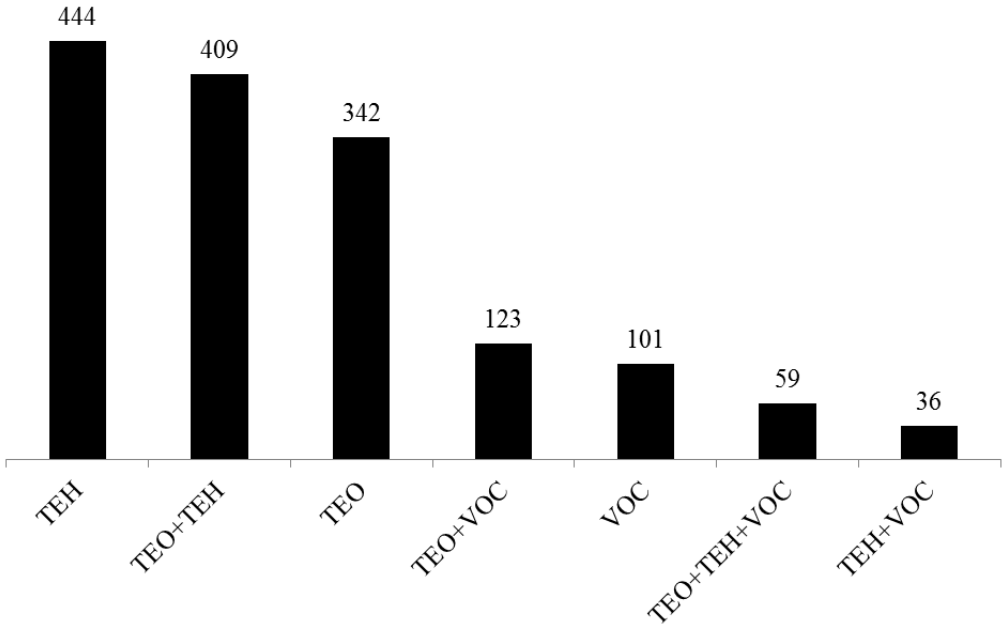

Figure 3. Distribution of the Romanian high schools by fields of study (TEH – Technological, TEO – Theoretical; VOC – Vocational)
Source: primary data provided by the National Database of Education (BDNE)

Out of the total target-population, 1,406 high schools had an e-mail address recorded in the National Database of Education (BDNE). Due to the fact that the method decided to administer the questionnaire was CAWI (*Computer-Assisted Web-Interviewing*), this situation has determined a reduction of the sampling frame down to approximately 93% of the total target-population. This reduction was artificially determined not so much by technical issues (there are no high schools in Romania today that do not have computers and internet access), but by administrative/management problems. In our opinion, this is more or less a symptomatic feature of the system: bureaucracy is rather high and principals sometimes deliberately ignore requests that they do not consider to be very important. On the one hand, this is a (questionable) sign of autonomy; on the other hand, not registering a valid e-mail address in a national database hinders communication and could generate subsequent problems for the school management, etc.

2.2. The sample

Considering the total number of 1,514 high schools reported by the National Database of Education (BDNE), the sample size needed to ensure a 95% confidence level, with a confidence interval of 0.05, is 307. Initially (and idealistically) we considered a systematic sampling of the population from the sampling frame. However, the problems recorded during the pre-testing phase of the questionnaire in November 2013 (which involved only 20 principals from 4 counties) had convinced us that an actual systematic sampling would have been highly time-consuming and with serious chances to never receive the necessary number of answers to ensure the national relevance of the findings. Therefore, we decided for a simple random sampling resulting "naturally" from the answers given after sending the questionnaire to the entire population from the sampling frame.

Following this decision, from February to May 2014, in 6 successive waves, we sent close to 7,000 e-mails to the high school principals from the sampling frame, explaining in detail the purpose of the investigation, assuming full responsibility for the anonymity of the answers, and kindly asking them to fill the on-line questionnaire. By June 2014 we finally recorded 328 answers. Out of these

answers, 21 were eliminated based on consistency analyzes, wrong type of school, etc., leaving us with the exact 307 number of required answers for the confidence level and confidence interval initially established. Table 2 synthesizes the characteristics of the sample in comparison with the characteristics of the target population.

Table 2. Comparison between the characteristics of the sample and of the target population

No.	Characteristic	Sample	Target population
Rural/Urban distribution			
1	Rural	14%	17%
2	Urban	86%	83%
Fields of study distribution			
1	TEH	42%	29%
2	TEO	32%	23%
3	VOC	3%	7%
4	TEO+TEH	15%	27%
5	TEO+VOC	5%	8%
6	TEH+TEO+VOC	--	4%
7	TEH+VOC	3%	2%
Territorial distribution by development regions (NUTS-II)			
1	North-West Region	14%	16%
2	Center Region	21%	13%
3	North-East Region	14%	16%
4	South-East Region	11%	12%
5	South Region	16%	13%
6	Bucharest-Ilfov Region	9%	9%
7	South-West Region	9%	10%
8	West Region	6%	11%

Source: primary data regarding the target-population characteristics provided by the National Database of Education (BDNE)

From the data in Table 2 we notice that the rural/urban distributions are highly similar for the sample and the target-population. Regarding the distribution by fields of study, the Technological ad Theoretical high schools have higher percentages in the sample compared with the ones in the target-population, while for the other fields the ratio is inversed. However, the relative ranking in the sample is similar to the one in the target-population, with the Technological, Theoretical and Theoretical-Technological high schools having the highest percentages. Finally, regarding the territorial distribution, with the exception of the Center Region, the sample and the target-population distributions are highly similar. This is due to the fact that personal interventions were used more intensively in the Center Region to persuade the principals to answer the questionnaire.

2.3. Design of the questionnaire

The questionnaire was designed having in mind the three main questions mentioned in the introductory section. The first and the second part of the questionnaire require the respondents to provide information regarding the school and the principal, including factual data as well as information on students' performances in the last 4 school years. The third part of the questionnaire contains 7 questions targeting school autonomy, continued in the 4th part with 5 more questions relative to budgeting and the per capita financing method applied in Romania since 2010 and its possible influences on school autonomy. The 5th part investigates through 8 questions the accountability measures in place in the school, including the principals' opinions regarding

increasing or not the responsibility of the teachers and schools' managers towards the performances of the students. The 6th and final part is dedicated to the educational management priorities of the school, also investigating the relative importance of the management functions in the principal's activity. Table 3 synthesizes the structure and the number of questions from each part of the questionnaire, as well as the number of variables by type.

Table 3. Structure of the questionnaire

No.	Section	Number of questions	Number of primary variables by type		
			Nominal	Ordinal	Interval
1	Information regarding the school	17	7	6	4
2	Information regarding the principal	11	7	0	4
3	Autonomy	7	0	7	0
4	Budgeting and per capita budgeting	5	0	5	0
5	Accountability	8	1	7	0
6	Educational management priorities	14	5	9	0
Total		**62**	**20**	**34**	**8**

Source: results of the questionnaire designed and administrated by the authors

Out of the 62 questions, 40 (65%) are closed-ended type, with 31 (50%) asking the respondents to answer using 1-to-5 bipolar scales, 5 (8%) being dichotomous (YES/NO), and 4 (6%) giving the respondent the option to choose a single statement from a given list. The remaining 22 (35%) of the questions are open-ended type, ranging from asking factual data regarding the school and the principal, to more difficult questions asking about the educational management priorities and opinions of the respondents on specific issues.

2.4. Administrating the questionnaire

As mentioned in a previous section, the method used to administer the questionnaire was CAWI (*Computer-Assisted Web-Interviewing*), using 6 waves of mass-emailing over a period of 4 months targeting the entire population of the sampling frame (1,406 high schools). The e-mails contained detailed information on the purpose of the investigation, a clear statement assuming full responsibility for the anonymity of the answers, and the internet address of the on-line questionnaire. The questionnaire was built using Google Docs – a friendly, very easy to use, and free feature available to anyone who has a Gmail address. The responses were automatically collected in a ready to download spreadsheet/comma-separated-values file, simplifying to a great extend the processing of the data.

3. PRELIMINARY RESULTS

The preliminary results of the investigation will be presented by thematic area, following the structure of the questionnaire (Table 3). Defining these results as "preliminary" is determined by the following objective facts:

(a) Considering the comparison between the characteristics of the sample and of the target population (presented in Table 2) we intend to re-open the administration of the questionnaire in order to achieve a better matching. This in turn will allow for better/more relevant estimates of the central tendencies on each of the thematic areas investigated.

(b) The very rich information provided by the respondents to the open-ended questions of the management section of the questionnaire requires further classifications and analysis. More specifically, in many cases, the vision and the mission of the school, as well as the most important

long-term objective, are particularly long statements, with multiple possible interpretations (only the statements regarding the visions of the 307 participating high schools extend on 32 pages). Analyzing more in depth these answers could provide a detailed image regarding the strategic development of our high schools. This in turn might lead to good-practice examples, as well as some pertinent answers regarding the priorities of the entire Romanian education system.

Taking into account the differences between the main characteristics of the sample and the characteristics of the entire target population (Table 2), we consider all the central tendencies presented in the following sections as indicative. Interval variables are presented using the mean value and both the standard error of the mean (SEM), and the standard deviation (SD). Mean values provided in text are followed by the SEM in brackets – in order to give an idea of the confidence interval. For ordinal variables we chose to use for the presentation of these preliminary results the mode in order to indicatively describe the central tendencies.

3.1 Information regarding the participating high schools

The distribution by fields of study and the territorial distribution by development regions of the 307 participating high schools are presented in Table 2. Table 4 synthesizes the factual information provided by the principals in the first section of the questionnaire. The variables marked with * are derived variables calculated using the values provided for the appropriate primary variables.

Table 4. Factual information regarding the participating high schools

No.	Variable	Min	Max	Sum	Mean	SEM	SD
1	Number of students	180	2,375	263,376	857.90	19.44	340.65
2	Number of teachers	6	130	17,292	56.32	1.24	21.73
3	Student-teacher ratio*	4	48	--	15.49	0.20	3.47
4	Number of teacher assistants	1	70	2,624	8.55	0.32	5.66
5	Student-teacher assistants ratio*	13	694	--	120.84	4.16	72.88
6	Number of administrative staff	2	84	4,309	14.04	0.47	8.24
7	Student-administrative staff ratio*	10	675	--	75.25	2.98	52.22

Source: results of the questionnaire designed and administrated by the authors

Regarding the student-teacher ratio resulting from our sample, the mean value 15.49 (0.20) is higher than the average value 12.96 reported in the World Bank databases (http://data.worldbank.org/) for the entire Romanian secondary education (grades 5 to 12) in 2011. It is also higher than the average 2011 values for secondary education in OECD countries (13.46) and the European Union (11.29). Although we cannot truly estimate the statistical significance of the differences due to the limitations of our sample and the 3-year time span between the compared values, we still note that the value obtained in our study is between the 2011 average values for middle income countries (18.44) and high income countries (12.00).

3.2 Information regarding the principals of the participating high schools

The majority of the principals participating in our study are experienced teachers and managers, holding the highest professional rank (First Degree Teacher, "Gradul Didactic I") available in the Romanian education system. Central tendencies were completely avoided in presenting the information in this section – not that much due to the limitations of our sample, but mostly because of the very complex and often local-determined nature of principals' appointment procedures used in Romania in the last years.

Table 5. Age, teaching and management experience of the participating principals

No.	Variable	Min	Max
1	Age (years)	31	65
2	Teaching experience (years)	7	43
3	Years since appointed as principal of the high school	0	26
4	Management experience (years)	0	39

Source: results of the questionnaire designed and administrated by the authors

Distributions by the different variables:
(a) Gender: 62.2% feminine, 37.8% masculine.
(b) Professional rank: 93.8% First Teaching Degree ("Gradul Didactic I"; highest possible rank in the system); 4.9% Second Teaching Degree ("Gradul Didactic II"; middle rank), and 1.3% Tenure Teacher ("Definitiv"; one rank above debutant).
(c) Major specialization: 12.70% Philology; 41.04% Mathematics and/or Sciences; 17.91% Social Sciences; 3.58% Sports; 3.90% ICT; 20.84% Engineering (various domains).

We note that the majority of the principals of the participating schools are females, consistent with the fact that more than 60% of the teachers in Romania are females and principals are chosen from the teachers of the schools. Regarding the major specialization of the principals, the distribution widely reflects the fact that more than half of the high schools in the sample (57%) are Technological and Theoretical+Technological high schools (see Table 2).

3.3 School Autonomy. Budgeting

The two related sections of the questionnaire investigating autonomy and budgeting/budgeting method issues have a total of 12 questions, all close-ended, of which 10 are requesting the respondents to answer using 1-to-5 bipolar scales, and two are dichotomous (YES/NO). Table 6 presents the main findings, following the order of the questions in the questionnaire.

Table 6. Main findings regarding school autonomy and budgeting

No.	Variable	Scale limits	Mode	Percent
1	Enrollment	1 – very low or no autonomy at all 5 – very high or full autonomy	4	41.4%
2	Curriculum		4	32.6%
3	Facilities and resources		3	38.8%
4	Budgeting		3	36.2%
5	Human resources – teachers		2	31.3%
6	Human resources – non teaching staff		4	35.8%
7	Autonomy – global		3	52.8%
8	Initially yearly budget corresponding to the needs of the school (salaries)	YES/NO	NO	70.7%
9	Initially yearly budget corresponding to the needs of the school (resources)		NO	81.4%
10	Correspondence between the per capita budgeting method and school's realities	1 – not at all or very little 5 – entirely or in great measure	3	32.9%
11	Influence of the per capita budgeting method on school autonomy (salaries)	1 – reduces drastically the autonomy 5 – strongly supports autonomy	3	31.6%
12	Influence of the per capita budgeting method on school autonomy (resources)		3	32.6%

Source: results of the questionnaire designed and administrated by the authors

Out of the variables presented in Table 6, we consider important to present the frequencies of the answers regarding human resources management (teachers), and the global perception of the principals regarding school autonomy (Figure 4 and Figure 5 respectively).

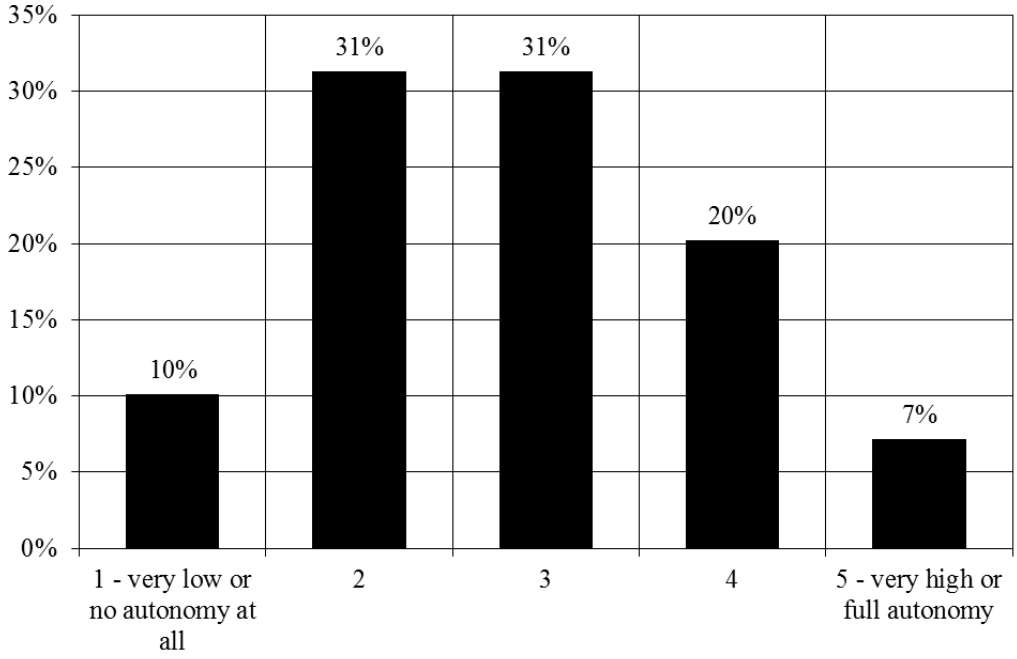

Figure 4. Principals' opinions regarding human resources management autonomy (teachers)
Source: results of the questionnaire designed and administrated by the authors

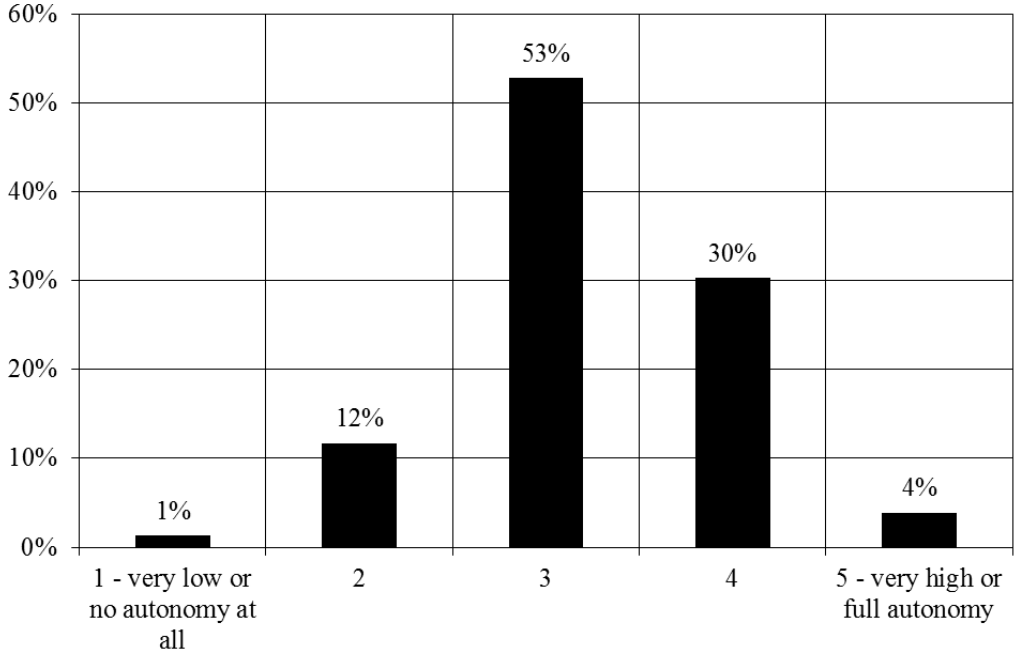

Figure 5. Principals' opinions regarding school autonomy (global)
Source: results of the questionnaire designed and administrated by the authors

We notice that regarding school autonomy, principals' opinion vary across the different areas investigated. Participating principals consider that they have the lowest level of autonomy when it comes to the management of probably the most important resource of the school: the teachers. At the same time, management of the non-teaching staff is considered by most of the respondents to be largely independent from external decisions/influences. In the same category fall the enrolment and

the (applied) curriculum. Most of the respondents chose the middle point (value 3) on the 1-to-5 bipolar scale to express their opinion on the autonomy regarding the facilities and resources, and budgeting. However, 70.7% of the principals assessed that the initial yearly budget allocated for salaries was lower than the actual school needs, and this figure rises to 81.4% when it comes to the yearly budget for resources. This means that the vast majority of the participating schools face every year serious problems in ensuring the salaries and the expenses for basic resources – like heating, power, basic teaching materials, etc. This is probably one of the reasons why 63.2% of the respondents considered that the per capita budgeting method corresponds low (value 2) to medium (value 3) to the realities of their schools. We consider this to be a major contradiction between the political declarations that the per capita budgeting method was meant to support schools' autonomy and the realities of the system. Moreover, this finding seems to support the idea that decentralization in Romania followed the worst possible scenario: transfer the long-term problems of the central government as short-term problems of the local/school-level authorities.

3.4 Accountability measures

Measuring accountability level is not an easy task, mostly when the sources of information are the actors supposed to observe accountability measures. This is why the section of the questionnaire dedicated to accountability has 8 rather simple questions, with 7 of them being close-ended and using 1-to-5 bipolar scales. The main findings of this section are presented in Table 7.

Table 7. Main findings regarding accountability measures

No.	Variable	Scale limits	Mode	Percent
1	Monitoring, control and evaluation by external authorities	1 – very low frequency 5 – very high frequency	4	52.4%
2	Students' performances analysis in the presence of their parents		4	52.1%
3	Principal monitoring, control and evaluation activities		4	47.2%
4	Knowledge of the results of the students/graduates in the community	1 – not known 5 – very well known	4	43.3%
5	Knowledge of the performances of the teachers in the community		4	47.2%
6	Sufficiency of management instruments to ensure accountability of the teachers	1 – not sufficient 5 – sufficient	3	41.4%
7	Necessity to increase the accountability of teachers and managers	YES/NO	YES	77.5%

Source: results of the questionnaire designed and administrated by the authors

In addition to these findings we should also mention that in Romania there is an external exit exam for high schools graduates: the National Baccalaureate Exam. However, the Baccalaureate is not compulsory and high school graduates can even continue their studies in tertiary non-university education without holding a Baccalaureate diploma. In our opinion, this reduces the strength of the Baccalaureate as an accountability measure.

3.5 Educational management priorities in the participating schools

The educational management section of the questionnaire contains 4 open-ended questions asking the respondents:

(a) to state the vision of their school;

(b) to state the mission assumed by their school;

(c) to choose and to state the most important strategic/long-term objective pursued by their school;
(d) to comment on the questionnaire and/or to express opinions on the various aspects investigated by the questionnaire (answer not required for the completion of the questionnaire).

As previously mentioned, the answers provided by the respondents to these 4 questions led to very rich information and a rather large range of different strategic management approaches and priorities. This information requires further classification and analysis in order to be properly presented and furthermore to eventually lead to good-practice examples and to support the decision making process at various levels of the education system.

The educational management section also includes 9 closed-end questions requesting the respondents to answer using 1-to-5 bipolar scales, and one multiple-choice question offering 7 possible answers of which 6 are pre-defined. The main findings regarding the 9 closed-end questions are presented in Table 8.

Table 8. Main findings regarding educational management (closed-end questions)

No.	Variable	Scale limits	Mode	Percent
1	Importance of the vision and mission of the school	1 – no real importance 5 – very high importance	5	60.6%
2.1	Knowledge of the vision and mission of the school by the teachers	1 – not known 5 – very well known	5	46.6%
2.2	Knowledge of the vision and mission of the school by the students		4	34.2%
2.3	Knowledge of the vision and mission of the school by the parents		3	34.9%
3	Influence of the school autonomy on pursuing the vision and the mission	1 – strongly negative 5 – strongly positive	4	43.0%
4.1	Knowledge of the most important strategic objective by the teachers	1 – not known 5 – very well known	5	45.9%
4.2	Knowledge of the most important strategic objective by the students		4	36.8%
4.3	Knowledge of the most important strategic objective by the parents		3	33.6%
5	Consistent pursuit of school objectives by the management and teachers	1 – not at all 2 – entirely	4	59.6%
6	Influence of the school autonomy on pursuing schools' objectives	1 – strongly negative 5 – strongly positive	4	49.5%
7	Educational management accent in the following 4 years	1 – current operation 5 – strategic development	4	41.0%
8	Importance of rules, regulations, and procedures in the school	1 – very low 5 – very high	4	42.0%
9.1	Importance of diagnosis	1 – very low 5 – very high	5	53.4%
9.2	Importance of planning		5	58.6%
9.3	Importance of organizing		5	71.3%
9.4	Importance of coordinating		5	67.1%
9.5	Importance of motivating		5	65.5%
9.6	Importance of controlling		5	47.2%
9.7	Importance of evaluating		5	61.9%

Source: results of the questionnaire designed and administrated by the authors

The multiple-choice question mentioned above asks the respondents to choose one management priority for the next 4 years for their school. There are 6 pre-defined priorities and the 7th place is left open for the respondent. Out of these 7 possibilities only one can be chosen. The distribution of the answers is presented in Figure 6.

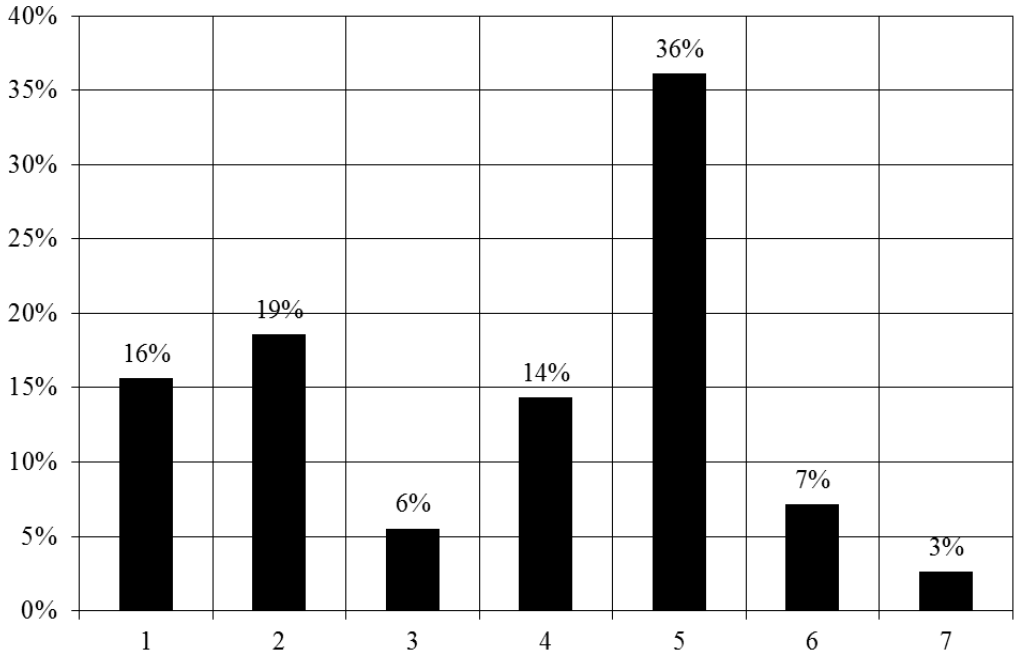

Figure 6. Management priorities in the participating schools (multiple-choice question)

Value	Priority
1	Improve educational facilities
2	Increase financial resources
3	Teacher training
4	Improve relevance of the educational offer
5	Improve students' results
6	Improve quality and effectiveness of educational management
7	Other

Source: results of the questionnaire designed and administrated by the authors

4. CONCLUSIONS

In the period February-June 2014 the authors have conducted a questionnaire-based investigation in order to find possible answers regarding the actual level of autonomy, the accountability measures in place, and the educational management priorities in the Romanian high schools. The target population of the investigation consisted of all 1,514 high schools recorded in the Romanian National Database of Education (BDNE) in October 2013. The sampling frame consisted of the 1,406 high schools that had an e-mail address recorded in the BDNE. Due to the communication problems during the pre-testing phase of the questionnaire in November 2013, the authors have decided for a "natural" (more or less) random build of the sample – based on the answers received after repeatedly mass-mailing the questionnaire to the entire population of the sampling frame.

After a number of corrections, the final sample used in the investigation contained 307 high schools, theoretically ensuring a 95% confidence level, with a 0.05 confidence interval.

The on-line questionnaire built using Google Docs facilities was addressed to the high school principals and contained 62 questions thematically grouped in 6 relatively independent areas: information regarding the school, information regarding the principal, autonomy, budgeting and per capita budgeting, accountability, and educational management priorities. Most of the questions of the questionnaire were designed as closed-end questions and requesting the respondents to answer using 1-to-5 bipolar scales. The open-ended questions ranged from very simple ones asking factual data regarding the school and the principal, to more difficult questions asking about the educational management priorities and opinions of the respondents on specific issues.

The preliminary results of the questionnaire led the authors to the following conclusions:

1) The actual level of the school autonomy appears to be lower than the intentional level recorded in the educational policies and even provided by the in force legislation. Principals consider that autonomy varies across the different categories of activities required to run a school. On the 1-to-5 bipolar scale used for the closed-end questions, the actual level of autonomy appears to be relatively high when speaking about students' enrollment, applied curriculum, and management of the non-teaching staff. Regarding educational facilities and budgeting, the mode of the answers falls on the middle point of the scale (3). This indicates that the participating principals consider their schools' autonomy to be moderate in these areas. The worst situation is recorded in the area of the human resources management, teaching staff category. The real level of schools' autonomy regarding recruiting, hiring, promoting, training, etc. the teaching staff appears to be very low. This means that despite the provisions of the legislations, principals' opinion is that they don't have much decision authority when it comes to probably the most important resource of the school: the teachers. Overall, the real level of school autonomy in the participating high schools appears to be at the best average/medium (or emergent using the SAAS scale).
2) In the participating high schools a number of important accountability measures appear to be functional. These include external and internal monitoring and control, assessment of students' results in the presence of the parents, and appropriate dissemination of students/graduates and teachers performances in the local community. However, when asked if they consider to have sufficient management instruments in order to ensure teachers' accountability regarding students' performances, most of the principals chose the middle point on the 1-to-5 bipolar scale. In addition, 77.5% of the respondents declared that the accountability of the managers and of the teachers regarding students' performances should be increased.
3) Regarding the educational management priorities in the participating high schools, there seems to be a stronger overall tendency towards strategic development than current operation. This indicates that most of the questioned principals are not entirely happy with the current state of their schools and would like to change and improve things in the future. This finding is consistent with the idea that decentralization of education, followed by an increased level of school autonomy, could and should produce a meaningful transition from management to leadership (Bush, 2008). The management functions considered by the principals to be very important in their activity are, in this order, organizing, coordinating, and motivating. In line with the overall accent on strategic development, but not necessarily a justified approach in today's Romanian schools, the management function controlling is placed on the lowest level of importance by the respondents. Finally, when determined to choose a major priority for the next 4 years for their school, most of the respondents chose "improve students' results". This is an important sign of the understanding of the true and persistent problem of the Romanian education system: low students' performances.

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