HIGH SCHOOL PUPILS' PERFORMANCE IN ROMANIA: INDIVIDUAL AND SOCIAL PREDICTORS

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ABSTRACT

Studies focused on academic achievement at the high school level generally discuss individual and social predictors of school performance, rarely suggesting measures to be taken at the level of national public policies in the education field. At the same time, public policies are rarely driven by empirical research. In this context, the article analyses the results of a national survey (N= 2624) conducted in 2011 on high school pupils in Romania concerning the individual and the social factors that influence school performance. A regression model shows that class attendance and gender are the strongest predictors of school performance, closely followed by parents' education and type of enrolment in a hierarchy of influences on pupils' grades. Other aspects are related to parents' migration abroad and peers' behavior. These findings are further used to make recommendations for public policies in education.

Keywords: school performance, secondary education, individual predictors, social predictors, public policies.

INTRODUCTION

High-level school performances are vital for the integration into the labor market in a knowledge-based economy. In this sense, the European Union strategy for 2020 states that early school leavers should be under 10% and at least 40% of 30–34 years old should have completed a tertiary or equivalent education.

There is a gap between Romania and European Union 2020 targets regarding early school leavers and percentage of people having higher education. According to the Eurostat, in 2015, in Romania, there were 19,1% early school leavers and only 25,6% of tertiary education attainment within the age group 30–34. In this

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context, recent studies in Romania focus on issues related to higher education improvement (Momanu & Hajbotă, 2013, Frunză & Frunză, 2010, Nicolescu & Dima, 2010, Pricopie, Frunzaru, Corbu, & Ivan, 2010), but little is still known about improving performance at the high school level.

In this context, our paper aims at identifying the significant predictors of academic achievement, in order to make recommendations for public policies in the field of education. Most studies inquiring about determinants of school performance focus on possible steps to be taken to encourage academic achievement at the school level. We argue that the purpose of such studies should rather focus on educational policies, especially in East-European countries, because of the many (sometimes incoherent) measures taken in former communist countries in the last 25 years, during the transition period from one political regime to another. Romania is such a country, in which the frequent change of ministers of education after the fall of communism, corroborated with "the need of modernization" of the educational system, have led to many arbitrary changes, rarely supported by empirical evidence. Our study aims at bridging the gap between academia, specialists and policy makers in the field of education.

In the last century, social sciences specialists have attached particular attention to school performance, attitude towards school, and interest in continuing higher education. School performance, being dependent on social factors, can be seen as a waste of human capital and a scene for potential future inequalities, the education system being one of the tools implementing the reproduction of social inequality (Schlicht, Stadelmann-Steffen, & Markus 2010).

From a theoretical point of view, school performance could be linked to intellectual potential (Hantos, 2011) or creativity (Stănescu, 2009). Adrian Hatos (2011, p. 618) builds on a study published in 1973 by C. Jencks, and shows the existence of a high correlation (0.68) between the IQ scores and the length of school career. There is currently a high consensus on the fact that school results are 25% explained by an innate capability to solve problems.

Without denying the importance of socialization in implementing the intelligence potential that everybody possesses, this paper focuses on the social and economic aspects that determine school performance. Most of these aspects are variables that could be changed through public policies or through measures that can be implemented at the school level. In this article, we focus on the system level, arguing for public policies in the field of education, based on empirical evidence.

The studies on school performance at the level of secondary education have showed a series of variables that should be taken into consideration when developing public policies in the field of education. The family-related variables, such as parents' level of education, family incomes, the rate of divorces, the harmony in family relationships, highlight the importance of this primary group in explaining school performance and the teenagers' interest in continuing education. The existence of social networks or social capital (parents' associations, the

relationship between local authorities and schools and parents' associations etc.), respectively the community economic development (existence of jobs and quality of schools), are aspects that show the importance of the community in explaining school performance variation. Another variable frequently used in education research is the relationship with the groups of friends or classmates, an important aspect considering the role played by peer groups for teenagers. The comparison of school performance between male and female students is a research subject that has been associated with other issues, such as the interest in certain disciplines, the interest in pursuing higher education, the level of resilience, intercultural sensitivity, etc. All these underline the complex problem of the relationship between gender and school performance. Finally, it is important to underline the role of social values in supporting high school students' motivation to achieve high-level school performance. Studies in various cultural areas or carried out in various periods of time have highlighted a series of common value elements, but also aspects underlining the importance of the social and cultural context in determining school performance.

These variables are strongly interdependent. Taking them into consideration allows building a complex model that explains the variation of the dependent variable in this study: school performance. We will further discuss such sources of influence, by groups of variables, related to family, community, peer-pressure, gender, and social values.

Identifying key predictors of school performance will allow us to make precise recommendations for public policies in the field of education, which will be discussed in the last section of this paper.

FAMILY RELATED INFLUENCES ON SCHOOL PERFORMANCE

Family is a key element in explaining school performance and the interest in continuing education. The general consensus among researchers on the importance of family can be explained by the functions of economic status and socialization that this social group fulfills with a view to the harmonious psychic and physical development of children. Since the classical study conducted by Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld, and York (1966), many researches have associated the socio-economic status of parents with students' school performance (Berg *et al*., 2016, Raymo, 2016, Mayo & Siraj, 2015, Panichella & Triventi, 2014, Daw, 2012, Pedro, 2008, Israel, Beaulieu, & Hartless, 2001). Children born into more affluent homes or with well-educated parents tend to have higher school performance, as compared with their peers. Children that benefit from rich cultural environments at home and enjoy higher economic prosperity have higher academic performance, lower risk of dropping school and higher academic aspirations.

Previous research explains that students from families with more resources have higher grades because they attend more academic track, while those coming from the working class more likely attend the technical and vocational schools. (Panichella & Triventi, 2014, Buchmann & Dalton, 2002) This pattern makes us consider that "it is frequently difficult to separate the quality of the school from the quality of the students". (Hanushek, 2003, p. 92)

The process of socialization from educated and affluent families consists of the acquisition of the elaborated language codes. (Bernstein, 2003/1971) A special role in this process of socialization is played by language acquisition, which is a significant element for explaining school performance, especially in social sciences and humanities. Basil Bernstein associates social classes, which have various levels of education, with what he calls elaborated and restricted language codes. (Bernstein, 2003/1971) The middle class child, compared to the working class child, "grows up in an ordered, rational structure in which his total experience is organized from an early age" and his feelings of hostility are discouraged, while the verbal expression of emotions is encouraged. (Bernstain 2003/1971, p. 25) Starting from Berstein's studies, it could be implied that middle class students are favored both because they are much more mobile from the geographic, social and cultural points of view and because "schools and universities are forced to use the elaborated code and to reward its mastering by students". (Hatos, 2011, p. 625) We may conclude that a first advantage of students whose parents have a higher level of education is the acquisition of a language used in the formal education system, which leads to differences in school performance. For this reason, we considered the parents' level of education as an important predictor in this study.

Parents' migration also has the potential of influencing pupils' school performance. This could be particularly true in Romania, in the last years, where there has been a massive migration abroad, in search of a job, especially in the last decade. Romanian studies present contradictory findings regarding the impact of international parents' migration on children school performance. Constantinescu and Constantinescu (2008) show that there is a negative relationship between children's academic performance and parents' absence from the family. Similar findings are offered by Popa (2012), who gives arguments that, regardless of their gender, children with migrant parents have lower average school grades than their colleagues. However, other studies (see Hatos, 2010) show that parents' labor migration does not have a negative impact on children school performance, and therefore children from the defective trans-national family structure do not have a poorer academic performance.

In the Romanian context, we considered important three family related variables and consider them as independent variables likely to be significant predictors of school performance: family income, parents' level of education and the situation of the parents: whether at least one of them is abroad.

COMMUNITY RELATED INFLUENCES ON SCHOOL PERFORMANCE

Another set of possible predictors of school performance refers to variables related to community. There are studies (i.e. Israel et al., 2001) showing that education policies regarding school performance should extend beyond the school and focus on strengthening social capital in the family and community. Similarly, Ralph B. McNeal, Jr. (2011) asks to what extent the larger social context, especially the labor market, influences poor school performance and the school drop-out risk and whether the students' social and economic status (such as gender, race, ethnicity, employability of the student) interferes with this relationship. After analyzing the statistical data, the author states that high school students who are less integrated in the school environment are more likely to drop out school. McNeal, Jr. (2011, p. 310–311) considers that there are at least two explanations for this situation: "First, persons residing in areas with greater concentrations of poorly educated individuals (e.g., dropouts) more frequently interact with these individuals and might have a greater likelihood of internalizing the behavior as an acceptable alternative. […] Second, a high concentration of poorly educated individuals is a potential indicator of a poor-quality school system and the general skill level and job readiness of the local population". Consequently, school performance is determined not only by the parents' income and level of education, but also by the economic prosperity and the level of education of the community where the high school students live in.

The relationships between local authorities, schools and parents are very important in the development of a social capital beneficial for school performance. In this study, the community-related differences between students are reflected in the differences between students attending daytime and evening high school courses. We have also considered the size of the locality as a development indicator of the community where the sample high school is located.

PEER GROUPS RELATED FACTORS INFLUENCING SCHOOL PERFORMANCE

Teenage high school students attach great importance to the relationships with peer groups. As Jones, Audley-Piotrowski, & Kiefer (2012, p. 19) state, friendship plays an important role among teenagers, both concerning well-being and the school motivation and performance. This explains why perceiving friends as having an academic behavior positively correlates with the self-assessment of mathematics performances, while perceiving friends as rather having a social behavior negatively correlates with the self-assessment of mathematics performances, whereas self-assessment positively correlates with real performance (Jones et al., 2012, 30). By academic behavior, the authors mean obtaining good grades, attending school, attaching importance to study and showing interest in

continuing higher education. As far as the social behavior perception is concerned, students had to assess whether, in general, the other classmates are prominently interested in: party, being popular, having a boy/girlfriend, and hang out. Consequently, the groups of students or friends are very important for determining the type of behavior and school performance. The interest in school performance is particularly high when peer groups live in a social environment where school performance is important.

A study conducted in Norway confirms the role played by colleagues in children's intentions to quit school, class absence, and motivation for continued education. (Studsrød & Bru, 2011) Moreover, there are studies supporting the idea that peer achievement has a positive effect on achievement growth. (Burke & Sass, 2013; Hanusheck, 2003)

This is the reason why, when we considered class attendance (generally a very important predictor of school performance), we measured it in two ways: on the one hand students' self-assessment of class attendance (affected by subjectivity) and, on the other hand, general class attendance (the number of pupils present in class at the time of the interview divided by the total number of pupils in the class). We considered that the classmates' attitude (towards attending or skipping classes) generally leads to similar patterns of behavior. There might be, of course, other different peer-pressure influences, with possible effects on school achievements; most of the time, though, they are individual-specific and thus virtually impossible to be collectively measured.

GENDER AS A PREDICTOR OF SCHOOL PERFORMANCE

The comparison between male and female students is a common subject in scientific articles studying school performance, the desire to continue education or generally the attitude towards school. Male students used to have higher grades than female students, but the situation is currently reversed. If, in 1958 in the United States, 29% of the female students and 36% of the male students had high grades, in 1993, 53.3% of the female students and only 45% of male students had high grades (Richardson and Woodley, 2003, pp. 478–479). After analyzing the students' performances in 19 disciplines, Richardson and Woodley (2003, p. 486) concluded that female students performed better than male students in 13 of these disciplines, while for the other six (veterinary science, mathematics, computer science, languages, humanities and creative arts) there were no significant differences. Compared to male students, female students have to a larger extent negative experiences with real and engineering sciences because of socialization, but especially because of the male professors' and students' attitudes and behaviors, which led to a higher rate of transfer of female students to other fields of study. (Richardson and Woodley, 2003, p. 489)

A recent Organization for Economic Co-operation and Development [OECD] (2015) study indicates that a new gender gap in education is opening. The Programme for International Student Assessment [PISA] developed by OECD shows that compared with girls boys are less engaged with school and have lower skills and poorer academic achievement. The girls' better school performance (except for mathematics) "do not stem from innate differences in aptitude, but rather from students' attitudes towards learning and their behavior in school, from how they choose to spend their leisure time, and from the confidence they have – or do not have – in their own abilities as students." (OECD, 2015, p. 3) Similar explanation is given by Fisher, Schultz, and Hell (2013), who underline the role of non-cognitive factors such as motivation for school success. Higher effort, self-control, pride of productivity make girls outperform boys in secondary school.

Another possible factor explaining girls' better school performances compared to boys is intercultural sensitivity. A study carried out in Finland by Holma, Nokelainnenb, and Tirria (2009) revealed that girls, who are more empathic, assess their intercultural sensitivity more than boys. At the same time, students with good school performances appear to reach a relatively high level of moral and ethical reasoning sooner than their classmates. Consequently, the Finnish authors consider that "gifted students should be prepared for cultural diversity, for example, by promoting critical thinking in school and by encouraging them to be aware of and comfortable with other cultures." (Holma et al., 2009, p. 198)

Recent research in Romania shows that gender is a significant predictor for school performance, both at the level of secondary education and at the university level. (Pricopie et al., 2010, Pricopie, Frunzaru, Corbu, Ivan, and Bârgăoanu, 2011) The authors suggest that the main explanation for this clear trend seen in the last years is related to the fact that, at this age, girls are generally more responsible and more diligent than boys.

SOCIAL VALUES AND THEIR INFLUENCE ON SCHOOL PERFORMANCE

The importance of values in influencing school performance was highlighted as early as the 1950s, when changes of values were foreseen in the Western world. A study published in 1960 by Richard Prince underlines the relationship between the value patterns of high school students and their academic achievements. The American author distinguishes between traditional values based on Puritan morality, individualism, work-success ethic and future-time orientation and emergent values that consist in relativistic moral attitudes, conformity, sociability, and present-time orientation. The results of research showed that students with higher grades rather share traditional values. The author's explanation is that students who work harder "must be work-success-oriented and achievement-

oriented, and must feel that high marks will benefit them in the future". (Prince, 1960, p. 382) Hence, Prince's recommendation for teachers and counselors emphasizes work-success ethics and individualism and de-emphasize the importance of sociability and conformity.

These conclusions and recommendations are partially contradicted by a study carried out in 2002, which underlines that resilience and school performance are partially the result of a complicated interplay of family, school, peer and community influences. (Wasonga, 2002) Consequently, Teresa Wasonga (2002, p. 45) develops the following hypothesis: "if individuals had sustained experiences in caring relations, high expectations, and opportunities for meaningful participation across the stages of the life circle and across institutions, they were likely to develop resiliency and perform better in school". Therefore, the recommendation would be that adults and students should be encouraged to show that they care about each other, and the school and the community should create opportunities for students to volunteer in activities. (Wasonga; Christman; Kilmer, 2003, p. 70)

In a research conducted on a sample of high school students in Indonesia, Liem, Martin, Porter, and Colmar (2012, p. 1) show that "security and conformity values, positively predicted social-oriented achievement motives, self-direction values, positively predicted individual-oriented achievement motive, and hedonism values negatively predicted both achievement motive orientations". Consequently, we can argue both for a social motivation and an internal motivation for performance, but hedonism has always a negative effect on school performance.

The low importance attached to interpersonal relationships, opening for intercultural diversity, volunteering and the lower level of hedonism are elements that refer to the reduced presence of materialistic values. Marsha L. Richins and Scott Dawson (1992) consider that for materialistic persons, possessions and their acquisition are at the center of their lives, as a source of success and happiness. Success is the result of possessing material goods (money, cars, houses, gadgets etc.) and not non-material goods, such as knowledge gained as a source of long-time rewards for high school students. And when the basic needs are met, high school students (especially those coming from families with high incomes) can focus on superior needs, such as the "satisfaction of curiosity, the need to learn and to know more and more" (Maslow, 2007, p. 129). As Moreira, Dias, Machado Vaz, and Machado Vaz (2013) mention, we need to approach the explanation of the school performance by taking into consideration the educational persistence and motivational theories. Therefore, we can build the hypothesis that the more the high school students share materialistic values, the poorer their school performance is.

After analyzing the literature in the North-American, European and Asian space regarding various cultural realities, we propose to test an explanatory model of performance for high school students in Romania. We shall take into consideration a series of variables related both to family aspects (parents' level of

education, family income, whether or not students have at least one parent abroad) or to the education environment in which students learn (the size of the locality where the high school is located, the students' class attendance, the type of education attended – daytime or evening courses) and to peer groups or to individual attributes (gender, values).

RESEARCH QUESTION AND HYPOTHESES

The research aimed at answering and validating the following research question and hypotheses:

RQ: What are the factors that influence high school pupils' school performance?

H1: The higher pupils' family income, the higher their grades.

Family income has the potential to influence pupils' grade in two different ways: by not providing the pupil with the basic economic support for a stable study environment, and by the fact that a high income usually provides a more balanced family environment. The level of the family income usually affects children's performance by the unstable environment and the frustrations created in correlation with the peer pressure.

H2: The higher pupils' parents' education, the higher their grades.

Parents' education might influence pupils' grades especially by setting education as a high value within the family values system. Parents with higher education usually consider education as an important asset for one's success in life. Thus, parents usually transfer to their children the orientation toward good school performance as a prerequisite for a good life in the future.

H3: Pupils attending daytime courses have higher grades than pupils enrolled in evening classes.

Participating in evening courses as opposed to daytime courses has two connotations: a symbolic one (attending evening classes is considered, in the Romanian culture, as a sign of a lower learning capacity), and a pragmatic one (most of the time, attending evening classes is the result of the need of getting involved in household activities in daytime). From both points of view, one would expect pupils enrolled in evening classes to perform more poorly than pupils attending daytime courses.

H4: The higher class attendance, the higher pupils' grades.

Class attendance is very important for pupils' school performance mostly because missing classes means losing access to learning content. At the same time, peer pressure could lead to a sort of alignment to the other pupils' behavior. The lower the level of overall class attendance, the lower the individual class attendance. Even though this correlation is not always significant, we believe that pupils tend to perform better in classes with overall good class attendance.

H5: Girls generally have better school performances than boys.

Gender has been shown as an important predictor of school performance. In the last decades most of the academic research has shown that girls usually have better school results than boys.

H6: The higher the materialistic values orientation of pupils, the lower their grades.

Pupils' materialistic orientation has the potential of influencing school performance by influencing their orientation toward gratifying basic needs and self esteem related needs as opposed to "higher" needs, such as satisfaction of curiosity, need to learn etc.

The final goal of the analysis is to construct a predictive model that would explain school performance among high school pupils, in order to propose practical solutions at the system level in order to improve pupils' performance and competitiveness.

METHODOLOGY

Sampling

In order to understand what the most relevant factors influencing pupils' school performance in Romania are, we conducted a national survey (N=2642) using a probabilistic, stratified, multistage sample, with a cluster extraction in the last stage of sampling. In the first stage we stratified Romania's counties based on dropping school rates. Within the chosen counties, we randomly selected the classes (and consequently the high schools) that were included in the sample. The sample consisted in a total number of 119 classes, representing 2,624 pupils, with a mean of 22 pupils in one class. The questionnaires were self administered, with the assistance of a survey operator, in May, 2011. Data were further processed using SPPS 16 package. Statistical analyses, such as chi square test, Pearson correlations and OLS regression analysis were further applied.

Measurements

In the analysis we used several variables measuring school performance, parents' income, parents' education, pupils' class attendance (overall and individual) and their materialistic value orientation.

School performance was measured as the general grade obtained in the first semester of school, using a 12 step interval scale, clustering ranges of grades from 4 to 10, divided by 0.50.

Parents' income was originally measured on a 5 step ordinal scale, and recoded as a dummy variable into "high income" (pupils' evaluation of parents' income as being enough to buy all they need) and "low income" (pupils' evaluation of parents' as not sufficient to buy all they need).

Parents' education was measured for both mother and father's level of education, by using a 7 step ordinal scale, and recoded as a dummy variable, with "1" representing "at least one parent has higher education" and "0" "none of the parents have higher education".

For class attendance measurement we used two different variables: the overall class attendance was computed by dividing the number of pupils in class at the moment of the application of the questionnaire by the total number of pupils in class; the individual class attendance was measured as a continuous variable (percentage) representing pupils' self evaluation of class attendance out of 100% class attendance (never missed a class).

Pupils' materialistic orientation was measured on a scale of social values orientation that could play a role in the school performance, particularly the presence of the materialistic versus non-materialistic values. In this respect we used a six items standardized scale developed by Marsha L. Richins (1987). Even though the original scale was built so as to reveal two factors, personal materialism and general materialism, we obtained a consistent one-factor scale, generally measuring materialistic orientation. All items were measured on seven point Likert-type scales where 1 means "strongly disagree" and 7 means "strongly agree". More specifically, the wording was: "It is important for me to have really nice things.", "I would like to be rich enough to buy anything I want.", "I'd be happier if I could afford to buy more things.", "It sometimes bothers me quite a bit that I can't afford to buy all the things I would like.", "People place too much emphasis on material things", "It's really true that money can buy happiness." The reliability of the scale was tested by using factor analysis. We used a principal components factor analysis, with a varimax rotation. The items grouped in one factor with an eigenvalue greater than 1 and that explained 54.4% of the variance. The factor solution is presented in *Table 1*. The materialism was finally measured by a composite variable (the mean of the six items), built after testing for the scale's reliability.

Table 1

Factor solution with varimax rotation for the materialism scale for high school pupils

Factor solution	**Component**
I would like to be rich enough to buy anything I want.	.796
It's really true that money can buy happiness.	.773
I'd be happier if I could afford to buy more things.	.762
It is important for me to have really nice things.	.717
People place too much emphasis on material things (R).	.709
It sometimes bothers me quite a bit that I can't afford to buy all the things I would like.	.660

Extraction Method: Principal Component Analysis.
a. 1 component extracted.

We usually used recoded variables in the graphs (visual representation of crosstabulations between independent variables and school performance), while variables as originally measured (with three exceptions – recoded as dummies – for parents' income and education, and parents' migration – at least one parent abroad) were used in the linear regression model presented at the end of the Findings section.

FINDINGS

Overall, class attendance, gender, parents' education, type of enrolment (daytime vs. evening course), in this order, are the strongest predictors for pupils' school performance. The general results of the regression model explaining this hierarchy will be presented at the end of the section. However, the logic of the findings presentation follows the type of influences on pupils' grade, as presented in the literature review and in the hypotheses.

FAMILY RELATED INFLUENCES: INCOME, EDUCATION, AND MIGRATION ABROAD

The family related factors with the highest potential of influencing pupils' grades in high school are income and education. Results show that both variables make a difference in pupils' school performance.

Pupils coming from families with low income have usually lower grades than their colleagues. The differences are significant in the population ($\chi^2(2)=34.291$, $N=2461$, $p<0.01$). There are several possible explanations for these differences, the most likely being that, especially at high school age, teenagers feel more confident if their families can provide them with all the things they need and, at the same time, pupils from low-income families are often concerned with helping their parents, in different ways, to provide for their family. It is not rare that low-income families provide an unstable environment for their children, not only in terms of everyday life needs, but also in terms of emotional well-being.

Another important factor influencing school performance is parents' education. Findings show that both mother and father's education are correlated with pupils' grades ($r=0.286$, $N=2393$, $p<0.01$ for mother's level of education, and $r=0.281$, $N=2314$, $p<0.01$ for father's level of education). Forty-five percent of the pupils whose parents have higher education (at least one of them) have grades higher than 9 (out of 10), while only 22% of their colleagues whose parents do not have higher education reach the same performance.

The most plausible explanation is related to the fact that the highly educated parents incorporate education as an important value in the system of values they transmit to their children. Thus, pupils grow up in an education oriented environment and, intrinsically motivated, strive for improving their school performance. This is probably also related to the fact that pupils coming from

educated families use the "elaborated code" of language, formally required in class. (Bernstein, 2003/1971)

Parents' migration was only included in the regression analysis, as a dummy variable ("1" for at least one parent abroad). We considered that the level of emotional insecurity in families in which one of the parents is absent most of the time could negatively influence pupils' performance – there has been a lot of public discussion in the last years over the negative influence of massive migration, especially in poor and rural communities, of parents going abroad in search of a job.

COMMUNITY INFLUENCES: TYPE OF ENROLMENT AND RESIDENCE

The other major influence exerted on pupils' school performance, besides family, is related to the school environment. This regards daytime courses vs. evening courses, and the size of the locality in which the high school is located.

Not only pupils enrolled in evening courses rarely have great grades (only 5% of them score on average higher than 9 (out of 10) in their general grades for one semester – if compared with 29% of their daytime courses enrolled colleagues), but the weight of pupils that score on average lower than 7.50 is much heavier than for their colleagues (59%, as opposed to only 26%). The observed differences are real at the population level as well ($\chi^2(2)=125.679$, $N=2610$, $p<0.01$).

Evening courses are known to provide a lower level of preparation for their pupils from two different perspectives: firstly, pupils enrolled in evening classes have difficulties finding the time to go to school and to prepare for school (they usually work, are older than their peers enrolled in daytime courses, sometimes have children), and secondly, the general education level of the class is lower, and thus the standard of expectation regarding school performance is low.

The size of the high school residence is significantly correlated with school performance, but the correlation is very weak ($r=0.072$, $N=2610$, $p<0.01$), and therefore it is difficult to conclude that the size of the high school locality has any sort of influence on pupils' school performance.

PEER GROUPS INFLUENCES IN SCHOOL PERFORMANCE: CLASS ATTENDANCE

Class attendance is another important predictor for school performance. Participating in classes is traditionally known to be one of the most influential predictors at all levels of education. Our study shows that pupils' grades reflect their level of exposure to knowledge, and not only their effort (and intelligence potential) to learn. The individual level of attendance is a strong predictor for school performance ($r=0.332$, $N=2515$, $p<0.01$ for individual class attendance, and $r=0.247$, $N=2610$, $p<0.01$ for overall class attendance).

At the high school level, class attendance has two direct implications. On the one hand, the general level of class attendance, in other words how many pupils are in class on a daily basis, influences the general behavior (by means of peer pressure) of pupils and a general level of expectations regarding missing school in general. On the other hand, the individual level of attendance reflects the general level of exposure to scientific content. This means that the more pupils miss school, the more they will have unfilled gaps in their general level of knowledge.

GENDER AND MATERIALISTIC ORIENTATION

Gender is the strongest individual attribute that influences school performance. Girls have higher grades than boys. A third of the girls in the sample (36%) scored higher than 9 as the average grade of the semester, while only 18% of the boys had the same performance, which is a statistically significant difference ($\chi 2(2)=151.780$, N=2598, $p<0.01$). The most common explanation for these differences resides in the fact that girls are usually more diligent, more hard working and less influenced by negative peer pressure.

One possible alternative explanation would be that, in rural areas at least, boys are much more involved in household work, and thus have less time to spend on school related activities. Therefore, we tried to observe the patterns in both urban and rural areas, in search of alternative explanations.

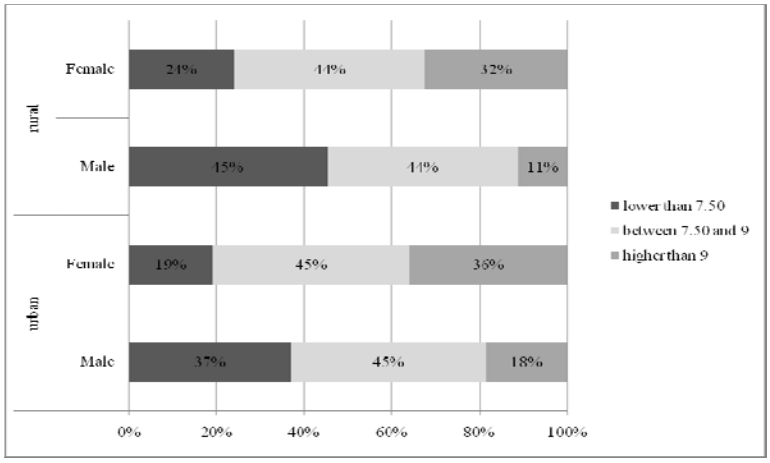

Figure 1 – School performance by gender in rural and urban areas.

The pattern remains the same (see *Figure 1*), with significant differences based on gender, real in the population ($\chi^2(2)=19.813$, N=241, $p<0.01$, for rural areas, and $\chi^2(2)=132.987$, N=2354, $p<0.01$ for urban areas). There is a general lower level of school performance in the rural areas, but gender differences are not

affected by it. Findings suggest that Romania follows the general global trend (OECD, 2015) of a new gender gap in favor of girls, in regard to academic achievement. This also confirms other Romanian recent research (Pricopie *et al*., 2010, Pricopie *et al*., 2011), showing that girls perform better in school, because they are more diligent and more responsible than boys.

As far as the pupils' materialistic orientation is concerned, there is a significant, though very weak, negative correlation ($r = –0.097$, $N = 2610$, $p < 0.01$) between school performance and materialistic orientation: the more materialistically orientated, the lower pupils' grades are. Even though weak, this correlation opens new directions of further analysis in studies related to school performance, as it shows that there is probably a reversed proportionality between the perceived importance of success in life and knowledge gain. This is the reason why less materialistic young people have generally higher grades in school, which also confirms previous studies. (i.e. Goldberg, Gorn, Peracchio, & Bamossy, 2003)

OVERALL INFLUENCES ON SCHOOL PERFORMANCE

In order to answer our general research question, we built a predictive model explaining school performance, in which we included all discussed influencing factors.

The predictive model is presented in *Table 2*, OLS regression coefficients included in the regression equation are significant, with one exception (one of the parents abroad), where the level of significance is situated in the close vicinity of 0.05 level of significance ($p = 0{,}070$). The hierarchy of the most influential factors shows that individual class attendance is highly important, followed by gender and parents' education, type of enrollment (evening/daytime), overall class attendance. The weak, but still significant predictors are materialistic orientation, family income, and high school residence. The explanatory power of the model is relatively high (Adjusted R square = 0.264).

Table 2

Predictive model for school performance

	B	**Beta**	**S.E.**
(Constant)	1.332**		0.385
Family income (dummy)	–0.191*	–0.042	0.083
Parents' education (dummy)	1.077**	0.198	0.102
Type of enrollment (daytime/evening)	1.302**	0.160	0.148
Overall attendance	2.405**	0.134	0.326
Individual attendance	0.042**	0.246	0.003
Gender	0.913**	0.207	0.080
Materialistic orientation	–0.031**	–0.048	0.012
High school residence	0.000*	0.043	0.000
One parent abroad (dummy)	–0.171	–0.031	0.097

**** Significant at the 0.01 level**
***Significant at the 0.05 level**

Overall, all six hypotheses are confirmed. If one thinks in terms of power of the predictors, class attendance is the most important: the more pupils attend class, the greater their grades. Secondly, girls have better school performances than boys. Parents' education is very important: pupils from families with at least one parent with higher education tend to perform better in school than their colleagues. Daytime courses stimulate school performance to a higher extent than evening courses. Low income families would negatively influence the school performance of their children. Materialistically oriented pupils have lower grades than non materialistically oriented pupils. The bigger the city the high school is located in, the higher pupils' grades are; in other words, high schools in urban areas, especially big cities, foster pupils with better school performances. Last, but not least, parents' migration has some potential of negatively influencing pupils' school performance.

DISCUSSION

When discussing school performance, researchers should think in terms of social intervention that could encourage it through public policies. Our research question and hypotheses were built so as to provide some answers regarding the most influential factors on school performance on the one hand, but to suggest at least some public action in the direction of supporting and encouraging it on the other hand.

All six hypotheses of this study were confirmed. We will further discuss the predictors of school performance, such as family related factors, what we called "community related factors", peer groups related factors, and individual factors.

Findings show that parents' education has a great influence on school performance, and family income has some influence on pupils' school performance. If one thinks in terms of "what could be done" at the society level, the answers are not very direct. Firstly, it becomes clear that the general level of parents' education will change (improve) in generations. The general trend in the last decades shows that more and more people enroll in higher education at the population level in Romania. Even though there have been long discussions about some universities providing diplomas for students not enough prepared for the university level, the simple fact of having a university diploma might have a positive influence on the general mentality (system of values) of the family; thus the positive influences might be visible only after the second generation: children would be raised in families where education becomes, little by little, a highly appreciated value, and thus their school performance would improve. In terms of public policies, we recommend encouraging the long-distance system for higher education programs, which would provide a great opportunity for working parents to continue their education and thus to later encourage their children to better

perform in school. With the more and more rapid development of the new media, attractive, real-time online courses could become a norm for qualitative long-distance higher education.

As far as income is concerned, a high standard of life would encourage pupils' performance. Not only a higher budget for education will provide better conditions for studies, but a good economic life indirectly improves the families' money related problems and consequently the general well being feeling in the family environment. Thus children would have better chances to be more focused on school and less on day to day emotional problems. In this context, any educational policy regarding school performance should give priority to disadvantaged pupils, by offering them subsidies or gratuities for books, public transportation, medical assistance, etc.

Community related factors influencing school performance are the type of enrolment (evening/daytime) and high school residence. Today evening courses are a good alternative to daytime courses for some categories of pupils: usually adult people in search of completing their education (as they abandoned school in the past), or teenagers from poor families who have to work to help their parents. Even though originally though as alternative forms of completing high school, nowadays evening courses are chosen as an easier way of finishing high school, because of the lower level of academic expectations regarding homework, hard work, learning effort in general. In terms of social intervention, education policies should encourage similar standards for both forms of enrolment. Even though probably the general level of school performance would still differ significantly, at least graduates of evening courses might have a chance at being much more prepared when finishing high school. As far as residence is concerned, results show that high schools in big cities generally offer a challenging environment and thus positively influence school performance. Therefore, public policies should be focused on rural areas and small towns, in order to improve the general environment in high school, by stimulating competition and raising expectations.

Class attendance remains the most influential predictor of school performance. Therefore encouraging pupils to not miss school or constraining them to come to school by different forms of punishment would lead to increasing the general level of school performance. There are different reasons why pupils cut classes: some of them are related to family problems (most of the pupils who ever thought of dropping school have family related reasons (Pricopie *et al*., 2010)), but some of them are related to peer pressure (not cutting classes means not being cool). The latter is possible because of the flexible school politics related to expulsion and other forms of punishment. There is a vicious circle within the system: schools are evaluated based on the rates of dropping out and expulsion, and consequently they are indulgent with pupils they should expel, in order to not affect their evaluation negatively. Some more strict rules imposed by the system might help improving matters in this direction. From a different perspective, professors and school

counselors should encourage, through direct discussions, both pupils and parents to find ways to avoid missing classes, as there are studies (Cismaru, Stănciugelu, Ivan & Corbu, 2007; Frunzaru, Oprea & Paraschiv, 2014) showing the importance of internal communication in school related problem solving.

The individual attributes discussed in this paper, gender and materialistic orientation, are influential on pupils' grades to different extents: gender is a very strong predictor, whereas materialistic orientation has a much weaker influence. However, gender is given and cannot be changed (plus policies encouraging one gender in any way might be perceived as discrimination), while the materialistic orientation is a cultural construct and has the potential of being re-shaped. We believe that the general trend in nowadays society, which, as a consequence of the consumption society, has developed in the last decades, goes toward encouraging the materialistic orientation, placing a high emphasis on the importance of money (and materialistic goals in general) as a way of measuring social success. Therefore, it is very difficult for the pupils to embrace the higher values spiritually and culturally oriented. We believe that, in this context, media play a very important part, and therefore it is virtually impossible to alter mentalities by instruments related to education public policies. However, if today a rather weak influence could be perceived, we believe that materialistic orientation will have a much greater influence in the future.

Another influencing factor on school performance, briefly discussed in this paper, is parents' migration abroad. Even though parents' migration remains a less significant predictor, in the future this variable has a strong potential of becoming influential. Parents' migration affects the equilibrium in the family, and thus the emotional well-being of teenagers. This is one factor that should be considered starting now, in order to diminish its potentially dangerous effects on school performance in the future.

Overall, when discussing factors that influence school performance in Romania, class attendance and gender are the strongest predictors, closely followed by parents' education and type of enrolment in a hierarchy of influences on pupils' grades.

Based on historical arguments, we argue that, given the generally similar socio-economic and political history in East-European countries, our study could be considered as a good starting point for public school policies in former communist countries from the Eastern block. However, evidence could only be gathered in a future joint comparative research regarding East-European countries. At the same time, other possible predictors could be included in further research. Given the relatively high influence of the variable measuring peer-pressure on school performance, we suggest looking for alternative ways of measuring the importance of entourage, as a means of deepening the understanding of this particularly powerful form of influence on pupils' behavior in general.

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