EDUCATIONAL DISPARITIES IN ROMANIA. A MULTILEVEL ANALYSIS OF THE NATIONAL ASSESSMENT EXAMINATION SUCCES RATE

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Les disparités éducationnelles en Roumanie. Une analyse multi-échelle sur le taux de réussite à l'Evaluation Nationale. Cette étude propose l'analyse de l'évolution de la participation des élèves du cycle gymnasial à l'Évaluation Nationale, depuis l'année 2000. L'importance de cet examen avait augmenté avec son utilisation comme instrument de sélection des candidats pour le cycle moyen d'enseignement, le lycée. La variabilité de la participation à cet examen est très forte, en profile chronologique aussi qu'en profile territorial, engendrant des disparités évidentes qu'on peut expliquer par l'incidence des facteurs sociaux, économiques ou culturels. L'élément-clé suivi est le taux de réussite souvent invoqué dans l'espace public dans le contexte des appréciations qualitatives à l'adresse du système d'enseignement. Rapporté seulement au nombre d'élèves participants à l'examen, ceci n'inclut pas deux catégories importantes d'élèves: ceux ayant abandonné l'école au long du cycle gymnasial et ceux qui, pour des raisons différentes, ne s'inscrivent pas. Les motivations de cette exclusion sont obscures, un rôle indubitable revenant aux soucis liées au prestige des institutions scolaires. L'utilisation des statistiques officielles avait permis l'analyse du taux de participation pour une longue période (2000–2018) et du taux de réussite pour cinq ans (2014–2018). Les conclusions de l'étude convergent vers la mise en évidence de certaines disparités entre les milieux de résidence et les catégories d'écoles (lycée de culture générale, lycée vocationnel, gymnase). Ces disparités trahissent une profonde ségrégation scolaire qui empêche la mise en place des mesures visant l'égalité de chances.

1. INTRODUCTION

The aim of this study is to establish the educational domain as analysed from a geographical viewpoint, and as defined in many sources: as a branch of geography oriented towards the spatial variation of educational demand and offer, towards the impact of the local social environment in terms of the development and performance of the services provided in the field, towards the influence of public policies and demographic changes, including the mobility of the studied population (Meusburger, 2015). Therefore, through spatial vision, often articulated in mapping, along three main coordinates (scale, space and positioning), geography may add to a better understanding of the educational process dynamics, by highlighting certain types of behavior and their distribution as strongly influenced by place of residence, some powerful disparities along the lines of social, economic or cultural origin (Brock, 2016). From a spatial perspective, the implications of an unequal access to education, have been a largely researched subject matter since 1970 and continue to be discussed, particularly when it comes to the issues of unequal education opportunities, in spite of the officially stated egalitarian ideology (Butler, Hamnett, 2007). The accent currently lies on the affiliation of the neo-liberal ideology with the changes in the education system (Waters, 2018). Also, there has been a keen interest in the rapport between geography and comparative education (Brock, 2013).

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After 1990, the Romanian education system underwent profound changes on the grounds of numerous experiments to make changes after 1990, fundamental improvements towards a free-market economy and an open society. The reforms in the education system have become an issue of global interest, as the assessment results have been compared and contrasted (PISA scores, the system of credit transfers, and so on). The efficiency of the education system is usually determined by the resources allocated and by the results garnered (Ezechiel, 2015). The aim of these reforms is to adapt the education system to the new knowledge-based information economy, while the former communist states display a significant handicap to be recovered in order to ensure a level of education in accordance with the requirements of the labor force (Achim, 2015). Education has become more expensive and its share in family expenses has become more and more far-reaching, given its significance in ensuring the necessary skills required by a more and more competitive contemporary society (Morrill, 2004). This evolution also involves the issue of equal opportunity, the families having by far different readjustment skills, depending on the residential environment, the standard of living, the level of education of adults (their previous educational background), the access to education services. From this point of view, for several centuries, in a number of advanced countries, education has become a profitable business, with the state transferring part of the costs to families with availability and willingness (Rogoff, 1960). With regard, in particular, to Romania, we have noted that the efficient functioning of the rural education system, which is extremely vulnerable in the specific context of Romania, is closely linked not only to the quality of human resources (the professional attitude of teachers) but also to the material conditions and facilities, as well as to the geographical position (isolation, accessibility – Tomuleţiu, Morar, 2010).

As in the case of other countries in Central and Eastern Europe, the Romanian education system has been going through a period of change which can be classified as an educational transition process. This has been imposed by a fusion of three main components: (i) going from a totalitarian political system to a democratic one; (ii) overcoming the deep structural economic crisis by creating a free market; (iii) updating and adapting to global change (Radó, 2001, p.11). Despite all the influences inherited from the totalitarian era, an educational transition was required as an historic opportunity to weaken the clash between culture and civilisation in comparison with Western Europe. Unlike the Western part of the continent, where the reform of the education system is an ongoing process of adaptation and reorganisation, an almost complete change in the system structure, in other words, a reconstruction was necessary in the Eastern part (id., p. 28). This reformation process required two major steps: the gradual development of the student assessment and the external assessment of the schools (id., p. 52). Romania has clearly stood aside, even in the European context, due to a number of features which show that the education system is far from being reformed: serious issues of functional illiteracy (PISA 2015); massive early drop out, expecially in rural areas, caused by absenteeism, learning difficulties, poor performance or lack of motivation, all of which increase when going from primary school to secondary school (Merce *et al*., 2015); the obstruction of access to education, caused by poverty, mostly in rural areas, but also by certain mentalities (especially in the case of the Roma population) or specific administrative limitations (Bălănescu, 2002, Dan, 2012, cited by Mosora&Mosora, 2013); the assessment regulated by high-level examinations that restrict the learning process and define success in a limited way (Kitchen *et al.*, 2017, p.15); the massive migration of adults in search of work on a temporary or long-term basis, leading to adaptation issues for children left alone or with relatives (Popa, 2012); inadequate investment and budget funds to improve the gross domestic product which had significantly decreased from 4.24% in 2008 to just 2.98% in 2018. Adding to this is a less researched phenomenon of school rivalry, which brings students and teachers together, inspired by the importance of competitions in the assessment and financial stimulation of teachers, resulting in an inflated attention paid to successful students (Curelaru *et al.*, 2014).

The National Evaluation, the key topic of this study, is used in the first place rank all the students in order for them to move on from secondary school to high school. As in the case of GCSEs, all students who have completed secondary school during that year or those who did not pass the

examination in previous years may sit this assessment. Its value is crucial for access to high school and later university education.

The key element of this study is the pass rate, namely the percentage of students who received at least the lowest official grade in the national assessment. The performance level of students is the main factor that contributes to a hierarchy being established from this point of view. It is commonly accepted that this depends, first of all, on the intelligence, conscientiousness and intellectual curiosity of students, followed by subsequent effects being left by their personality traits (von Stumm *et al.*, 2011). The interest in this indicator is strongly expressed not only by the parties involved (teachers, students, parents) but also by the press, which, according to the results, finds an opportunity to highlight the problems of the education system or, on the contrary, to emphasize its high quality. The secondary elements of this analysis, used to provide an explanation for the distribution of the pass rate, are as follows: the participation rate in the national assessment, the rate of school dropout, the distribution of the population in different environments and the distribution of the population into school categories (high schools, secondary schools, vocational schools, etc.) and the results obtained in the national assessment examination. On an explanatory note, the GDP is also considered to be an indicator of the socio-economic level of wealth or of the degree of urbanization presented by the administrative units under study.

The notion of disparity is understood in the traditional meaning of the areal differentiation defined as early as 1939 (Hartshorne, quoted by Johnson, 1994): the variation in space of a phenomenon correlated with other phenomena which either manifest in the same space or are its causality. In fact, without confusing it with area differentiation, disparity is actually "a pathological form of differentiation, highlighted by the strong inequalities and imbalances present in different territorial subunits" (Nonn, 1998, p. 90). Applied in the studied educational context, the disparities to be described could be analyzed either on a territorial scale (counties, administrative units as NUTS 3) or by different school units that objectively benefit from the same institutional framework (except for private schools). As for the case of true disparities in the education system, taking into account the specific issues, equal opportunity plays a fundamental role. Strongly linked to accessibility, theoretically, this is ensured by the enforcement of compulsory education, as officially registered in Article 3 of the Law on National Education, in the form of equity. In reality, the ideal of equal education opportunities would be difficult to achieve, even if the mechanisms that form the basis for unequal access to education opportunities have been clarified, as action plans have been devised (here we refer to increasing the importance of early education, life-long learning, etc). The contradictions between this desideratum and other principles such as respecting family autonomy, individual freedom and others, are still leading to frustrating inequalities, even in the most advanced societies (Shields, 2017).

The working hypotheses based on the reviewed literature are as follows:

H_1: The succes rate at the national assessment is dependent on the local socio-economic context.

H_2: Territorial disparities are generated by segregation trends along cleavage lines (rural/urban, status of schools).

H_3: The modest results at international tests (PISA) are a direct consequence of both the highlighted disparities as well as the expansion of school dropout.

This study aims in the first place to highlight, and less to explain these disparities, as being limited by access to information as well as the intervention of other subjective factors, in particular cultural ones.

2. MATERIALS AND METHODS

The main source of information has been the official page of the National Ministry of Education which has posted the results of the national assessment for each county and school unit for the past four years (2015, 2016, 2017, 2018). This database has been downloaded and aggregated depending on the demands of the analysis conducted, for each county, as follows: according to residency area

(towns, countryside), according to the type of school (secondary, vocational, technological, skills and industrial schools). Each of these has been integrated with the following variables: the number of students officially registered in the assessment (Pr), the number of students actually sitting the assessment (Ps), the number of students who passed (Pp), the percentage of students coming from high schools and colleges (Phs) and the arithmetic mean of the assessment parts (A), split into two main categories of schools – high schools (Ahs) and secondary schools (As). We consider that the four chronological series stand for a representative sample required to identify the disparities caused by the national assessment. In order to test just how representative this is, we have collected, from the same source, information on the pass rate for previous years (2000–2014) and data on the number of participants and number of students who passed the exam.

In addition to the data base, we have collected information on the total number of student positions for the same time period (2015–2018) in order to discover the difference between the number of students registered in the 8^{th} grade and the number of students registered for the national assessment. This knowledge was required for an accurate estimate of the school dropout phenomenon (Sd), by which we understand not only the situation of students ending the education cycle but also of studentsfinding it impossible to move onto the next education level, namely high school or vocational school, which is the case for a large number of students. Officially, the figures referring to school dropout are usually underestimated and this could lead to a fairer picture of the phenomenon. The necessary information was taken from the INS Tempo Online data base. Data was also extracted regarding the GDP, measured in Euro/inhabitant for the years 2015–2017 (NGP), based on the information provided by the National Prognosis Commission, the degree of urbanization (U) and the percentage of working persons out of the total active population (Ep). The OECD report on the evaluation and assessment in the education system of Romania was also used, as well as the OECD – PISA 2015 report, for the same purpose.

In an initial stage, the methodology used was primarily intended to process the information, by analyzing the spatial differentiation induced by the distribution of dependent variables and by analyzing the correlations between the dependent and the explanatory variables.

In the second stage, an ascending ranking in a hierarchy was applied using 12 indicators derived from the primary analysis, standardized by reporting them to the maximum value registered.

1) the percentage of students registered for the national assessment out of the total number of students who should finish secondary school (Pr);

2) the percentage of students who passed the national assessment examination out of the total number of students who registered for it (Pp);

3) the school dropout rate, estimated in theory by comparing the difference between the number of students who should finish secondary school and the number of students registered for the national assessment (Sdr);

4) the illiteracy rate reported for the last census, performed in 2011(Ir);

5) the rural – urban disparity rate for registered students (Dr);

6) the rural – urban disparity rate for students who passed (Dp);

7) the percentage of students coming from theoretical high schools and colleges, out of the total number of registered students (Phs);

8) average results, estimated by calculating the average of all the grades received in the assessment examination, including the failing grades (Ar);

9) the average adjusted result, estimated by including the students who were absent from the assessment examination, considering a failing grade of 3 (Aa);

10) the urban – rural disparity rate of average results (Dar);

11) the disparity rate in schools categories were caused by the standard deviation of the specific values, the greater the differences, the higher the specific values (Dcs);

12) the average results of students coming from high schools and colleges compared to the average result (Ahs);

In order to aggregate the statistical units, AHC used the dissimilarity expressed by Chi^2 as the proximity type, as well as the Ward method. The resulting cluster was designed to keep the interclass variation net superior to the class variation.

3. RESULTS AND DISCUSSION

The starting point of the undertaken analysis was the graphic representation of the number of students who graduated from secondary school, the students enrolled in the national assessment examination, the students who passed the national assessment exam out of the total number of students who should have finished this cycle, for quite a long period of time (2000–2018). The information is not totally comparable, at least not with regards to the students who passed since the assessment method was changed twice: the first time in 2003 when the General Certificate of Lower-Secondary Education Examination which was more complex was replaced with the national examination based on tests given at the end of the school year, and once again in 2010 when the national assessment examination was introduced and simplified to two tests taken after having graduated the eighth grade (Fig. 1). Nonetheless, the year 2000 is an important milestone because it was at that time that computerized admission was implemented, meaning a computer system that distributes the students into the high school cycle according to their grades in the General Certificate of Lower-Secondary Education Examination, as well as their options. Another element which influenced the evolution of the above-mentioned indicators was the creation of the Art and Skills Schools (SAM) in 2003 and their closing in 2010, as an alternative to high school education. All these attest to the existence of instability in implementing education policies, and the measures adopted have had a major impact on the evolution of school life over several generations.

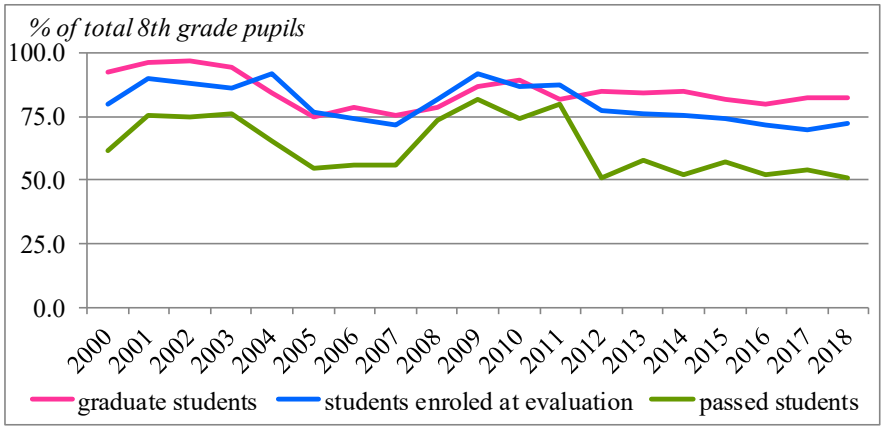


Fig. 1 – Evolution of the graduation rate, registration rate and passing rate in the final assessment for the total number of students in the last year of secondary school. Source : www.edu.ro.

An element of surprise that strikes at first glance at the above figure is the drop in the students graduation rate by 2003, which was close to the maximum until the Art and Skills Schools appeared (SAM), while during 2004–2009 only a quarter of the students did not take part in the tests at the end of secondary school. Some studies explain the drop in the number of students enrolled in high school during the above mentioned period through school leaving as well as through the influence of a sudden downward trend in the birth rate, as seen in 1990 (Iancu, 2015). In addition to these factors, the previously discussed changes must be mentioned. The situation improved after this option of

secondary education was closed down and the percentage fluctuated somewhere between 80–85%. The progression of the registration rate to the final assessment follows a similar pattern, but poses broader variations. One of the effects of the introduction of computerized ranking in 2000 was an increase in the participation rate at the end of the assessments cycle which actually conditioned the high school education, but the appearance and subsequent disappearance of SAMs had the same effect, albeit with some delay. The small number of cases that suggest a higher number of registered students than graduating students is due to the opportunity given to previous generations to take the exam again. Nevertheless, the downward trend recorded after 2010 is troubling, hence more than a quarter of the students graduating the eighth grade are stuck in the impossible situation of pursuing their studies. When we evaluate the history of the graduating rate, the situation is even worse. The effect of the above mentioned changes can be seen quite clearly, the pass rate going down at the same time as students gave up on sitting the General Certificate of Lower-Secondary Education Examination. The follow-up recovery was the result of a few drawbacks in the organisation of the assessment examination in a specific context: the steady decline in the number of students, due to the decrease in demographics which started immediately after 1990 and led to a lower degree of difficulty in the tests, combined with a certain indulgence when grading the tests, with an end to promote the greatest prossible number of students onto the secondary education. Still, the introduction of video camera surveillance in 2012 caused quite a shock and changed the pass rate to a level that was closer to the students' real level of knowledge, a rather mediocre one at that, should we take into account the PISA tests, which have been in existence since 2002. The visible tendency to put an upper limit to the pass rate at a level that hardly exceeds 50% of the total number of students reaching the end of secondary school is more than distressing. The authorities in the field reacted by reporting a number of passing students only for the national assessment, hiding the reality while wishing to save the face by displaying a less serious official situation. The other students, which only have the secondary school graduation certificate or which have unfinished studies are thus excluded from the statistics. To this, the school dropout rate must be added, which is relatively low in secondary school, according to official figures (2% between 2010-2016, according to INS), but actually much higher in reality, if we take into account the population layers per age group, which suggest a greater number of children who should be finishing secondary school (teens averaging between 14–15 years of age).

Part of the students might be included in the international migration and there are studies which indicate an increase in this movement after graduating primary school (Dimitriu, p. 125, 2013). Practically, one in two children who should finish secondary school (which is compulsory according the Law) fails in the wake of poor training in a globalized world where competitiveness also expresses itself in the ability to ensure a minimally acceptable level of education.

What are the factors generating this less than desirable situation? It is a legitimate question which cannot find an answer unless by analyzing its factors, which is difficult to do using the information provided through official channels, as they are often prone to insufficiency and deficiency. Conducting some surveys on a representative sample could be a viable alternative. Still it would be difficult to do them all around the country, while on a local level they may depend strictly on the conditions typical for that particular area. In order to identify the degree of correlation between the variables which make the topic of this study (pass rate, school dropout rate at the end of secondary school and the level of performance in the national assessment examination as expressed in the average results, as seen for two categories of institutions – secondary schools, high schools and colleges) and a series of variables which show some explanatory potential (percentage of urban population, percentage of employed people out of the total of active people, percentage of students who attend high schools and colleges, percentage of people of Roma ethnicity, the percentage of emigration as it was registered during the last census of 2011 and the GDP per capita) a series of linear regressions were envisioned, which are shown in the following table (Table 1).

Table 1

Correlations between the pass rate in the national assessment examination and a series of factors of explanatory potential

Dependent variables	Explanatory variables					
	Percentage of urban population (2017)	Percentage of employed people out of the total number of active people (2014–2017)	GDP per capita (2016)	Percentage of students coming from high schools and colleges (2014–2018)	Emigration rate (2011)	Percentage of Roma people (2011)
	Regression coefficient (R^2)					
School dropout rate	0.2657	**0.3806**	**0.3303**	0.0823	0.0278	0.0398
Pass rate	**0.3319**	0.1312	0.2811	0.0719	0.0076	0.2000
Average grade in the national assessment	**0.4025**	0.1718	**0.3881**	0.0616	0.0068	**0.3275**
Average grade in the national assessment in secondary schools	**0.3146**	0.1105	**0.3745**	0.0035	0.0166	**0.3666**
Average grade in the national assessment in high schools and colleges	0.0701	**0.3112**	0.0600	**0.4337**	**0.3301**	0.0944

Source: INS, MEN (www.edu.ro).

Although strong correlations were not noticed, there is a clear interdependence between certain variables. The school dropout rate relies significantly on the level of development expressed in the value of the GDP per capita and especially on the percentage of people employed.

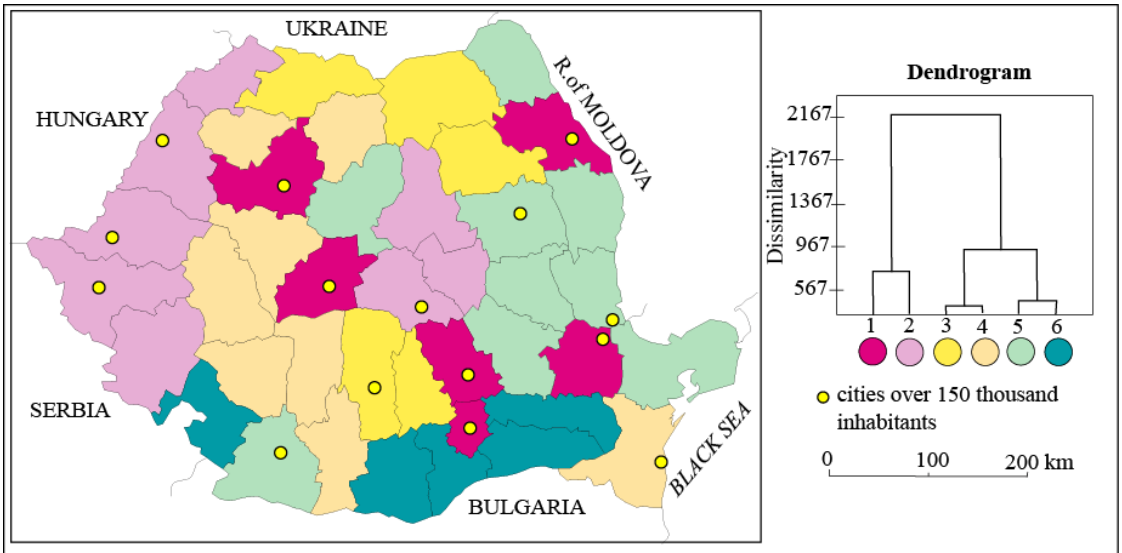
The lack of income or poor income shows a high degree of vulnerability from this point of view. Surprisingly, perhaps, the percentage of Roma population and the rate of emigration are not significantly related to the school dropout at secondary school level. We could provide an explanation for the first of these variables in the early school dropout phenomenon seen at primary school level, in some cases, even in great proportions (Muntele, Horea-Şerban, 2011).

The pass rate seems to depend generally on the percentage of urban population, and the counties which display a higher degree of urbanization tipically have a higher level in the pass rate as well. The level of development reflected in the GDP per capita and the percentage of Roma population also have an effect, but this is likely to be decreased by the spread of information on different counties.

Differences between the school categories can be seen in the results of the national assessment examination. As a whole, the percentage of urban population, the GDP and the Roma population contribute significantly in this order of importance, to school performance, pointing to the existence of a strong division between the living environments and the social groups. This image is kept at the level of secondary schools, as a reversal of the order in favour of the development level. It is interesting to note that at this level, the percentage of the Roma population has the most significant impact. In contrast, the high school and college students' results depend largely on the inclusion rate seen in this category of schools, as the counties with a higher percentage generally achieve better results. The division between the living environments and residential areas is thus doubled by the separation into school categories, high schools and colleges usually having better facilities, more professional and more stable teaching teams. The students coming from the countryside, from families suffering from a lack of constant income are restricted to these types of schools, as is also the case or families living in towns but that are, nonetheless affected by unemployment or poor income. The link to the rate of emigration shows that one of the incentives for adults to work abroad is definitely based on the

aspiration to offer their children a higher quality of education. Similarly significant is the absence of any correlation with the level of urbanization or economic development, contrasting visibly with secondary schools.

This brief analysis has led to an AHC analysis (agglomerative hierarchical clustering) based on the 12 indicators presented in the previous chapter. This model of data analysis was preferred for highlighting the territorial differences which appear in this particular context studied. The six types presented are clearly individualized from a statistic point of view, the variation between classes playing a significant role in highlighting them (62.7%). As for spatial features, a certain coherence can also be seen, the statistical units (counties) usually clustering according to cultural or geographial affinities (Fig. 2).



Class profile (relative to the national average)

Class	enrolled	passed	high schools and colleges	school dropout	iliteracy rate	average score at national evaluation	disparities rural/urban (urban = 1)			disparities by school type	score in high schools and colleges	urban population
	%	%	%	%	%	*numeric*	*enrolled*	*passed*	*average score*	*STDEV*	*versus average*	%
National average	**69.7**	**74.9**	**14.1**	**9.0**	**3.0**	**6.50**	**0.66**	**0.73**	**0.74**	**0.77**	**1.17**	**56.4**
1	0.97	1.14	1.36	0.69	0.85	1.09	0.94	1.10	1.00	1.08	0.98	1.15
2	0.97	0.94	1.74	0.78	0.97	0.95	0.86	0.96	0.95	0.77	0.98	0.98
3	1.07	0.97	0.46	1.17	0.97	0.98	1.17	1.08	1.07	0.71	1.04	0.79
4	1.05	1.00	0.92	1.37	0.99	1.00	1.09	1.06	1.05	1.14	0.97	0.95
5	0.94	0.97	0.65	0.99	1.28	0.98	1.01	0.96	1.00	1.21	1.05	0.85
6	0.94	0.86	0.49	1.42	1.68	0.90	1.22	0.91	1.12	1.19	1.07	0.73

Created in Adobe Illustrator by Ionel Muntele *Data source : INS (www.insse.ro); MEN (www.edu.ro)*

Fig. 2 – Typology of explanatory variables on the pass rate of the national assessment examination for the 8th grade students in Romania (average for 2014–2018).

During the studied period, as we have already pointed out, the national environment profile is characterized by serious drawbacks in ensuring that all students have equal access to the national assessment examination at the end of secondary school. Almost a third of the students in the eighth grade do not attend this exam (30.3%), thus not having the possibility to follow onto the next level of education (high school) while out of all the participants, a quarter do not manage to obtain the minimum passing grade. If in the case of 9% of them school dropout may act as an extenuating

circumstance (as shown by official numbers), for a significant number of the students who do not finish secondary school by passing the national assessment examination, the main explanation lies in the low level of education, often synthesized in the phrase "functional illiteracy", due to a sum of functions contextualized in the inability to reform the Romanian education system according to up-to-date requirements.

The international assessment exams such as PISA which show serious educational shortcomings in students who finish secondary school are also verified by mediocre results in the national assessment examination (the average grade being 6.50 points out of 10, considering also that more than 30% of students didn't sit the exam and the minimum requirement is 5, thus the average is only a little higher than the minimum required). The findings of several analyses performed on PISA tests contribute to the existence of significant disparities in the Romanian education system, which are not inherently just responsible for them, but rather reflect more the complexities of the economic transition, overlapping several contradictory reforms that promote superficiality and formalism (Babii, 2018, p. 195). These analysis instruments warrant the existence of a severe imbalance between the average grades of OECD states, in spite of all the stunted progress made between 2006–2015 (Table 2).

Table 2

Comparative evolution of results in PISA tests between the OECD states and Romania (2006-2015)

Assessed subject / Level of training	Romania (% of the total number of students sitting the examination)				Average in the OECD states (% of the total number of students sitting the examination)			
	2006	2009	2012	2015	2006	2009	2012	2015
Mathematics (< level 2)	52.7	47	40.8	39.9	22.5	22	23.1	23.4
Mathematics (< level 5)	1.3	1.3	3.2	3.3	12.8	12.7	12.6	10.7
Reading (< level 2)	53.5	40.4	37.3	38.7	20.9	18.5	18	20.1
Reading (≥ level 5)	0.3	0.7	1.6	2	8.4	7.7	8.5	8.3
Sciences (< level 2)	46.9	41.4	37.3	38.5	19.8	17.8	17.7	21.3
Sciences (≥ level 5)	0.5	0.4	0.9	0.7	8.7	8.4	8.3	7.7

Source : OECD (http://read.oecd-ilibrary.org/education/pisa-2015-results).

The average profile is characterized by strong differences in living environments, especially as pertaining to the participation in the national assessment examination, the issue of absenteeism (consequently of school dropout) is mostly present in the countryside, without being represented in cities, of which the capital is an example, where on average, 11.3% of students didn't register for the national assessment examination during the timeframe analyzed. The disparities diminish significantly regarding the pass rate and the results, however, they keep to a high level. One can understand from this context that the so-called "Brăila phenomenon", as the press described some administrative school teams' tendency to encourage absenteeism in the case of students with pooor performance or of those not prepared enough to successfully pass the national assessment examination, in order to later post exceptional results is widely present on a national level and is hardly specific only to the above mentioned county (Necula, "Adevărul" newspaper, dated May 11th 2018). A high level of disparities is also given by the school type (secondary school, theoretical high school, vocational high school, technological high school, and so on). Added to the significant difference between the average and the results obtained in theoretical high schools and colleges, considered the most efficient educational units, the differences between the school categories amplify the inequality and nullifies the chances presented to the less favoured students stemming from their living environment, as the school units which provide secondary education are mostly present in main cities. The fact that these institutions manage to obtain good results is partially due to the quality of their teachers, but also to the selection of the students even starting from primary school level, by following their results in a series of competitions. The fact of pursuing secondary education in high schools is considered advantageous in

terms of higher quality school preparation. However, the fact that high schools have expanded their range of educational services, to include secondary school classes, has gradually led in communities to a negative discrimination of schools intended exclusively for secondary education.

The drawbacks of the national assessment have been highlighted also in the recent OECD report (Kitchen *et al.*, 2017, p. 16), which recomends "improvement in quality and impartiality in the national assessment system and the examination practices by formative reforms". Insufficient investment in the education system has been identified as the main cause of the gap that separates us from international performance.

Compared to the average national profile, strong territorial contrasts can be observed which can be partially detected in ACH processed in XLSTAT. The gap between the six types and the average is usually significant and can be interpreted as the expression of a number of inequalities in development as well as cultural, social or historical features.

The first type includes counties with an urbanization level above the national average, a clearly higher gap regarding the pass rate and the results of the assessment examination, in the context of a high percentage of students studying in high schools and colleges. The well below average percentage of school dropout can also be considered as high as it can be. The disparities between the urban and rural areas are stronger when referring to the registration for the assessment examination and the differences between different school types, thus demonstrating the presence of the above mentioned phenomenon (with Brăila county being included in this group). It is not at all by chance that the counties of Cluj, Iaşi, Prahova, Sibiu, together with Bucharest city integrated with Ilfov county have been added to this group. The presence of powerful centres for teacher training, the small distance to the capital (Prahova county) or the high level in development or openness to other countries (Sibiu) play an essential role in illustrating this profile.

Closely related, the profile of the second type, extended from a cultural point of view to two coherent, relatively unitary areas (the Western side of the country and the South-East of Transylvania) stands out, however, due to certain deficiencies displayed by the pass rate and by the results below the national average, despite the highest rate of students coming from high schools and colleges. Still, to compensate for the weakness, the disparities between the living area features are reduced to a minimum, the smallest percentage in the entire country, doubled by the small differences between schools. In other words, in these areas, the inequalities are much more reduced, even if the performance level is lower than for the majority of other types, while the access to education seems more democratic. One may assume that in these areas, there is a higher level of economic development (such as in Timiş, Arad, Braşov) and thus generates a smaller pressure on obtaining good results in this national assessment examination, as the labour market offers multiple job opportunities to students after graduating from secondary school, high school or advanced studies, which compensates for the apparent mediocrity of the educational performance and results. The education quality, as certified by certain studies, stems mainly from the more efficient social integration, strongly correlated to a fairer education (Pfeffer, 2015). In some counties, such as Harghita, Covasna or Satu Mare, this could be explained by the higher percentage of rural population as well as by the significant presence of the Hungarian community which is less favoured by the test given in the Romanian language and literature, which is compulsory in the national assessment system.

Types 3 and 4 have a similar profile, as they are clustered around two different areas: firstly, the Northern part of Moldavia and Transylvania (including Maramureş) and second, the South-Western part of Transylvania and the Sub-Carpathian area from Oltenia and Western part of Muntenia to which we may add the isolated county of Constanţa. The former stands out for the remarkable participation rate in the national assessment examination, the highest rate actually, in spite of a much lower than average urbanization rate. Nevertheless, the high degree of rural features is converted into a more significant rate of school dropout and strong disparities in the living environments. The low percentage of students coming from high schools and colleges can also be seen in small clashes between the school categories, the level of performance being close to the national average. In these counties

(Neamţ, Suceava, Maramureş, Argeş, Dâmboviţa) the best results in the countryside areas are registered, which can be seen as one possible explanation for the proper choice of teachers and teaching mthods in these schools as well as a certain propensity for education, seen in the clear school registration numbers which have been high ever since the interbellum period.

Type 4 is well-represented by 8 counties, found in continuity with the previous ones (except for Constanţa), having a similar profile, on the backdrop of a higher degree of urbanization, but in contrast to the high school dropout rate. The disparities are even more evident, especially when it comes to schools types.

Types 5 and 6 are also relatively close, having as common points a high degree of rural characteristics (more highlighted in the last case), a low level of participation in the national assessment examination and a small number of students from high schools and colleges, all over the background of the highest rate of illiteracy on a national level (including the permanent one, represented by the older generations). Nonetheless, beyond these similarities, there are significant differences in favour of the fifth type which includes counties from the Eastern part of the country, mainly from Moldova but also, but also from separate counties towards the West, such as Dolj and Mureş. In this case, the above mentioned deficiencies do not lead to a less favourable position, the school dropout rate being within the limits of the national average, as well as the pass rate, average results and the level of disparities according to grades. But the presence of the highest values in disparities according to school categories indicates the existence of certain significant inequalities.

Unlike its predecessor, type 6, located to the South-West and South-East of the capital and in Mehedinţi county seems to be specific to the Southern areas of Muntenia and Oltenia, with mainly rural features, lacking important towns and displaying the highest values in school dropout and the least favourable pass rate or results. The disparities are quite strong, except in the case of results, reflecting deficiencies at teaching level. This area has had an elevated level of illiteracy in the past as well, but the values were higher (especially in Giurgiu and Călăraşi), with a predominantly economic and agricultural specialization. It is currently going through a demographics crisis the likes of which has never before been seen within Romania, mostly and firstly witnessed in an accentuated increase in age. The economic and social vulnerability of these counties is, sadly, doubled by the educational vulnerability, hence reducing the chances of catching up on said differences.

The existence of these local or regional features requires particular corrections. The educational policies demand a minimal decentralization in order to be able to remedy these noted deficiencies. The current legal paradigm cannot ensure a fair level of education, as it entails interference at administrative level, by reorganizing education system in accordance with the most efficient practices in the world, as well as changes in the curriculum, by introducing active learning content.

4. CONCLUSIONS

This study firstly highlighted the presence of certain significant territorial discrepancies from the perspective of the analysis on the students' participation in the national assessment examination at the end of secondary school, in contrast to the levelling visions exposed most often by mass-media or by the authorities. These results depend on the limits of the information used and on the analytical model proposed, which is mainly geared towards explaining territorial disparities.

The fundamental gap appears to be between the living environments, with rural areas clearly at a disadvantage, closely linked to social, economic and cultural factors, confirming the H_2 hypothesis. Absenteeism, learning difficulties, low motivation for studying, poor school outcomes, these are indicated in other sources as well as the vectors of school dropout (Merce *et al.*, 2015). Essentially, school performance inequalities are a translated form of social inequalities which, according to some analyses, are strongly correlated with other forms of inequity (Binelli, 2015). The unfavourable results of the national assessment examination in rural areas (only one third of students manage to pass the

exam, or 60% if we consider only those who actually sit the exam, as opposed to urban areas where the pass rate is adequate, somewhere around 75%, even if we take into account the total number of students) show the precariousness of the school infrastructure, including the perspective of human resources but also the lack of a coherent policy which could ensure the basic requirements for an adequate education. The rural area is severely disadvantaged due to the endemic poverty of a large number of families which exacerbated by the persistent underfinancing, leading to massive school dropout levels and a high failure rate in the national assessment examination. This emphasizes poor performance in PISA tests. Certain studies which have looked in detail at the disparities for each environment show that the degree of the inclusion of students in the education system remains proportional to the parents' income and education (Stanef, 2013).

From the study of the types described and discussed above the significant gap between the Western and Eastern parts of the country can be remembered by looking at the analysed disparities which tend to increase while following the trend, especially when we analyze the results on different categories of schools, in line with a series of social indicators which prove the existence of important disparities, especially when it comes to the expansion of facility networks, the employment rate of the active population, etc. The appearance of high results in the national assessment examination in several counties from the Eastern and Southern parts of the country is explained by a higher degree of school segregation, providing a greater selection of the students in each class while neglecting rural education.

Another highlighted element is the real dimension of the school dropout phenomenon and the functional illiteracy which is actually well above official numbers. The fact that only slightly more than 50% out of the total number of students who complete 8^{th} grade pass the national assessment examination should be a serious cause for alarm. The possibility of reallocating towards different high schools all the students who take the national evaluation examination, regardless of their results, has been proven to be an unproductive practice. Insufficient school options, often completely non-existent, and the lack of concern to enture a minimum level of knowledge for all students call for immediate action to be taken in order to to achieve an accurate and positive appraisal of the teaching staff, beyond damaging indicators such as the students taking part in all forms of school competitions.

In order to remedy the previously deficiencies emphasized, administrative coherence and a complete eradication of political interference in the education system of Romania are needed, aside from vision. Having had 24 ministries in the field in less than three decades since the fall of the totalitarian régime, the education system is far from being able to make long-term corrections. Having received minimal budgets at a European level (approximately 3% of the GDP, falling behind even Bulgaria which according to Eurostat, was allotted 4.1%), the Romanian education system does not, at least for the time being, have the financial power needed for a sustainable reform.

The results of the study point to the need for a geographical analysis of the education process, as a starting point for more in-depth studies at local level, capable of identifying the specific causality of some of the disparities reported. Geography can therefore provide significant support for the development of appropriate educational policies.

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