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Factors influencing educational choices of Romanian rural youth

This paper attempts to identify the main factors influencing the decisions regarding educational choices of rural youth from Cluj county, Romania. In order to achieve this, data collected in three waves of survey, in 2007, 2011 and 2015, were combined. The three surveys used the same methodology, thus allowing us to test the stability of the outcomes over a period of eight years, to highlight the main changes occurring in this period and to test statistically the factors of influence on a larger sample. The results show that the share of those who intend to study further slightly increased in the period 2007-2015. Regression analysis lead us to five factors that have a statistically significant influence on continuing education: the parents' attitude towards continuing education, the age, the number of siblings, the school performance and the computer skills of the respondents. Some other individual, family and locality-related variables also correlated significantly with the intention to study further. Based on the conclusions, some policy implications are discussed.

Keywords: factors influencing further studying, early school leaving, Cluj county

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Introduction

Smart, sustainable and inclusive growth are the main priorities defined by the European Union (EU) in its 'Europe 2020' strategy (EC, 2010). The results of this paper are relevant for two out of the 'smart growth' targets set for Romania (EC, 2017), namely: (a) school drop-out (early school leaving) rates below 11.3 per cent, and (b) at least 26.7 per cent of the population aged 30-34 years should have completed tertiary education. These targets are lower than those for the EU-28 Member States (below 10.0 per cent and at least 40.0 per cent respectively), as Romania is lagging behind most EU Member States with respect to these indicators.

Over the past decade, Romania has recorded a high rate of early school leavers among those aged 18-24: 18.5 per cent overall and 26.6 per cent in the rural areas in 2016 (Eurostat, 2017) – and the trends are not decreasing. The share of the Romanian population aged 30-34 with tertiary education was 25.6 per cent in 2016 (Eurostat, 2017) and has increased over the last decade. Thus the overall target of 26.7 per cent seems to be realistic, but there are no separate data for the rural areas. At the last Romanian Census (INS, 2011), the share of the rural population aged 30-34 with tertiary education was only 9.7 per cent, and 61.8 per cent of the rural population over ten years old had a low level of education (at most, lower secondary school). The quality of education is lower in rural areas due to the undeveloped educational infrastructure and the inadequate number, lower qualification and high turnover of the teaching staff. By grouping schools, the primary and secondary schools in rural areas became less accessible, and several pupils have to commute every day (EC, 2006; Bertolini *et al.*, 2008).

Poorly-educated people face more difficulties in meeting job requirements and earn less when employed; thus, the likelihood of them becoming poor is much higher than for their better educated peers (Kertesi and Varga, 2005; Berryman *et al.*, 2007; Ékes, 2007; Fazakas and Kézdi, 2007; Bertolini *et al.*, 2008; OECD, 2009). A World Bank report on Romanian labour market vulnerabilities (WB, 2008) pointed out that "returns to schooling remain low for those with less-than-tertiary education" (p.23), and those who complete

tertiary education earn on average 55 per cent higher salaries than those who completed only basic education. OECD (2009) shows that the school-to-work transition is easier for youth who have obtained at least an upper secondary school qualification. Educational level was also found to play an important role in non-farm diversification (Meyer *et al.*, 2008). Tudor (2015) considers the increase of the stock of knowledge and professional abilities of the rural population a potential way to increase resilience, as it allows an increasing occupational mobility.

Ginzberg (1977) outlined three distinct stages or periods in the career-choice process: the fantasy stage (childhood before age 11), the tentative stage (from ages 11 to 17) when the individual becomes more aware of work requirements and of his/her own abilities and values and makes decisions regarding vocational likes and dislikes, and the realistic stage (ages 17 to young adult), when the person, after narrowing his/her choices to a few possibilities, selects a job or a specialised training.

Studies of educational inequalities correlate academic success and access to higher education with several factors. One is family background, the most important aspect being the parents' education (Boudon, 1974; Bourdieu and Passeron, 1990; Coleman, 1990; Jigău and Surdu, 2002; Dávid-Kacsó, 2010; Jakimovski, 2010; Voicu and Vasile, 2010). Women's education is positively associated with investments in children's education (WB, 2007). Being born in the rural area is associated with a significant lower probability to attend and graduate from university courses (Voicu and Vasile, 2010), and rural location significantly increased the risk of school failure for girls (Dávid-Kacsó, 2010). Because continuing education means extra costs for rural families (paying for travel to the city and/or accommodation), the parents' approach and the financial welfare of the family have an important influence on the decision regarding continuing education (Jigău and Surdu, 2002; Kapitány *et al.*, 2005; Jakimovski, 2010; Vincze and Harbula, 2011).

A higher rate of school abandonment was registered in rural schools with a higher share of Roma children. The school advancement of Roma children is hindered by several factors, such as the parents' low level of and negative attitude towards education, poor housing conditions, family tra-

ditions (nomadic way of life or early-age marriage of girls), lack of identity documents, the deficit of qualified teachers and a high turnover of teaching staff (Jigău and Surdu, 2002; Vincze and Harbula, 2011).

Poor employment opportunities may reduce the returns to education in rural regions and can reinforce the tendency to underinvest in education. The migration of highly-educated towards places with high concentrations of people with similar skills (mostly urban areas) may further decrease the return to education in rural areas (Green and Hardill, 2003; Bertolini *et al.*, 2008). Romanian rural young people have a strong preference for living and working in the urban area (Kerekes and Pakucs, 2013). In the words of older farmers, “young people don’t want to be the slaves of the land and of the animals” (Vincze *et al.*, 2005. p.283).

The aim of this paper is to identify the main factors influencing the decisions regarding educational choices of rural youth from Cluj county, Romania. Based on the available evidence, we hypothesise that individual factors (such as the age, the gender and the school performance of the young person), family factors (the parents’ educational level and their attitude towards education, the number of siblings) and locality-related factors (remoteness, level of development, ethnic structure) influence the decision related to continuing education.

Methodology

Our analysis uses primary data collected through three waves of survey carried out among rural young people from Cluj county, Romania. Empirical data were collected in 2007, 2011 and 2015, in the eighth forms of 31 lower secondary schools from 21 communes (28 per cent of the communes in Cluj county).

The main reason to choose pupils from the eighth form (the last year of the lower secondary school, also called *gymnasium* in Romania) is that in most rural localities that is the highest level of schooling which can be achieved locally. Another reason behind this choice is that the school enrolment rate of young people aged 15-18 (corresponding to higher secondary education) is much lower than those aged 11-14 (corresponding to lower secondary education). In 2015 the difference was over 12 percentage points, i.e. 78.2 per cent versus 90.4 per cent (INS, 2017), showing that a substantial share of the young people quit education after completing lower secondary education. Our respondents belong the 13-17 years’ age group, thus they are in the tentative stage according to Ginzberg (1977), when young people are more aware of the consequences of their decisions regarding educational choices.

The communes were selected using the following criteria: accessibility (measured by the average time to reach the county capital city Cluj-Napoca by road and the existence of a railway station on the territory of the commune)¹, the

geographical location (mountain areas being characterised by a lower share of arable land), the size and age structure of the population (measured by number of inhabitants and the share of those aged 0-14 years in the total population), as well as the level of development, measured with the complex development coefficient (CDC) calculated both from six and twelve indicators, as described by Kerekes (2005). For all indicators, commune-level (LAU 2) data from 2002 were used, the year of the most recent Census at the time of the first round of the survey (2007). The 21 selected communes present a great variety, but the averages of the chosen indicators for the sample are very close to the county-level averages calculated for all communes (Table 1).

The following main issues were tackled in the questionnaire: choice for continuing education, aspiration for university studies, chosen profession and future place (locality) of work. In addition, questions referred to the age, gender, health status, domicile, school results, opinion about the school, main values, family structure, educational level of the parents and siblings, parents’ occupation, and the size and structure of the family farm.

A total of 1,280 pupils (646 female and 634 male) completed the questionnaires. The 2007 survey involved 170 female and 169 male pupils from 26 schools from 19 communes. In 2011, when 256 female and 229 male pupils were surveyed, two additional communes were added in order to compensate for the decrease of the number of pupils in the originally selected communes. In 2015, the 220 female and 236 male pupils were drawn from 29 schools from 20 communes, leaving out one of the two schools added in 2011. The number of schools visited varies because the classes can be regrouped within the different village schools according to the number of children in the respective age group.

Results from 2007 and 2011 were published by Kerekes (2007, 2013) and Kerekes and Pakucs (2013), where further details can be found about the preliminary results and the research methodology. The current article analyses the factors influencing the decision regarding continuing education using a database composed of all responses collected during the three waves, completed with data related to the characteristics of the communes gathered from the Tempo Online database of the National Institute of Statistics.

From all the available data, we have selected those indicators which, based on the results of the literature review and in our own judgement, could be influential for continuing

Table 1: The values of the indicators used for selection at sample level, compared to Cluj county averages.

Indicator	Sample average (n=21)	County average (n=75)	Distribution of the communes from the sample within all communes from Cluj county, by quintile				
			Q1	Q2	Q3	Q4	Q5
Share of arable land, per cent	44.6	43.4	5	6	2	4	4
Number of inhabitants	3,282	3,068	5	5	4	5	2
Share of the population aged 0-14, per cent	16.2	15.8	6	3	3	4	4
CDC ₆	0.2810	0.2810	4	3	6	2	6
CDC ₁₂	0.3639	0.3543	6	1	6	4	4

Source: own calculations

¹ For calculating accessibility, we did not consider distances expressed in kilometres, because distances to Cluj-Napoca from the different villages within the same commune differ greatly. Five communes from the sample can be reached within 30 minutes by car, nine communes between 30-60 minutes and six of them in over one hour. Four of the communes from the sample have operational railway stations (19 per cent), while the county average is 21 per cent (16 out of the 75 communes).

education. We grouped these potential factors of influence into four groups:

- *Individual characteristics of the respondent*, such as the gender, age, school performance, computer skills, and values (the importance of being educated, having a family and a job);
- *Family characteristics*, such as the educational level of parents, the attitude of parents towards the education of their children and the number of siblings;
- *Data related to the localities where the respondents live*: the size of the commune, its demographic and ethnic structure (the share of the Roma population), its distance from Cluj-Napoca (the county capital city), its land structure (the share of forests);
- *School-related factors*, such as the number of teachers, the number of school-age children per teaching staff, the share of lower secondary school graduates and the distance from the nearest school.

Data were processed with the SPSS program (IBM Corporation, Armonk, New York, USA). Descriptive statistics (frequencies, shares and crosstab analysis and linear regression) were used to identify the main factors of influence.

Results

Influence of the respondents' individual characteristics

About three quarters of the pupils (922) were living in the same locality as the school and 358 commuted to school from neighbouring villages or – as in the case of some pupils from two schools located in mountain villages – they were staying in the school college during the week, because they live too far to commute daily.

Continuing education is the choice for 95.2 per cent of the pupils and 4.8 per cent plan to quit education after completing the eighth year of study. Of the respondents, 79.6 per cent would like to study further in a high school and 15.6 per cent in a vocational school. Because of the transformation of vocational schools into technical high schools in the 2009/2010 school year, no choice for vocational school was registered in 2011 but, after some more reforms, in the school year 2014/2015 studying in a vocational school was again an option. There are statistically significant differences among the different waves: in 2007, the share of those opting to quit education was bigger, while in 2015 more pupils were opting for vocational education.

Answers related to continuing education and the type of school chosen are significantly related to the gender of the respondents (Pearson Chi-Square=0.000). Girls are more likely to continue education (87.4 per cent chose high school, 9.0 per cent vocational school) and only 3.6 per cent planned to drop out. Boys also prefer high school (71.8 per cent), but a much higher share (22.3 per cent) chose vocational school and plan to quit school (6.0 per cent). The preference for high school has increased both for girls (from 79.5 per cent in 2007 to 81.6 per cent in 2015) and boys (from 54.5 per cent in 2007 to 59.1 per cent in 2015),

as well as for vocational school (from 13.7 per cent in 2007 to 16.1 per cent in 2015 for girls and from 32.7 per cent in 2007 to 37.0 per cent in 2015 for boys), both contributing to the decreasing share of those who plan to drop out of school.

Regarding their wish to enrol for university studies, 65.1 per cent of the respondents gave an affirmative and 34.9 per cent gave a negative answer. The inconsistency between the choice for university studies and the preferred profession (a different item from the questionnaire) suggests that many respondents have no information about the professions universities qualify for. Gender influence is evident in this case, too: 78.2 per cent of girls want to go to university compared to 51.9 per cent of boys (Pearson Chi-Square=0.000).

We present in Table 2 the correlation coefficients between continuing education and some individual characteristics which proved to be statistically significant.

Computer literacy increased over the period 2007–2011 from 54.3 per cent to 81.5 per cent, and then declined slightly to 78.5 per cent in 2015, but this small decrease is not statistically significant. Altogether in the three waves 72.8 per cent of the pupils (72.2 per cent of the girls and 73.5 per cent of the boys) declared that they can use a computer (for verification, we also asked them to list some programmes they are using). Computer skills and continuing education proved to be positively correlated (Pearson Correlation=0.236).

The age of respondents varied from 13 to 17 years, but 91.1 per cent of them were 14 or 15 years old. There is a negative correlation between age and the educational choice; older pupils opted to a greater degree for vocational school or for quitting education.

School performance was also relevant. From the average grades obtained by the pupils in the seventh form (as declared by the respondents in the questionnaire) we formed three categories: good results (over an average of 8.5) were achieved by 50.1 per cent of the respondents, medium results (7.0–8.5) by 40.7 per cent and poor results (below 7.0) by 9.2 per cent. A larger share of those with good results continue education in high schools and those with poor results

Table 2: Correlation between continuing education in a high school or a vocational school and the respondents' individual characteristics.

Characteristic	Continuing education (1=yes, 0=no)		
	Pearson correlation	Sig. (2-tailed)	N
Computer skills (1=yes, 0=no)	0.236	0.000	1,234
Age (in years)	-0.213	0.000	1,248
School performance (3=good, average over 8.50, 2=medium (7.00-8.50), 1=poor, average lower than 7.00)	0.187	0.000	1,044
Planned age of starting to work (in years)	0.128	0.000	1,164
Importance of being educated (1=very important to 3=not important)	-0.111	0.000	1,232
Importance of having a job (1=very important to 3=not important)	-0.101	0.000	1,239
School is easy (1=easy to 3=difficult)	-0.065	0.026	1,182
Importance of establishing a family (1=very important to 3=unimportant)	-0.057	0.045	1,232

Source: own calculations

drop out from school to a much higher degree than the average (Pearson Correlation=0.187).

The age when the respondents plan to start working is also positively correlated with the decision to continue education, which is a realistic expectation, as those who stay longer in education will enter the labour market when they are older.

The pupils were asked to express their opinion regarding some value-related issues. Being educated is very important for 84.5 per cent of them, while 14.3 per cent consider it important and only 1.1 per cent believe that it is not important. However, the share of those who believe education is very important has declined from 87-89 per cent in 2007 and 2011 to 78.4 per cent in 2015. There is a statistically significant correlation between the importance given to being educated and the choice to study further. The importance of other values, such as having a job or establishing a family, is also correlated with continuing education.

The final individual characteristic which was statistically significantly correlated with continuing education was the ease of learning for the respondent. As expected, those who consider school difficult are more likely to drop out.

Influence of the respondents' family characteristics

The highest share (38.0 per cent) of the respondents are part of families composed of four people, typically formed by the parents and two children (29.7 per cent); 23.3 per cent of the families have five members and in 20.8 per cent at least six people live together. The largest household has 14 members.

Regarding the attitude of their parents to further education, 89.1 per cent of the pupils answered that both of their parents want them to study further and only 13 respondents, of which 11 were boys, declared that neither of their parents wants them to continue education. Naturally, these latter pupils all declared that they would quit education. We scored parents' agreement on a scale from 0 (none of the parents agree with further education) to 4 (both parents agree). Intermediary values were given as follows: 1=one

parent does not agree and the respondent is undecided about the other parent's opinion, 2=one parent agrees, the other does not, 3=one parent agrees and the respondent is undecided about the other parent's opinion. Parents' agreement proved to have the strongest correlation (Pearson Correlation=0.406) with the decision regarding further education (Table 3).

Among the pupils, 23.3 per cent were not aware of the educational level of their parents. Of the mothers, 12.7 per cent have completed tertiary education, compared to 9.3 per cent of the fathers, while similar shares of each have completed high school with baccalaureate exam (27.8 per cent of the mothers and 29.1 per cent of the fathers) and ten years of education (23.4 per cent of the mothers and 20.4 per cent of the fathers). Vocational school was mostly attended by the fathers (25.4 per cent, compared to 11.6 per cent of the mothers). The share of the parents with at most lower secondary education (eight years of schooling or less) is also rather high (24.4 per cent of the mothers and 15.9 per cent of the fathers) and has increased over the years, from 13.5 per cent in 2007 to 30.5 per cent in 2015 for mothers and 14.0 per cent in 2007 to 20.5 per cent in 2015 for fathers. The decision to continue education correlates with the educational level of both parents. The negative sign in Table 3 is due to the decreasing scale attributed to this indicator (from 1=tertiary education to 5=at most lower secondary education). In addition, children of more educated parents opted to a higher degree for high school than those of the less educated parents.

Another important family characteristic is the number of siblings. Among the respondents, 48.0 per cent have one brother or sister, 18.2 per cent have two and 16.6 per cent have three or more, while 17.3 per cent have no siblings at all. There was a statistically significant correlation between the number of siblings and the decision to study further: those who have more siblings are less willing to continue education.

Combined effect of the individual and family factors

To calculate the combined effect of the individual and family factors influencing the educational choices of rural youth, regression analysis was performed with the SPSS program. The model summary is presented in Table 4 and the coefficients in Table 5. Only five variables out of the individual and family characteristics discussed above were statistically significant. The R^2 of the best fitting model explained was 0.236, and the best explanatory variable proved to be the parents' agreement to continue education ($R^2=0.187$), followed by age ($R^2=0.026$), the number of siblings ($R^2=0.014$), school performance ($R^2=0.009$) and computer skills ($R^2=0.004$).

Influence of the locality and school characteristics

Of the 21 communes in the survey, 19 were included in all three waves, Gilău in 2011 and 2015, and Țaga only in 2011. All these communes are composed of more than one

Table 3: Correlation between continuing education in a high school or a vocational school and the characteristics of the respondents' family.

Characteristic	Continuing education (1=yes, 0=no)		N
	Pearson correlation	Sig. (2-tailed)	
Parents' agreement to continue education (0=both parents no, 1=one parent no, the other undecided, 2=one parent yes, the other no, 3=one parent yes, the other undecided, 4=both parents yes)	0.406	0.000	1194
Fathers' education (1=tertiary education to 5=utmost lower secondary education)	-0.133	0.000	967
Number of siblings	-0.127	0.000	1253
Mothers' education (1 = tertiary education to 5 = lower secondary or less education)	-0.098	0.002	1023

Source: own calculations

Table 4: Summary of the linear regression model for the dependent variable: continuing education (high school or vocational school).

Model	R	R ²	Adjusted R ²	SE of the estimate	Change statistics				
					R ² change	F change	df1	df2	Sig. F change
1	0.432 ^a	0.187	0.186	0.127	0.187	228.442	1	993	0.000
2	0.461 ^b	0.213	0.211	0.125	0.026	32.636	1	992	0.000
3	0.476 ^c	0.226	0.224	0.124	0.014	17.367	1	991	0.000
4	0.486 ^d	0.236	0.233	0.123	0.009	12.154	1	990	0.001
5	0.490 ^e	0.240	0.236	0.123	0.004	5.057	1	989	0.025

Predictors: ^a (constant), parents' agreement to continue education; ^b (constant), parents' agreement to continue education, age; ^c (constant), parents' agreement to continue education, age, number of siblings; ^d (constant), parents' agreement to continue education, age, number of siblings, school performance; ^e (constant), parents' agreement to continue education, age, number of siblings, school performance, computer skills

Source: own calculations

Table 5: Coefficients of the linear regression model for the dependent variable: continuing education (high school or vocational school).

Model no.	Unstandardised coefficients		Standardised coefficients	t	Sig.	Correlations			Collinearity statistics	
	B	SE	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	0.464	0.034		13.500	0.000					
Parents' agreement	0.133	0.009	0.432	15.114	0.000	0.432	0.432	0.432	1.000	1.000
2 (Constant)	0.996	0.099		10.050	0.000					
Parents' agreement	0.128	0.009	0.417	14.743	0.000	0.432	0.424	0.415	0.991	1.009
Age	-0.036	0.006	-0.162	-5.713	0.000	-0.201	-0.178	-0.161	0.991	1.009
3 (Constant)	0.976	0.098		9.912	0.000					
Parents' agreement	0.125	0.009	0.407	14.451	0.000	0.432	0.417	0.404	0.984	1.017
Age	-0.033	0.006	-0.150	-5.322	0.000	-0.201	-0.167	-0.149	0.981	1.019
Number of siblings	-0.002	0.000	-0.118	-4.167	0.000	-0.172	-0.131	-0.116	0.981	1.019
4 (Constant)	0.892	0.101		8.854	0.000					
Parents' agreement	0.122	0.009	0.398	14.137	0.000	0.432	0.410	0.393	0.975	1.026
Age	-0.030	0.006	-0.137	-4.825	0.000	-0.201	-0.152	-0.134	0.963	1.038
Number of siblings	-0.002	0.000	-0.114	-4.044	0.000	-0.172	-0.127	-0.112	0.980	1.021
School performance	0.021	0.006	0.099	3.486	0.001	0.170	0.110	0.097	0.966	1.035
5 (Constant)	0.870	0.101		8.604	0.000					
Parents' agreement	0.122	0.009	0.395	14.072	0.000	0.432	0.408	0.390	0.974	1.027
Age	-0.029	0.006	-0.132	-4.654	0.000	-0.201	-0.146	-0.129	0.958	1.044
Number of siblings	-0.002	0.000	-0.113	-4.023	0.000	-0.172	-0.127	-0.112	0.980	1.021
School performance	0.019	0.006	0.087	3.057	0.002	0.170	0.097	0.085	0.938	1.066
Computer skills	0.021	0.009	0.064	2.249	0.025	0.124	0.071	0.062	0.957	1.045

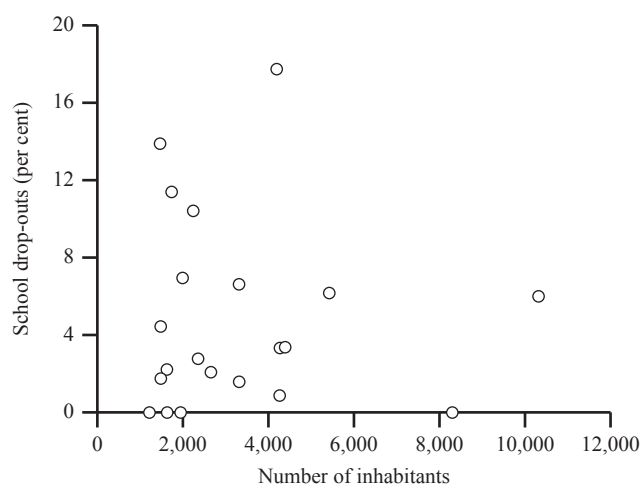
Source: own calculations

village. Primary schools operate in more localities, while lower secondary schools (fifth to eighth forms) operate usually in the commune centre and in the villages with a higher number of children from the respective age groups. In all three waves, we visited all schools where eighth form children were studying, thus the total number of villages reached was 33 (26 in 2007 and 2011, 29 in 2015). As most statistical data are only available at the commune (LAU 2) level, we characterise the communes, and not the villages, as localities of origin.

The first commune-specific indicator we tested is the number of inhabitants, which in the Census from 2011 ranged from 1,218 (Palatca) to 10,317 (Baciu). Our hypothesis was that settlement size would have a positive effect on children's decision to continue education but, according to our data (Figure 1), the number of inhabitants does not correlate with the share of school drop-outs ($R^2=0.001$), calculated as an average of the pupils from the respective commune who do not want to continue education, nor with the overall educational choice ($R^2=0.012$), calculated as a weighted average of the chosen school type (2=high school, 1=vocational school and 0=no school).

The vitality index of the commune (calculated as the ratio of births to deaths) correlated neither with the share of

the school drop-outs ($R^2=0.001$) nor with the educational choice ($R^2=0.002$). The only population-related characteristic which proved to be relevant regarding the educational outcomes is the share of Roma population within the total population of the commune. There was a negative relation-

**Figure 1:** The percentage of school drop-outs according to the total number of inhabitants in the commune.

Data sources: INS (2017) and own research

ship (Figure 2) between the share of Roma population and the share of gymnasium (lower secondary school) graduates among the 10-14 years old ($R^2=0.268$). Successful graduation is a precondition for further studying.

The share of the Roma population is significantly correlated (Figure 3) with the share of those who plan to drop out after graduating lower secondary school ($R^2=0.178$), as well as with the educational choice (high school, vocational school or no school) ($R^2=0.107$).

Other indicators tested were intended to measure the geographical remoteness of the communes: the distance to the county capital city, Cluj-Napoca, the distance to the nearest high school and the share of woodland in total land cover (as a proxy for mountain areas). Correlation coefficients among the distance to the nearest high school and the distance to Cluj-Napoca were calculated both with the individual answers and with the commune-level aggregated values related to continuing education and the chosen school

type. Among these, only between the distance to the nearest high school and the individual-level educational choice (high school, vocational school and no school) was a very weak negative correlation found (Pearson Correlation = -0.067, statistically significant at the 0.05 level), showing that the long distance can be an obstacle for continuing education in a high school. The same conclusion can be drawn from Figure 4, which shows the share of children who continue to study (calculated at commune level), according to the distance to the nearest high school, where the negative influence can be observed, especially for longer distances (over 21 km).

The share of woodland in total land cover correlates (Figure 5) with the commune-level educational choice ($R^2=0.138$). As the high share of woodland is characteristic of mountain areas, we arrive to the somehow contra-intuitive result that young people from mountain areas prefer high schools more than the average.

One further commune-level characteristic which was statistically significant is related to the local school system. The share of gymnasium graduates among 10-14 years old is decreasing as the number of children per gymnasium teacher

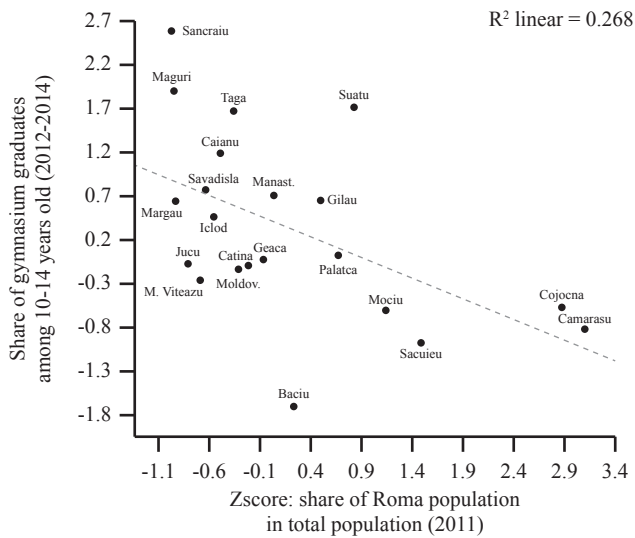


Figure 2: The share of gymnasium graduates among 10-14 years old according to the share of the Roma population in the commune. Data source: INS (2017)

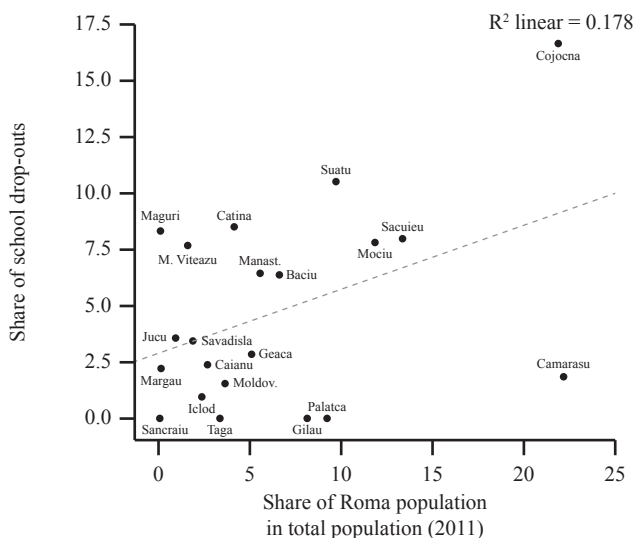


Figure 3: The percentage of school drop-outs according to the share of the Roma population in the commune.

Data sources: INS (2017) and own research

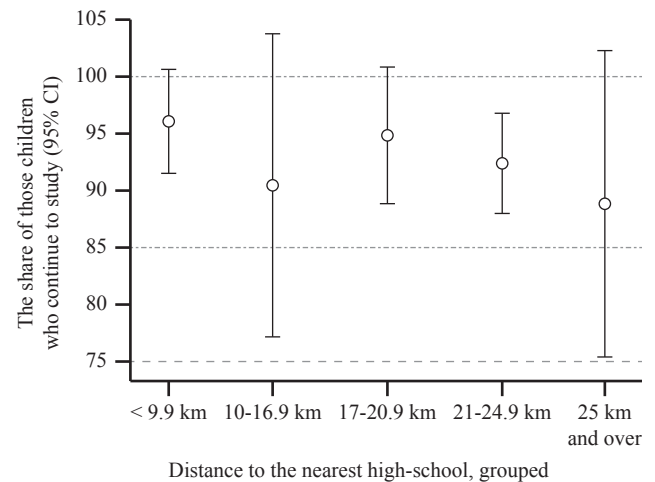


Figure 4: The percentage of pupils continuing education according to the distance from home to the nearest high school. Error bars indicate 95 per cent confidence index.

Data sources: INS (2017) and own research

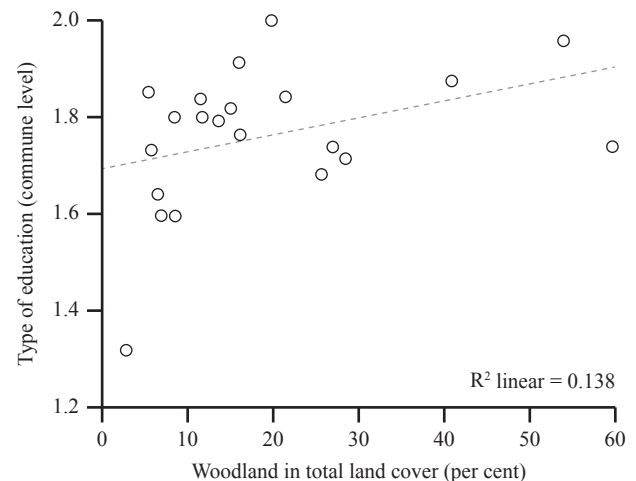


Figure 5: Educational choices of pupils according to the share of woodland in the commune by land cover.

Data sources: INS (2017) and own research

increases ($R^2=0.258$), showing the importance of teachers' attention for the performance of the pupils (Figure 6). A high number of children per teacher can also signal that some of the teachers have their main job in a school located in a different commune, which also means a lower level of teachers' involvement.

Discussion and conclusions

The low level of education of the rural population in Romania and the alarmingly high rate of early school leavers among those aged 18-24 in the rural area requires both researchers and policy makers to try to understand the causes behind these unwanted phenomena. Our paper offers some hints, based on empirical research carried out in three waves over a period of eight years, reaching 1,280 young people in 21 communes of Cluj county.

Our first result is that quite a substantial share (9.8 per cent of the pupils in 2007, and 3.1 per cent in 2011 and 2015) do not want to continue their education after completing the eighth form (lower secondary education), which means that they will have no professional qualification and their chances of gaining employment outside agriculture are very low.

The educational choices of rural youth from Cluj county have changed during the period 2007-2015. The share of those who declared they want to continue education increased by six percentage points from 2007 (when the Romanian economy was growing) to 2011 (just after the global economic crisis), which supports the view that in an economic slowdown young people are more likely to stay in education than look for work (OECD, 2009). In the period 2011-2015, characterised by economic recovery, the share of planned school drop-outs stabilised at around 3 per cent. Those who do not want to continue education explained their choice with the low school achievements, the negative feelings towards school, the lack of money, the parent's negative attitude towards continuing education or their own wish to work on the family farm.

Background information collected through the questionnaire and official statistical data allows us to identify the factors which influence the choice of a young person from a rural area to study further or not (Figure 7).

Regression analysis lead us to five factors having a significant influence on continuing education: the parents' attitude towards continuing education, the age, the number of siblings, the school performance and the computer skills of the respondents. Other variables, such as the parent's education, the age when the respondents plan to start working, the importance given to some values (being educated, having a job and establishing a family) also correlate (one-by-one) with the decision to continue education. Gender significantly influences the choice of a specific school type (high school for girls and vocational school for boys to a greater degree), and the share of girls who would like to enter tertiary education is also significantly higher than for boys. Even though these variables were not statistically significant in our regression model, we believe that they should be taken into account as factors of influence by projects addressing the improvement of rural education.

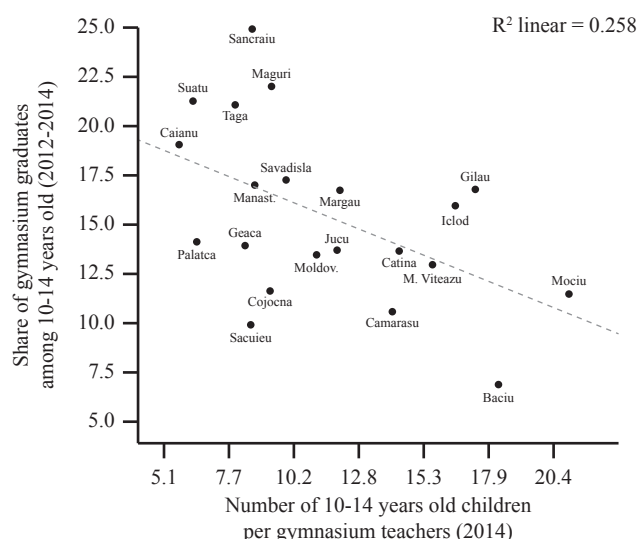


Figure 6: The share of gymnasium graduates among 10-14 years old according to the number of 10-14 years old children per gymnasium teacher.

Data source: INS (2017)

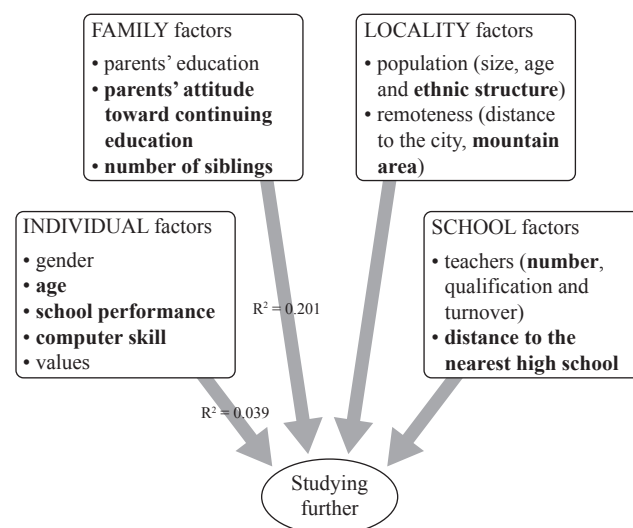


Figure 7: Factors influencing pupils' decision to continue education.

Source: own composition

Our results related to the importance of family characteristics are strongly supported by the literature cited above. The negative attitude of the parents and the number of siblings are closely associated with the financial welfare of the family. Larger families are more likely to face poverty, which can be an obstacle for continuing education. Poverty can also be a reason behind the negative attitude of the parents towards further education, because of the costs implied.

The negative influence of age was expected, as older pupils are usually those who had to repeat a year, or who interrupted education for a while and who are therefore less likely to continue education after graduating lower secondary school.

School performance indicates the interest of the young person towards education, thus the positive influence of this factor is self-explanatory. Still, it is important to point out this relationship, as poor performance at school can signal already at an early age the risk of school drop-out and the

need for intervention by teachers and parents. The positive influence of computer skills could be considered as a side effect of school performance, but the correlation between the two is quite weak (Pearson Correlation=0.198), thus we can assume that the development of computer skills can be a way to prevent the school drop-out of pupils with lower general school performance.

Concerning the influence of commune-level characteristics, our results are consistent with those of Jigău and Surdu (2002), who concluded that general locality-related indicators, such as the number of inhabitants, the distance to the closest city, the development level and the occupational structure of the locality do not have a significant influence on school abandonment.

Being a sensitive issue, we did not ask questions regarding the ethnic background of our respondents, thus we cannot differentiate between the options of Roma and non-Roma pupils. Still, we can state that in the communes with a high percentage of Roma population the share of school drop-out is also higher, confirming the results of earlier studies regarding the educational disadvantages faced by the Roma community.

The availability and the quality of education in the locality of domicile have a positive influence on the decision to study further. Qualified and committed teachers who spend enough time with each child could contribute in the prevention of school drop-out. The distance to the closest high school influences in a negative way the decision to continue education in a high school, meaning that pupils from more remote villages need extra support to overcome the negative impact of commuting.

To ensure a well-trained workforce for a knowledge-based, innovative economy, all children, including those from remote rural areas, must have access to quality education. Pre-school, primary and lower secondary school education must be organised as close as possible to where the children live, because transportation time and cost are limiting factors of school attendance.

Recognising the importance of parents' support in the decision regarding continuing education, educational policies must address the families in need, ensuring that no children are left out of education because of financial hardship or lack of information.

Recent strategies elaborated by the Romanian Ministry of Education (MEN, 2015, 2017) show that the authorities are aware of the problems faced by rural young people (higher rate of school failure and early school leaving, lower rate of successful baccalaureate exams, and lower rate of participation at all levels of education than for urban young people). Several measures have been proposed, starting from the modernisation of the educational infrastructure (e.g. 60 per cent of rural schools have no libraries and 72 per cent have no laboratories), to improve school transportation and accommodation facilities for those who have to travel to school, but also to recruit teachers willing to serve in more remote areas, to organise afterschool activities and to involve parents of children at risk of school abandonment. The long-term impact of these measures will depend on the resources allocated to and the continuity of the programmes implemented.

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