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ROMA EDUCATION IN COMPARATIVE PERSPECTIVE

FINDINGS FROM THE UNDP/WORLD BANK/EC REGIONAL ROMA SURVEY

Roma Inclusion Working Papers

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Contents

The author ... 3
Acknowledgements ... 3
List of figures ... 6
List of tables ... 7
List of boxes ... 7
Abstract ... 8
1. Introduction and background ... 9
2. Data and methods ... 14
3. Trends in Roma education: monitoring school attainment and youth literacy ... 18
3.1 Trends in educational attainment: 2004 and 2011 ... 18
3.2 Trends in youth literacy: 2004 and 2011 ... 24
4. School attendance ... 31
4.1 Pre-school attendance ... 31
4.2 School attendance ... 37
4.3 Early leavers from education and training ... 49
5. Romani Čhib and education ... 52
5.1 Multilingual Roma households ... 52
5.2 Romani Čhib and formal education ... 58
5.3 Adequate language support beyond Romani language teaching ... 60
6. Segregation in education ... 63
6.1 Ethnic segregation in regular schools and classes ... 63
6.2 Overrepresentation in special schools ... 66
6.3 Twofold segregation: Special schools with a predominantly Roma student body ... 71
7. A differentiated view on educational disadvantages: predictors of school dropout and special schooling ... 72
7.1 Predictors of school dropout in Central and Southeast Europe ... 72
7.2 Predictors of special school experience in the Czech Republic and Slovakia ... 77
8. Conclusions and recommendations ... 82
References ... 90
Annex ... 100

List of abbreviations

EACEA	Education Audiovisual and Culture Executive Agency
EC	European Commission
ECCE	Early Childhood Care and Education
FRA	Fundamental Rights Agency
IEA	International Association for the Evaluation of Educational Achievement
ISCED	International Standard Classification of Education
REF	Roma Education Fund
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNDP	United Nations Development Programme

List of figures

Figure 1: Roma population with at least primary education 20
Figure 2: Roma population with at least lower secondary education 21
Figure 3: Roma population with at least upper secondary education 23
Figure 4: Self-perceived youth literacy 27
Figure 5: Self-perceived computer literacy 28
Figure 6: Self-perceived computer literacy by gender 29
Figure 7: Pre-school attendance 33
Figure 8: Pre-school attendance by age 34
Figure 9: Pre-school experience 36
Figure 10: Never been in school 38
Figure 11a: School attendance in the Czech Republic 39
Figure 11b: School attendance in Slovakia 40
Figure 11c: School attendance in Hungary 40
Figure 11d: School attendance in Bulgaria 41
Figure 11e : School attendance in Romania 41
Figure 11f : School attendance in Bosnia and Herzegovina 42
Figure 11g: School attendance in Croatia 42
Figure 11h: School attendance in the Former Yugoslav Republic of Macedonia 43
Figure 11i: School attendance in Montenegro 43
Figure 11j: School attendance in Serbia 44
Figure 11k: School attendance in Albania 44
Figure 11l: School attendance in Moldova 45
Figure 12: Irregular school attendance 47
Figure 13: Early leavers from education and training 48
Figure 14: Multilingual Roma households 53
Figure 15: The use of Romani in the family 54
Figure 16: Language use of Roma in Bulgaria 56
Figure 17: Language use of Roma in the Former Yugoslav Republic of Macedonia 56
Figure 18: Language use of Roma in Slovakia 57
Figure 19: Language use of Roma in Romania 57
Figure 20: Linguistic socialisation of Roma infants and children 61
Figure 21: Poverty of Roma infants and children 62
Figure 22: Ethnically segregated schools 64

Figure 23: Ethnically segregated classes 65
Figure 24: Roma in special schools 68
Figure 25: Roma with health problems in special schools 69
Figure 26: Roma in ethnically segregated special schools 71

List of tables

Table 1: Individuals covered by the UNDP/World Bank/EC regional Roma survey 17
Table 2: Participation in international student assessment studies 26
Table 3: Educational attendance at the age of 6 35
Table 4: Average time spent in pre-school 37
Table 5: Educational aspirations for female education attainment (sample average) 51
Table 6: Predictors of early dropout 75
Table 7: Predictors of special school attendance 80
Table A1: Individuals covered by the UNDP/World Bank/EC Regional Roma Survey – by countries 100
Table A2: Educational attainment of persons aged 25 to 64 104
Table A3: Self-perceived literacy of persons aged 15 and older 106
Table A4: Educational aspirations: special schooling (sample average) 107
Table A5: Acceptability of preferential treatment (sample average) 107

List of boxes

Box 1: Education indicators and the EU Framework for Roma Integration Strategies 12
Box 2: Using the International Standard Classification of Education (ISCED) for assessing educational attainment 19
Box 3: Tertiary education attainment and Roma scholarship programmes 24
Box 4: The potential of PISA, TIMSS and PIRLS for monitoring achievement inequalities 25
Box 5: Measuring educational achievement of Roma students: from experiences of Serbia and Hungary 30
Box 6: Educational aspirations 50

Abstract

This working paper contains a comprehensive analysis of the UNDP/World Bank/EC Regional Roma Survey (2011), regarding the educational situation of Roma in twelve Central and Southeast European countries. By comparing data from 2004 and 2011, this paper contributes to the evaluation of the Decade of Roma Inclusion 2005-2015. Moreover, it offers a wide range of education indicators that might be used as benchmarks for the EU Framework for Roma Integration Strategies. This paper presents and contextualises key data on educational attainment, literacy, pre-school participation, school attendance, early school leaving, multilingualism and educational segregation. It shows that the Roma remain strongly disadvantaged, compared to the non-Roma, with regard to educational outcomes. In addition, there are considerable differences in this sphere between countries.

1 Introduction and background

The regime changes occurring in many Central and Southeast European countries since 1989 have had a profound impact on the region's Roma population.[1] The transition from centrally planned to market economies was accompanied by breakups of state industries and strong increases in unemployment rates. In the newly established competitive labour markets, employment positions were increasingly associated with higher qualifications, and many Roma, formerly employed as low-skilled and semi-skilled workers in state owned industries, were among the first to lose their jobs (Ringold et al. 2005). While private returns to education have been increasing (Cerych 1997, pp. 77-78), marginal economic assets and low education levels have been a barrier to labour market re-entry for many Roma. Although many countries in Central and Southeast Europe have recovered from the economic transition and successfully posted improvements, in terms of human development, inequalities have been on the rise (UNDP 1997, pp. 9-11). In the decade following the economic transition, a person's level of education had increasingly defined individual and household incomes, as well as the probability of falling into poverty (Berryman 2000, p. 2). Social upward mobility seems to be more and more determined by family assets, in terms of social, economic and cultural capital.

Educational changes in Central and Southeast Europe can be characterised by several trends, such as the breakdown of state education monopoly, the separation of education from Marxist and Leninist ideology and the shift of decision making power towards regional and local governments, schools and parents (Cerych 1997, p. 76). In many countries, education reform came with a reduction of pre-school capacities, and the introduction of fees for such services (von Kopp 2009, p. 320). Not much research has been undertaken to determine to what extent such structural reforms have disadvantaged Roma children and youth. Kertesi & Kézdi (2005, p. 46) show that in Hungary, the rising autonomy of schools to accept or dismiss students, hand in hand with the introduction of freedom to choose schools, have strengthened educational segregation. The shifting of competencies from the national to regional and local levels gave widened space for institutional discrimination against the Roma, with their overrepresentation in special schools and classes being one of the most debated results.

1/ For practical reasons, the term 'Roma' is applied for various heterogeneous groups that might distinguish themselves along characteristics such as, for example, language, traditions, life style, social status, migration history, national affiliation or internal structures (see, for example, Urech & van den Heuvel 2011, p. 151).

Low levels of education are part and parcel of the "vicious circle of poverty and exclusion" (Ringold 2000, p. vii), and create tremendous costs to the overall economy (Bodewig et al. 2010, pp. 15-21). Given the importance of education for social upward mobility, the provision of non-discriminatory quality education for the Roma minority is expected to have a substantial impact, in terms of living conditions. Following this assumption, education has played an important role in numerous international policy documents dealing with the living conditions of Roma since the 1970s (Hornberg 2000, p. 24). Among other things, the importance of education for Roma communities was highlighted by the Council of the European Communities and the ministers of education in the resolution "*School provision for gypsy and traveller children*" of 1989, which was based on a comparative research in ten member states of the European Community (see Liégeois 1998). The educational situation of Roma has played an on-going role in EU accession discussions since the 1990s. A first monitoring mechanism, regarding the living conditions of Roma in Europe, was set up by the Council of Europe's Framework Convention for the Protection of National Minorities, which entered into force in 1998. States that have ratified the convention are obliged to ensure minority rights through combating discrimination, providing equal opportunities and promoting the culture and language of national minorities (Council of Europe, 1995).[2] Furthermore, states are obliged to monitor and report on the situation of their respective national minorities to the Council of Europe in a four-year cycle.[3] Two political frameworks have further highlighted the importance of education for Roma inclusion: the Decade of Roma Inclusion 2005-2015 and the EU Framework for National Roma Integration Strategies up to 2020. The Decade is a common effort of the governments of the Czech Republic, Slovakia, Hungary, Bulgaria, Romania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia, Albania and Spain and several international organisations to foster Roma inclusion. Monitoring mechanisms are supposed to be part of the Decade National Action Plans, developed and implemented by the participating governments (Decade Steering Committee 2004, p. 2). Education is one of four priority areas of the Decade. The establishment and extensive financial endowment of the Roma Education Fund since 2005, mirrors the importance that members of the Decade have attributed to the improvement of the educational situation of the Roma (Surdu & Friedman 2013). A third monitoring framework has recently been set up by the European Commission through the EU Framework for National Roma Integration Strategies up to 2020. The framework has underlined the importance of education as a key priority for Roma integration, and all EU member states are supposed to set up a "robust monitoring mechanism to ensure concrete results" (European Commission 2011a, p. 4). Both the Decade and the EU Framework have led to various policy documents that define goals, measures and indicators to monitor and evaluate Roma inclusion (see Box 1).

In order to provide for the increasing demand for statistical data on the living situation of Roma, and to set a frame for policy monitoring and evaluation, the United Nations

2/ Belgium, Greece, Iceland and Luxembourg have signed but not ratified the convention. Andorra, France, Monaco and Turkey have neither signed nor ratified the convention.
3/ See Council of Europe (2012, online source).

Development Programme (UNDP) pioneered Roma internationally comparative integrated household surveys in 2001 and 2004. Both studies quantified the educational marginalisation of Roma communities. Among other things, the UNDP analysis found that Roma parents strongly preferred integrated, as opposed to segregated, schooling, thus highlighting the importance of pre-school education and proficiency in the language of school instruction for Roma children (Ivanov et al. 2002, pp. 53-62). Moreover, it was found that younger Roma reported lower attainment rates than older Roma, and that educational marginalisation of Roma is closely linked to poverty and segregation (Ivanov et al. 2006, pp. 29-39).[4] The present paper builds on these experiences, analysing data from the household survey implemented in 2011 by the UNDP and the World Bank, in cooperation with the EU Fundamental Rights Agency. Unlike most present statistics on Roma education, this paper uses the International Standard Classification of Education (ISCED) to classify attainment data.[5]

Based on household data, a variety of key education indicators can be calculated and compared, such as attendance, attainment and self-perceived literacy. Other indicators that mirror the quality of teaching, or the achievement of students, are out of the scope of the present surveys. Interview-based household surveys do not offer data about the mathematical skills of students, the qualification of teachers, or the commitment of school directors and decision making mechanisms within schools. Many Roma settlements are situated in poor regions and localities that face structural disadvantages, such as a high share of unqualified teachers, poor or overcrowded schools and/or a lack of available pre-school facilities. Thus, this paper does not have the ambition to present an all-encompassing picture about the educational situation of Roma in Central and Southeast Europe. Nevertheless, it presents a fundamental stock of statistical information, contributing to a puzzle that might be complemented by student assessments, as well as research on teaching and schools. In particular, research of a qualitative nature would be valuable to further contextualise the present analysis.

This paper (like most pieces of academic research on Roma education) focuses on educational disadvantages. It is worth mentioning that a few studies have also focused on educational success: Abajo & Carrasco (2004) have investigated experiences and trajectories of schools' successes, based on semi-structured interviews with 160 Spanish Roma, and have concluded that drivers behind educational success, among others, are: experiences of integrated schooling and early educational success, teachers with high expectations, family support and appreciation, and access to positive inter-ethnic relationships. Bereményi (2007) analysed educational perceptions and pathways of Roma in Colombia, showing that the Roma in Colombia attain higher educational levels and indicate stronger aspirations for education than other minorities. In educational terms, the Roma are often perceived as the most disadvantaged minority in Europe. However, it should be mentioned that the Roma are not the only ethnic minority that experiences

4/ See also O'Higgins 2010; O'Higgins & Ivanov 2006; Milcher 2006, 2009, 2011; Milcher & Zigová 2005; UNDP 2005 for analysis of UNDP survey data relevant to education.
5/ See Box 2 for a summary of the ISCED terminology, and Milcher (2013) for an analysis of the UNDP Vulnerable Groups Survey 2004, based on ISCED.

educational deprivation. Many ethnic and language minorities all over the world face similar disadvantages (for an overview, see UNESCO 2010, pp. 149-153). Even though the patterns of educational exclusion of different ethnic minorities vary, the structural drivers, underlying these processes, might be similar for such heterogeneous groups as migrants, indigenous people and Roma.

This paper is structured as follows: the second chapter briefly introduces the data and methods used to analyse the educational situation of Roma in the region. Chapter three compares data from household surveys in 2004 and 2011, and points to trends in educational attainment and literacy of young Roma. Chapter four looks at the attendance rates of Roma and non-Roma living in close proximity to Roma households, capturing attendance rates of persons between 3 and 24 years of age. The fifth chapter explores the multilingualism found in Roma households, and points to educational challenges related to this phenomenon. Chapter six looks at the extent of educational segregation, referring to ethnic segregation in regular education and streaming into special education. Chapter seven applies multivariate statistics to shed light on the underlying factors that trigger dropout and special school attendance. The paper is thus roughly oriented to the EU Framework for Roma Integration Strategies, which presupposes that member states should:

- ensure access to education and school completion,
- widen the access to early childhood education and care,
- reduce the number of early school leavers,
- encourage secondary and tertiary education and
- prevent discrimination and segregation (European Commission 2011a, pp. 5-6).

Box 1: Education indicators and the EU Framework for Roma Integration Strategies

The call for ethnically disaggregated data collection is a usual component in any set of policy recommendations dealing with Roma inclusion. According to a widely agreed upon paradigm, progress in Roma inclusion cannot be evaluated without the collection of ethnic data (e.g. McDonald & Negrin 2010; Škobla et al. 2009). The call for the collection of data goes hand in hand with the development of indicators that are supposed to monitor Roma inclusion. Indicators are part and parcel of the Decade of Roma Inclusion Action Plans as well as the National Roma Integration Strategies, which are supposed to define state policies towards Roma inclusion. Decade member states have developed strategies and defined indicators. In most cases, however, indicators fall short of their potential to measure change (Brüggemann & Kling 2012, pp. 26-28).

In order achieve their full potential to mirror progress, stagnation or pitfalls of educational change, indicators need to fulfil several conditions:

- Indicators need to be expressed in quantitative terms. The Romanian National Roma Integration Strategy (Government of Romania 2011, Annex 2, p. 4) suggests measuring "affirmative educational conditions for early childhood development" through an indicator called the "ensured appropriate environment". The lacking operationalization of the indicator impedes measurement.
- Indicators need to be based on valid data. The Hungarian National Roma Integration Strategy (Government of Hungary 2011, p. 130) suggests measuring "development of early talent fostering, early childhood education and care" with PISA data. As PISA data provides information only about educational achievement of 15-year-olds, it is not an adequate measure for early childhood education and care.
- Indicators need to refer to a certain benchmark. The Romanian National Roma Integration Strategy (Government of Romania 2011, Annex 2, p. 6) suggests measuring the "preparation of children, particularly ones from ethnic minority groups, in early childhood" by the number of children attending kindergartens. As it is not stated how many children from ethnic minority groups already attend kindergarten, it is impossible to evaluate progress.
- Indicators need to refer to certain target values. The National Roma Integration Strategy of the Czech Republic (Government of the Czech Republic 2011, p. 19) aims to "increase the accessibility and interlinking of early care services at local level in all required socially excluded Roma localities". As it is not mentioned how this should impact on the stated share of Roma children attending pre-school facilities, it is not possible to measure whether the aim was achieved.
- Indicators need to be sensitive to educational change. The National Roma Integration Strategy of Slovakia (Government of the Slovak Republic 2011, p. 28) suggests measuring the "school attendance of Roma children in elementary schools" by the number of Roma aged 15 and older, who have completed lower secondary education as a share of all Roma aged 15 and older. Instead of defining an age group, for example students aged 16 to 22, the entire population above the age of 15 is used as the denominator. Thus, even considerable changes in education attainment, of those who recently finished school, would hardly translate into a visible change of the whole indicator.

It should not be forgotten that not all aspects of the multidimensional nature of Roma exclusion are measurable. Evaluations of qualitative nature might provide important insights and supplement the limited reach of quantitative measures. Nevertheless, if quantitative indicators are defined, they should be designed carefully in order to realise their full potential. Otherwise indicators might be harmful to, rather than a support for, Roma inclusion.

2 Data and methods

Two parallel and complementary surveys were carried out in 2011 in an effort to map the current situation of Roma in Europe : One focusing on social and economic development aspects and carried out by the UNDP and the World Bank, and one focusing on the fulfilment of key fundamental rights carried out by the EU Agency for Fundamental Rights (FRA).

The UNDP/World Bank/EC Regional Roma Survey was conducted in May-July 2011 on a random sample of Roma and non-Roma households living in areas with higher density (or concentration) of Roma populations in the EU Member States of Bulgaria, Czech Republic, Hungary, Romania, Slovakia, and the non-EU Member States of Albania, Bosnia and Herzegovina, Croatia, Former Yugoslav Republic of Macedonia, Montenegro, Republic of Moldova and Serbia.[6]

The FRA Roma Pilot Survey was conducted in May-July 2011 on a random sample of Roma and non-Roma households living in areas with higher density (or concentration) of Roma populations in the EU Member States of Bulgaria, Czech Republic, Hungary, Romania, Slovakia, France, Greece, Italy, Poland, Portugal and Spain.

The survey questionnaire was designed jointly by a team from UNDP, the World Bank and the FRA. Each survey used different questions and a core common component composed of key questions on education, employment, housing, health, free movement and migration issues, and discrimination experiences.

The UNDP/World Bank/EC Regional Roma Survey was implemented by the IPSOS polling agency and the FRA Roma Pilot Survey through Gallup Europe. Both surveys applied the same sampling methodology in countries of overlap allowing for the development of a common dataset on core indicators and ensuring comparability and consistency of results (FRA & UNDP 2012).

This working paper uses only data from the UNDP/World Bank/EC Regional Roma Survey.

In line with the methodology used in the FRA Roma Pilot Survey, the UNDP/World Bank/EC Regional Roma Survey was constructed through a three stage random representative sampling:

6/ Funded by the European Commission Directorate General for Regional and Urban Policy of the European Commission, the UNDP and the Nordic Trust Fund at the World Bank.

- All areas with an above average density of Roma were differentiated into clusters, with approximately 30 households making up one cluster (primary sampling unit). About 110 clusters were randomly chosen in each country.

- In each cluster, seven households (secondary sampling units) were interviewed using the method of random start and equal random walk. Altogether, about 750 households were interviewed by a team of two interviewers in each country.

- Information about household members was provided by the head of the household, or the person that proved to be the most knowledgeable. Questions about early childhood education were answered by the primary care taker of the children. Individual status questions and attitudes were answered by respondents over 15 years of age (tertiary sampling unit), randomly selected through the first birthday technique.

In addition to Roma households, 350 non-Roma households, situated in close proximity to Roma households, were interviewed using the same questionnaire and technique, with a selection of three or four households in each primary sampling unit. Questions regarding the education of household members were answered by the self-identified head of the household. Questions on pre-school education were answered by the primary caretaker (see Ivanov, Kagin & Kling 2012 for details).

Table 1 shows the total number of individuals covered by the survey, according to age groups that are relevant to education indicators. Due to a higher fertility and a lower life expectancy, compared to the majority, the Roma population is younger than the non-Roma population: about one out of ten Roma covered by the survey are of pre-school age (3 to 6) compared to about one out of twenty non-Roma. Also, the share of Roma of compulsory schooling age (7 to 15) is 21%, nearly twice as high as the rate of non-Roma of the same age (12%). The share of individuals in certain age groups varies between countries. A table that provides information, country by country, is attached (Annex, Table A1).

The primary dimension of comparison is between Roma and non-Roma living in close proximity to Roma households. This dimension shows the extent of educational deprivation of the Roma, in comparison to their direct neighbours. It is assumed that both groups are subject to the same regional conditions. Thus, differences between Roma and non-Roma living in close proximity to Roma households do not result from the fact that Roma often live in regions that are most affected by poverty and unemployment. A second dimension compares the educational situation of Roma (and non-Roma) in the twelve countries. This dimension shows the differences between countries, pointing to what extent the educational outcomes vary between states. A third dimension of comparison is based on Roma household data extracted from the UNDP Vulnerable Groups Survey implemented in 2004 (see Milcher & Ivanov 2004; Ivanov et al., 2006; Milcher 2013). This dimension shows to what extent the educational situation of Roma has improved, stagnated or worsened between 2004

and 2011.[7] A fourth dimension of comparison is based on national data extracted from secondary sources, such as the Eurostat or UNICEF TransMonee. This dimension shows the extent of educational deprivation of Roma and non-Roma living in close proximity to Roma households, in comparison to national averages. The differences between national averages on the one hand, and Roma as well as non-Roma living in close proximity to Roma households on the other hand, point to regional and socio-economic disparities, because Roma and non-Roma interviewed are supposed to share the same environment, social infrastructure, and labour market.

The differences between dimensions are described as statistically significant ($p < .01$) if the chance that a true null hypothesis (no difference, e.g. between pre-school attainment rates of Roma and non-Roma) being falsely rejected is less than 1%. Similarly, differences between dimensions are described as not statistically significant ($p > .01$) if the chance that a true null hypothesis (no difference) being falsely rejected is above 1%.[8] The strength of association between group affiliation (being Roma or non-Roma) and a dependent variable (e.g. school attendance) is measured by the phi coefficient. Chapter seven uses probit regressions to estimate the effects of predictor variables (e.g. pre-school experience) on dichotomous outcomes (attending school or not, attending a special school or a regular school). This allows estimating how single predictor variables influence the probability of dropout or special experience, while the effects of a set of other variables are held constant (see Ivanov, Kagin & Kling 2012 for details). Those results cannot be interpreted as causal effects, but nevertheless provide evidence about the role several background variables play vis-à-vis ethnic effects.

The majority of data, referred to in this paper, are displayed in figures. Boxes provide additional background information about certain topics related to the text.

7/ No values for 2004 are available for Slovakia as well as Moldova. For Slovakia, two independent surveys were implemented by the UNDP in 2005 and 2010, with a focus on residential segregation (see Filadelfiová et al. 2007 and Filadelfiová & Gerbery 2012). For Moldova, an independent household survey was implemented by UNDP Moldova in 2007 (see Cace et al. 2007).
8/ An alpha level of 0.01, compared to the often used alpha level of 0.05, was chosen because of the relative huge sample size, and in order to decrease the likelihood of making Type I errors (falsely rejecting the null hypothesis: no difference).

Table 1: Individuals covered by the UNDP/World Bank/EC regional Roma survey
Total number of Roma and non-Roma covered in the Czech Republic, Slovakia, Hungary, Bulgaria, Romania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia, Albania and Moldova according to age groups

Age Group	Roma		non-Roma	
0-2	3113 (7.5%)	7193 (17.4%)	475 (3.6%)	1169 (8.8%)
3-6	4080 (9.9%)		694 (5.2%)	
7-9	3000 (7.3%)	8670 (21.0%)	540 (4.1%)	1629 (12.2%)
10-12	2998 (7.3%)		558 (4.2%)	
13-15	2672 (6.5%)		531 (4.0%)	
16-18	2475 (6.0%)	6882 (16.6%)	619 (4.6%)	1780 (13.4%)
19-21	2323 (5.6%)		592 (4.4%)	
22-24	2084 (5.0%)		569 (4.3%)	
25-64	17294 (41.8%)		7108 (53.3%)	
65+	1295 (3.1%)		1640 (12.3%)	
Total	**41334**		**13326**	

Source: UNDP/World Bank/EC Regional Roma Survey 2011

3 Trends in Roma education: monitoring school attainment and youth literacy

A first empirical evaluation of the educational situation of Roma, at different points in time, is possible though a comparison of household data from the UNDP Vulnerable Groups Survey 2004 and the UNDP/World Bank/EC 2011 Regional Roma Survey. Trends in educational attainment and youth literacy indicate to what extent education systems have progressed in providing education for Roma.

3.1 Trends in educational attainment: 2004 and 2011[9]

Attainment data is commonly used to evaluate the performance of education systems, especially when no information about individual student performance or competencies is given. Educational attainment is an output variable, and reflects to what degree students have completed education levels. As education systems differ from each other, the terms primary and secondary education can reflect a very different coverage of age groups. For example, while in Germany the Grundschule (primary school) usually covers the first four grades, the Slovak základná škola (primary school) generally covers the first eight grades. Thus, the International Standard Classification of Education (ISCED) is used to compare data internationally (see Box 2).

Attainment statistics in the EU and OECD are based on labour force survey data. In the EU and the OECD, most young people attend at least upper secondary education. Statistical reports therefore usually provide a differentiated view about upper and post-secondary education (e.g. OECD 2011, pp. 39-42; Eurostat 2011, p. 203). However, the share of Roma that do not complete primary or lower secondary education in many countries in Central and Southeast Europe is considerable, and therefore an analysis of educational progress has to include these levels as well. Younger age cohorts are preferred to older age cohorts, as they inform about developments in the near past.

Figure 1 shows the share of Roma aged 14 to 20 that completed at least primary education in 2004 and 2011. Primary education in the region refers to the first four or five years

9/ In order to take into account short term changes in education, attainment is measured for specific age groups who are expected to have completed a certain educational level in the last couple of years. For example, primary education is measured for persons aged 14 to 20, and lower secondary education is measured for persons aged 17 to 23. The educational attainment of the population aged 25 to 64 is displayed in the Annex Table A2.

Box 2: Using the International Standard Classification of Education (ISCED) for assessing educational attainment

Even though education systems share many similar features, such as a period of compulsory schooling, age-homogenous classes, subject differentiation, etc., they also show certain variations in terms of structure and content. Countries differ for example in terms of time that pupils spend in primary school: in some countries what is referred to as 'primary school' includes the first four grades, while in others, the primary school contains eight grades or more. In order to compare education internationally, UNESCO has developed the International Standard Classifications of Education (ISCED). ISCED distinguishes between different levels of education, among other things, between primary education (ISCED 1), lower secondary education (ISCED 2) and upper secondary education (ISCED 3) (UNESCO 2011b, Annex pp. 26, 29, 34):

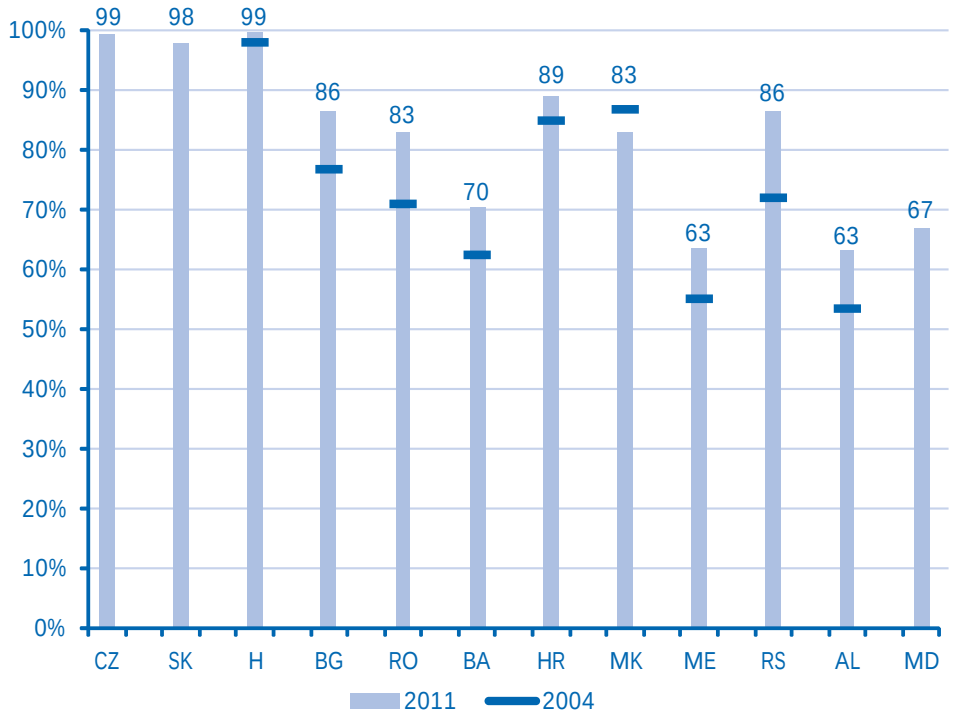
- Primary education (ISCED 1) usually starts at the age of 6, lasts between four and six years, and provides students with basic skills in reading and mathematics.
- Lower secondary education (ISCED 2) follows primary education and lasts between four and six years (students typically leave lower secondary education between the ages 14 and 16). Lower secondary education is more subject-oriented then primary education, and in many countries, the end of lower secondary education coincidences with the end of compulsory schooling.
- Upper secondary education (ISCED 3) follows lower secondary education and lasts between two and four years (students typically leave upper secondary education between the ages 17 and 20). Upper secondary education is more specialised than lower secondary education, differentiated in academic and vocational tracks, and in most countries is not compulsory.

The majority of education systems in Central and Southeast Europe consist of a single structured system with primary and lower secondary education levels (ISCED 1 + 2) integrated into one school, often referred to as the 'basic school'. Most statistical references to Roma education (see for example Revenga et al. 2002, p. 24 or the Open Society Institute 2006 pp. 6, 15) therefore do not take lower secondary education into account when referring to educational attainment, but make a distinction between primary and secondary attainment only. In this context, what is referred to as 'primary education attainment' must be translated into 'lower secondary education attainment' according to ISCED. Similarly, what is referred to as 'secondary education attainment' must be translated into 'upper secondary education attainment', according to ISCED. Using the ISCED classification gives not only the advantage that statistics will be understood internationally, but also offers a more differentiated picture on educational attainment.

of schooling, and is compulsory in all countries. The chance that people, who have not completed at least primary education, possess basic numeracy or literacy skills is rather low. Even in the poorest regions in the world, people who have not attended at least primary education are considered to be strongly marginalised (UNESCO 2010, p. 140). While nearly all Roma in the Central European Countries (the Czech Republic, Slovakia and Hungary) have completed primary education as of 2011, a considerable share of Roma in Southeast European Countries did not finish such education. In Montenegro, Albania and Moldova, more than 30% of Roma, aged 14 to 20, have not completed primary education.

Figure 1: Roma population with at least primary education

Share of Roma aged 14 to 20 who completed at least primary education (ISCED 1) in 2004 and 2011



For visual clarity, the following abbreviations were used in the graphs: AL (Albania), BA (Bosnia and Herzegovina), BG (Bulgaria), H (Hungary), HR (Republic of Croatia), CZ (Czech Republic), MD (Moldova), ME (Montenegro), MK (FYR of Macedonia), RO (Romania), RS (Republic of Serbia), and SK (Slovakia). The abbreviations are following the country codes used by EUROSTAT, http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Country_codes

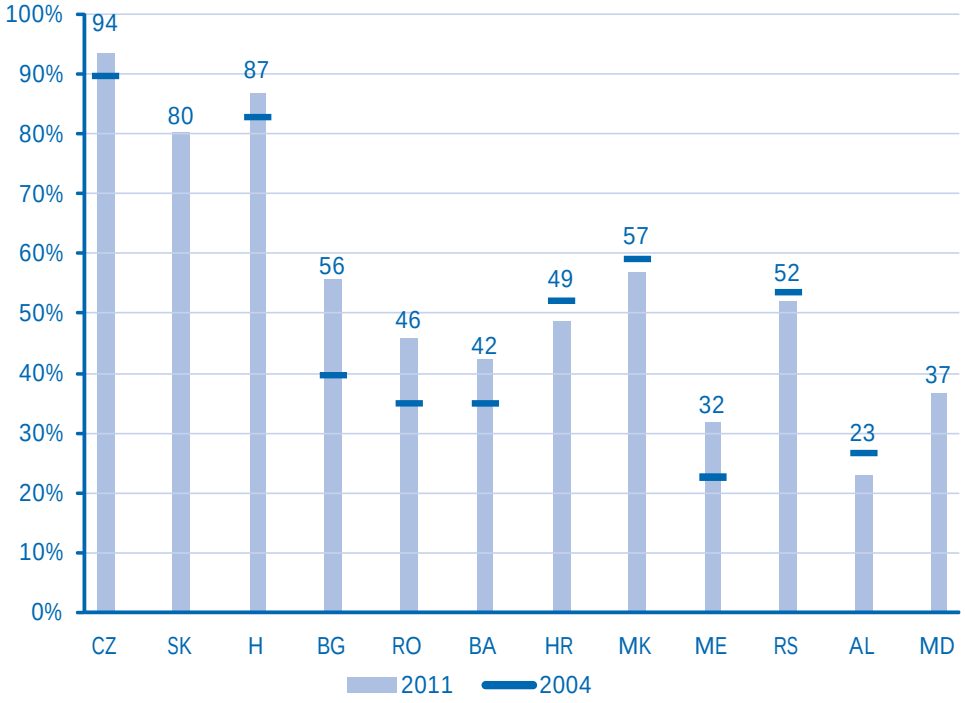
Sources: UNDP Vulnerable Groups Survey 2004, UNDP/World Bank/EC Regional Roma Survey 2011

Note: The UNDP Vulnerable Groups Survey 2004 did not cover Slovakia and Moldova. For the Czech Republic answer possibilities did not differentiate between primary and lower secondary education in 2004.

Differences in primary education attainment between 2004 and 2011 are statistically significant for Bulgaria, Romania, Serbia and Albania ($p < .01$). In all countries, a higher share of Roma aged 14 to 20 completed primary education in 2011 than in 2004: In Romania primary education was completed by 71% of Roma as of 2004 and 83% as of 2011. The primary attainment rate of Roma in Bulgaria increased 9 percentage points to 86%, in Serbia 14 percentage points to 86% and in Albania 10 percentage points to 63%. No significant gender differences were found.

Figure 2 shows the share of Roma aged 17 to 23 that have completed at least lower secondary education in 2004 and 2011. Lower secondary education in the region refers to four or five years of schooling following primary education. In many countries, the end of lower secondary education corresponds with the end of compulsory schooling. However, students who entered school later than usual, who participated in the so-called "zero year" programmes, or who repeated one or more grades, might finish compulsory schooling before attending the last year of lower secondary education. In the region, lower secondary education is a minimum requirement for skilled employ-

Figure 2: Roma population with at least lower secondary education
Share of Roma aged 17 to 23 who completed at least lower secondary education (ISCED 2) in 2004 and 2011



Sources: UNDP Vulnerable Groups Survey 2004, UNDP/World Bank/EC Regional Roma Survey 2011

Note: The UNDP Vulnerable Groups Survey 2004 did not cover Slovakia and Moldova.

ment. In the OECD context, people without lower secondary education certificates are being perceived as subject to educational poverty (Allmendinger & Leibfried 2003, p. 5). As shown in Figure 2, a high share of Roma did not complete lower secondary education in 2011. More than 80% of Roma, aged 17 to 23, have completed lower secondary education in Central European Countries. Nevertheless, in Hungary and Slovakia, where labour force surveys indicated for 2009 that just about 1% of the overall population (aged 25 to 64) did not complete lower secondary education (OECD 2011, p. 38), the share of Roma that did not achieve this education level (20% in Slovakia and 13% in Hungary) is still considerable. In Southeast European Countries an even lower share of Roma achieved lower secondary education. Lower secondary education attainment of Roma aged 17 to 23 was below 50% in Romania, Bosnia and Herzegovina, Croatia, Montenegro, Albania and Moldova, indicating that for more than one of every two young Roma in these countries, employment prospects are strongly limited.

Differences in lower secondary education attainment between 2004 and 2011 are statistically significant for Bulgaria and Romania ($p < .01$). In both counties, a higher share of Roma aged 17 to 23 have completed lower secondary education in 2011, in comparison to 2004. In Bulgaria, lower secondary education was completed by 40% of Roma as of 2004, and 56% as of 2011. The lower secondary attainment rate in Romania increased 11 percentage points to 46%. In Bulgaria, Romania, Croatia, Montenegro and Serbia, a significant higher rate of male Roma completed lower secondary education, compared to their female counterparts.

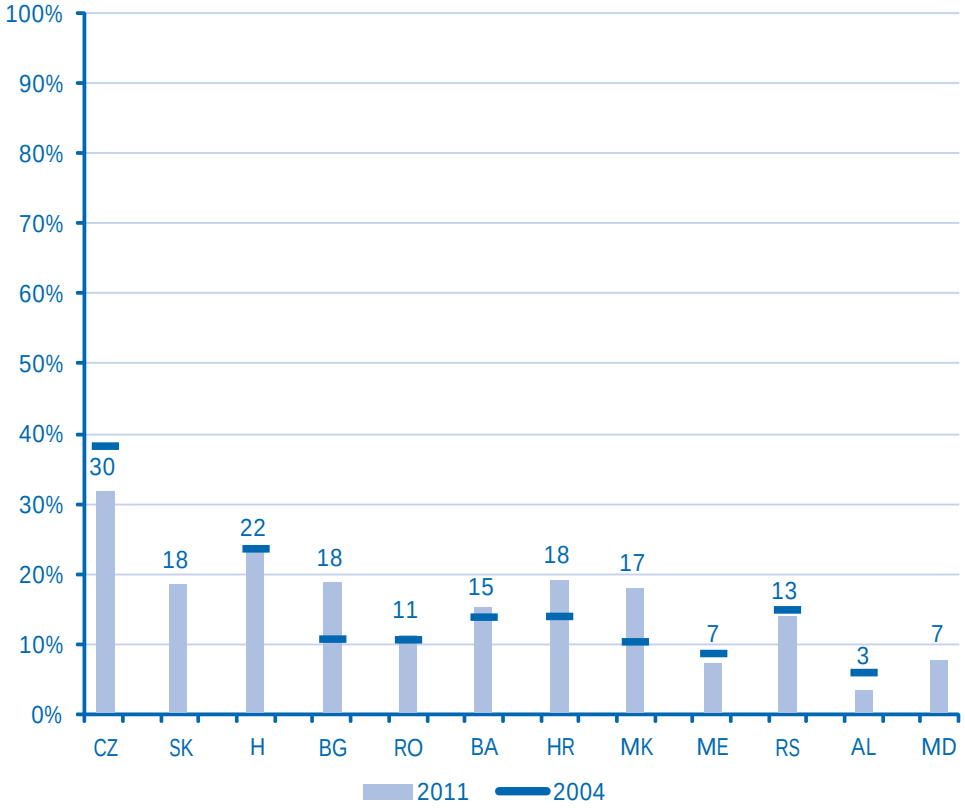
Figure 3 shows the share of Roma aged 20 to 26 that completed at least upper secondary education in 2004 and 2011. Upper secondary education in the region refers to two to four years of education, following lower secondary education. Upper secondary education is usually separated into vocational oriented tracks, which are more or less directly linked with specific occupations and general tracks, which open the way for higher education. Upper secondary education is a minimum requirement for many occupations, especially those with above average salaries. In the OECD, more than seven out of ten persons aged 25 to 64 achieved at least upper secondary education in 2009 (OECD 2011, p. 39). As shown in Figure 3, a minority of Roma aged 20 to 26 completed upper secondary education. The Czech Republic is the only country where the share of Roma completing upper secondary education reaches 30%. In Montenegro, Albania and Moldova the share is even below 10%.

Differences in upper secondary education attainment between 2004 and 2011 are statistically significant for Bulgaria and the Former Yugoslav Republic of Macedonia ($p < .01$). In both counties, a higher share of Roma aged 20 to 26 has completed upper secondary education as of 2011, in comparison to 2004: In Bulgaria upper secondary education was completed by 10% of Roma in 2004, and 18% in 2011. The upper-secondary attainment rate in Romania increased 7 percentage points to 17%. In Romania, where a higher share of Roma completed primary and lower secondary education in 2011, in comparison to 2004, no significant differences were found with regard to upper secondary education. Increased upper-secondary attainment rates in the Former Yugoslav Republic of Macedonia may be perceived as surprising, because Roma there did not

achieve higher attainment rates in primary and lower secondary education. Increased upper-secondary attainment in the FYROM might be due to a new school law (in force since school year 2009/2010) making upper secondary education compulsory and free of charge, as well as to the increasing amount of scholarships provided to Roma students who continue upper-secondary education (Eminovska & Spasovski 2012, pp. 21, 28). Bulgaria is the only country in which a significantly higher share of Roma, in the respective age groups, achieve higher attainment in primary, lower secondary and upper secondary education. In Montenegro, a significant higher percentage of male Roma completed upper secondary education, compared to their female counterparts. For other countries, no significant gender differences were found.

The number of Roma between 26 and 32 years of age with attained university education was found to be marginal in all countries surveyed. Box 3 discusses this finding.

Figure 3: Roma population with at least upper secondary education
Share of Roma aged 20 to 26 who completed at least upper secondary education (ISCED 3) in 2004 and 2011



Sources: UNDP Vulnerable Groups Survey 2004, UNDP/World Bank/EC Regional Roma Survey 2011

Note: The UNDP Vulnerable Groups Survey 2004 did not cover Slovakia and Moldova.

Box 3: Tertiary education attainment and Roma scholarship programmes

According to UNDP/World Bank/EC household data tertiary education attainment of Roma has not improved since 2004. Survey data suggest that the share of Roma between 26 and 32 years of age, with completed university education, does not exceed 1% in any country. This result mirrors the fact that Roma are strongly underrepresented in tertiary education. Nevertheless, it must be taken into account that the localities covered by the Household Survey (localities with Roma populations above the national average) are in most cases poor and do not offer adequate employment perspectives for university graduates. Household Surveys are thus likely to underreport the share of Roma university graduates, given the assumption that most Roma who study at university have to leave their locality, and that Roma who completed university are not likely to return to their locality (but rather live more or less invisible among the non-Roma). Evidence about a growing number of Roma university students is provided by data about Roma scholarship holders. Within the framework of affirmative action policies, scholarships for Roma have been provided by the Romanian Government since 1992, by the Romaversitas Foundation in Hungary since 1998, and in the Former Yugoslav Republic of Macedonia since 2001 (Friedman & Garaz 2013, forthcoming).

Through the establishment of the Roma Education Fund in 2005, the number of Roma scholarship holders has multiplied. Taking into account the scholarships provided by the REF alone, the number of university scholarships provided annually increased from 677 in 2005, to 1497 in 2011 (REF 2010, p. 25; REF 2012, p. 47). Altogether, over 10,000 grants in 16 countries (referring to all countries under review in this study plus Kosovo, Russia, Turkey and Ukraine) have been provided for Roma students since 2001 (ibid.). Additionally, the Governments of Former Yugoslav Republic of Macedonia and Serbia have established national Roma scholarship schemes. Assuming the above mentioned underrepresentation of university graduates in surveyed data, and assuming that the establishment of scholarship schemes has increased the share of Roma that attend university, the rate of Roma university graduates might be higher than Household Survey estimates suggest.

3.2 Trends in youth literacy: 2004 and 2011[10]

Increasing literacy, (defined as 'being able to understand, both read and write a short statement about everyday life' (UNESCO 2005, p. 158)), is one of the central goals of the international development agenda documented in the Dakar Framework for Action (World Education Forum 2000). In household surveys, self-perceived literacy is measured usually by a 'yes' or 'no' answer to the question: "Can you read and write?". Self-

10/ In order to take into account short term changes in education, literacy is measured for Roma aged 15 to 24. Self-perceived literacy of Roma and non-Roma aged 15 and older is displayed in Annex Table A3.

reported literacy estimations are lower when compared to indirect literacy estimates, which are based on the assumption that everybody having more than four years of education is literate, and higher when compared to estimates based on test scores (White 2005, p. 414). According to UNESCO (2011a, pp. 275-279) data, self-perceived youth literacy ranks between 99 and 100% all over Europe. Such estimations do not reflect on the fact that a person might not possess competencies in reading and writing that are necessary to participate in today's complex societies (such information might be rather provided by student assessments – see Box 4 and Box 5). Especially in those countries in which being a member of a knowledge society has become part of the self-image, the evaluation of competencies provides more differentiated information on literacy than perception questions do.

Box 4: The potential of PISA, TIMSS and PIRLS for monitoring achievement inequalities

Assessment studies like the Trends in International Mathematics and Science Study (TIMSS), the Programme for International Student Assessment (PISA) and the Progress in International Reading Literacy Study (PIRLS) compare learning outcomes of students internationally. Unlike other education data, such as attendance or attainment, achievement studies reflect to what extent schooling has been translated into student skills and competencies. Therefore, international student assessment studies have developed into an important instrument for monitoring education systems, and their impact on national education policy discourse and reform has been considerable in many countries (Hornberg & Bos 2007, p. 155). To some extent, comparative student assessment has become a mode of educational governance (Nóvoa & Yariv-Mashal 2003, p. 426), with the production of league tables and international rankings as a central feature (Steiner-Khamsi 2009, p. 48).

Achievement studies can be indicators of the equity of education systems through the comparison of student achievement and socio-economic indicators. The results from PISA 2000 showed a strong association between the socio-economic status of students and their average performance (OECD 2001, pp. 138-151). A considerable association between low performance and migration background was found in many countries (ibid., pp. 152-157). PISA 2000 results have been replicated through PISA studies in 2003, 2006 and 2009, and were taken as evidence for educational inequity, disadvantage and sometimes discrimination against migrants.

Even though many Central and Southeast European countries have been participating in international assessment studies (see Table 2), student assessments have not been used to evaluate the educational situation of Roma. Yet, in countries where the Roma make a considerable share of the total school population, including a simple question, about whether the students surveyed belong to a national minority or adding the option of Romani language as the mother tongue, might be sufficient to provide comparative data about achievement of Roma students (Baucal 2009). In countries where the Roma make up a low share of the total school population, an boosted subsample might be necessary (ibid.). As far as early dropout is concerned, PIRLS and TIMSS studies, which measure the achievement of students attending fourth grade, might have the a higher potential to include a sufficient number of Roma students than PISA, which measures the achievement of 15-year-olds (see Brüggemann & Bloem 2013 for an analysis of learning outcomes of Romani speakers in Slovakia based on PISA 2009 data).

Table 2: Participation in international student assessment studies

PISA (reading, mathematics and science achievement of fifteen-year-olds)	PIRLS (reading achievement of fourth grade students)	TIMSS (mathematics and science achievement of fourth and eighth grade students)
2000: Czech Republic, Hungary, Bulgaria, Romania, the Former Yugoslav Republic of Macedonia, Albania 2003: Czech Republic, Slovakia, Hungary, Serbia and Montenegro 2006: Czech Republic, Slovakia, Hungary, Bulgaria, Romania, Croatia, Montenegro, Serbia **2009: Czech Republic, Slovakia, Hungary, Bulgaria, Romania, Croatia, Montenegro, Serbia, Albania, Moldova (2010)**	2001: Czech Republic, Slovakia, Hungary, Bulgaria, Romania 2006: Slovakia, Hungary, Bulgaria, Romania **2011: Czech Republic, Slovakia, Hungary, Bulgaria, Romania, Croatia**	1995: Czech Republic, Slovakia, Hungary, Bulgaria, Romania 1998: Czech Republic, Slovakia, Hungary, Bulgaria, Romania, the Former Yugoslav Republic of Macedonia, Moldova 2003: Slovakia, Hungary, Bulgaria, Romania 2007: Czech Republic, Slovakia, Hungary, Bulgaria, Romania **2011: Czech Republic, Slovakia, Hungary, Romania, Croatia**

Sources: IEA (2012, online source), OECD (2012, online source).

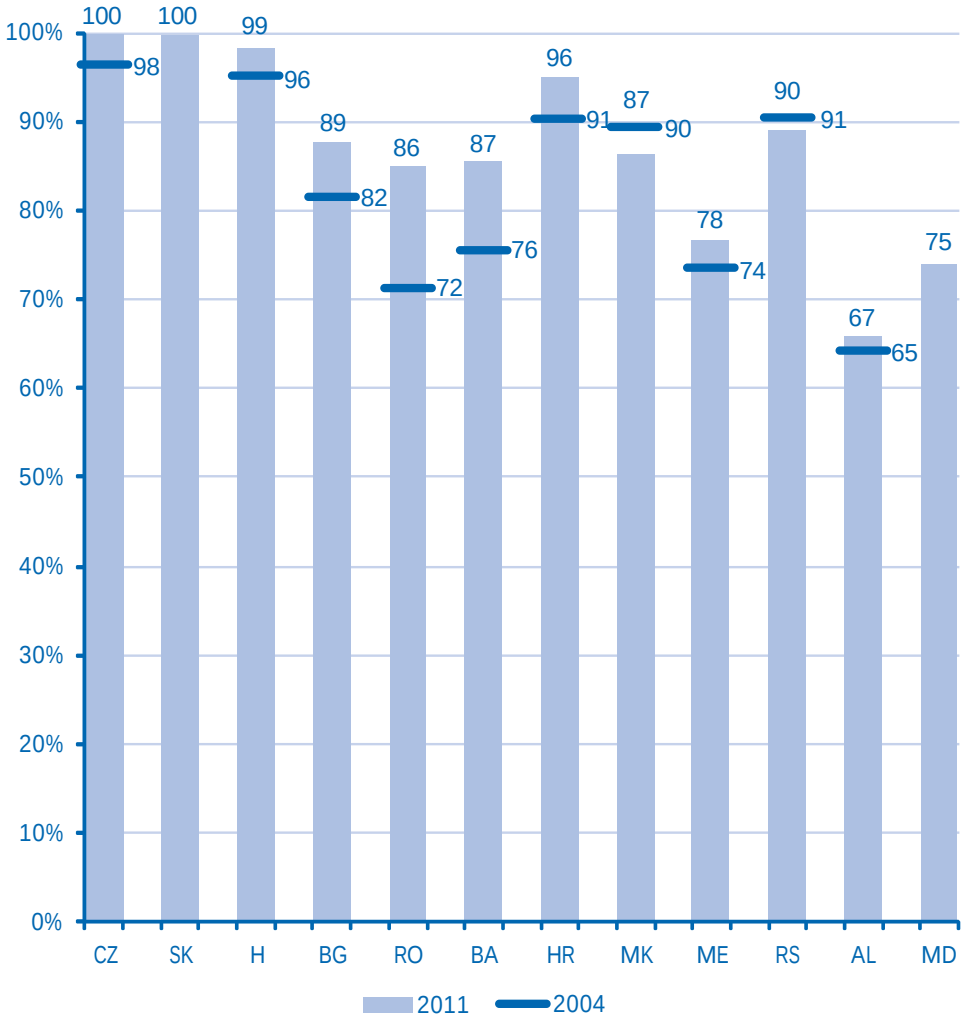
Literacy is a fundamental human capability and a foundation for the development of various human functionings. Literacy has impacts on a person's self-esteem, the ability to learn, to participate in political and social life, to preserve cultural diversity and to critically reflect on life (UNESCO 2005, pp. 139-142). Figure 4 shows the share of Roma aged 15 to 24 who indicated the ability to read and write. Self-perceived literacy of young Roma reaches 100% in the Czech Republic and Slovakia, and is close to 100% in Hungary. Nevertheless, one cannot conclude that young Roma in these countries have reading and writing competencies that allow them to compete in the labour market. Literacy rates of young Roma are below 90% in Bulgaria, Romania, Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia, and below 80% in Montenegro Albania and Moldova. The share of literates, measured through perception questions, is not a sufficient indicator for the ability to participate in the social, political and economic life; however, the share of illiterates clearly indicates that these people are deprived of this ability.

Improvements in self-perceived literacy rates between 2004 and 2011 are statistically significant ($p < .01$) for Hungary, Bulgaria, Romania, Bosnia and Herzegovina and Croatia. In Romania, the percentage of young Roma who indicated the ability to read and write increased from 72% in 2004 to 86% in 2011. In Bosnia and Herzegovina this rate increased by 11 percentage points, to 87%.

Besides the ability to read and write, the ability to use digital technologies is of increasing importance for employment prospects. To a great extent, the ability to read and write is a precondition for the use of digital technologies. Basic computer skills – especially the ability to communicate via e-mail – are often required qualifications for a wide range of occupations. The UNDP/World Bank/EC Regional Roma Survey assesses computer literacy with the question: "Are you able to use a computer word processing

Figure 4: Self-perceived youth literacy

Share of Roma aged 15 to 24 who indicated to be able to read and write in 2004 and 2011

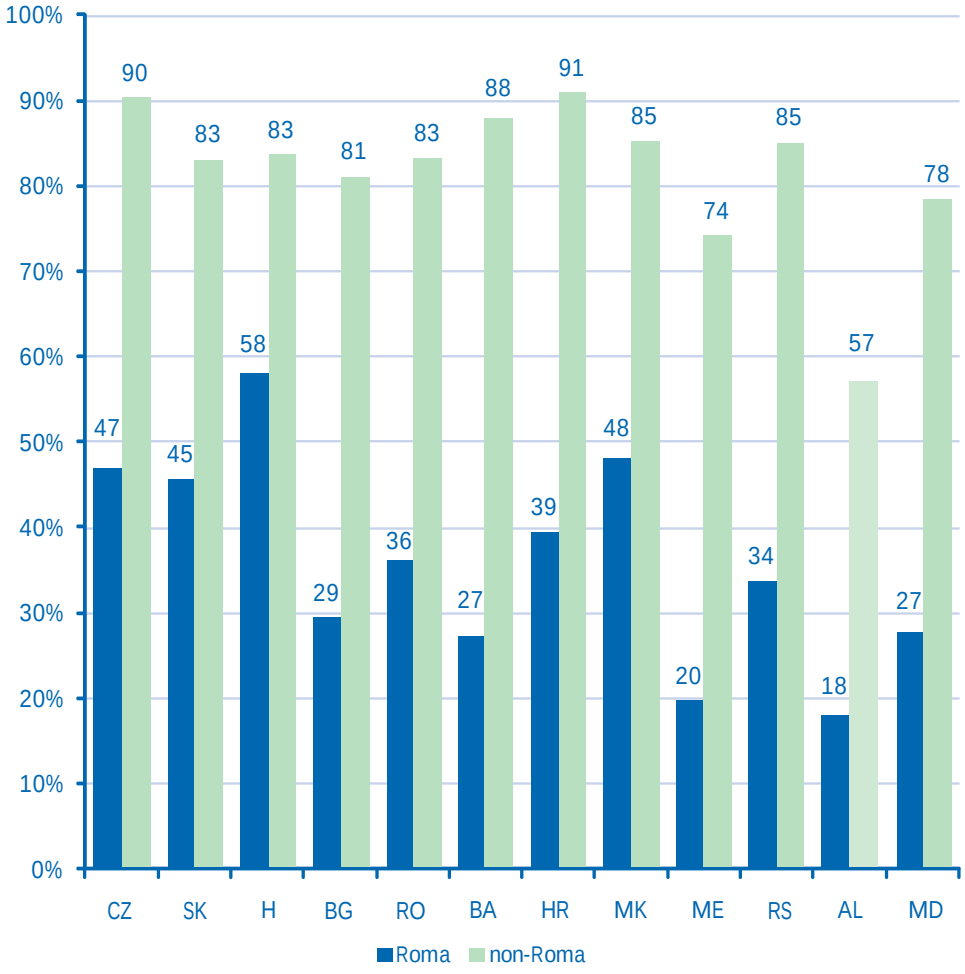


Sources: UNDP Vulnerable Groups Survey, UNDP/World Bank/EC Regional Roma Survey 2011

Note: The UNDP Vulnerable Groups Survey 2004 did not cover Slovakia and Moldova

program?". Figure 5 shows that (with the exception of Hungary) the majority of Roma aged 15 to 24 are not able to use a word processing program. In comparison, more than 80% of people living in close proximity to Roma households indicated to have this ability, with the exception of Montenegro (74%) and Albania (57%). The differences, between Roma and non-Roma living in close proximity to Roma households, are statistically significant in all countries ($p < .01$). The association between group affiliation and computer literacy is the weakest in Hungary (Phi = -.200) and the strongest in Bosnia and Herzegovina (Phi = -.493): In Bosnia and Herzegovina 27% of Roma are able to use a word processing program, compared to 88% of the non-Roma.

Figure 5: Self-perceived computer literacy
Share of Roma and non-Roma living in close proximity to Roma households aged 15 to 24 who are able to use a computer word processing program

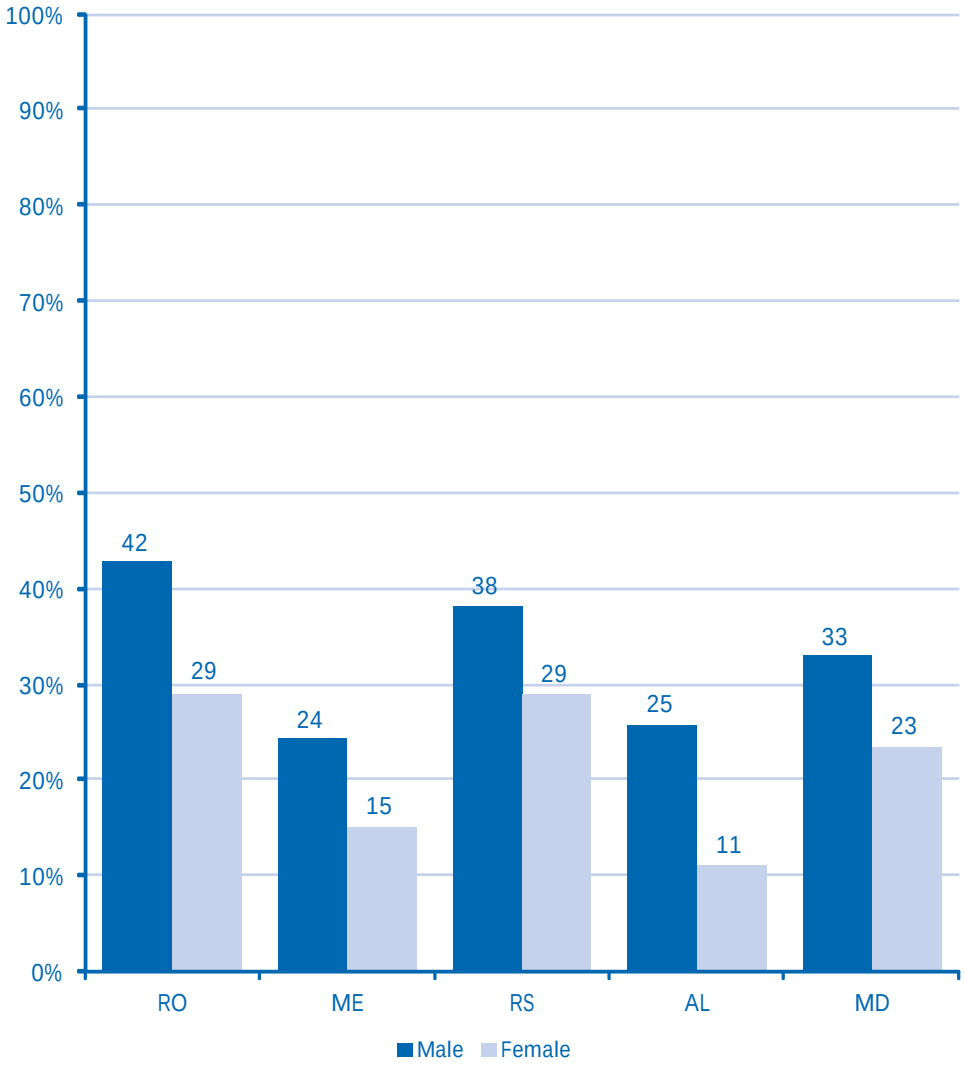


Source: UNDP/World Bank/EC Regional Roma Survey 2011

Figure 6 shows computer literacy, differentiated by gender, for selected countries. Statistically significant differences between male and female Roma exist in Romania, Montenegro, Serbia, Albania and Moldova ($p < .01$), but not in the other countries surveyed. The association between gender and computer literacy is the strongest in Albania (Phi = .189): 11% of the females are able to use a word processing program, compared to 25% of the males.

Figure 6: Self-perceived computer literacy by gender

Share of male and female Roma aged 15 to 24 who are able to use a computer word processing program



Source: UNDP/World Bank/EC Regional Roma Survey 2011

Box 5: Measuring educational achievement of Roma students: from experiences of Serbia and Hungary

The first achievement study that assessed learning outcomes of Roma pupils was implemented as part of a National Assessment Serbia 2004, which tested N=4178 students in grades one to three all over Serbia in mathematics and the Serbian language, including n=686 Roma students (Baucal 2006, p. 213). Results show that more than half of Roma students did not exceed the lowest achievement level, and the grade repetition rate of Roma was found to be eleven times higher than of the non-Roma (ibid., p. 216-217). The socio-economic situation accounted for 40% of the achievement gap of the Roma, while other factors such as the educational quality of Serbian schools were supposed to explain the remaining differences, leading to the conclusion that there was "large room for improvement of the education quality delivered to Roma students in Serbian schools" (ibid., p. 219).

A second achievement study, which assessed learning outcomes of Roma pupils, was the Hungarian National Assessment of Basic Competences 2006, linked to the Hungarian Life Course Survey and providing information on n=848 Roma students out of N=9056 six, eight and tenth grade students taking part in a reading test, and N=8335 students taking part in a mathematics test (Kertesi & Kézdi 2011, p. 519). The test score gap of Roma, in comparison to non-Roma, was found very similar to the test score gap of black Americans in comparison to white Americans in the late 1970s (ibid., p. 521). Furthermore, the authors found a strong mediating effect of health variables (being also an indirect measure of poverty), variables of the home environment, the family background, as well as school and class fixed effects, explaining the full test-score variance in reading, and 85% of the test-score variance in mathematics (ibid., pp. 523-524).

4 School attendance

School attendance is a necessary (but not sufficient) condition of educational success. Children who do not participate in pre-school education are likely to be disadvantaged right from the beginning of their school career. Regular school attendance is a central precondition for educational achievement and the acquisition of school related competencies and certificates. On the other hand, school related competencies, as well as certificates, are preconditions for subsequent education and employment. Children and teenagers who do not attend school face high risks of social exclusion throughout their lifetime.

4.1 Pre-school attendance

The positive impact of early childhood care and education (ECCE), especially pre-school education, on human development is widely recognised (e.g. Brooks-Gunn 2003, Walker et al. 2011). Paradoxically, those who may gain the most from ECCE – children disadvantaged in terms of the educational and social-economic background of their parents – often participate less in ECCE than their non-disadvantaged peers (Engle et al. 2011). In Bulgaria and Serbia, for example, priority in pre-school access is granted to children of employed parents (Marushiaková et al. 2007, p. 39; Szira & Kočić-Rakočević 2010, p. 23).

During socialism, early childhood care and education in Central and Southeast Europe was centralised, comprehensive, relatively well equipped and free of charge (Zafeirakou 2006, p. 6). In many Central and Southeast European countries, the first years of transition were accompanied by a reduction of ECCE facilities, a decrease of ECCE enrolment rates and a decentralisation process, which shifted the responsibility of ECCE provision to the municipal level (ibid., pp. 23-26). Poor families in the region have been most vulnerable to these changes, especially to the introduction of fees.

Early care and childhood education positively influences educational attainment and outcomes at later stages. Furthermore, ECCE positively impacts on health and nutrition (UNESCO 2007, p. 112). Research undertaken in the USA provides evidence of the high rates of economic returns associated with early childhood interventions, especially with regard to interventions for disadvantaged children (Heckmann 2008, p. 7). A recent Word Bank report, based on UNDP/World Bank/EC survey data for new EU

member states, has shown that pre-school education positively correlates with self-perceived learning outcomes of Roma in Bulgaria, Czech Republic, Slovakia, Hungary and Romania: Controlling for socio-economic background and parenting characteristics, de Laat et al. (2012, pp. 33-34) found a positive effect of pre-school attendance on children's self-perceived cognitive skills and self-confidence. Moreover, for Roma above pre-school age, attendance was found to be associated with a lower probability of special school attendance in the Czech Republic and Slovakia, a lower probability of receiving social assistance in the Czech Republic, Slovakia and Romania, and a higher probability of secondary school (ISCED 3) completion in all countries (ibid., pp. 34-36).

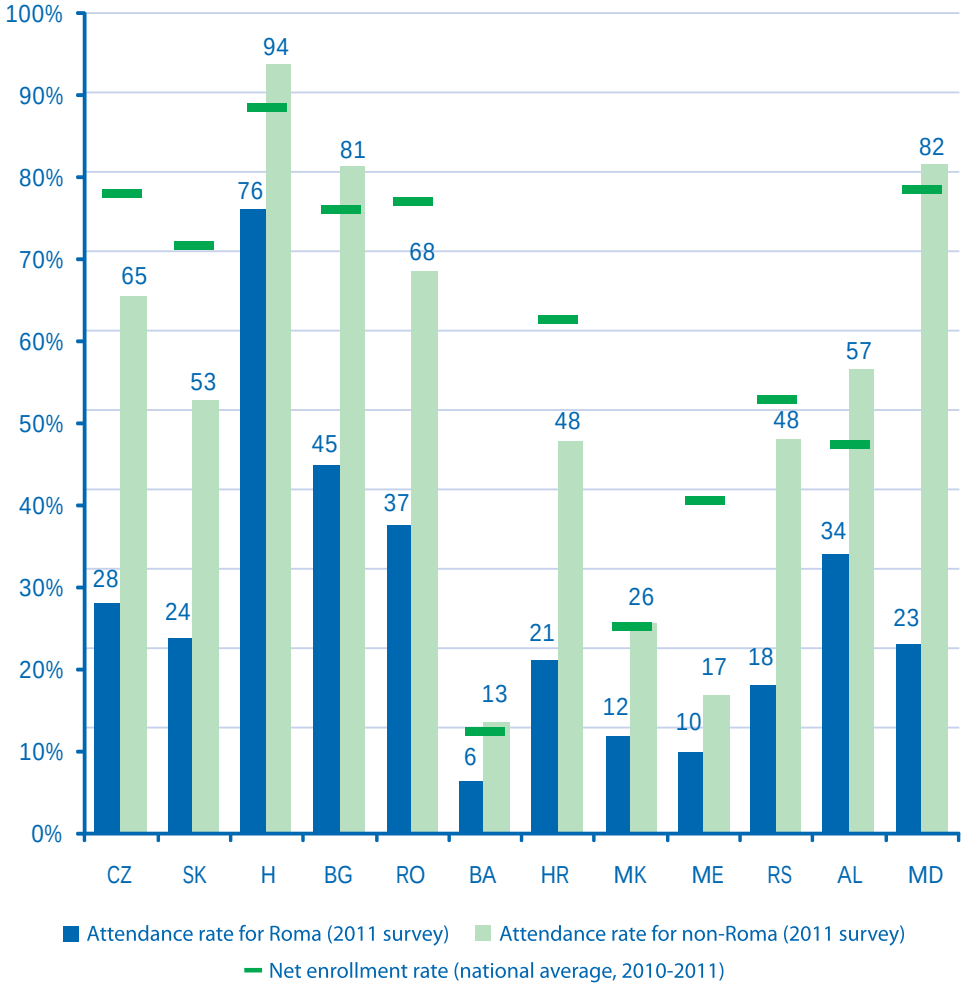
Figure 7 shows the share of Roma and non-Roma, aged 3 to 6 (in some cases aged 3 to 5), who attend pre-school facilities (including kindergarten and nursery) as well as net enrolment rates, according to national averages. In most countries, the Roma are less likely to attend pre-school education facilities than non-Roma living in close proximity to Roma households. Differences in pre-school attendance between Roma and non-Roma are statistically significant in all countries ($p < .01$), with the exception of Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia and Montenegro ($p > .01$) – the countries with the lowest overall pre-school attendance rates. The association between group affiliation and pre-school attendance is the strongest in Moldova (Phi = -.429) and the Czech Republic (Phi = -.328): In Moldova 23% of Roma aged 3 to 6 attend pre-school, compared to 82% of non-Roma. In the Czech Republic, 28% of Roma aged 3 to 5 attend pre-school, compared to 65% of non-Roma. No significant gender differences were found.

Considerable differences between net enrolment ratios, according to national averages and attendance rates of Roma as well as their direct non-Roma neighbours, according to household data in the Czech Republic, Slovakia, Romania, Croatia and Montenegro, might suggest that pre-school facilities are underrepresented in localities with a higher than average share of Roma inhabitants in the mentioned countries. In Slovakia, for example, enrolment estimates report a national average of 72%, whereas household data indicates an attendance rate of 53% for non-Roma and 24% for Roma. Between-country differences are remarkable: Roma in Hungary indicated higher pre-school attendance rates (76%) than non-Roma in the neighbouring countries Slovakia, Romania, Croatia and Serbia.

Figure 8 shows the pre-school attendance rates of Roma according to age groups. In most countries, attendance rates of Roma children increase with higher age: as one would expect, the attendance rates for 5-year-old children are higher than for 4-year-old children, and attendance rates of 4-year-old children are higher than for 3-year-old children. The figure also mirrors general high pre-school attendance rates in Hungary. In Hungary, local governments have been obliged to offer free of charge kindergarten places to "multiple disadvantaged" children from the age of 3 since 2008 (EACEA 2009, pp. 39, 64). Moreover, a "kindergarten subsidy programme" provides a one-time conditional cash transfer for "multiple disadvantaged" children, if they attend pre-school regularly (de Laat et al. 2012, p. 109). Additionally, beginning from the school year 2013/2014 onwards, pre-school education in Hungary will be compulsory from the age of 3.

Figure 7: Pre-school attendance

Share of Roma and non-Roma children aged 3 to 6 (in some cases 3 to 5) who attend pre-school, kindergarten or nursery



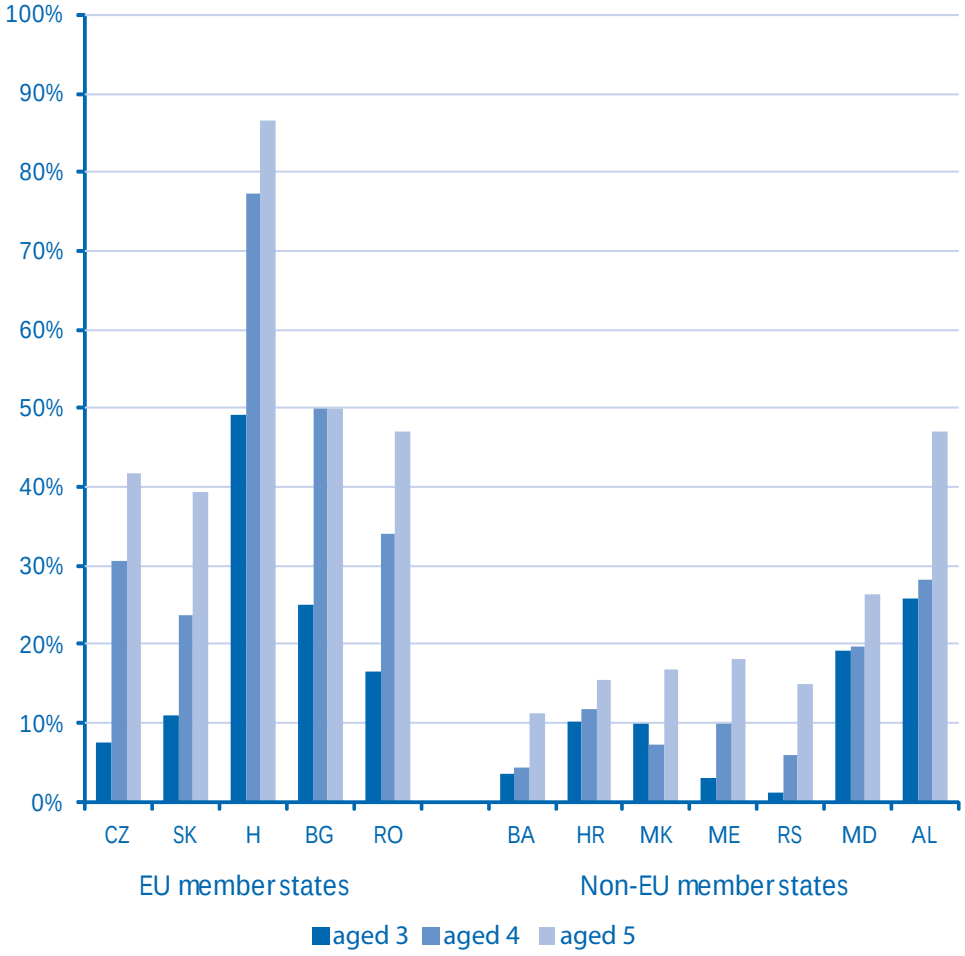
Sources: for attendance rates – UNDP/World Bank/EC Regional Roma Survey 2011; for enrollment rate - UNICEF TransMONEE database.

Notes:

- *Children who have been already enrolled in primary school were not considered in the calculation.*
- *For Czech Republic. Slovakia, the Former Yugoslav Republic of Macedonia and Montenegro the age group is 3 to 5 because TransMONEE reference data also refers to this age group.*
- *For Slovakia and Albania net enrolment ratios are based on the school year 2009/2010.*
- *Slightly different results regarding pre-school attendance are presented by FRA & UNDP (2012, p. 13). Differences are a result of FRA & UNDP using a pooled dataset (combining UNDP and FRA survey data) and because a different age cohort has been used for the calculation. Moreover, nursery attendance is not included in the pooled dataset.*

Figure 8: Pre-school attendance by age

Share of Roma children aged 3 to 5 who attend pre-school, kindergarten or nursery



Source: UNDP/World Bank/EC Regional Roma Survey 2011

Note: Children who have been already enrolled in primary school were not considered in the calculation.

Six-year-old children usually attend either the last year of pre-school education or the first year of primary school. Table 3 shows the percentage of 6-year-old Roma children who either attended pre-school or primary education, or do not attend any education. In all countries, with the notable exception of Hungary, more than 30% of Roma children aged 6 do not attend any form of education. The share of Roma children who do not attend institutional education is the highest in Bosnia and Herzegovina (71%), Montenegro (80%) and Moldova (71%). Even though the last year of pre-school education (for children aged 5 or 6) is free of charge in the Czech Republic and in Slovakia, more than 30% of Roma aged 6 do not attend pre-school nor primary school. In Bul-

garia, a country with a compulsory and free of charge[11] pre-school year, nearly four out of ten Roma children aged 6 do not attend school or pre-school.

Low pre-school attendance rates are also mirrored in a statistically significant lower share of Roma, aged 7 to 15, who have at least one year of pre-school experience (Figure 9). Differences between group affiliation and pre-school experience are significant ($p < .01$) for all countries but Hungary. In Hungary, more than 90% of Roma aged 7 to 15 attended at least one year of pre-school, as a result of pre-school being obligatory from the age of 5. In comparison, the share of Roma with pre-school experience in the

Table 3: Educational attendance at the age of 6
Share of Roma children aged 6 according to education attendance

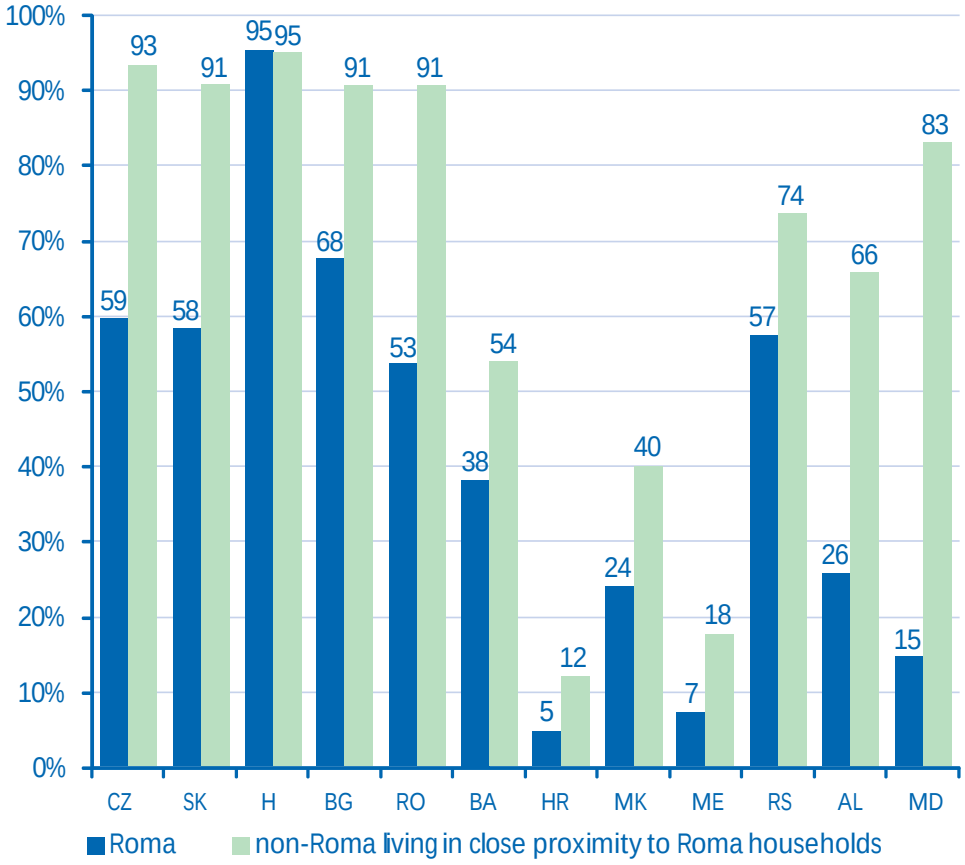
	Attending pre-school education	Attending primary education	Not attending any kind of institutional education
Czech Republic	49%	16%	34%
Slovakia	45%	18%	37%
Hungary	88%	3%	9%
Bulgaria	61%	0%	39%
Romania	54%	3%	43%
Bosnia and Herzegovina	4%	25%	71%
Croatia	47%	7%	47%
The Former Yugoslav Republic of Macedonia	23%	47%	31%
Montenegro	13%	7%	80%
Serbia	45%	6%	49%
Albania	30%	10%	61%
Moldova	27%	2%	71%

Source: UNDP/World Bank/EC Regional Roma Survey 2011

11/ In Bulgaria, beginning from the school year 2010/2011, two years of pre-primary education are compulsory and free of charge (EACEA 2011, p. 2).

Figure 9: Pre-school experience

Share of Roma and non-Roma living in close proximity to Roma households aged 7 to 15 who have spent at least one year in crèche, kindergarten and/or pre-school



Source: UNDP/World Bank/EC Regional Roma Survey 2011

Czech Republic and Slovakia is below 60%. The association between group affiliation and pre-school experience is the strongest in Albania (Phi = .345) and Moldova (Phi = .568): In Albania 26% of Roma aged 7 to 15 have pre-school experience, compared to 66% of non-Roma. In Moldova, 15% of Roma have pre-school experience, compared to 83% of non-Roma.

Table 4 shows that in all countries, except Albania, Bosnia and Herzegovina, Montenegro and Hungary, non-Roma aged 7 to 15 with pre-school experience spend, on average, significantly more time in pre-school than Roma with pre-school experience. The difference between group affiliation and average time spent in pre-school is the highest in Croatia: Roma with pre-school experience attended pre-school on average 1.7 years, in comparison to non-Roma with pre-school experience who attended on average 2.6 years.

Table 4: Average time spent in pre-school

Average time Roma and non-Roma living in close proximity to Roma households with pre-school experience aged 7 to 15 spent in crèche, kindergarten and/or preschool

Country	Ethnicity	Mean (Years)	Std. Error Mean	Difference (Years)
Albania	Roma	2.3	0,08	.18
	non-Roma	2.5	0.10	
Bosnia and Herzegovina	Roma	2.0	0.23	-.22
	non-Roma	1.8	0.25	
Bulgaria	Roma	2.4	0.07	***.67***
	non-Roma	3.1	0.15	
Czech Republic	Roma	2.2	0.06	***.63***
	non-Roma	2.8	0.07	
Slovakia	Roma	1.7	0.04	***.50***
	non-Roma	2.2	0.07	
Montenegro	Roma	2.0	0.17	.00
	non-Roma	2.0	0.23	
Croatia	Roma	1.7	0.06	***.89***
	non-Roma	2.6	0.21	
Hungary	Roma	2.9	0.03	.03
	non-Roma	2.9	0.08	
The Former Yugoslav Republic of Macedonia	Roma	1.4	0.07	***.40***
	non-Roma	1.8	0.12	
Moldova	Roma	2.5	0.16	***.73***
	non-Roma	3.2	0.15	
Romania	Roma	2.2	0.05	***.52***
	non-Roma	2.7	0.08	
Serbia	Roma	1.2	0.03	***.63***
	non-Roma	1.8	0.14	

Source: UNDP/World Bank/EC Regional Roma Survey 2011

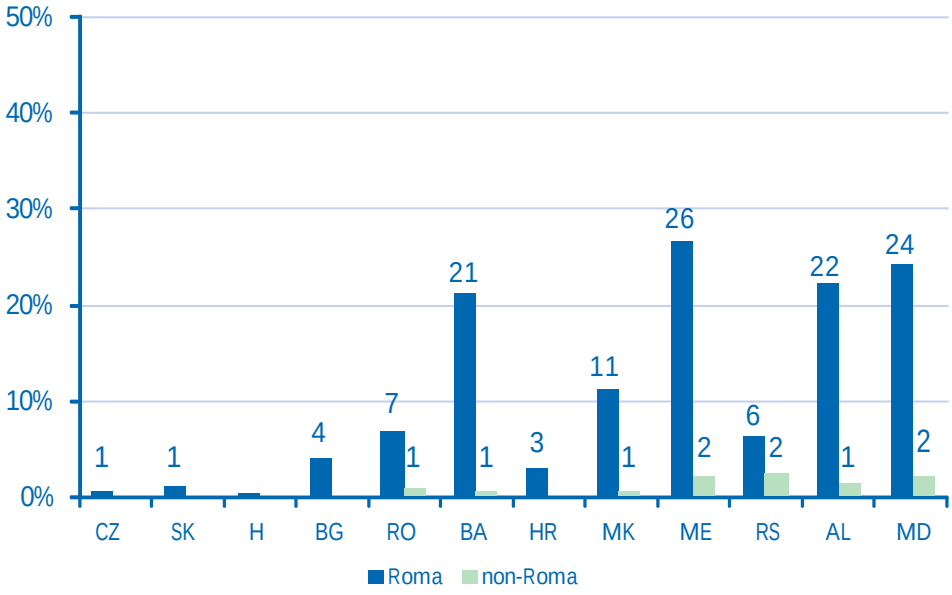
*Note: Statistical significance indicated by bold and italic (**p < .01**)*

4.2 School attendance[12]

School attendance is closely associated with academic achievement and school completion, and thus is crucial for the ability to lead a self-determined life and to enter a professional occupation. Regular attendance can be distinguished from irregular attendance and from no attendance (dropout). Dropout might often result after a period of irregular attendance. Dropouts are unlikely to re-enter the education system, and may not have acquired sufficient skills and competencies to succeed in the labour market. Factors associated with dropout are multi-layered and may include poor health and nutrition, a lack of motivation, household poverty and child labour (Sabates et al. 2010, p. 12). Dropout might also be caused by school factors, such as the quality of education, opportunity costs of schooling or an unsupportive school climate (ibid.).

Dropout refers to children and youth previously enrolled in school. However, a considerable share of Roma children and youth in several countries has never attended school. Figure 10 shows the share of Roma and non-Roma living in close proximity to Roma households, aged 10 to 18, who have never been to school. The differences be-

Figure 10: Never been in school
Share of Roma and non-Roma aged 10 to 18 who have never attended school



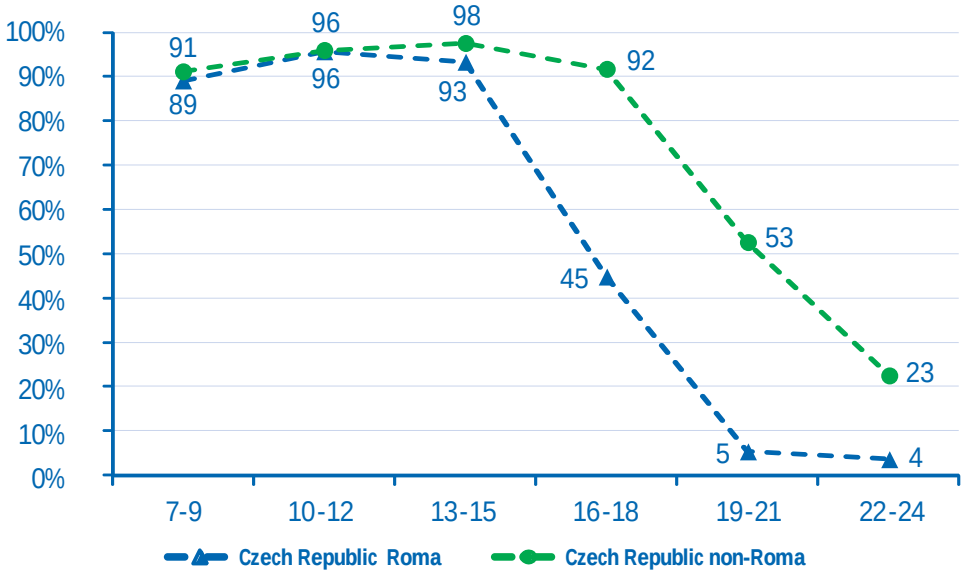
Source: UNDP/World Bank/EC regional Roma survey 2011

12/ In comparison to enrolment rates, attendance rates provide similar, but not identical estimations about the share of students in school. Enrolment rates are usually calculated based on school census, brought into relation with population census, while attendance rates usually stem from household surveys (White 2005, p. 6).

tween Roma and non-Roma are statistically significant in Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia, Montenegro, Albania and Moldova ($p < .01$). In the FYROM, about one out of ten Roma aged 10 to 18 has never attended school. In Bosnia and Herzegovina, Montenegro, Albania and Moldova, the share of Roma who have never attended school is above 20%. In the Czech Republic, Slovakia and Hungary, nearly all Roma attend school at least for some time. In Bulgaria, Romania, Croatia and Serbia, a relatively small number of Roma are without school experience. The association between group affiliation and school experience is the strongest in Albania (Phi = .239): 22% of Roma aged 10 to 18 have no school experience, compared to 1% of non-Roma.

School attendance rates,[13] differentiated by age groups, unfold different patterns of school participation as shown in Figure 11(a-l). In Bosnia, Montenegro, Albania and Moldova, no single age cohort of the Roma sample reaches an attendance rate above 70%. Slightly increasing attendance rates of Roma aged 10 to 12, in comparison to Roma aged 7 to 9, in all countries indicate that many Roma might enter school only after the age of 7. In Southeast European countries, a considerably smaller share of Roma,

Figure 11a: School attendance in the Czech Republic
Share of Roma and non-Roma living in close proximity to Roma households who attend school by age groups

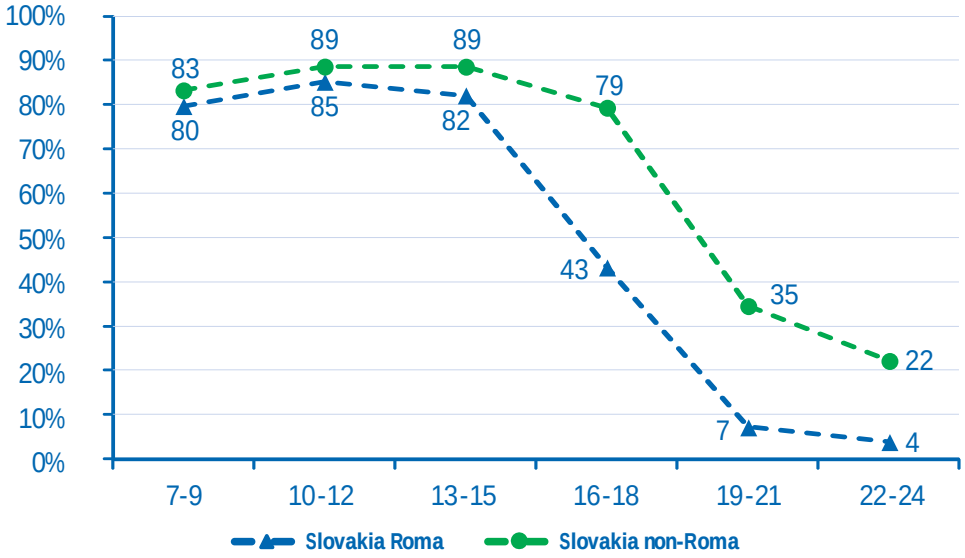


Source: UNDP/World Bank/EC Regional Roma Survey 2011

13/ Attendance rates are based on the question: "Do you still attend school?". Unlike attendance rates calculated elsewhere (White 2005, footnote 5), the share of students not attending school includes students who have dropped out during the school year.

Figure 11b: School attendance in Slovakia

Share of Roma and non-Roma living in close proximity to Roma households who attend school by age groups

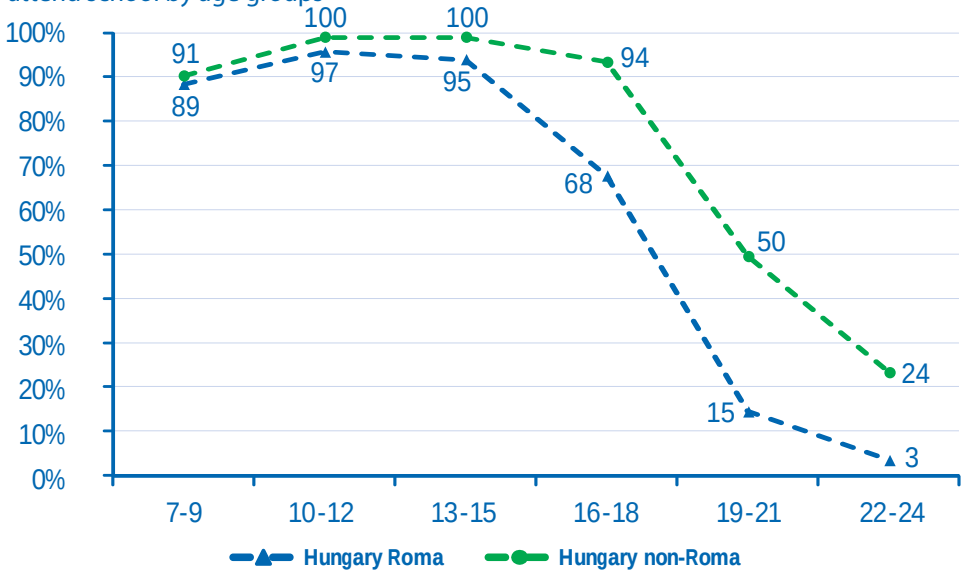


Source: UNDP/World Bank/EC Regional Roma Survey 2011

Note: The relative high share of Roma and non-Roma aged seven to 15 not attending school contradicts with findings from the FRA Roma pilot survey (FRA & UNDP 2012, p. 14) and a household survey implemented by UNDP in Slovakia in 2010 (Fiadelfiová & Gebery 2012) which point to higher attendance rates than presented in this graph.

Figure 11c: School attendance in Hungary

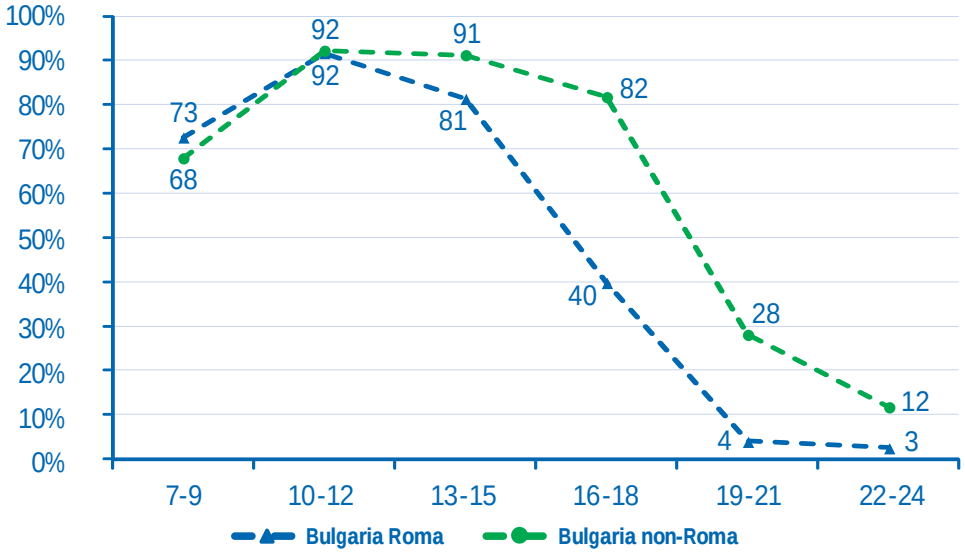
Share of Roma and non-Roma living in close proximity to Roma households who attend school by age groups



Source: UNDP/World Bank/EC Regional Roma Survey 2011

Figure 11d: School attendance in Bulgaria

Share of Roma and non-Roma living in close proximity to Roma households who attend school by age groups

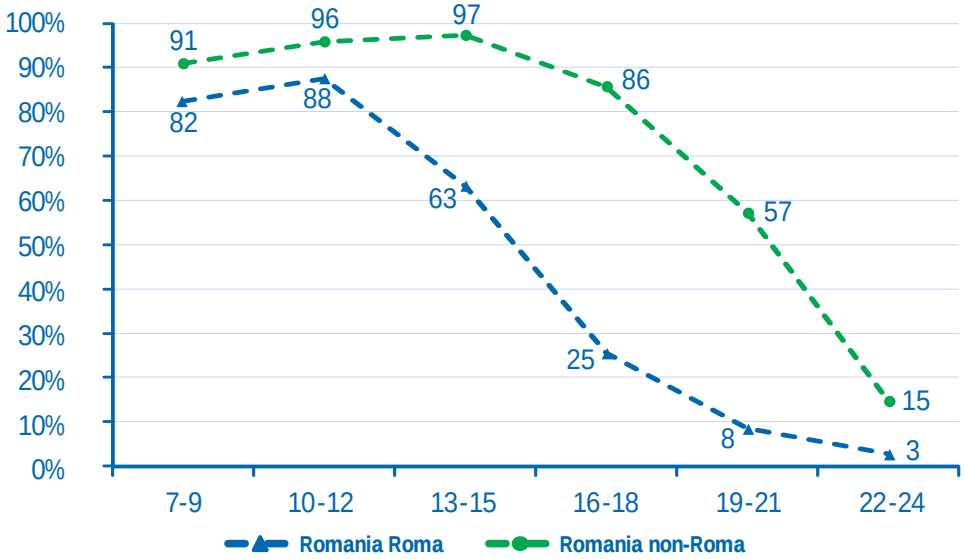


Source: UNDP/World Bank/EC Regional Roma Survey 2011

Note: The relative high share of non-Roma aged seven to 15 not attending school contradicts with findings from the FRA Roma pilot survey (FRA & UNDP 2012, p. 14) which points to higher attendance rates than presented in this graph.

Figure 11e : School attendance in Romania

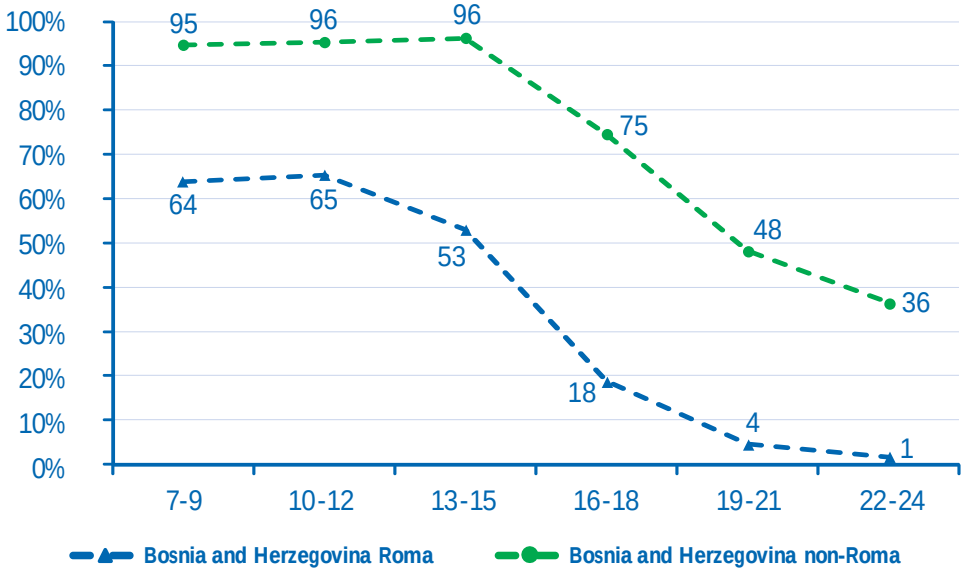
Share of Roma and non-Roma living in close proximity to Roma households who attend school by age groups



Source: UNDP/World Bank/EC Regional Roma Survey 2011

Figure 11f : School attendance in Bosnia and Herzegovina

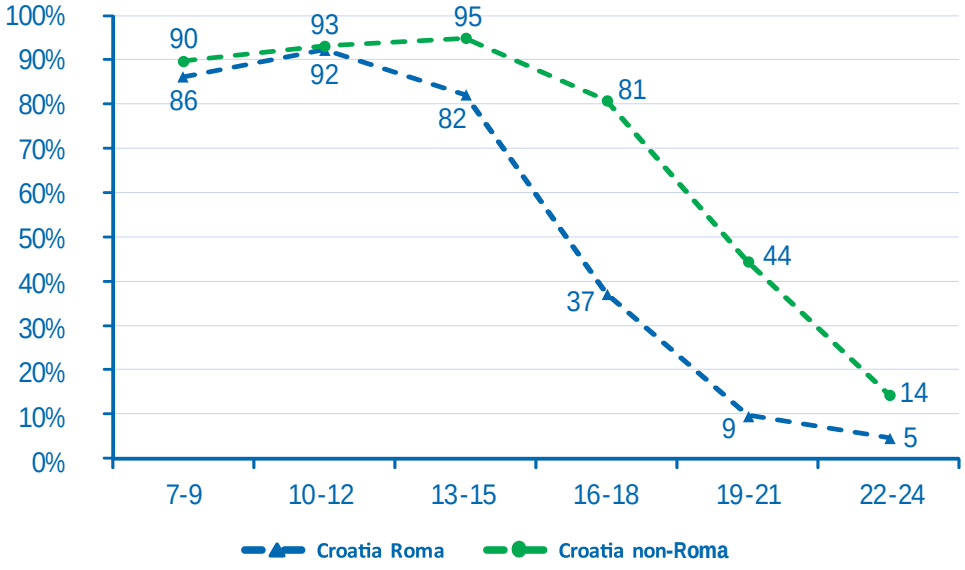
Share of Roma and non-Roma living in close proximity to Roma households who attend school by age groups



Source: UNDP/World Bank/EC Regional Roma Survey 2011

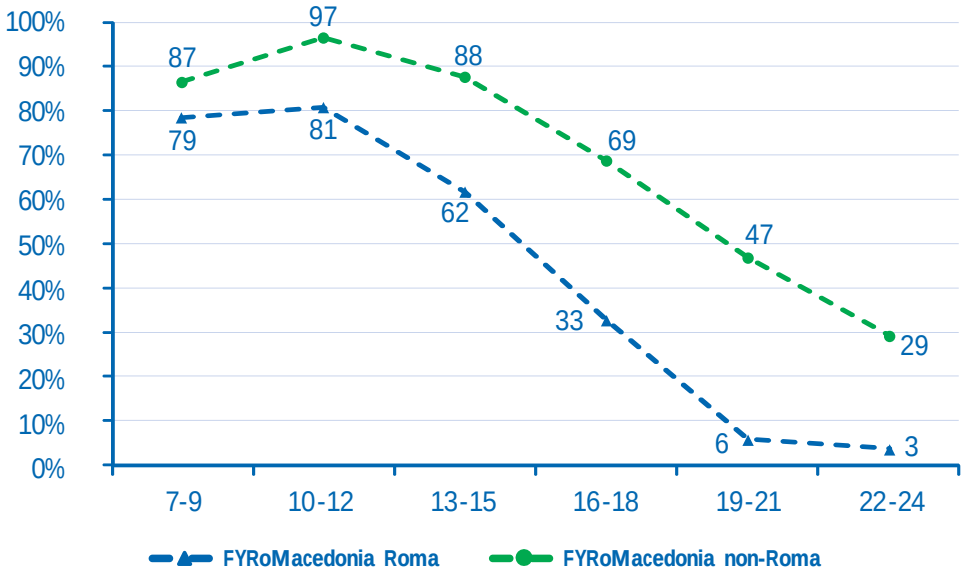
Figure 11g: School attendance in Croatia

Share of Roma and non-Roma living in close proximity to Roma households who attend school by age groups



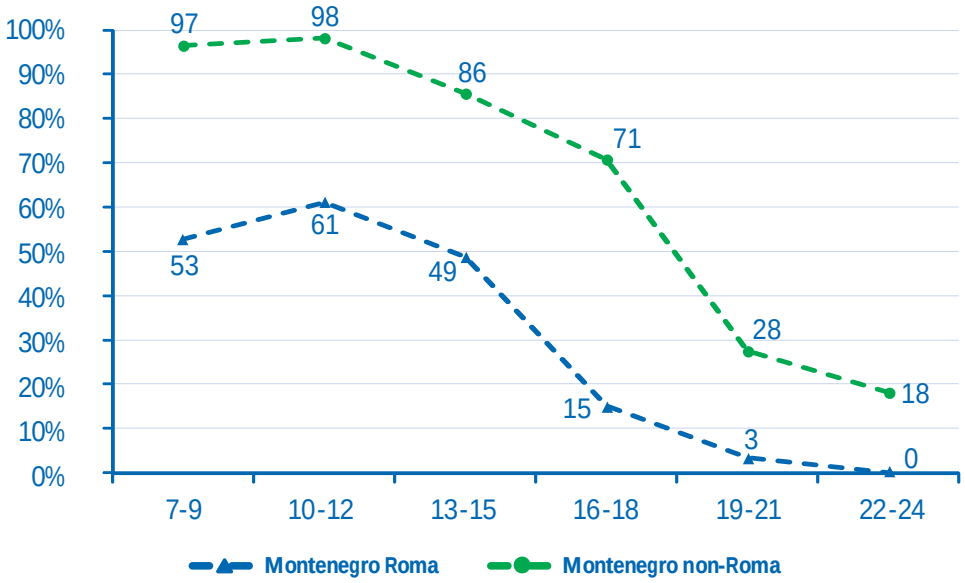
Source: UNDP/World Bank/EC Regional Roma Survey 2011

Figure 11h: School attendance in the Former Yugoslav Republic of Macedonia
Share of Roma and non-Roma living in close proximity to Roma households who attend school by age groups



Source: UNDP/World Bank/EC Regional Roma Survey 2011

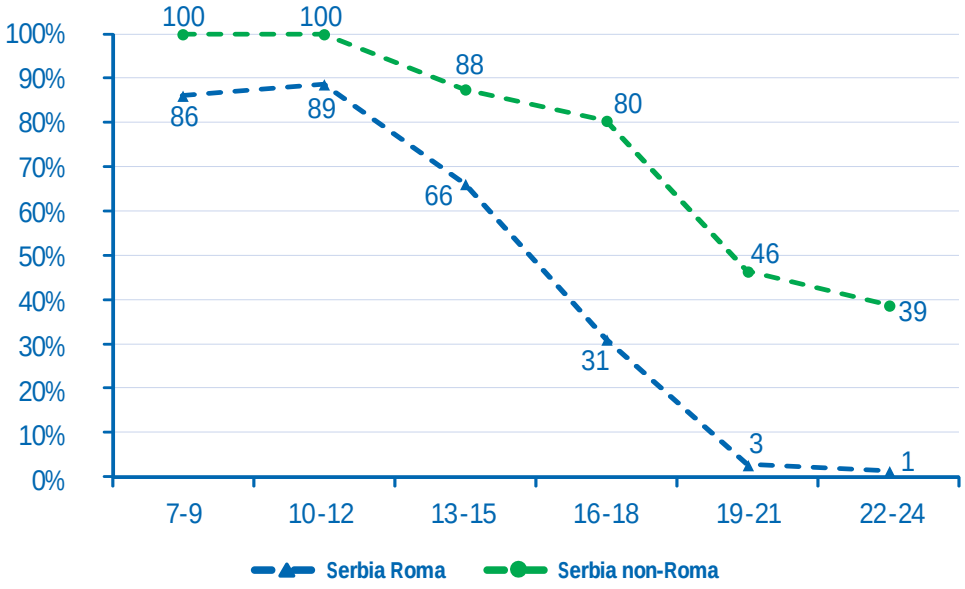
Figure 11i: School attendance in Montenegro
Share of Roma and non-Roma living in close proximity to Roma households who attend school by age groups



Source: UNDP/World Bank/EC Regional Roma Survey 2011

Figure 11j: School attendance in Serbia

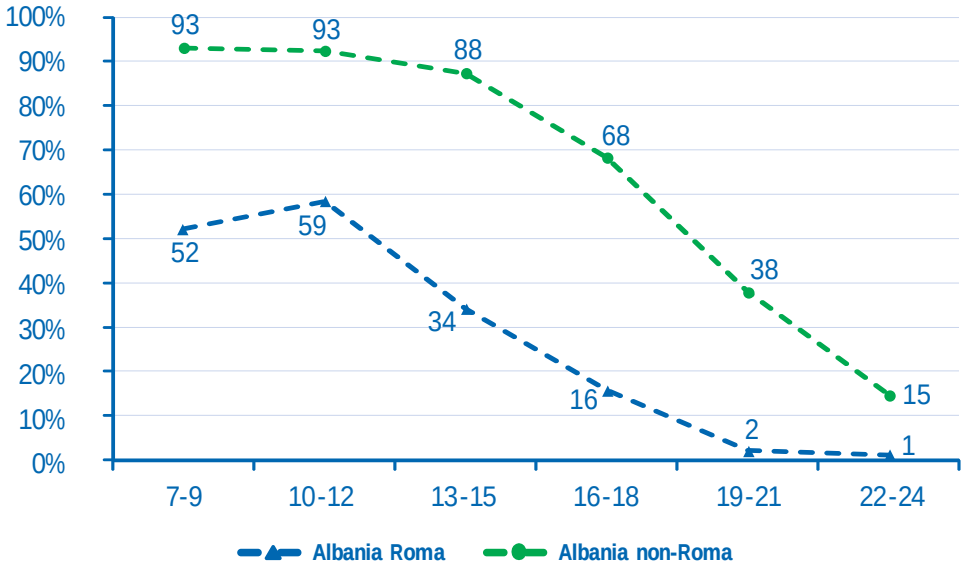
Share of Roma and non-Roma living in close proximity to Roma households who attend school by age groups



Source: UNDP/World Bank/EC Regional Roma Survey 2011

Figure 11k: School attendance in Albania

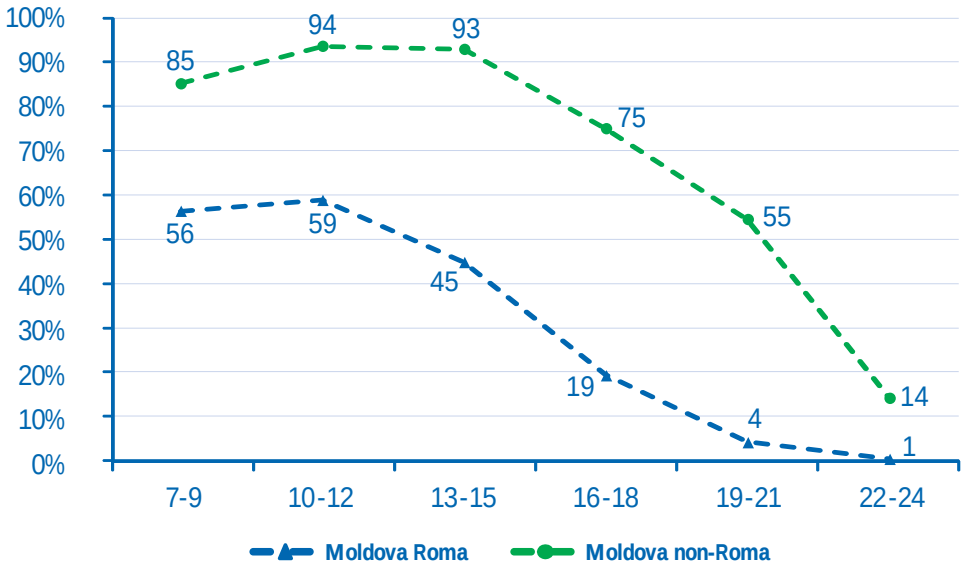
Share of Roma and non-Roma living in close proximity to Roma households who attend school by age groups



Source: UNDP/World Bank/EC Regional Roma Survey 2011

Figure 11l: School attendance in Moldova

Share of Roma and non-Roma living in close proximity to Roma households who attend school by age groups



Source: UNDP/World Bank/EC Regional Roma Survey 2011

aged 13 to 15, attend school, in comparison to Roma aged 10 to 12. In many countries, the differences between attendance rates, of Roma aged 13 to 15, in comparison to Roma aged 16 to 18, are considerably high. This indicates a sharp drop directly after compulsory schooling. For non-Roma, in most countries, the differences between age cohorts are the highest among persons aged 16 to 18, in comparison to persons aged 19 to 21.

In Albania, Bosnia and Herzegovina, Montenegro and Moldova, differences in attendance between Roma and non-Roma are statistically significant for all age cohorts. In the Former Yugoslav Republic of Macedonia, differences are significant for the age cohorts 10 to 12 and above. In Romania and Serbia, differences are significant for age cohorts 13 to 15 and above. In Slovakia, the Czech Republic, Hungary, Bulgaria and Croatia, differences are significant for the age cohorts 16 to 18 and above. Most notable is the attendance rate of Roma and non-Roma aged 10 to 12 in Croatia and the Czech Republic, where the measured differences account for not even one percentage point. Independently from the education system, the Roma seem to be strongly disadvantaged in terms of attendance after the age of 15. The end of compulsory schooling, and the transition between compulsory and (upper) secondary education, are most likely central institutional settings, along which attendance rates of Roma students decrease. Compulsory schooling in the region usually ends in the school year in which the stu-

dents turns 15 or 16 years of age (UNESCO 2011a, p. 294), and is in most cases related to a change of the institutional environment. This transition might be associated with higher transaction costs of education (for example when students are old enough to enter the labour market or register for social benefits), with a transition to high school and with longer travelling distances.

For most countries, the association between group affiliation and school attendance is the strongest for the age cohort 19 to 21: In the Czech Republic 5% of Roma attend school, compared to 53% of non-Roma (Phi = -.537). In Serbia, 3% of Roma attend school, compared to 46% of non-Roma (Phi = -.555).

Attendance rates, as such, do not provide information about the regularity of attendance. Irregular attendance correlates with low achievement and school failure; it increases the risk of school dropout and strongly negatively effects educational attainment. Irregular attendance might have various reasons, such as illness, family obligations, conflictual relationships with teachers or schoolmates, disengagement or peer group pressure. The Regional Roma Survey assesses school regular school absenteeism, without asking whether absenteeism is authorised or not.

Figure 12 shows the share of Roma and non-Roma living in close proximity, aged 7 to 15, who still attend school, but are absent from school for at least four days a month.[14] More than 20% of Roma attending school are absent on a regular basis in the Czech Republic, Slovakia and Moldova. In Romania, the share reaches even up to 30%. Differences between Roma and non-Roma are statistically significant for all countries, except Hungary, Croatia and Montenegro. These countries have the lowest share of regularly absent students among those who attend school, and absenteeism in these countries does not seem to be a particular disadvantage for the Roma youth.

4.3 Early leavers from education and training

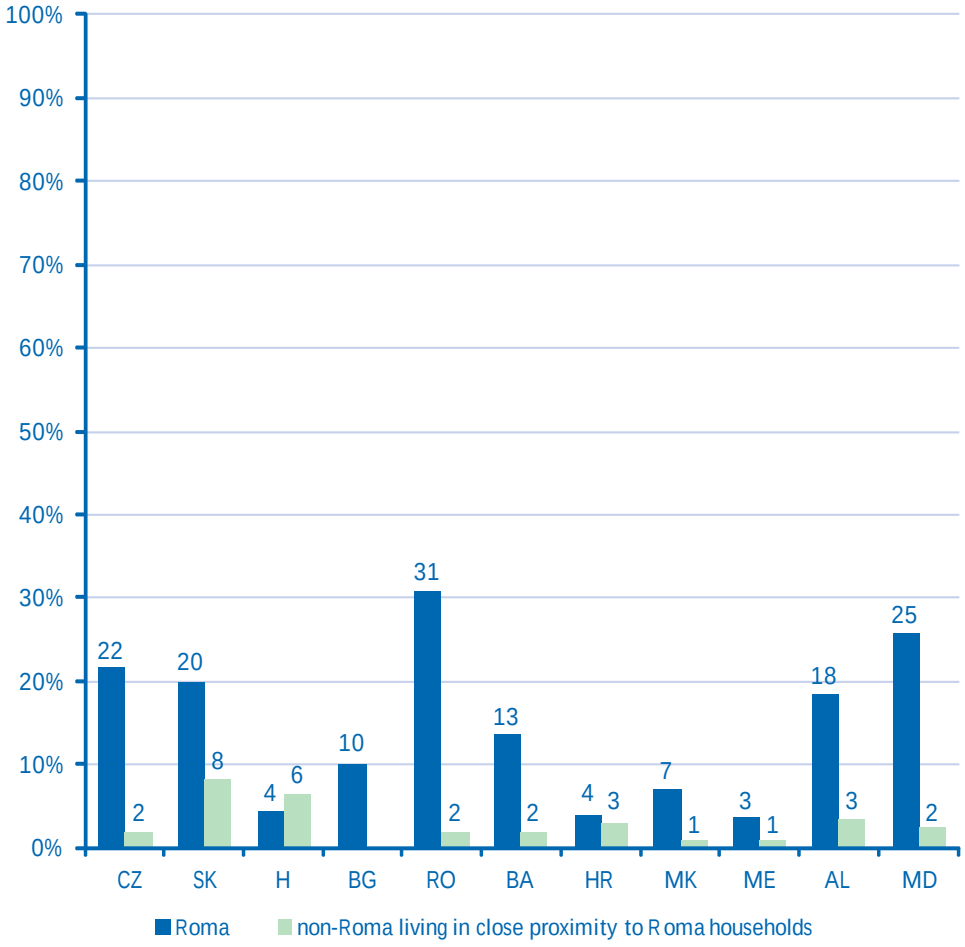
Early leavers from education and training are defined as persons between the ages of 18 and 24, who are currently not enrolled in school or training and have not achieved at least upper secondary education (ISCED 3), including those whose upper secondary education track lasted less than three years (ISCED 3c short) (Eurostat 2011, p. 203). In many countries, a higher share of Roma has completed short term upper secondary education than long-term upper secondary education. This share falls under the definition "early leavers from education and training".

The official aim of the European Union, documented in the strategic framework for European cooperation in education and training, is to reduce the share of early leavers to below 10% by 2020 (European Commission 2012, online source). According to

14/ Responses might be biased if we assume that the household head has no all-embracing information about the school absence of household members.

Figure 12: Irregular school attendance

Share of Roma and non-Roma living in close proximity to Roma households aged 7 to 15 attending school but missing at least four school days a month



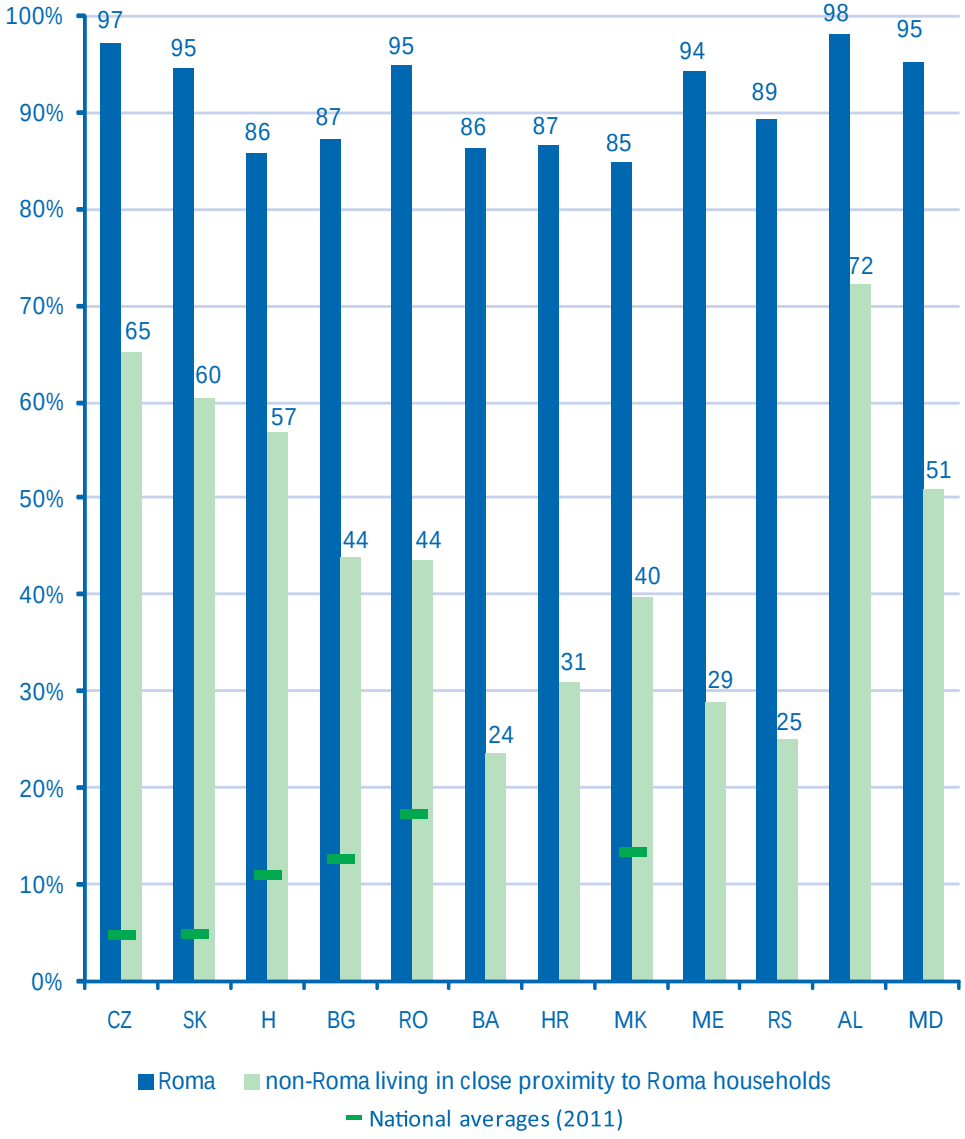
Source: UNDP/World Bank/EC Regional Roma Survey 2011

Eurostat data (retrieved from labour force surveys), the Czech Republic and Slovakia have achieved this goal in 2009, and Hungary is close to achieving it (Eurostat 2012, on-line source).[15] According to the European Commission (2011b, p. 85), early leavers face higher risks of unemployment or precarious employment and welfare dependency than people with higher education attainment.

15/ The Government of Hungary recently reduced the end of compulsory schooling from the age of 18 to the age of 16. This reform might increase the share of early school leavers.

Figure 13: Early leavers from education and training

Share of Roma and non-Roma living in close proximity to Roma households aged 18 to 22 who are not attending school and have not completed education higher than lower secondary (ISCED 2) or short-term upper secondary (ISCED 3c) compared to national averages



Sources: UNDP/World Bank/EC Regional Roma Survey 2011; Eurostat (2012, online source) for national averages in 2011.

Note: National averages were not available for Bosnia and Herzegovina, Croatia, Montenegro, Serbia, Albania and Moldova.

Low educational aspirations are a frequent explanation for early school leaving of Roma students. Even though educational aspirations of Roma are significant lower than of non-Roma (a fact that should not be reduced to cultural differences – see Box 6), aspirations of Roma are high compared to real outcomes. Being asked what should be a sufficient educational level for a girl, the majority of randomly selected persons from Roma households aspired to at least upper secondary education (sample average). Thus, quantitative data does not support the idea that early leaving is mainly caused by low aspirations of Roma parents.

As shown in Figure 13, most Roma, as well as a considerable share of non-Roma living in close proximity to Roma households, fall under the category of "early leavers". In Hungary, Bulgaria, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia and Serbia, the share of Roma that fall under this category is above 80%. In the Czech Republic, Slovakia, Romania, Montenegro, Albania and Moldova, the share is even above 90%. The differences between Roma and non-Roma are statistically significant in all countries ($p < .01$). The association between group affiliation and early school leaving is the weakest in Hungary (Phi = .256) and the strongest in Montenegro (Phi = .669): In Montenegro, 94% of Roma are early school leavers, compared to 29% of non-Roma. The huge differences between non-Roma living in close proximity to Roma households and national averages, measured through labour force surveys, point to regional disparities in all countries where national averages are available.

No statistically significant differences were found with regard to gender in any country except Croatia, where a 10% higher share of female Roma leave school early, in comparison to their male counterparts.

Box 6: Educational aspirations

It is a widely shared assumption that educational marginalisation of Roma is at least partly due to a lack of aspirations, and that in certain milieus higher education is perceived as something one should rather avoid in order not to experience cultural loss. Culture is an often anticipated concept to explain the low educational aspirations of Roma. Especially with regard to Roma girls, low aspirations have been repeatedly explained by traditional cultural values (Kyuchukov 2011, pp. 97-98; Bennett et al. 2012, p. 36). The UNDP/World Bank/EC Regional Roma Survey also shows significant differences in aspirations between Roma and non-Roma. One should however not conclude that differences are mainly caused by culture or ethnicity.

In order to assess educational aspirations, interviewers asked a randomly selected person in each household about what she/he thought should be a sufficient educational level for a boy or a girl. The differences between Roma and non-Roma are significant in all countries ($p < .01$). The Roma aspire, on average, to a lesser extent to post-secondary education (college or university) and to a higher extent to lower secondary education. Educational aspirations highly correlate with the education the respondent has received himself. Looking at the (not representative) sample average, it is revealed that an aspiration gap still persists, even if the education of the respondent is taken into account. Table 5 compares the educational aspirations of Roma and non-Roma, disaggregated by educational level of the respondent.

Upper secondary education was aspired to by 71% of Roma respondents who had completed no higher than primary education, compared to 88% of non-Roma respondents who had completed no higher than lower secondary education. On the other hand, upper secondary education was aspired to by 89% of Roma respondents who had completed upper secondary education, compared to 97% of non-Roma who had completed upper secondary education. The remaining gap between Roma and non-Roma might be explained by higher poverty and hopelessness among Roma respondents, or because Roma respondents expect labour market discrimination, and thus assume lower gains from education (see O'Higgins 2010, pp. 180-182). Traditional cultural values may also play a role, however this assumption should be treated with caution, as long as the residual ethnic differences contain other omitted factors.

Table 5: Educational aspirations for female education attainment (sample average)

	Educational aspirations for a girl (sample average)				
	Roma		non-Roma		Difference (gap)
Highest completed education of the respondent	Lower secondary (ISCED 2) or less	Upper secondary (general or vocational / technical - ISCED 3) and higher	Lower secondary (ISCED 2) and below	Upper secondary (general or vocational / technical - ISCED 3) and above	
Primary education (ISCED 1)	29%	71%	12%	88%	**17%**
Lower secondary (ISCED 2)	19%	81%	6%	94%	**13%**
Upper secondary (general or vocational / technical - ISCED 3)	11%	89%	3%	97%	**8%**

Source: UNDP/World Bank/EC Regional Roma Survey 2011

Note: For some observers the gap between Roma and non-Roma might seem rather small and a ground for hope that due to high aspirations early school leaving among Roma may shrink in the future. However, one has to distinct between idealistic aspirations and actual educational decisions. Educational decisions are among others based on cost-benefit considerations taking into account transaction costs of education as well as the probability of success and labour market prospects. Thus, educational decisions - especially of poor families - may not correspond with idealistic aspirations.

5 Romani Čhib and education

In the course of the 19th century, most, if not all, European nation states used national languages to trigger unity, assess loyalty and govern public participation (Gogolin 2010, pp. 536-537). In this context, national institutions, and especially schools, developed the imagery of monolingualism as being a natural norm, while perceiving bilingualism and multiculturalism as disturbing or even threatening (ibid.). This "monolingual habitus" (Gogolin 1994) is still prevalent in European schools, and might disadvantage linguistic minorities, especially those whose language is neither considered as an economic or cultural asset, nor protected by national institutions.

5.1 Multilingual Roma households

Most Roma in Europe can be considered as bilingual or multilingual. Roma usually speak the national language of the country in which they live, many speak Romani Čhib (language of the Roma, referred to as 'Romani' by modern linguistics), and some speak other minority languages. Roma migrants often speak the dominant language(s) of their country of origin, as well as the language(s) of their country of residence and Romani. Apart from some exceptions,[16] the Roma learn Romani in the family (Boretzky 2002, p. 928). This does not mean automatically that Romani can always be considered as the first language (L1) or mother tongue. Roma children might grow-up bilingual, with a language other than Romani being the dominant language.[17]

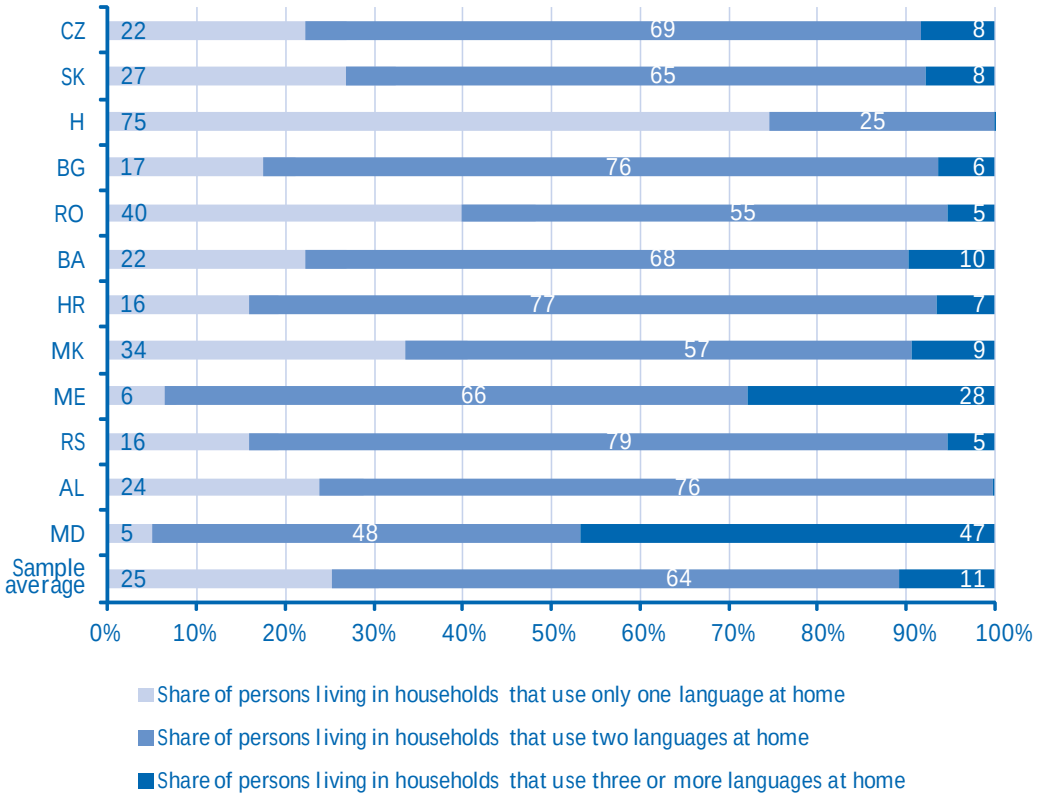
Figure 14 shows that 25% of Roma surveyed live in households that indicated using only one language at home, 64% of Roma surveyed live in households that indicated using two languages at home, and 11% of Roma live in households that indicated using three or more languages at home (sample average). In all countries, except Hungary,

16/ Romani is usually not spoken at all by non-migrant Roma in Britain, the Iberian Peninsula and Scandinavia (Matras 2004, p. 243). However, non-migrant Roma in these countries use some Romani-derived vocabulary, as a sort of "in-group code" or cultural heritage, sometimes referred to as para-Romani (ibid.).

17/ Explorative interviews conducted in Košice (Slovakia) showed that Romani-speaking adults might not speak Romani with their children, because they perceive that the language is not useful for success in education or for entering the labour market. Nevertheless, one mother, who avoided the use of Romani in her household, indicated that her children spoke Romani fluently, having learned it from friends and cousins.

Figure 14: Multilingual Roma households

Share of Roma living in households that use one, two or three and more languages at home



Source: UNDP/Wolrd Bank/EC Regional Roma Survey 2011

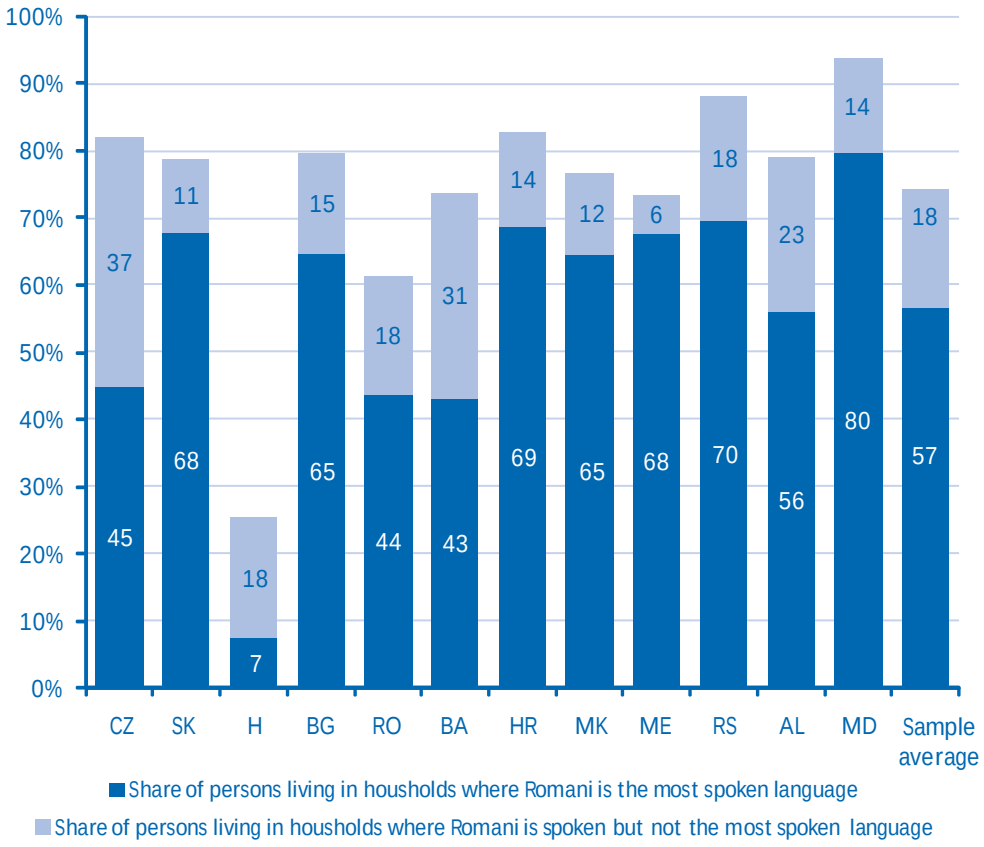
the share of Roma living in households that use two or more languages is upwards of 60%. The share of Roma living in households using three or more languages at home is 28% in Montenegro and 47% in Moldova, whereas in Hungary 75% of households use only Hungarian at home.

Romani is perceived as one central "identity marker" of Roma communities. It is the affinity of Romani and Indo-Aryan languages that led to the discovery of Indian origins of the Roma in the 1700s (Tcherenkov & Laederich 2004, pp. 237-239). Romani is a full-fledged language, with its own grammar, extensive lexicon and sound system, its dialects developed most probably from a single ancestor idiom over the past 500-600 years, and its dialectal variation is not atypical for a European language (Matras 2005a, p. 3). Romani dialects are influenced by the surrounding majority languages, especially with regard to their respective loanwords. The varieties can be roughly differentiated into:

- Northern Dialects (spoken in France, Germany and Austria),
- North-eastern Dialects (spoken in Russia and Baltic States and parts of Poland)
- Central Dialects (spoken, among others, in parts of Slovakia, the Czech Republic, in West and South Hungary, Poland, the Austrian Burgenland and northern Slovenia)
- Vlach Dialects (spoken in Rumania and in the Balkan countries) and
- South-Balkan Dialects (spoken in the Balkan countries, except Croatia) (Heinschink und Cech 2013).

Figure 15 shows that 75% of Roma surveyed live in households that speak Romani at home and 57% live in households that use mostly Romani at home (sample average).

Figure 15: The use of Romani in the family
Share of persons living in households that speak Romani at home



Source: UNDP/Wolrd Bank/EC Regional Roma Survey 2011

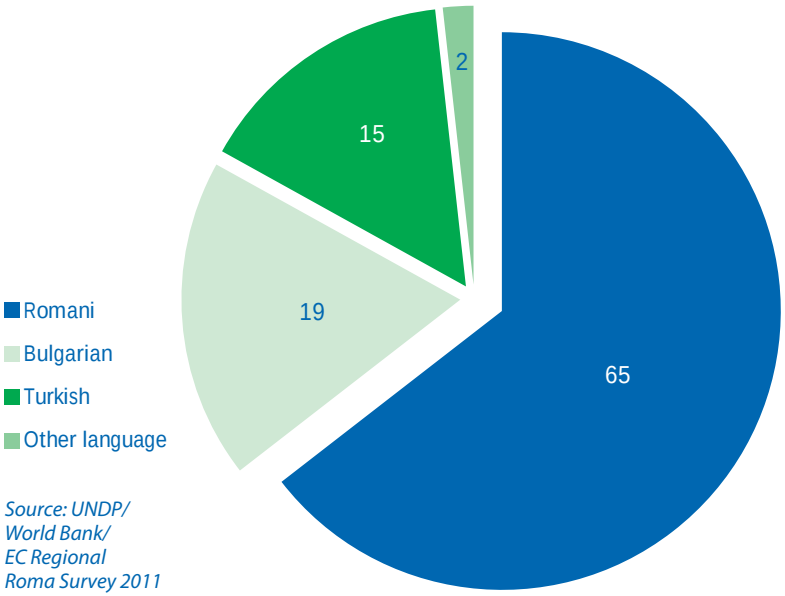
This indicates that Romani may be considered as the first language (L1) for a high share of the region's Roma population. Furthermore, the high share of households that indicated using Romani at home suggests that the absolute number of Romani speakers may be much higher than assumed so far. The number of persons living in households that primarily use Romani at home varies from 7% in Hungary, to over 60% in Slovakia, Bulgaria, Croatia, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Moldova.[18]

Several groups that are called 'Roma' do not use Romani in their daily communication, such as the Beás (Boyash / Bajaši) in Hungary, Croatia and Serbia, most Romungro in Hungary and the Vatrashi in Romania. At an individual level, the dropping of Romani language might be a strategy to achieve social upward mobility and to avoid stigma. A considerable share of Roma in Bulgaria, the Former Yugoslav Republic of Macedonia, Moldova and Slovakia, live in households that primarily use another minority language than Romani at home: 15% of Roma in Bulgaria and 6% of Roma in the Former Yugoslav Republic of Macedonia live in households that mainly use Turkish at home, while 14% of Roma in Slovakia and 10% of Roma in Romania live in households that mainly use Hungarian at home (see Figures 16-19).

Attempts to establish an international standard in Romani have failed so far. Romani dialect variance makes standardisation a difficult endeavour. There is neither a widely accepted authority that would have the means and the trust to undertake language-planning decisions for Romani (Matras 2005b, p. 4), nor a strong notion for the need of such an effort from the side of most local Roma communities. Some communities might see such attempts as a danger for their own linguistic culture or object to the fact that they would have to learn and use a version of Romani that strongly deviates from their own dialect. Moreover, Romani was not used as a written language until the beginning of the 20th century, and writing systems of the languages of the respective state have been used for textualization of Romani. Under these circumstances, the development of an international standard is rather unlikely. However, various Romani dialects have been codified on national and regional levels – often thanks to the involvement of non-governmental organisations. Written forms of Romani have been established in the Czech and Slovak Republic, Hungary, Romania, the Former Yugoslav Republic of Macedonia, Serbia, and Bulgaria (ibid., pp. 5-8), among others. The fall of the iron curtain led to increasing (sometimes short-lived) publication activities, and Romani is, to a limited extent, present in Central and Southeast European media such as radio and television (Heinschink & Cech 2013). The internet as a medium has led to a rapid increase in communications in written Romani since the mid-1990s. Nevertheless, reflecting the socio-political and socio-economic situation of its speakers, Romani remains relatively marginalised in the public sphere (Halwachs 2011, p. 381).

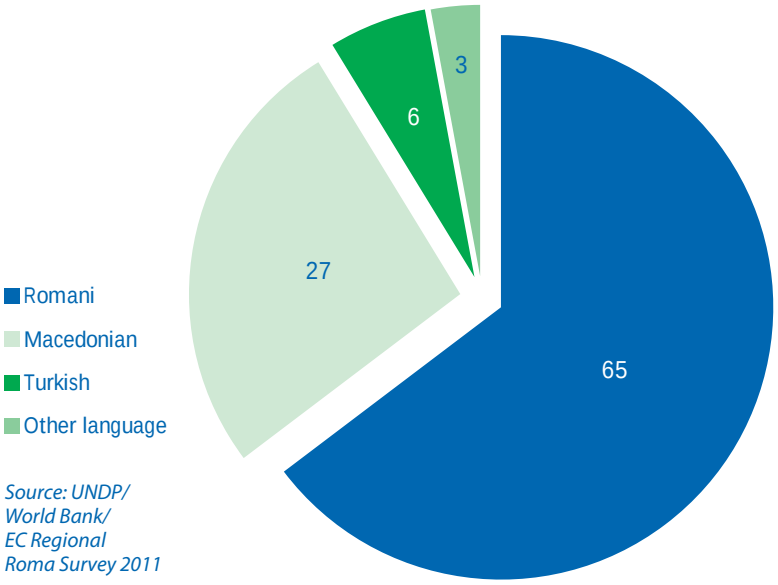
18/ The numbers are slightly below estimations of Bakker & Rooker (2001, p. 10), who estimated the share of Roma speaking Romani was about 90% in Albania, Serbia, Macedonia, Montenegro, and about 50% in Hungary. On the other hand, the numbers are slightly higher than results from the UNDP Roma household survey 2002, which was based on interviews with the respective heads of each household (Ivanov et al. 2002, p. 59).

Figure 16: Language use of Roma in Bulgaria
Share of Roma living in households according to the language that is used most at home (in %)



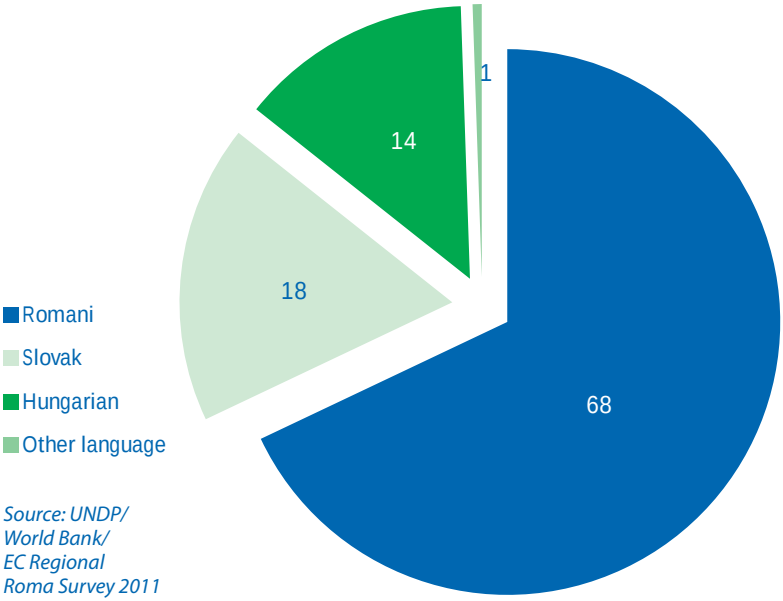
Source: UNDP/ World Bank/ EC Regional Roma Survey 2011

Figure 17: Language use of Roma in the Former Yugoslav Republic of Macedonia
Share of Roma living in households according to the language that is used most at home (in %)



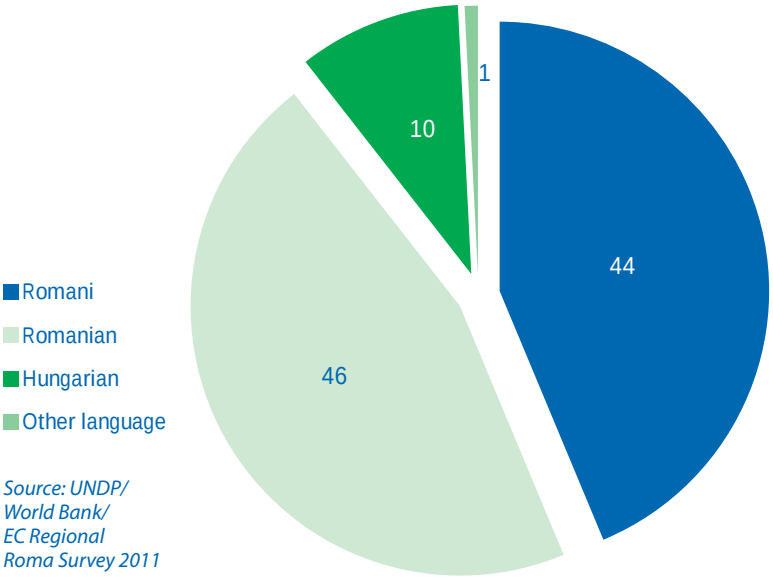
Source: UNDP/ World Bank/ EC Regional Roma Survey 2011

Figure 18: Language use of Roma in Slovakia
Share of Roma living in households according to the language that is used most at home (in %)



Source: UNDP/ World Bank/ EC Regional Roma Survey 2011

Figure 19: Language use of Roma in Romania
Share of Roma living in households according to the language that is used most at home (in %)



Source: UNDP/ World Bank/ EC Regional Roma Survey 2011

5.2 Romani Čhib and formal education

Apart from a few local pilot projects, the Romani language has been historically neglected in the European education systems. Until recently, Romani was passed orally and was not used in public or academia. Dialectal variation and the difficulties of language standardisation, the lack of a transnational accepted authority, the fact that all its speakers are at least bilingual and the stigma that is associated with Romani, have prevented the use of Romani in school contexts. In some schools in East and Southeast Europe, Romani was introduced as an additional school subject, or as a language of instruction besides the respective majority language. The option to introduce Romani as a language of instruction in a parallel education system is opposed by many Roma communities (Friedman 2001, p. 296; Ivanov et al. 2002, p. 58).

A legal framework for the promotion of Romani language, and its use in the school context, was set up by the Council of Europe's European Charter for Regional and Minority Languages of 1992, which calls on member states to "encourage or provide teaching in or of the regional or minority language at all the appropriate stages of education". The Council's Framework Convention for the Protection of National Minorities of 1995 furthermore calls states to "provide adequate opportunities for teacher training and access to textbooks", in order to foster the knowledge of minority languages.

A precondition for the introduction of Romani as a school subject would be the establishment of Romani language as a university subject, and subject of the teaching profession, which requires that governments become responsible for Romani language planning, and distribute appropriate resources for this endeavour. Furthermore, resources would have to be provided for educational materials and the development of Romani language as a language of academia and media. Last, but not least, the language planning would have to consider different needs of different communities and dialect groups, which might lead to the introduction of two or more Romani dialects in the education system of a country.

Romani teaching materials have been produced in several countries – mostly thanks to the engagement of single activists or non-governmental organisations (an overview of materials that might be used for teaching is provided by Bakker & Kyuchukov 2003). Several universities offer Romani as a study subject, such as the Universities of Bucharest, Graz, Manchester, Paris and Pécs, or offer Romani language courses such as the Charles University in Prague and Constantine the Philosopher University in Nitra. The introduction of Romani in the school curriculums has been reported for Finland, Sweden and Romania (Matras 2005a, p. 13). A transnational coordination for the development of standardised teaching material in four major Romani dialects (Lovari, Gurbet, Arli and Kalderašicko) is in progress (Universität Graz 2012, online source).

An implementation – at least rhetorical – of the Council of Europe's framework is reflected in action plans for the Decade of Roma Inclusion, which have been devel-

oped by Decade member states since 2005, and Roma integration strategies that have been developed by EU member states following the EU Framework for National Roma Integration Strategies since 2011.

Attempts that open the way to introducing Romani as a school subject, such as the establishment of Romani as a subject at universities and/or for teacher training, as well as the production of didactical materials are mentioned in the Decade action plans of Albania, Bosnia and Herzegovina, Bulgaria, Montenegro and Serbia, and in the Roma integration strategies of the Czech Republic, Romania and Slovakia.

Seen from the point of view of human and minority rights, states that have ratified the Charter for Regional and Minority Languages and the Framework Convention for the Protection of National Minorities are obliged to offer Romani as an optional subject, depending on the demand of students and their parents. However, the development of Romani in the school context also depends on the support of Roma parents and communities. This support, in turn, depends at least partly, on the usefulness of Romani in public communications and business relations. Several challenges are linked to the establishment of Romani in the school context:

- Given the diversity of Romani dialects, and the challenges of language standardisation, the chances that the Romani standard taught at school varies from the local dialect are quite high, which may lead to opposition from the local community or to the teaching of a variant the pupils can hardly use for daily communications (Heinschink & Cech 2013).

- The probability is high that Romani will be taught just to Roma pupils. In this case, students would be taught separately from other students. Separate teaching could indirectly highlight the differences between Roma and non-Roma students, or reinforce segregation (Ivanov et al. 2002, p. 59).[19]

- Roma parents might perceive Romani language learning as a cementation of their social status, and a barrier to social upwards mobility. Roma, as well as non-Roma, parents might act rationally when deciding that their children should not learn Romani.

On the other hand, the introduction of Romani in the school curriculum might prevent language loss and language impoverishment. Just like the extremely limited public use of Romani results from the marginalisation of Roma communities, language use and development may positively influence not just language status, but also the minority status as such. In the same way that language development, and its recognition in the education system, might positively impact on minority status, it might also positively impact on the self-esteem of Roma students, and the relations between parents and educational institutions.

19/ Bilingual schools with Romani as language of instruction exist in Kremnica and Košice (Slovakia) as well as Russe, Kyustendil and Shumen (Bulgaria).

5.3 Adequate language support beyond Romani language teaching

Insufficient knowledge of the language of school instruction is a barrier to equal education opportunities. While education policies and activism have focused mainly on Romani language acquisition, the importance of mastering the language of school instruction as a pre-condition for educational success has not gained much attention. That many Roma children have a limited command of the language of instruction, when entering school, has been noted in the Czech Republic (Hübschmannová 1979, p. 47). In Montenegro, a desegregation project failed because Roma children did not have sufficient knowledge of the language of instruction (Petričević et al. 2009, p. 25). In the Croatian Međimurje County, Roma children with a limited mastery of Croatian language are streamed into special classes, while Roma students who master Croatian according to certain standards attend regular classes (Novak et al. 2007, p. 18). Limited command of the language of school instruction might result from the fact that many Roma children learn the language of instruction as a second language, and from the fact that many Romani children live in poverty and a less supportive home environment. Language acquisition must be perceived as an important means of social mobility, and is thus a key to inclusive human development: "*Speaking the dominant language of the country will make it easier to find a job and generally one would also expect that it would be a better paid job*" (Rodriguez-Chamussy et al. 2012, p. 96).

Figure 20 shows that 58% of Roma surveyed between 0 and 6 years of age live in households that indicated using Romani as a first language (L1), 18% of Roma between 0 and 6 years of age live in households that indicated to use Romani as a second language (L2) (sample average). The share of Roma infants and children that live in households that primarily used Romani at home is above 60% in Bulgaria and the Former Yugoslav Republic of Macedonia, and above 70% in Slovakia, Croatia, Montenegro, Serbia and Moldova.

As shown in Figure 20, a considerable number of Roma children who are going to be enrolled in school in the near future, or have recently been enrolled, are primarily socialised in Romani. In most countries of Central and Southeast Europe, more than half of Roma children between 0 and 6 years of age live in households that mostly speak Romani at home.

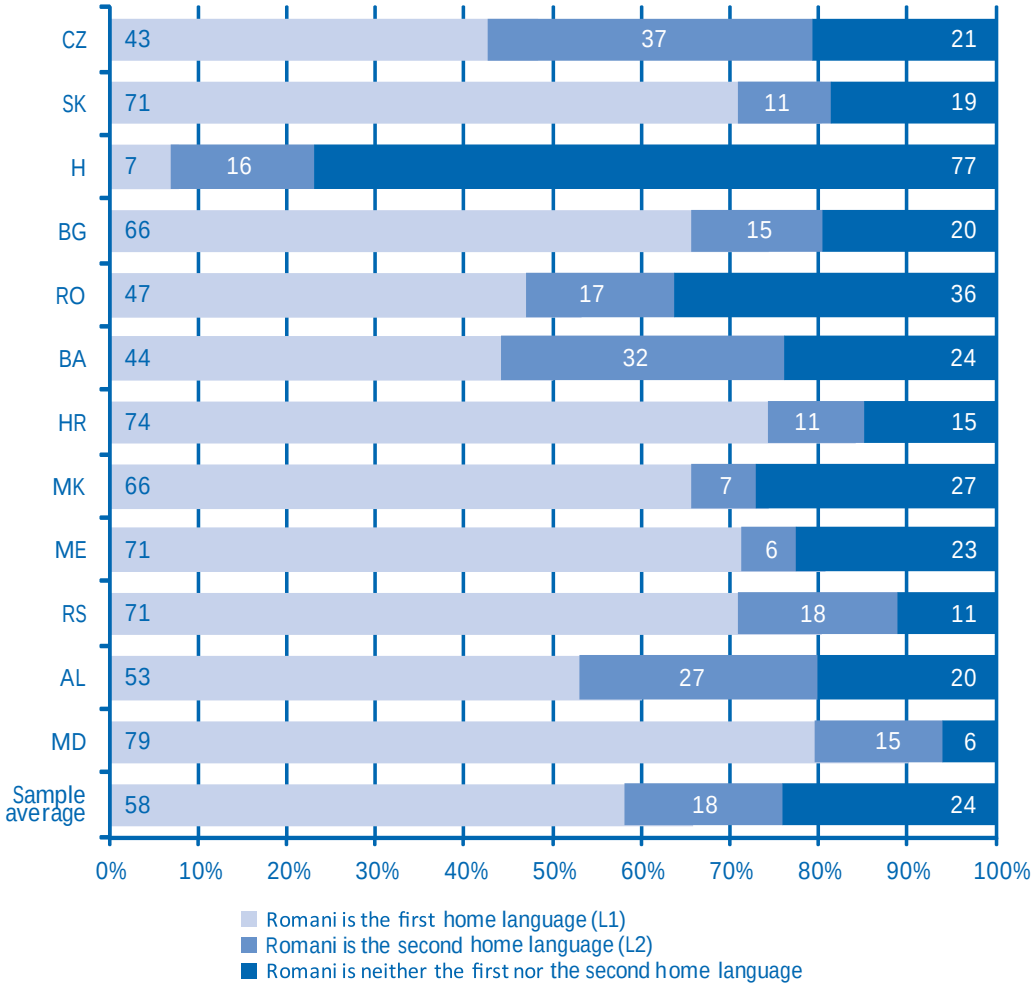
The language needs of students that speak the language of instruction as L2 or L3 differ from language needs of students that speak the language of instruction as L1, and so do the necessary teaching responses. This has been acknowledged in many EU countries with regard to education of children and youngsters with migrant backgrounds, and in many other parts of the world where the languages of the former colonial powers serve as the main medium of instruction. Serbia is the only country where a curriculum framework to support Roma who learn Serbian as second language was developed (Filipović et al. 2010).

Furthermore, language skills vary between children with different socio-economic backgrounds. Children from the middle class are more likely to master the academic

language when entering school, while children from lower strata use language codes that prove to be disadvantageous for their scholarly success (Bernstein 1971, Bourne 2008). A proxy for assuming the share of children, who are most disadvantaged, is household poverty. Figure 21 shows the share of Roma children who live in households with a per capita income below $2.15 and $4.30 (PPP).

The combination of poverty and competency in the language of school instruction has an influence on the segregation of Roma students in special schools and classes, and might possibly be the central barrier to equal educational achievement of Roma children.

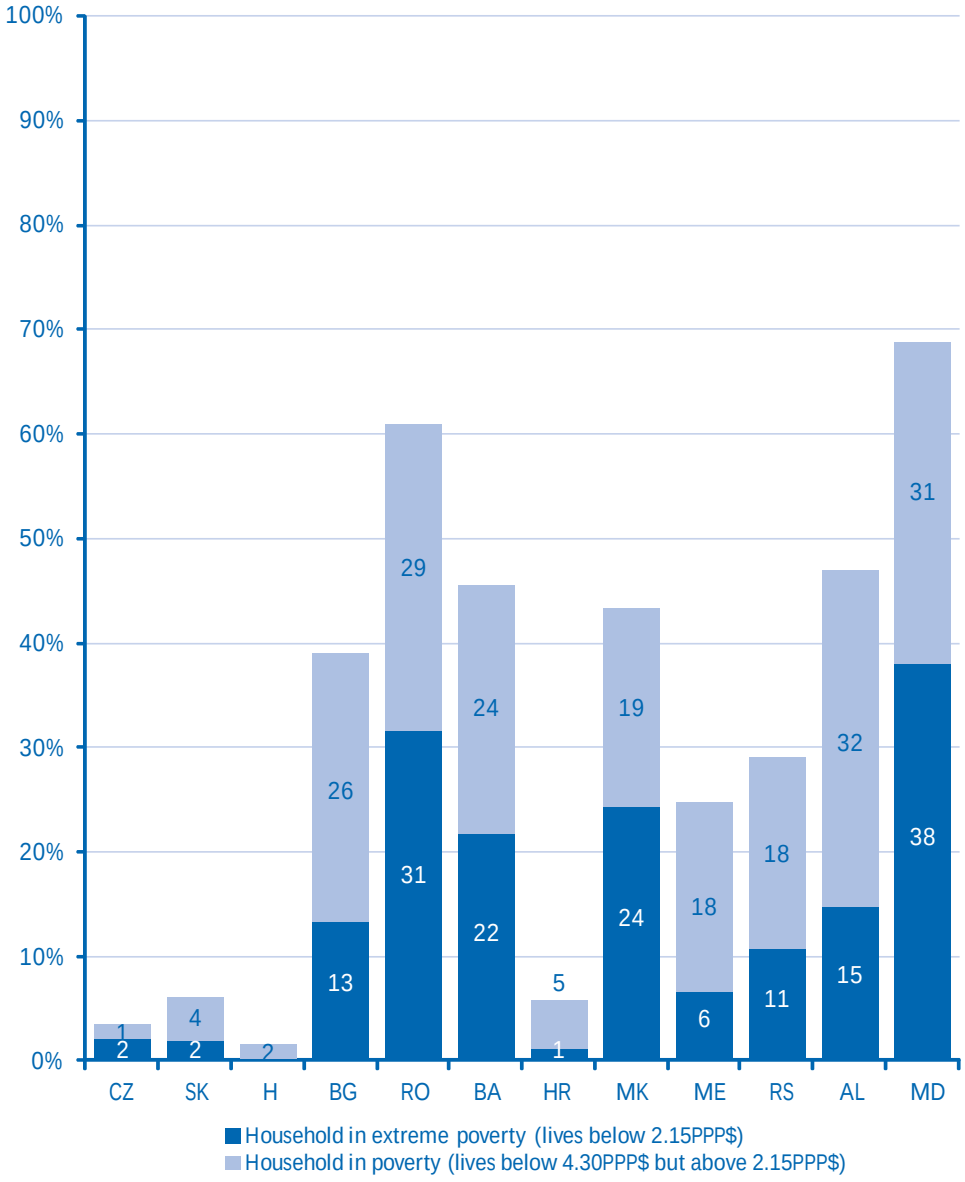
Figure 20: Linguistic socialisation of Roma infants and children
Share of Roma infants and children aged 0 to 6 living in households that speak Romani at home



Source: UNDP/World Bank/EC Regional Roma Survey 2011

Figure 21: Poverty of Roma infants and children

Share of Roma infants and children aged 0 to 6 living in households that live below the 2.15$ or the 4.30$ poverty line



Source: UNDP/World Bank/EC Regional Roma Survey 2011

6 Segregation in education

Educational segregation, in the context of Roma inclusion, refers to two processes that should be analytically distinguished and clearly defined. One is the process where Roma students, even though being a minority, make up the majority of the school body of certain regular schools. The other process is the streaming of Roma into special schools and classes, leading to an overrepresentation of Roma in these schools and classes. If both processes mutually enhance each other, special schools develop into ethnically segregated education settings for Roma children. This incident might then be labelled as twofold segregation (Brüggemann 2011, p. 201).

6.1 Ethnic segregation in regular schools and classes

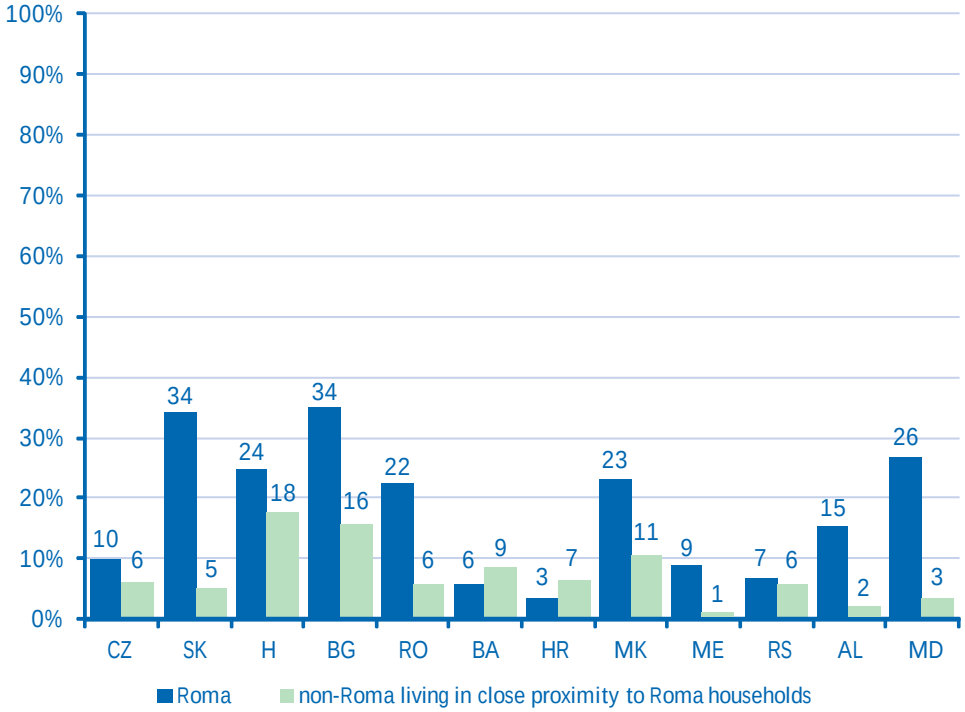
An ethnically segregated school or class is understood as a school or class where a local minority, in terms of the share of school age population in a territorial administrative unit, builds composes the majority of pupils in the respective school or class. The statistical overrepresentation of the minority in a regular school or class is a precondition for the school or class being labelled as ethnically segregated. However, not every school or class where a minority is overrepresented should be labelled as ethnically segregated. Ethnic segregation might rather be understood as an extreme case of overrepresentation of a minority group in a school or class. Thus, an artificial 50% threshold is applied to refer to ethnically segregated schools or classes (Surdu 2003, p. 1).

The UNDP/World Bank/EC Regional Roma Survey makes it possible to measure the share of students that have indicated attending a school or class where the majority of students belong to the Roma minority. These schools are referred to as segregated schools for the purpose of this paper, even though data of the respective territorial administrative unit would have to be considered in order to meet the definition stated above. Figure 22 shows the share of Roma, aged between 7 and 15, who attend regular schools with a predominant Roma student body.[20] In Slovakia, Hungary, Bulgaria, Romania, the Former Yugoslav Republic of Macedonia, Montenegro, Albania and Moldova, the share of Roma that attend segregated schools is statistically significantly higher

20/ For a relatively high share of Roma, aged between 7 and 15, it was indicated that the ethnicity of the schoolmates is "mixed". This share reaches from over 10% in Bosnia and Herzegovina, Moldova, Romania and Serbia, to over 25% in Albania, Bulgaria, the Czech Republic and Macedonia, and over 35% in Slovakia, Montenegro and Croatia.

Figure 22: Ethnically segregated schools

Share of Roma and non-Roma living in close proximity to Roma households aged 7 to 15 who attend regular schools with the majority of schoolmates being Roma



Source: UNDP/World Bank/EC Regional Roma Survey 2011

than the share of non-Roma living in close proximity to Roma households (p> .01). In Hungary, Romania, the Former Yugoslav Republic of Macedonia and Moldova, more than 20% of Roma students attend such schools. In Slovakia and Bulgaria, the share of Roma attending segregated schools is even higher than 30%. The association between group affiliation and attending a segregated school is the strongest in Slovakia (Phi = -.261): 34% of Roma attend schools with a predominant Roma student body, compared to 5% of non-Roma.

As shown in Figure 23, the share of Roma in segregated classes is even higher than the share of Roma in segregated schools. In Slovakia, 43% of Roma attend classes with a predominant Roma student body. The share of Roma who attend segregated classes in non-segregated schools exceeds 5% in Hungary, Romania, Croatia and Moldova, and 10% in Slovakia and Bulgaria, pointing to segregation practices within schools.

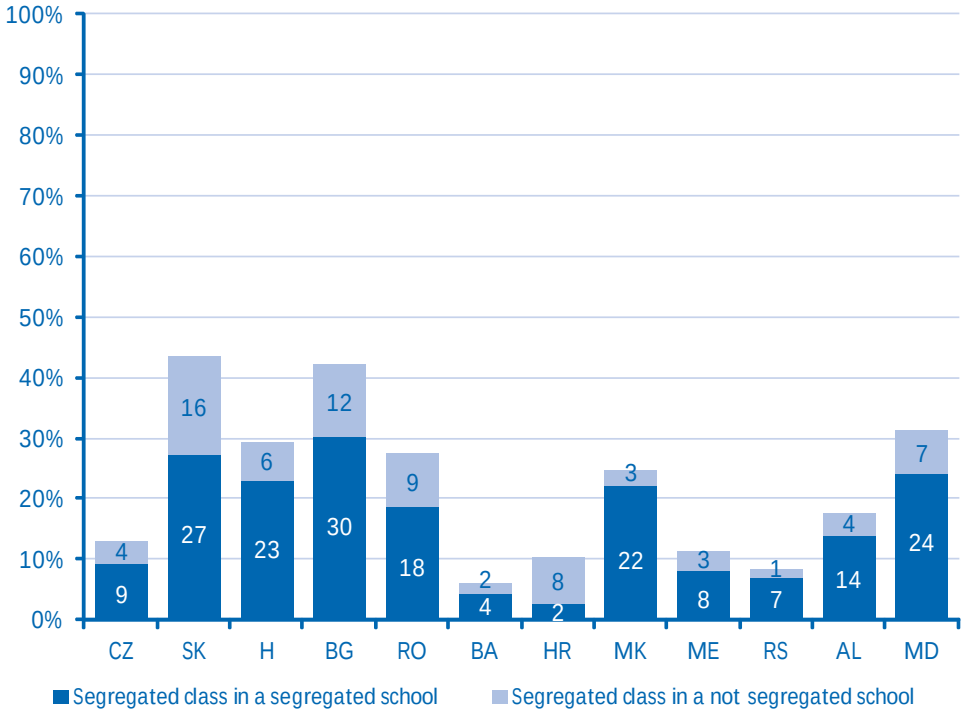
The existence of ethnic segregation is strongly influenced by a variety of interwoven factors. Factors outside the education system, and therefore difficult to be addressed by education policies, are characteristics such as the share of minority pupils of school age, or the extent of residential segregation within a given territory. The extent of edu-

cational segregation is expected to be higher in regions with a high share of minority pupils and a higher extent of residential segregation than in regions with a low share of minority pupils and a lower extent of residential segregation. The extent of educational segregation in countries with a relatively small Roma population, such as the Czech Republic, Albania and especially Moldova is noticeable (Figure 23). In Moldova, a country where the estimated share of Roma is below three per cent (Council of Europe 2010, online source), nearly every third Roma student attends a class where the majority of the students are also Roma.

Apart from population characteristics, mechanisms within the education system and decisions of families also influence the extent of educational segregation. Since the 1990s, parents have gained decision making power regarding the schooling of their children. In certain instances, non-Roma parents avoid enrolling their children in schools with a high share of Roma pupils, or non-Roma parents transfer their children to other schools, if the share of Roma pupils within a school increases (Feinschmidt et al. 2010, p. 24 for Hungary; Kusa et al 2010, p. 40 for Slovakia). This behaviour is referred to as 'white flight'. White flight might be partly a result of racism and partly a result of parents' fears that a higher share of Roma students might lower the quality of school-

Figure 23: Ethnically segregated classes

Share of Roma aged 7 to 15 who attend regular schools with the majority of classmates being Roma



Source: UNDP/World Bank/EC Regional Roma Survey 2011

ing. Very similar is the attempt of non-Roma parents to influence school authorities to keep schools "Roma-free" (Zentai 2011, p. 164). Free school choice has been introduced in several Central and Southeast European countries since the 1990s. This has led to increasing segregation of Roma children, as it was shown by Kertesi & Kézdi (2005, pp. 35-36) for Hungary: due to free school choice, middle class families increasingly enrol their children into schools with the best reputation and quality, while less affluent families still choose a school in closest proximity.

Quantitative research shows that Roma parents might also place their children in schools with a predominantly Roma student body. This might be the case when a certain school establishes "good relations" with a local Roma community, or when parents fear that their children could be discriminated against in other schools (Zentai 2011, p. 165). However, data from a UNDP Household Survey in the new EU member states suggests that Roma parents strongly favour integrated schooling over segregated schooling (Ivanov et al. 2002, p. 58).

School authorities might directly or indirectly influence educational segregation via counselling or admission criteria. Political decision makers influence educational segregation through educational planning: in Serbia it was observed that schools had built satellite facilities close to Roma settlements (Open Society Institute 2007, p. 597). Satellite classes of vocational schools have also been established in several Roma settlements in Eastern Slovakia. Teachers and authorities justify the establishment of such facilities by arguing that Roma students do not have the financial means to travel to the closest upper secondary school.[21]

Several studies have reported that students who attend segregated schools or classes are disadvantaged, in terms of school infrastructure and equipment, as well as the quality of teaching. A correlation between teacher fluctuation (indirect indicator of the quality of teaching) and ethnic segregation was found in Hungary (Kertesi & Kézdi 2005, p. 45). Surdu (2003, p. 4) found that classes in segregated schools in Romania were more likely to be overcrowded, and less likely to be taught by qualified teachers. Poor conditions in terms of sanitation and technical equipment were also found in satellite facilities of primary schools in Slovakia (Friedman et al. 2009, p. 28).

6.2 Overrepresentation in special schools

Segregation of Roma children and youngsters in special schooling is a result of disproportionate streaming, leading to the overrepresentation of Roma in special schools or special classes for children with (mental) disabilities, or special education needs. Special schools and classes are perceived as per se segregated education settings (in-

21/ Own observations based on interviews with school authorities, teachers and Roma students in the city of Košice, Slovakia and villages around Košice .

dependent from the ethnic composition of the student body), because education in these facilities is separated from regular education. Special schools and classes offer a reduced curriculum and seldom enable their students to enter the regular school system or the labour market.

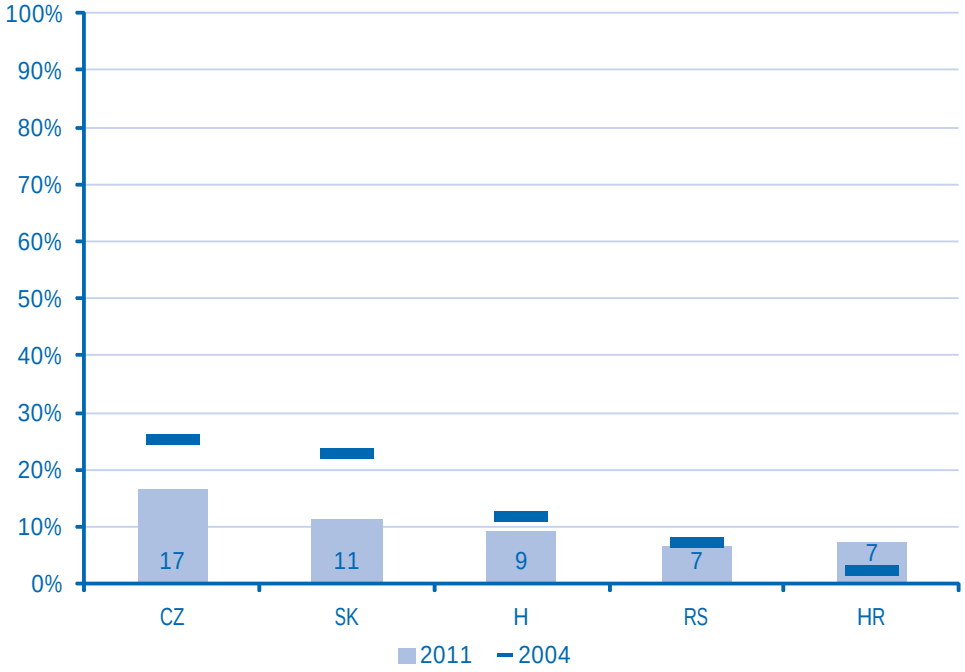
Most (in)famous for the streaming of Roma is the Czech Republic. The Czech government published an often cited government document in 2003 that indicated that about 75% of Roma children of primary school age were enrolled in remedial special schools (Government of the Czech Republic 2003, p. 11). While this estimate (based on questionable teacher estimates) was most probably overestimated, regional data about the overrepresentation of Roma in the Czech region of Ostrava were used as evidence of indirect discrimination before the European Court of Human Rights (ECHR) in DH and Others v. Czech Republic. The ECHR decided that the Czech Republic violated Article 14 of the European Convention on Human Rights and ruled in favour of 18 Czech Roma who have been discriminated against when being streamed into remedial special schools (O'Nions 2010, p. 1).

According to the Regional Survey 2011, the share of Roma, aged 7 to 15, who attend or have been attending special schools (not including special classes) exceeds 5% in Hungary, Serbia and Croatia, and 10% in the Czech Republic and Slovakia, (Figure 25). The differences between 2004 and 2011 are statistically significant for the Czech Republic, where the number of Roma enrolled in special schools decreased from 25% to 17%, and for Croatia, where the number of Roma enrolled in special schools increased from 2% to 7% ($p < .01$). No significant gender differences were found. A considerable share of Roma students might attend special classes in regular schools. Hence the data on the number of Roma in special schools underestimates the number of Roma that are taught a reduced curriculum in a segregated education setting. Moreover, the significant reduction in special school attendance rates in the Czech Republic should be treated with caution. In the Czech Republic, the term "special school" has been abolished and schools that offer a reduced curriculum are officially called "practical schools" since 2005 (Laubelova & Olahova 2007, p. 23). It is questionable whether respondents indicated special school attendance for pupils enrolled in practical schools. The Czech School Inspection reported strong overrepresentation of Roma in former special schools in 2010 (Gwendolyn 2012, p. 181). Findings from a separate UNDP Household Survey conducted in Slovakia in 2010, based on a different sampling methodology, show that 16% of Roma aged 7 to 15 attended special schools, and another 4% attended special classes (Brüggemann & Škobla 2012, p. 2).

Overrepresentation of Roma in special schooling might not be limited to the countries mentioned above. In the Former Yugoslav Republic of Macedonia (Eminovska & Spasovski 2012, p. 22) and Montenegro (Petričević et al. 2009, p. 22) official data suggests that considerable shares of pupils that attend special schools are Roma. Furthermore, field experience has recorded overrepresentation of Roma in special schools in Bulgaria (Marushiaková et al. 2007, p. 42; Kanev 2012, p. 149) and in Romania (Jigou & Surdu, 2007, p. 10).

Figure 24: Roma in special schools

Share of Roma aged 7 to 15 who attend or have been attending a special school



Source: UNDP/World Bank/EC Regional Roma Survey 2011

Notes:

- Special classes that are also considered as segregated settings (Luciak 2008, p. 35) are not included.

- Findings from a household survey implemented by UNDP in Slovakia in 2010 found 16% Roma aged 7 to 15 attended special schools (Brüggemann & Skobla 2012, online source).

The share of Roma aged 7 to 15 for whom a longstanding illness or health problem[22] was indicated is far below the share of Roma attending special schools as shown in Figure 25. One in four Roma, who is or has been attending a special school in Hungary, has a longstanding illness or health problem. In the Czech Republic a longstanding illness or health problem was indicated for just one out of twenty Roma who attend special schools.

Considering that illness or health problems are reported for a minority of Roma students that attend special schools, the interplay between unfavourable environmental influences and institutional mechanisms might be the main reason for the high share of Roma students in special schools. Streaming into special schools can be triggered by decision making within the family. Roma families might prefer special schools to

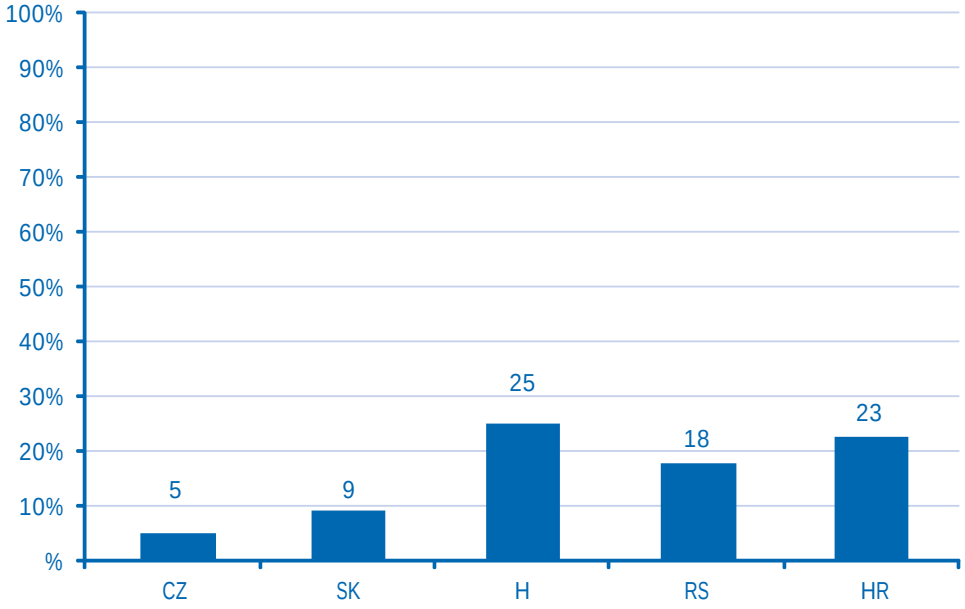
22/ The existence of a longstanding illness or health problem was indicated by the household head, based on subjective assessment.

regular schools, as an act of quasi-rational choice if, for example, special schooling is associated with lower transaction costs, such as hot meals and free textbooks or clothing, as it has been observed in Serbia (Szira & Kočić-Rakočević 2010, p. 22) and Bulgaria (Marushiakova et al. 2007, p. 12) or when students have a high chance of receiving achievement-based scholarships, as it was observed in Slovakia (Friedman et al. 2009, p. 78). Parents might also expect less discrimination for their children in special school settings, or welcome a special school's quasi-specialisation on the conditions found in the local Roma community. In Slovakia (Rigová et al. 2003, p. 425) and Serbia (McDonald & Mihajlović 2010, p. 161), it was observed that students are likely to attend special schools if older siblings were attending special schools. Nevertheless, UNDP/World Bank/EC survey data suggests that Roma do not believe that special education is a sufficient education level: Out of 8792 (randomly selected) respondents from Roma households in Central and Southeast Europe, only 28 (0.3%) stated that education in special schools is sufficient for a girl (sample average) (see Annex Table A4). The percentage of Roma respondents aspiring to special schooling for a girl did not reach 1% in any country.

The streaming of Roma into special schools is influenced by institutional mechanisms. As special schooling is associated with disadvantages, in terms of learning and life chances, and institutional mechanisms that drive streaming are perceived as discrimi-

Figure 25: Roma with health problems in special schools

Roma aged 7 to 15 with a longstanding illness or health problem (according to subjective assessment of the household head) as share of all Roma who attend or have been attending a special school



Source: UNDP/World Bank/EC Regional Roma Survey 2011

natory. Scholars distinguish between direct and indirect institutional discrimination: Mechanisms that intentionally disadvantage minorities are directly discriminatory, while mechanisms that unintentionally disadvantage minorities are indirectly discriminatory (Gomolla & Radke 2009, pp. 49-50). The streaming of Roma into special schools and classes is a result of both, direct and indirect discrimination. Direct discrimination has been observed, for example, in Slovakia, where Roma children have been enrolled in special schools without any diagnostic examination (Tomatová 2004, p. 49). Moreover, Roma have been found to be indirectly discriminated against through the use of intelligence or school readiness tests that guide streaming decisions. Diagnostic tests, such as the Raven's Progressive Matrices or the Wechsler Intelligence Scale for Children, which are used in the Czech Republic, Slovakia, Hungary and Serbia, show cultural and language bias that disadvantage Roma children (White 2012, p. 23).[23] As it has been observed for other disadvantaged groups (Luciak 2009, p. 386), it is neither limited intelligence nor talent, nor physical or psychical dysfunctions, but rather their disadvantaged situation, which seems to trigger the streaming of Roma into special schools and classes.

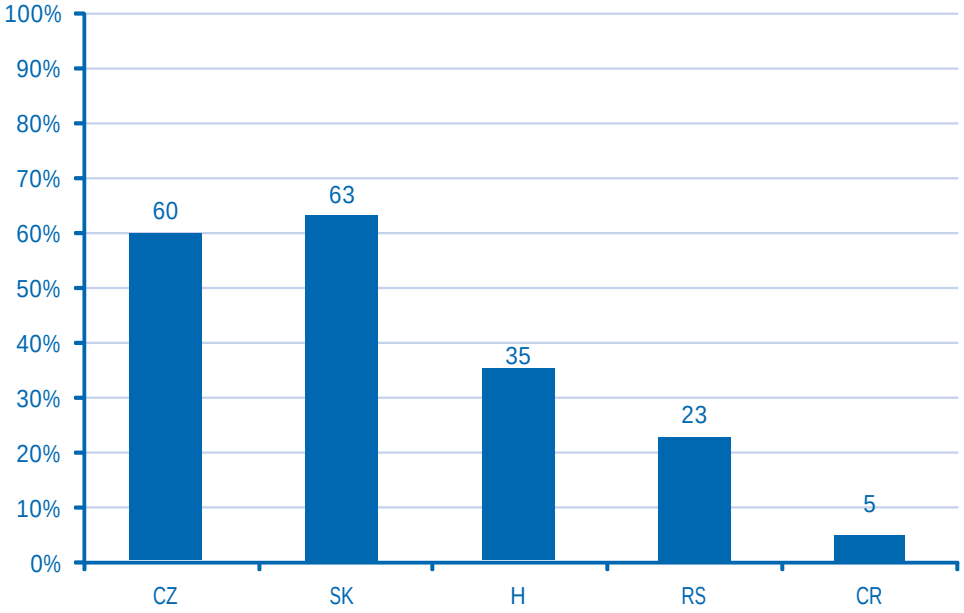
6.3 Twofold segregation: Special schools with a predominantly Roma student body

A severe form of educational segregation takes place if Roma children are not only overrepresented in special schools, but also make up the majority of the student body of special schools. Figure 26 shows the share of Roma aged between 7 and 15 attending a special school, who indicated that the majority of their schoolmates are Roma. These results suggest that many special schools in the Czech Republic, Slovakia, Hungary and Serbia are segregated education settings for the Roma.[24] In all countries, except Croatia, the share of Roma attending ethnically segregated special schools is higher than the share of Roma attending ethnically segregated regular schools. In the Czech Republic and Slovakia, over 60% of all Roma who attend special schools are subject to twofold educational segregation: They attend special schools with a predominantly Roma student body.

23/ Research carried out in Slovakia also points to indirect discrimination as a result of informal routines, in the form of teachers advocating the advantages of special schooling to Roma parents (Friedman et al. 2009, p. 75).
24/ The existence of ethnically segregated special schools is also reported for Bulgaria (Marushiaková et al. 2007, p. 30).

Figure 26: Roma in ethnically segregated special schools

Share of Roma aged 7 to 15 attending special schools who attend schools with the majority of schoolmates being Roma



Source: UNDP/World Bank/EC Regional Roma Survey 2011

7

A differentiated view on educational disadvantages: predictors of school dropout and special schooling

Evidence about unequal school attendance of Roma, compared to their non-Roma peers, was presented in chapter four. In chapter six, it was indicated that high numbers of Roma attend special schools, especially in the Czech Republic and Slovakia. Not attending school, or attending a special school instead of a regular school, might negatively impact a person's future in terms of employment, income, and health, as well as welfare dependency, and thus limit his or her opportunities, choices and freedoms. Dropping out of school, or receiving education based on a reduced curriculum, might prevent students from acquiring the basic skills necessary to lead a self-determined life.

7.1 Predictors of school dropout in Central and Southeast Europe

To assess dropout, a question was asked whether household members attend school or not. The majority of Roma respondents indicated the costs related to schooling were the main reason associated with not attending school in Bulgaria, Romania, Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia, Albania and Moldova. In the Czech Republic, Hungary and Croatia, most respondents indicated "being sufficiently educated" as the main reason for not attending school. In Slovakia, the majority of respondents often referred to "other reasons", instead of selecting a concrete answer offered by the questionnaire. Reasons such as bullying, language difficulties, marriage, pregnancy, safety concerns or lack of documents, language problems or distance from school, were less often indicated.

In order to uncover the underlying drivers of early dropout, a probit model was used to assess the relative influence of various explanatory variables (hereafter the 'predictor variables'). The probit model assesses the probability of dropout occurring, if a given specific characteristic in the predictor variable changes, while several other predictor variables are controlled for: thus it is, for example, possible to assess how much the probability of dropout decreases for those pupils who attended pre-school, compared to those who did not attend pre-school, while other variables (e.g. gender, age, house-

hold poverty) are held constant. The models also depict the marginal effects of each of the included variables. The coefficients of the estimates can be interpreted as a change in the predictor variables, increasing or decreasing the probability of dropout (see Ivanov, Kagin, and Kling 2012 for details).

Five models are estimated, containing different sets of predictor variables, with all individuals covered by the survey aged 9 to 17 (Table 6).[25] The first model contains basic predictors: ethnicity, age, gender and country of origin. The second model introduces predictors related to the specific locality in which the household is situated: asking whether the household is situated in an urban or rural area, whether the neighbourhood is predominantly Romani and whether a primary school is within walking distance.[26] The third model adds variables related to school experience of the individual, such as whether a pre-school was attended and whether the individual attended a special school. The fourth model introduces several predictors, related to the socio-economic status of the household (including poverty, education of the household head and number of books at home),[27] and asks whether the home language is Romani or not. The fifth model adds a health predictor, asking for the presence of a longstanding illness.[28] Results significant at the 5% level ($p < .05$) are reported.

The results show that being Roma significantly increases the probability of dropout, regardless of how many other available predictors are held constant. However, after controlling for other available variables, the predictive power of ethnicity is strongly reduced. While being Roma increases the probability of dropout in the first model by 29 percentage points, being Roma increases the probability of dropout by 13 percentage points in the fifth model. The fact that being Roma remains a significant predictor of dropout, might be due to rational behaviour, as Roma expect lower gains from education due to labour market discrimination (O'Higgins 2010, p. 184).[29]

In all countries the dropout probability is significantly higher, compared to Hungary (which, having the lowest dropout rates, serves as benchmark for the other countries). If predictors, related to the socio-economic status of the household and the home language, are held constant, being from Czech Republic or Croatia, instead of Hungary, does not significantly increase the probability of dropout. The predictive power of the country of origin decreases, if other available predictors are held constant. Being from

25/ Younger individuals were not included, as children below nine-years-old not attending school might be late enrollers.
26/ In order to avoid endogeneity, households, who moved to this locality in the last five years and households with a household head aged below 18, were not considered in the analysis.
27/ The number of books in the household does not include textbooks.
28/ The set of possible predictor variables is limited to the scope of the household survey. Thus, other important predictor variables, such as school resources and climate, student achievement, peer-group effects, family practices, student behaviours, attitudes or perceptions cannot be taken into account (see Rumberger & Ah Lim 2008 for a comprehensive review on dropout research).
29/ Differences between Roma and non-Roma are likely to be mediated by school quality and student performance.

Serbia, for example, increases the dropout probability by 27 percentage points in the first model, and by 10 percentage points in the fifth model.

As one might expect, a higher age significantly increases the dropout probability.[30] In contrast, being female is not a significant predictor for dropout. Also, predictors, related to the specific locality in which the household is situated, do not significantly predict dropout.

Having attended a special school has no significant influence on the dropout probability. Having attended a pre-school, on the other hand, strongly reduces the dropout probability: Pre-school experience reduces the dropout probability by 16 percentage points in the third model, and by 14 percentage points if predictors, related to the socio-economic status of the household, the home language and the health status, are held constant. This finding underlines the importance of pre-school education for later school success. Even if sharing the same background characteristics, such as living in a poor household, or not having many books at home, children who attended pre-school are more likely to be among students who attend school.

All predictors, related to the socio-economic status of the household, are statistically significant predictors of dropout. Having more than 30 books at home, decreases the dropout probability by 8 percentage points. Living in a poor household,[31] increases the dropout probability by 5 percentage points. The most influential household predictor is the education of the household head: The dropout probability decreases by 13 percentage points, if the household head at least attained lower secondary education. These findings point to the intergenerational reproduction of educational inequalities. The number of books at home and the education of the household head are indicators of the cultural capital available in the household, while poverty indicates a lack of economic capital (Bourdieu & Passeron, 1971; Bos et al. 2007, pp. 225-233). These findings might suggest that unfavourable background characteristics condition educational success to a certain extent, and that schooling might have limited means to balance inequalities produced in home environments. However, international student assessments also show that the extent to which educational outcomes are determined by family background strongly varies between countries (ibid., OECD 2010, pp. 51-64). Consequently, political leeway exists for at least narrow educational inequalities.

Having Romani as first home language significantly increases the dropout probability by 4 percentage points. The higher dropout of individuals with Romani as the first home language indirectly points to disadvantages many Roma might face, due to the fact that the language of school instruction is not their first home language. Never-

30/ A problem related to age is that it is not known whether students, for example, at the age of 9 will dropout before reaching 17 years of age, while for those at the age of 17, it is known that they have not dropped out before reaching this age. Moreover, one should be aware that the factors affecting early school leaving might be different for younger students than for older students.

31/ Living in a poor household is defined as living in a household with a per capita income below $4.30 (PPP).

Table 6: Predictors of early dropout
Probit model of dropout,
individuals aged 9 to 17

	Model 1 Basic predictors	**Model 2** Including predictors related to the specific locality in which the household is situated	**Model 3** Including predictors related to the school experience of the individual	**Model 4** Including predictors related to the socio-economic and status of the household and the home language	**Model 5** Including a predictor related to the subjective health status of the individual
Being Roma	***0.29*** (0.04)	***0.28*** (0.04)	***0.24*** (0.04)	***0.13*** (0.03)	***0.13*** (0.03)
Age	***0.05*** (0.00)	***0.05*** (0.00)	***0.05*** (0.00)	***0.05*** 0.00)	***0.05*** (0.00)
Being female	0.01 (0.01)	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)	*0.02* (0.01)
Living in a rural area	-	0.00 (0.03)	0.01 (0.03)	0.00 (0.02)	0.01 (0.01)
Living in a predominantly Romani neighbourhood	-	0.02 (0.02)	0.01 (0.02)	0.01 (0.01)	0.00 (0.02)
Having a primary school in walking distance (< 3 km)	-	*-0.04* (0.02)	-0.03 (0.02)	-0.02 (0.02)	-0.02 (0.02)
Having visited a pre-school	-	-	***-0.16*** (0.02)	***-0.14*** (0.02)	***-0.14*** (0.02)
Having visited a special school	-	-	-0.04 (0.04)	-0.05 (0.04)	-0.07 (0.04)
Household lives in poverty (below 4.30$ a day)	-	-	-	***0.05*** (0.01)	***0.05*** (0.01)
First home language is Romani	-	-	-	***0.04*** (0.01)	***0.04*** (0.01)

Household has more than 30 books at home	-	-	-	***-0.08*** (0.01)	***-0.08*** (0.01)
Household head has attained at least lower secondary education	-	-	-	***-0.13*** (0.02)	***-0.13*** (0.02)
Suffering from longstanding illness or health problem	-	-	-	-	***0.09*** (0.02)
Living in the Czech Rep.	***0.11*** (0,00)	***0.10*** (0.02)	***0.03*** (0.02)	0.02 (0.02)	0.03 (0.02)
Living in Slovakia	***0.23*** (0.00)	***0.24*** (0.00)	***0.14*** (0.01)	***0.14*** (0.02)	***0.15*** (0.02)
Living in Bulgaria	***0.21*** (0.00)	***0.21*** (0.00)	***0.13*** (0.01)	***0.08*** (0.01)	***0.09*** (0.01)
Living in Romania	***0.28*** (0.00)	***0.28*** (0.00)	***0.20*** (0.01)	***0.10*** (0.02)	***0.11*** (0.02)
Living in B&H	***0.39*** (0.00)	***0.38*** (0.01)	***0.22*** (0.03)	***0.15*** (0.03)	***0.15*** (0.03)
Living in Croatia	***0.20*** (0.00)	***0.18*** (0.02)	***0.08*** (0.02)	-0.01 (0.03)	-0.00 (0.03)
Living in the Former Yugoslav Republic of Macedonia	***0.32*** (0.00)	***0.31*** (0.02)	***0.17*** (0.03)	***0.10*** (0.03)	***0.10*** (0.03)
Living in Montenegro	***0.44*** (0.00)	***0.43*** (0.02)	***0.28*** (0.03)	***0.19*** (0.03)	***0.20*** (0.03)
Living in Serbia	***0.27*** (0.00)	***0.27*** (0.01)	***0.17*** (0.02)	***0.10*** (0.02)	***0.10*** (0.02)
Living in Albania	***0.47*** (0.00)	***0.47*** (0.01)	***0.34*** (0.02)	***0.24*** (0.03)	***0.25*** (0.03)
Living in Moldova	***0.43*** (0.00)	***0.44*** (0.01)	***0.30*** (0.02)	***0.19*** (0.02)	***0.20*** (0.02)
Pseudo-R^2	0.21	0.21	0.25	0.29	0.29

Source: UNDP/World Bank/EC Regional Roma Survey 2011

*Note: Statistical significance indicated by italic ($p < .10$), bold (**$p < .05$**), bold and italic (***$p < .01$***). Marginal effects are reported. Standard errors displayed in parentheses. Example: All other predictors being equal pre-school experience reduces the probability of dropout by 13 percentage points (Model 5).*

theless, the home language is an imperfect indicator for language acquisition in the language of school instruction, and assessments of linguistic competencies would be needed to support this assumption.

Having a long-standing illness or health problem increases the dropout probability by 9 percentage points.[32]

7.2 Predictors of special school experience in the Czech Republic and Slovakia

To assess special school experience, a question was asked whether the household members attend or attended a special school for most of their time in school. A strong overrepresentation of Roma in special schools was found in the Czech Republic and Slovakia. For most Roma, aged 7 to 17, who attend or had been attending special schools in the Czech Republic and Slovakia, it was indicated that the easier school programme was the main reason associated with special school attendance. Nevertheless, these results must be considered with caution: a single closed question, offering a limited number of fixed answer possibilities, is hardly able to explore the complex and manifold reasons that lead to special school attendance.[33]

To explore possible drivers of special school experience in the Czech Republic and Slovakia – the countries with the highest share of Roma attending special schools – a probit model was calculated. The probit model assesses the probability of special school attendance, instead of regular school attendance, if a given specific characteristic in the predictor variable changes, while several other available predictor variables are controlled for.[34]

Five models are estimated containing different sets of predictor variables, with all individuals covered by the survey, aged 7 to 15, in the surveyed population (Table 7). Similar to the probit model of dropout, the first probit model of special schooling contains basic predictors: ethnicity, age and gender. The second model introduces predictors, related to the specific locality in which the household is situated, including the region within the respective country: in the Czech Republic Bohemia (West) and Moravia (East) as well at the capital Prague, in Slovakia the Western Region (including Bratislava, Trnava, Trenčín and Nitra), the Central Region (Žilina and Banská Bystrica) and the Eastern Region (Prešov and Košice). The third model introduces pre-school experience, as a predictor. The fourth model introduces predictors, related to the socio-economic status of the household and the home language. The number of household members is used as

32/ This result is however subject to endogeneity issues, in that there might be a small chance that the illness is caused by dropout, and not vice versa.
33/ For a case study on special schooling in Slovakia, including in-depth interviews with Roma parents, see Friedman et al. 2009, pp. 49-67.
34/ The model includes dropouts, as it is known whether they attended a regular or a special school. No data is provided about attendance of special classes.

an indirect indicator of poverty, as households living in absolute poverty (below $4.30 a day) are rarely to be found in the Czech Republic and Slovakia. The fourth model also asks whether the household head has attended a special school or not. The fifth model introduces the presence of a longstanding illness or health problem as a predictor.

Results show that while being Roma significantly increases the probability of special school attendance in Model 1, ethnicity loses its significance when several other predictors are controlled for. Age has a significant influence on special school attendance in the Czech Republic, as long as no other than basic predictors are controlled (Model 1). Gender has no significant influence on special school attendance.

Regional disparities were found to be considerable in both countries: Living in other parts of Bohemia, other than Prague, increases the probability of special schooling, compared to the capital, by 8 percentage points (all other available variables being equal). Being from Central Slovakia, instead of Western Slovakia, increases the probability to end up in a special school by 8 percentage points, and being from the Eastern Slovakia instead of Western Slovakia by 10 percentage points (all other available variables being equal). This finding points to the importance of educational infrastructure, which (differing between regions) determines the availability, and consequently the magnitude of special schooling. Following this result, it is reasonable to suggest that special schools partly create their own demand.

Living in a rural instead of an urban area increases the probability of ending up in a special school in the Czech Republic by 19 percentage points (Model 3), but the predictor does not remain significant, on the 5% level, after controlling for predictors related to the socio-economic status of the household. All other variables being equal, having any primary school within walking distance significantly increases the special school attendance by 17 percentage points in the Czech Republic. A primary school within walking distance might indicate a good school infrastructure, including the availability of special schools. Given this assumption, the probability of special school attendance is higher in localities with a higher density of special schools, thus also supporting the hypothesis that overrepresentation in special schools is strongly framed by the educational infrastructure. Living in a predominantly Romani neighbourhood does not significantly increase the probability of special school attendance, neither in the Czech Republic nor in Slovakia.

Pre-school experience lowers the probability of special school attendance by 6 percentage points in the Czech Republic, and by 7 percentage points in Slovakia (all other available variables being equal). This finding points to the positive role that pre-school education might play in improving educational outcomes of Roma students.

A bigger household size does not significantly increase the probability of ending up in a special school. Speaking Romani as a first home language increases the probability of special schooling in Slovakia, but not in the Czech Republic. For Slovakia, it was shown that a considerable share of Romani students enrolled in special schools hardly speak the language of instruction (Friedman et al. 2009, p. 61), and tests used for diagnosing disabilities are strongly biased against children whose test language is not

the home language (Tomatová 2004, p. 35). Thus, the streaming of Roma into special schools might partly be driven by limited language skills, rather than by the presence of a mental disability.

The strongest predictor of special schooling is whether the household head attended a special school or not. If the household head attended a special school, the probability of special school attendance increased by 21 percentage points in the Czech Republic, and by 23 percentage points in Slovakia (all other available variables being equal). Household heads, who attended a special school, might favour special schools for their children, might not be informed about the potential disadvantages of special schooling, or might not be able to defend against the placement of younger household members into special schools. They might feel insecurity towards regular schools, as they might never have attended a regular school themselves.

Having a longstanding illness was not found to be significant in the Czech Republic, while it increases the probability of special school attendance by 12 percentage points in Slovakia.

Table 7: Predictors of special school attendance

Probit model of special schooling, individuals aged 7 to 17

Czech Republic					
	Model 1 Basic predictors	**Model 2** Including predictors related to the specific locality in which the household is situated	**Model 3** Including predictors related to the school experience of the individual	**Model 4** Including predictors related to the socio-economic and status of the household and the home language	**Model 5** Including a predictor related to the subjective health status of the individual
Being Roma	***0.14*** (0.04)	***0.15*** (0.04)	***0.15*** (0.04)	0.05 (0.04)	0.05 (0.04)
Age	**0.01** (0.00)	.005 (0.00)	.003 (0.00)	.001 (0.00)	0.00 (0.00)
Being female	-0.02 (0.02)	-0.02 (0.02)	-0.03 (.023)	-0.03 (.023)	-0.03 (0.2)
Living in Bohemia (instead of Prague)	-	***0.14*** (0.03)	***0.14*** (0.03)	***0.08*** (0.03)	***0.08*** (0.03)
Living in Moravia (instead of Prague)	-	***0.10*** (0.028)	***0.09*** (0.03)	0.05 (0.03)	0.08 (0.03)
Living in a rural area	-	***0.19*** (0.68)	***0.19*** (0.07)	0.13 (0.07)	0.13 (0.07)
Living in a predominantly Romani neighbourhood	-	-0.02 (0.07)	-0.03 (0.02)	-0.03 (0.02)	-0.03 (0.02)
Having a primary school in walking distance (< 3 km)	-	***0.19*** (0.37)	***0.19*** (0.4)	***0.17*** (0.4)	***0.17*** (0.04)
Having visited a pre-school	-	-	***-0.06*** (0.02)	***-0.06*** (0.02)	***-0.06*** (0.02)
Household size	-	-	-	-0.01 (0.01)	-0.01 (0.01)
First home language is Romani	-	-	-	0.03 (0.02)	0.04 (0.02)
Household head has attained at least lower secondary education	-	-	-	***-0.09*** (0.03)	***-0.09*** (0.03)
Household head has been educated in a special school	-	-	-	***0.22*** (0.02)	***0.21*** (0.02)
Suffering from long-standing illness or health problem	-	-	-	-	0.10 (0.05)
Pseudo-R^2	0.02	0.10	0.11	0.26	0.27

Slovakia					
	Model 1 Basic predictors	**Model 2** Including predictors related to the specific locality in which the household is situated	**Model 3** Including predictors related to the school experience of the individual	**Model 4** Including predictors related to the socio-economic and status of the household and the home language	**Model 5** Including a predictor related to the subjective health status of the individual
Being Roma	***0.11*** (0.03)	***0.10*** (0.03)	0.01 (0.03)	0.01 (0.03)	0.004 (0.03)
Age	0.00 (0.003)	0.00 (0.003)	0.00 (0.003)	0.00 (0.003)	0.00 (0.003)
Being female	-0.00 (0.02)	-.00 (0.02)	0.01 (0.02)	0.01 (0.02)	0.02 (0.02)
Living in Central Slovakia (instead of Western Slovakia)	-	***0.01*** (0.02)	***0.09*** (0.03)	***0.08*** (0.04)	***0.08*** (0.04)
Living in Eastern Slovakia (instead of Western Slovakia)	-	***0.11*** (0.01)	***0.13*** (0.02)	***0.10*** (0.02)	***0.10*** (0.03)
Living in a rural area	-	0.02 (0.02)	0.01 (0.02)	-0.01 (0.02)	-0.01 (0.02)
Living in a predominantly Romani neighbourhood	-	0.00 (0.02)	0.03 (0.02)	-0.02 (0.02)	-0.02 (0.02)
Having a primary school in walking distance (< 3 km)	-	0.16 (0.07)	0.12 (0.07)	0.12 (0.05)	0 (omitted)
Having visited a pre-school	-	-	***-0.12*** (0.02)	***-0.07*** (0.02)	***-0.07*** (0.02)
Household size	-	-	-	0.01 (0.004)	**0.01** (0.04)
First home language is Romani	-	-	-	0.05 (0.03)	**0.06** (0.03)
Household head has attained at least lower secondary education	-	-	-	0.01 (0.02)	0.01 (0.02)
Household head has been educated in a special school	-	-	-	***0.25*** (0.02)	***0.23*** (0.03)
Suffering from long-standing illness or health problem	-	-	-	-	***0.12*** (0.04)
Pseudo-R^2	0.02	0.07	0.13	0.27	0.28

Source: UNDP/World Bank/EC Regional Roma Survey 2011

*Note: Statistical significance indicated by italic ($p < .10$), bold (**$p < .05$**), bold and italic (***$p < .01$***). Probit coefficients represent marginal effects. Standard errors displayed in parentheses. Example: All other predictors being equal pre-school experience reduces the probability of special school attendance by 6 percentage points in the Czech Republic and 7 percentage points in Slovakia (Model 5).*

8 Conclusions and recommendations[35]

Educational attainment of young Roma increased in few countries, but attainment gaps between Roma and non-Roma remain large throughout the region. A comparison of educational attainment data[36] shows that a statistically significant higher share of young Roma in Bulgaria, Romania, Serbia and Albania completed primary education (ISCED 1) in 2011, compared to 2004. In Bulgaria and Romania, a significant higher share of young Roma completed lower secondary education (ISCED 2), and in Bulgaria and the Former Yugoslav Republic of Macedonia, a significantly higher share of young Roma completed upper secondary education (ISCED 3). Attainment has not improved in the Czech Republic, Hungary, Bosnia and Herzegovina, Croatia and Montenegro. In Montenegro, Albania and Moldova, over 30% of young Roma did not complete primary education. In Southeast European Countries, more than 40% of young Roma did not complete lower secondary education. In no country, covered by the survey, does the share of young Roma who completed upper secondary education reach 40%. Attainment gaps between Roma and non-Roma remain large.

Recommendation: *It should be ensured that all Roma complete compulsory schooling, and that support is provided for the transition from compulsory schooling to post-compulsory education*. This might be achieved through the lowering of transaction costs of education, investing into the quality of schools (especially in poor regions), and the introduction of financial incentives for participation in post-compulsory education. Costs associated with schooling are high for poor families. Travel costs associated with attending high school might be an incentive for parents to decide against an upper secondary education career of their children. The decrease of costs associated with education (e.g. travel costs, costs for extracurricular activities, costs for school materials, or fees for preschool), or the introduction of attendance subsidies (conditional cash transfers) leads to higher investments into education. Given that marginal costs of education are high-

35/ It should be noted that the rather broad recommendations expressed in this paper may only partly fit to local problems. Studies of international scope must be supplemented by an analysis on national and local levels, in order to consider context specific factors that need to be taken into account for the development of effective education policies.
36/ For Slovakia and Moldova, no direct comparison between 2004 and 2011 is possible. See Filadelfiová et al. (2007) for 2005 household data on Slovakia and Cace et al. (2007) for 2005 household data on Moldova.

er for poor families than for affluent families, decreasing transaction costs of education will likely benefit the poorest disproportionately, making such transfers a reasonable investment, from the human development perspective. Close cooperation between educational institutions, at both ends of the transition, and professional guidance for students who are struggling to enter post-compulsory education, might increase attainment rates.

Self-perceived literacy of young Roma has increased in several countries. A comparison of self-perceived youth literacy indicates a significant increase in literacy rates in Hungary, Bulgaria, Romania, Bosnia and Herzegovina and Croatia. Youth literacy rates are above, or close to, 90% in all countries except Montenegro, Albania and Moldova. High self-perceived literacy rates might, however, obscure existing gaps in educational outcomes between Roma and non-Roma. Student assessments would provide much more detailed information about the literacy of Roma students.

Recommendation: *Assessment tests should be used in order to provide a detailed picture about literacy skills of Roma students*. Countries that take part in international student surveys might easily adapt the national student questionnaire used in such surveys, by including a question concerning the belonging to an ethnic or national minority, and the option to declare Romani as a home language. Furthermore, countries might ensure the coverage of Roma populations by introducing a boosted subsample to international surveys, or by running national surveys that explicitly include Roma students.

Gaps between Roma and non-Roma, with regard to self-perceived computer literacy, are remarkable. The share of young Roma who are able to use a computer word processing program is below 50% in all countries, except Hungary. Differences between Roma and non-Roma are statistically significant in all countries and point to a "digital divide". This finding shows the difficulties many young Roma face in societies where knowledge, and the access to knowledge, are of increased importance for labour market participation and self-realisation. In Romania, Montenegro, Moldova, Serbia and Albania, young female Roma indicated significant lower computer literacy rates, compared to their male counterparts.

Recommendation: *It should be ensured that young people, regardless of ethnicity, gender or socio-economic status, have access to digital technologies and the possibility to acquire the relevant knowledge necessary for using programs and applications associated with those*. Equipping schools in poor areas with computers, internet access, capable teachers and the possibility to offer after class projects, might be a first step to reduce inequalities regarding computer literacy. Involving the private sector and the big IT or telecommunications companies in such partnerships, within the framework of corporate social responsibility projects, could make such change possible.

Low pre-school attendance rates strongly contribute to the long-term disadvantages of Roma students. Differences between Roma and non-Roma, with regard to pre-school attendance, are significant in all countries, with the exception of countries with low overall pre-school attendance rates (Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia and Montenegro). Differences between countries are

remarkable: Roma in Hungary indicated higher attendance rates than non-Roma in the neighbouring countries. Differences between national enrolment rates, registered by statistical offices, and attendance rates of both Roma and non-Roma measured in the household survey, point to considerable regional and socio-economic disparities, regardless of ethnicity in Slovakia, Croatia and Montenegro. A great amount of research has shown advantages of pre-school education for later school career, especially for children growing up in families with a low socio-economic status. Investing into pre-school education is comparably cost-friendly, and disadvantaged children benefit disproportionally from pre-school education. A World Bank report recently documented positive effects of pre-school education for learning outcomes and life chances of Roma (de Laat et al., 2012). Multivariate statistical analyses show that the probability to drop out of school before the age of 17, and the probability to end up in a special school, decrease if a pre-school was attended.

Recommendation: *It should be ensured that the share of Roma attending pre-school facilities is at least as high as the national average*. Pre-school participation of Roma might be raised through abolishing all costs related to pre-school education, additional financial incentives for poor families to enrol children in pre-school institutions, and the introduction of compulsory pre-school education of two or three years. In this regard, Hungary might serve as role-model for other countries. If certain families or communities fear pre-school institutions, or lack experience with pre-school institutions, attendance might be further increased by involving parents, for example through parent-child activities or offering parents from certain communities the possibility to work as teaching assistants or on the basis of fee contracts.

A considerable share of young Roma in Bosnia and Herzegovina, Montenegro, Albania, Moldova and (to a lesser extent) in the Former Yugoslav Republic of Macedonia has never been to school. The share of Roma aged 10 to 18 that has attended special schools is above 20% in Bosnia and Herzegovina, Montenegro, Albania and Moldova. In the Former Yugoslav Republic of Macedonia, about one out of ten Roma of this age is without school experience. Without having attended formal education, the chances to unfold one's potential to participate in society and lead a self-defined life, are minimal.

Recommendation: *It should be ensured that all children, regardless of ethnicity, documentation or living conditions are enrolled in school*. Educational monitoring systems need to be designed in a way to effectively detect absence and, if necessary, enforce school participation. Regular primary schools must be obliged to enrol students, and need to be sanctioned when tolerating non-enrolment. If not already established, the right to education for every child, with or without proper documents (such as resident permit or identity cards), needs to be enforced by legislature. The "voluntary choice to not attend school" has nothing to do with "freedom of choice", and infringes individual liberties in the long run.

School attendance rates indicate late initial school entry of Roma in several countries, and show that many Roma leave school early, compared to their non-Roma

peers. Differences in school attendance between Roma and non-Roma are statistically significant from age group 7 to 9 onwards in Albania, Bosnia and Herzegovina, Montenegro and Moldova. In the Former Yugoslav Republic of Macedonia, attendance differences are significant from age group 10 to 12 onwards. In Romania and Serbia, differences are significant from age group 13 to 15 onwards. In the Czech Republic, Slovakia, Hungary, Bulgaria and Croatia, differences are significant from the age group of 16 to 18 onwards.

Recommendation: *In order to reduce attendance gaps between Roma and non-Roma, the governments in Albania, Bosnia and Herzegovina, Montenegro and Moldova should ensure higher attendance rates from initial school enrolment onwards. In Romania, Serbia and the Former Yugoslav Republic of Macedonia, the policy focus should be on increasing the attendance rates of Roma teenagers, whereas in the Czech Republic, Slovakia, Hungary, Bulgaria and Croatia, the focus should be primarily on the transition from compulsory to post-compulsory education*. Factors leading to dropping out differ from country to country, and even from region to region. Each country might carefully compare school attendance data of Roma and non-Roma, in order to identify the age groups that need to be addressed by targeted policies that tackle dropout. The decrease of costs, related to education, or the establishment of subsidy systems connected to school attendance, might be important first steps to fight dropout, and need to be complemented with more specific measures, addressing specific barriers at the local level. The continuous communication between schools and parents, and the involvement of parents in school related issues, might be of high importance in this regard.

In many countries, those Roma that attend school indicate higher absences, in comparison to their non-Roma peers. High absence rates of Roma attending school are reported in the Czech Republic, Slovakia, Moldova, and especially Romania. Roma show statistically significantly higher absences than their non-Roma peers also in Bulgaria, Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia, Serbia, and Albania. Regular absence puts students at the risk of dropout.

Recommendation: *Mechanisms should be put into place that prevent and tackle school absence*. Such mechanisms might include the rigid monitoring and carefully sanctioning of school absence, combined with outreach work done by persons who are accepted in the community. Incentives might be put into place that reward schools and teachers who tackle or prevent school absence. The promotion of role models (Roma university students, doctors, teachers and managers) might convince those young Roma who, because of discrimination or self-stigmatisation, have lost the hope to aspire to social-upward mobility through education. The Roma civil society organisations have a special role to play in that regard. Also, communications between schools and parents need to be intensified, if irregular attendance of students is recognised. Support systems such as academic tutoring and mentoring and home visits by mediators, social workers or specialised NGO staff might reduce irregular attendance.

Bilingualism and multilingualism is a widespread phenomenon among Roma families. In all countries, except Hungary, a high share of Roma uses mainly Romani

at home. A considerable share of Roma in Bulgaria and the Former Yugoslav Republic of Macedonia uses primarily Turkish at home, and many Roma families in Slovakia and Romania use mainly Hungarian at home. For a high share of children, Romani is the first home language. Many Roma children might not start school with the same language skills as non-Roma students, because the language of school instruction is not their home language or because their home environment does not provide them with an academic language proficiency that is expected by educational institutions.

Recommendation: *Educational institutions should respond to students who, at the beginning of their school career, do not possess expected language proficiency in the official language of school instruction*. Resources need to be allocated (both financial and human) to ensure that preparatory and supportive courses in the language of school instruction are available. Besides additional support for students who learn the language of school instruction as a second language, educational support might include an integrated and long-term emphasis on academic language teaching in all subjects (Gogolin & Lange 2011), and an institutional habitus that acknowledges and supports linguistic heterogeneity in educational institutions. Linguistic testing at an early age might prove to be an effective early warning system that points to the demand of preparatory and supportive language courses.

A high share of Roma students attend ethnically segregated schools or classes. Many Roma have mainly Romani schoolmates or classmates. Triggers of ethnic segregation are manifold, including population characteristics, residential segregation, education policies and institutional mechanisms. The share of Roma students that attend ethnically segregated schools is above 20% in Hungary, Romania, the Former Yugoslav Republic of Macedonia and Moldova, and above 30% in Slovakia and Bulgaria. The share of Roma students attending ethnically segregated classes in non-segregated schools exceeds 5% in Hungary, Romania, Croatia and Moldova, and 10% in Slovakia and Bulgaria. The existence of ethnically segregated classes, in non-segregated schools, is an indicator of discriminatory practices within schools. Preventing overrepresentation of Roma in certain schools and classes is likely to have a positive impact on the educational outcomes of Roma students. However, this will need strong political commitments on the part of central and local levels, to steer against the selection processes of institutions and parents.

Recommendation: *Policies should tackle the existence of ethnically segregated schools and classes, especially if those are a result of institutional mechanisms*. School desegregation projects might be well combined with housing policies that tackle residential segregation. Historically evolved arrangements between schools on the one hand, and Roma and non-Roma communities on the other hand, might be a trigger for school segregation that needs to be addressed with care, while bearing in mind the complexities of both the historical legacies, as well as the interests of different groups with a stake in the issue. Desegregation can be sustainable only if strict anti-discrimination legislation is matched by deliberate efforts to address the implicit lack of "segregation incentives" that often exist. It is also a matter of addressing prejudices and better awareness of and respect of diversity. The involvement all actors, especially teachers and parents, might

be a precondition for successful school desegregation. Students and parents need to be prepared for desegregation policies, as otherwise desegregation might increase school dropout. If school segregation is a direct result of residential segregation mechanisms, things such as travel support or scholarships might enable students to attend schools in other areas.

I**n Hungary, Serbia and Croatia, and especially the Czech Republic and Slovakia, a high share of Roma attend special schools**. The share of Roma attending special schools surpasses 5% in Hungary, Serbia and Croatia, and 10% in the Czech Republic and Slovakia (special classes in regular schools not included). The reasons for the streaming of Roma into special schools are manifold, including culturally biased student assessments, parental choices, institutional routines, financial incentives for families or institutions, and direct or indirect discrimination. The relatively high lower secondary education completion rates of Roma in the Czech Republic, Slovakia and Hungary are partly tarnished by the high number of Roma undergoing special schooling.

Recommendation: *The streaming of Roma pupils into special schools should be avoided, and inclusive schooling should replace segregated schooling*. This might be achieved through the abolishment of all financial or institutional incentives of special school attendance – a blatant example of an implicit segregation incentive. School funding schemes might be revised and designed in a way that neither diagnostic centres, nor special schools, have any advantage if more students are diagnosed as mentally disabled. Furthermore, states might permit only a small corpus of tools that are allowed to assess mental disabilities. Such tools should be adjusted in order not to disadvantage children that have language difficulties, or children who feel frightened or alienated in a test situation. Proven cases of direct or indirect discrimination against Roma students need to be sanctioned by the educational inspectorate. International evidence shows that children who do not suffer from serve physical or mental disabilities might well be enrolled in regular schools, and if done properly, inclusion is a win-win situation for all actors involved.

In the Czech Republic and Slovakia, most Roma students in special schools have mainly Roma schoolmates. The share of Roma that attend ethically segregated special schools exceeds 20% in Serbia, 30% in Hungary and 60% in the Czech Republic and Slovakia. The extent of ethnic segregation in special schools is higher than the extent of ethnic segregation in regular schools. Many Roma students in the mentioned countries are subject to twofold segregation: they are streamed into special schools and have mainly Roma schoolmates. **Students from certain regions are also more likely to end up in special schooling, compared to students from other regions**. Multivariate statistical analyses show that the probability to end up in a special school strongly increases, if the household head has attended a special school (even if various background characteristics are equal). Special schooling thus has strong inter-generational effects. Moreover, strong regional disparities show that special school attendance is regulated by the educational infrastructure, supporting the assumption that the supply of special schools partly creates its own demand.

Recommendation: *Special schools, predominantly attended by Roma students, express a unique and serious form of twofold segregation that should be tackled immediately*. A quota system could be used to ensure that Roma students remain a minority in any special school. All special schools, with a predominant Roma student body, need to be immediately identified, monitored and become subject to well defined desegregation projects that reflect the needs of all actors, including teachers, students and parents. Also, the pronounced regional disparities regarding the share of students in special schools and classes should be eliminated. Governments could, for example, define a nationwide benchmark and oblige regional governments to reduce the maximum share of students in special schools for mentally disabled children down to this level.

Acceptability of affirmative action in education is high among Roma and non-Roma alike. In all countries, Roma as well as non-Roma living in close proximity indicate a high degree of acceptance of affirmative action in the realm of education. The sample average shows over 90% acceptability of providing educational support for students who do not speak the language of instruction sufficiently, as well as for scholarships for students from poor families (see Annex Table A5). The average acceptability of preferential treatment of disadvantaged students, with regard to access to secondary schools and universities is lower, but still above 80% among the Roma respondents and above 60% among the non-Roma respondents (ibid.). *Affirmative action, in the form of educational support for disadvantaged groups, is likely to be accepted by the wider public*.

The following meta level conclusions are drawn from an observation of Roma related research and policy developments and go beyond survey findings:

Recent data collection partly addressed the lack of quantitative data needed for the monitoring and evaluation of evidence based policies. The UNDP Vulnerable Groups Survey (2004), the UNDP/WB/EC Regional Roma Survey (2011) and the FRA Roma pilot survey (2011) fill an enormous data gap, by providing researchers and policy makers with key information on educational outcomes of Roma. The EU Fundamental Rights Agency has a mandate to carry out further household surveys, in order to evaluate the impact of National Roma Integration Strategies in the EU member states. Household data that has been, and will be provided, is a first step to monitor the educational outcomes of Roma vis-á-vis the majority populations.

Recommendation: *Future initiatives to collect data should expand the number of countries surveyed, and contextualise findings from household surveys by focusing on student assessments, case studies and observations within schools*. Qualitative and action research might play an important role in this regard. Such methods could be used for constructing a richer context, against which the quantitative data would acquire a deeper meaning, and the results of the household surveys could be better understood. As a result, context specific policy recommendations, which go beyond what can be drawn from international comparative quantitative data, can be developed and implemented with the proper understanding of the real dynamics in the targeted communities.

Educational interventions need to strike a balance between measures that explicitly target Roma and measures that target disadvantaged populations in general.

The European Commission (2011a, footnote 36) calls for explicit, but not exclusive, targeting with regard to interventions focusing on Roma inclusion. Educational interventions, which target Roma exclusively, might lead to local tensions, increase the feelings of injustice or envy among majority populations, or even increase stigmatisation of the targeted group (Ivanov 2012, p. 4). On the other hand, educational interventions that target vulnerable groups in general (e.g. children from families with low socio-economic status), might not be able to address ethnic discrimination (Cashman 2008, p. 14) and bear the risk that Roma are the only vulnerable group that does not profit from the intervention.

Recommendation: *When deciding about direct or indirect targeting of Roma communities, the specific local context should be taken into account in order to ensure that Roma will benefit from the intervention, without having to bear negative external effects*. Area based development approaches, in areas with above average Roma populations that target Roma and non-Roma alike, might prevent the perception by the majority population that supports are only provided for the Roma. Language support for example might be provided for all students who fail a certain level of language competency, independent of their ethnicity.

The commitment to foster educational inclusion of Roma has been stated in various documents, but implementation is lacking. Since the start of the Decade of Roma Inclusion, and further triggered by the EU Framework for National Roma Integration Strategies, a great number of action plans and strategies, as well as research and policy reports have been produced, all highlighting the importance of education to foster Roma inclusion. However, it is widely acknowledged that the implementation of the stated commitments and recommendations is lacking, and is not being monitored on the country level. Especially the implementation of Roma inclusion policies at the local level seems to be the exception, rather than the norm.

Recommendation: *Political and public attention for Roma inclusion should be directed towards local implementation*. Mechanisms could be defined that monitor and evaluate political action towards Roma inclusion on the regional and local levels. Regional and local policy makers, and school officials, need to be held responsible for the implementation of national action plans and strategies.

Final remark: It would be naïve to assume that schools alone are able to fundamentally change societal inequalities or power relations (Coleman et al. 1966, Jencks et al. 1973). Institutional education is not able to totally compensate for fundamental inequalities, and given the influence of social, cultural and economic resources available in the family (Bourdieu & Passeron 1971), educational achievement gaps do not fully close, as long as other social inequalities persist. Yet educational polices and institutions have the potential to narrow the gap in educational outcomes between Roma and non-Roma, and consequently to reduce other inequalities. In that regard, addressing educational gaps today is a long-term investment into the reduction of broader social inequalities in the future.

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Annex

Table A1: Individuals covered by the UNDP/World Bank/EC Regional Roma Survey – by countries

Total number of Roma and non-Roma covered according to age groups

Country	Age Grops	Roma	non-Roma
Albania	0-2	231 (6.5%)	54 (3.9%)
	3-6	293 (8.3%)	79 (5.7%)
	7-9	241 (6.8%)	59 (4.3%)
	10-12	249 (7.0%)	67 (4.8%)
	13-15	242 (6.8%)	72 (5.2%)
	16-18	234 (6.6%)	95 (6.9%)
	19-21	230 (6.5%)	79 (5.7%)
	22-24	201 (5.7%)	68 (4.9%)
	25-64	1489 (42.1%)	719 (52.0%)
	65+	123 (3.5%)	92 (6.6%)
Bosnia and Herzegovina	0-2	280 (7.9%)	35 (3.1%)
	3-6	380 (10.7%)	52 (4.6%)
	7-9	271 (7.6%)	38 (3.4%)
	10-12	274 (7.7%)	43 (3.8%)
	13-15	259 (7.3%)	54 (4.8%)
	16-18	222 (6.3%)	51 (4.5%)
	19-21	210 (5.9%)	50 (4.4%)
	22-24	168 (4.7%)	47 (4.2%)
	25-64	1383 (38.9%)	647 (57.3%)
	65+	104 (2.9%)	113 (10.0%)
Bulgaria	0-2	185 (6.0%)	16 (1.7%)
	3-6	230 (7.5%)	32 (3.4%)
	7-9	165 (5.4%)	25 (2.7%)
	10-12	172 (5.6%)	26 (2.8%)
	13-15	124 (4.1%)	23 (2.5%)
	16-18	153 (5.0%)	33 (3.5%)
	19-21	178 (5.8%)	32 (3.4%)
	22-24	165 (5.4%)	17 (1.8%)
	25-64	1518 (49.6%)	502 (53.5%)
	65+	168 (5.5%)	232 (24.7%)

Country	Age Grops	Roma	non-Roma
Czech Republic	0-2	249 (7.4%)	57 (5.4%)
	3-6	393 (11.7%)	117 (11.2%)
	7-9	265 (7.9%)	47 (4.5%)
	10-12	274 (8.2%)	53 (5.1%)
	13-15	208 (6.2%)	41 (3.9%)
	16-18	187 (5.6%)	36 (3.4%)
	19-21	129 (3.8%)	38 (3.6%)
	22-24	111 (3.3%)	33 (3.1%)
	25-64	1442 (43.0%)	555 (52.9%)
	65+	95 (2.8%)	72 (6.9%)
Slovakia	0-2	242 (6.9%)	53 (4.4%)
	3-6	377 (10.7%)	83 (6.9%)
	7-9	305 (8.7%)	67 (5.6%)
	10-12	267 (7.6%)	65 (5.4%)
	13-15	223 (6.4%)	54 (4.5%)
	16-18	196 (5.6%)	68 (5.7%)
	19-21	188 (5.4%)	55 (4.6%)
	22-24	195 (5.6%)	59 (4.9%)
	25-64	1482 (42.2%)	639 (53.4%)
	65+	36 (1.0%)	54 (4.5%)
Montenegro	0-2	317 (9.8%)	36 (3.4%)
	3-6	353 (10.9%)	53 (5.1%)
	7-9	259 (8.0%)	58 (5.5%)
	10-12	274 (8.5%)	57 (5.4%)
	13-15	221 (6.8%)	42 (4.0%)
	16-18	239 (7.4%)	48 (4.6%)
	19-21	204 (6.3%)	69 (6.6%)
	22-24	189 (5.8%)	66 (6.3%)
	25-64	1116 (34.5%)	549 (52.5%)
	65+	65 (2.0%)	68 (6.5%)
Croatia	0-2	387 (10.0%)	41 (3.7%)
	3-6	485 (12.5%)	45 (4.1%)
	7-9	321 (8.3%)	39 (3.5%)
	10-12	391 (10.1%)	44 (4.0%)
	13-15	298 (7.7%)	40 (3.6%)

Country	Age Grops	Roma	non-Roma
Croatia	16-18	232 (6.0%)	47 (4.2%)
	19-21	214 (5.5%)	45 (4.1%)
	22-24	177 (4.6%)	49 (4.4%)
	25-64	1308 (33.8%)	599 (54.2%)
	65+	56 (1.4%)	157 (14.2%)
Hungary	0-2	233 (7.3%)	35 (3.8%)
	3-6	286 (8.9%)	48 (5.2%)
	7-9	233 (7.3%)	34 (3.7%)
	10-12	236 (7.4%)	32 (3.4%)
Hungary	13-15	235 (7.3%)	35 (3.8%)
	16-18	196 (6.1%)	35 (3.8%)
	19-21	185 (5.8%)	46 (4.9%)
	22-24	143 (4.5%)	34 (3.7%)
	25-64	1369 (42.7%)	484 (52.0%)
	65+	88 (2.7%)	148 (15.9%)
Macedonia	0-2	260 (7.0%)	52 (3.8%)
	3-6	285 (7.7%)	59 (4.3%)
	7-9	219 (5.9%)	52 (3.8%)
	10-12	210 (5.7%)	59 (4.3%)
	13-15	209 (5.7%)	57 (4.1%)
	16-18	224 (6.1%)	80 (5.8%)
	19-21	219 (5.9%)	62 (4.5%)
	22-24	181 (4.9%)	63 (4.6%)
	25-64	1743 (47.2%)	732 (53.3%)
	65+	146 (4.0%)	158 (11.5%)
Moldova	0-2	199 (6.3%)	28 (3.0%)
	3-6	255 (8.1%)	39 (4.2%)
	7-9	211 (6.7%)	47 (5.0%)
	10-12	192 (6.1%)	31 (3.3%)
	13-15	185 (5.8%)	28 (3.0%)
	16-18	191 (6.0%)	40 (4.3%)
	19-21	186 (5.9%)	33 (3.5%)
	22-24	183 (5.8%)	35 (3.7%)
	25-64	1393 (44.0%)	508 (54.4%)
	65+	168 (5.3%)	145 (15.5%)

Country	Age Grops	Roma	non-Roma
Romania	0-2	271 (7.7%)	28 (2.7%)
	3-6	364 (10.4%)	41 (4.0%)
	7-9	244 (6.9%)	33 (3.2%)
	10-12	265 (7.5%)	48 (4.7%)
	13-15	226 (6.4%)	37 (3.6%)
	16-18	181 (5.2%)	35 (3.4%)
	19-21	179 (5.1%)	28 (2.7%)
	22-24	191 (5.4%)	41 (4.0%)
	25-64	1457 (41.5%)	510 (50.0%)
	65+	136 (3.9%)	220 (21.5%)
Serbia	0-2	259 (7.1%)	40 (3.3%)
	3-6	379 (10.4%)	46 (3.8%)
	7-9	266 (7.3%)	41 (3.4%)
	10-12	194 (5.3%)	33 (2.7%)
	13-15	242 (6.6%)	48 (3.9%)
	16-18	220 (6.0%)	51 (4.2%)
	19-21	201 (5.5%)	55 (4.5%)
	22-24	180 (4.9%)	57 (4.7%)
	25-64	1594 (43.7%)	664 (54.6%)
	65+	110 (3.0%)	181 (14.9%)

Source: UNDP/World Bank/EC Regional Roma Survey 2011

Table A2: Educational attainment of persons aged 25 to 64

Share of Roma and non-Roma living in close proximity to Roma households by highest completed education (in %)

Country	Highest Education Completed	Roma	non-Roma
Albania	No Formal Education	34.9	2.9
	Primary Education - ISCED 1	36.4	14.0
	Lower Secondary Education - ISCED 2	24.9	48.1
	Upper Secondary Education - ISCED 3	3.6	29.3
	Post-secondary Education - ISCED 4+	0.1	5.6
Bosnia and Herzegovina	No Formal Education	37.4	2.3
	Primary Education - ISCED 1	25.1	6.2
	Lower Secondary Education - ISCED 2	26.9	24.9
	Upper Secondary Education - ISCED 3	10.3	56.9
	Post-secondary Education - ISCED 4+	0.2	9.7
Bulgaria	No Formal Education	15.7	2.2
	Primary Education - ISCED 1	32.2	3.8
	Lower Secondary Education - ISCED 2	40.1	18.9
	Upper Secondary Education - ISCED 3	11.4	63.9
	Post-secondary Education - ISCED 4+	0.6	11.2
Czech Republic	No Formal Education	4.9	0.4
	Primary Education - ISCED 1	11.4	0.2
	Lower Secondary Education - ISCED 2	53.8	11.0
	Upper Secondary Education - ISCED 3	29.9	78.6
	Post-secondary Education - ISCED 4+	0.0	9.9
Slovakia	No Formal Education	2.6	0.5
	Primary Education - ISCED 1	15.3	1.4
	Lower Secondary Education - ISCED 2	62.4	16.2
	Upper Secondary Education - ISCED 3	19.2	75.1
	Post-secondary Education - ISCED 4+	0.5	6.8
Montenegro	No Formal Education	48.0	1.6
	Primary Education - ISCED 1	26.6	5.5
	Lower Secondary Education - ISCED 2	18.6	23.7
	Upper Secondary Education - ISCED 3	6.6	61.9
	Post-secondary Education - ISCED 4+	0.1	7.3

Country	Highest Education Completed	Roma	non-Roma
Croatia	No Formal Education	39.7	1.7
	Primary Education - ISCED 1	34.4	9.1
	Lower Secondary Education - ISCED 2	16.4	20.8
	Upper Secondary Education - ISCED 3	9.5	59.7
	Post-secondary Education - ISCED 4+	0.1	8.7
Hungary	No Formal Education	5.9	0.8
	Primary Education - ISCED 1	21.9	5.8
	Lower Secondary Education - ISCED 2	56.1	35.1
	Upper Secondary Education - ISCED 3	16.0	52.5
	Post-secondary Education - ISCED 4+	0.1	5.8
Macedonia	No Formal Education	22.4	3.3
	Primary Education - ISCED 1	26.1	8.9
	Lower Secondary Education - ISCED 2	40.0	27.8
	Upper Secondary Education - ISCED 3	11.3	48.2
	Post-secondary Education - ISCED 4+	0.3	11.8
Moldova	No Formal Education	37.3	1.4
	Lower Secondary Education - ISCED 2	30.9	37.6
	Upper Secondary Education - ISCED 3	6.1	38.8
	Post-secondary Education - ISCED 4+	1.1	20.3
Romania	No Formal Education	30.7	2.0
	Primary Education - ISCED 1	31.2	8.6
	Lower Secondary Education - ISCED 2	28.4	31.8
	Upper Secondary Education - ISCED 3	9.6	52.2
	Post-secondary Education - ISCED 4+	0.1	5.5
Serbia	No Formal Education	22.3	2.3
	Primary Education - ISCED 1	33.5	6.6
	Lower Secondary Education - ISCED 2	32.1	21.0
	Upper Secondary Education - ISCED 3	11.8	64.0
	Post-secondary Education - ISCED 4+	0.2	6.2

Source: UNDP/World Bank/EC Regional Roma Survey 2011

Table A3: Self-perceived literacy of persons aged 15 and older
Share of Roma and non-Roma living in close proximity to Roma households according to ther self-perceived ablity to read and write (in %)

Country			Roma	non-Roma
Albania	can s/he read and write?	yes	65.1	95.3
		no	34.9	4.7
Bosnia and Herzegovina	can s/he read and write?	yes	82.5	97.0
		no	17.5	3.0
Bulgaria	can s/he read and write?	yes	88.2	99.3
		no	11.8	0.7
Czech Republic	can s/he read and write?	yes	98.8	99.9
		no	1.2	0.1
Slovakia	can s/he read and write?	yes	99.2	99.9
		no	0.8	0.1
Montenegro	can s/he read and write?	yes	72.8	99.1
		no	27.2	0.9
Croatia	can s/he read and write?	yes	84.5	99.2
		no	15.5	0.8
Hungary	can s/he read and write?	yes	94.7	99.2
		no	5.3	0.8
Macedonia	can s/he read and write?	yes	82.7	96.4
		no	17.3	3.6
Moldova	can s/he read and write?	yes	68.9	98.9
		no	31.1	1.1
Romania	can s/he read and write?	yes	79.2	98.7
		no	20.8	1.3
Serbia	can s/he read and write?	yes	85.3	97.9
		no	14.7	2.1

Source: UNDP/World Bank/EC Regional Roma Survey 2011

Table A4: Educational aspirations: special schooling (sample average)
Share of randomly selected respondents from Roma and non-Roma households that indicated special education as a sufficient level of education for a girl

		Roma	non-Roma
What do you believe is a sufficient level of education for a girl?	Special education	28 (0.3%)	17 (0.4%)
	Regular education	8764 (99.7%)	4142 (99.6%)

Source: UNDP/World Bank/EC Regional Roma Survey 2011

Table A5: Acceptability of preferential treatment (sample average)
Share of randomly selected respondents from Roma and non-Roma households that indicated that they found preferential treatment in the stated situations acceptable

	Roma	non-Roma
Additional support to a child in school if he/she does not speak sufficiently the language taught in the school	8272 (95.5%)	3688 (91.8%)
Providing scholarships to pupils/students coming from poor families	8481 (97.6%)	3861 (95.5%)
Acceptance of students from different disadvantage groups (like poor, Roma, disabled...) in secondary school or university even without entering exam.	6989 (84.1%)	2632 (66.9%)

Source: UNDP/World Bank/EC Regional Roma Survey 2011

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