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TOWARD AN EQUAL START:

CLOSING THE EARLY LEARNING GAP FOR ROMA CHILDREN IN EASTERN EUROPE

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EXECUTIVE SUMMARY

A large body of international evidence underscores the importance of early intervention – from conception to age 8 - for child development and later life outcomes. This includes recent articles in *The Lancet (2011)* pointing to the long-term benefits of early childhood development in institutions and at home, including quality preschool. Early childhood development programs are particularly beneficial to children from disadvantaged backgrounds. Effective investments in this area have the potential to reduce inequalities perpetuated by poverty, poor nutrition, and restricted learning opportunities. This report explores the gaps in early education and care experienced by Roma children between the ages of 3 and 6 in Eastern Europe, and looks at measures to close those gaps.

New evidence from the UNDP/World Bank/EC regional Roma survey implemented in Bulgaria, Romania, Hungary, Slovakia, and the Czech Republic (2011), similarly points to the benefits of pre-school for Roma children. For example, Roma children currently in preschool have better cognitive outcomes, and those who attended pre-school are much more likely to complete secondary school than Roma children from the same communities and with similar backgrounds who have not attended preschool. They are also much less likely (33% reduction in the Czech Republic and 70% in Slovakia) to be enrolled into special needs primary schools designed for children with learning disabilities.

Yet, while more than 75% of all children aged 3-6 are in preschool in each of these countries, the large majority of Roma children are not. The report finds that more than 80% of Roma parents wish at least a secondary education for their sons and their daughters. But multiple disadvantages stand in the way of reaching that goal for the vast majority of Roma, especially inequalities early in life. In Bulgaria only 45%, in Romania 37%, in the Czech Republic 32%, and in Slovakia 28% of Roma children aged 3-6 are in pre-school. Hungary, where preschool is compulsory, and where the government supports poor families for out-of-pocket expenses and school lunches, and gives them subsidies for regular pre-school attendance, enrolment is considerably better: 76% of Roma children are in preschool.

Many Roma children lack a strong early learning and care support mechanism at home. The vast majority of Roma children grow up in poverty and many regularly go hungry. Their parents have minimal levels of education. This creates multiple disadvantages from malnutrition to limited early learning stimulation. For example, most children 3-5 years lack access to books: at least 50% of Roma children in Bulgaria and Romania have no books at home. In Slovakia, half have one book at home. In the Czech Republic and Hungary the situation is a bit better: 5 and 4 books at home, respectively.

Roma children aged 5-6 years old lag behind their non-Roma neighboring children in cognitive outcomes. The gaps in self-reported outcomes (by parents) are large. For example, while approximately half of Roma children are able to identify at least ten letters of the alphabet (with the exception of Romania, where the level is one quarter), between 50-94% of non-Roma neighboring children can. Similarly, whereas approx. two-thirds recognize the symbols for numbers 1 to 10 (with the exception of Romania where this is half), between 79-94% of their non-Roma peers can.

The report points to four main policy measures to increase pre-school enrollment and improve early learning at home: (1) better inform parents on the benefits of preschool for children's later-life outcomes; (2) promote inclusive pre-schools by reaching out to parents and by involving them more directly in pre-school with the help of Roma teaching assistants; (3) remove cost barriers possibly coupled with regular attendance subsidies. In addition: (4) support parenting at home. These conclusions follow from the finding that the vast majority of Roma parents wish their children to complete secondary education, but that many also stated a desire to raise children at home in their early years when asked why they did not enroll their children in preschool. Cost was also a consideration. Almost half of parents reported being willing to reconsider enrollment if there were a Roma teaching assistant. More than half said they would reconsider if there were no fees, or if they received food coupons.

Practical experience from a number of government and NGO-led initiatives also support these conclusions. As example is Hungary's much higher enrollment coupled with programs to remove cost barriers and even provide explicit subsidies to enroll children based on conditional attendance. Recent local Roma secondary school graduates hired as kindergarten teacher's assistants would be in a good position to more easily build trust with parents and provide them with information, get them more involved in the local pre-school, and support them with parenting techniques at home. They are also relatively inexpensive, and this early work experience may boost their long-term employment prospects, and create important role models to aspire to for young Roma who are still in school, especially girls.

The report also calls for systematic piloting with variations of different programs, and implementing randomized impact evaluations. Findings from impact evaluations can build public support for scale-up of proven programs. Impact evaluations can address questions such as: how far can the provision of information alone – which is a very inexpensive program – go in boosting pre-school enrollment rates, or is continuous outreach also necessary? How effective are preschool attendance subsidies in boosting enrollment relative to information and outreach? Similar education evaluations from around the world have shown that finding answers to these policy questions is entirely feasible and can provide valuable information not only to further guide policy options, but also build public trust in inclusive education investments. The report points to various government and NGO-led initiatives that fall under the policy measures mentioned above to address the early learning gap. Systematically evaluating their effectiveness can shift the debate toward implementation and scale-up of proven initiatives.

Finally, the report points out that ensuring that poor Roma and non-Roma children alike receive an equal start in life by investing in early childhood development is essential to break the cycle of intergenerational poverty and is also smart economics. The majority of Roma youth enter the labor market unprepared, perpetuating the cycle of poverty from one generation to the next. With more than 30% of Roma in Eastern European countries younger than 15--double the number among the general population--Roma make up a large and growing share of young people entering the labor force. Countries cannot afford to have such inequalities in opportunity translate into wasted productive resources, lower productivity and growth.

PART 1: INTRODUCTION

Ensuring that poor Roma and non-Roma children alike receive an equal start in life by investing in early childhood development is both essential to break the cycle of intergenerational poverty and smart economics. Ensuring that children achieve their full development and education potential requires investing early. This report explores the gaps in early education and care experienced by Roma children, focusing on the ages from 3 to 6 years old.[1]

More than 80% of Roma parents wishes at least a secondary education for their sons and their daughters. But multiple disadvantages stand in the way and the vast majority of young Roma – more than 75% - does not complete secondary education and enters the labor market unprepared. This not only perpetuates the intergenerational cycle of poverty, but with more than 30% of Roma in Eastern European countries younger than 15 years of age, which is double the approx. 15% among the general populations[2], young Roma contribute a large – as many as 1 in 5 in some countries - and growing share of young people entering the labor force. In a context where populations are aging and labor forces shrinking,[3] countries cannot afford having such inequalities in opportunities translate into wasted productive resources, lower productivity, and lower growth.[4][5]

The *EC Communication on an EU Framework for National Roma Integration Strategies* (EC, 2011) issued in April 2011 and endorsed by the European Council on 24 June 2011 calls on all Member States to "widen access to quality early childhood education and care" (p.6), and, referring to the February 2011 communication "Early Childhood Education and Care: Providing all our children with the best start for the world of tomorrow", it argues for increased access to high quality non-segregated early childhood education. New survey evidence collected in partnership by the European Commission, the Fundamental Rights Agency, UNDP, and the World Bank, highlights the very large gap in pre-school access between Roma children and non-Roma children in 9 of the 11 Member States where households were interviewed, with the exception of Hungary and Spain.[6]

[1] For a discussion on Roma access to care through the first two years of life, see for example: Bennett, John (2012): Roma Early Childhood Inclusion (RECI) Project. UNICEF, REF, and OSF. It finds that the early development of Roma children, during infancy and the pre-kindergarten period (as well as the preschool period) is not sufficiently supported in the four countries studies (Czech Republic, FYR Macedonia, Romania, and Serbia).
[2] The situation of Roma in 11 EU Member States; Survey Results at a Glance (2012). FRA and UNDP. And, calculations from the UNDP/World Bank/EC regional Roma survey (2011) described below.
[3] The share of the working age population in Europe is expected to decline from approx 60% today to approx 50% by 2040. United Nations, Department of Economic and Social Affairs, Population Division (2011). World Population Prospects: The 2010 Revision, CD-ROM Edition.
[4] World Bank (2010): Roma Inclusion: An economic opportunity for Bulgaria, Czech Republic, Romania, and Serbia. World Bank Policy Note.
[5] World Development Report: Equity and Development. (2006). World Bank
[6] The situation of Roma in 11 EU Member States; Survey Results at a Glance (2012). FRA and UNDP

Box 1: Recent Lancet (2011) Scientific Review Underscores Critical Importance of Early Childhood Development

In October 2011, two Lancet papers reviewing the scientific literature underscore the importance of ECD interventions, especially in addressing inequalities facing disadvantaged populations. The first review article[7] underscores that inequalities in child development begin prenatally and in the first years of life. These inequalities include insufficient early intake of micronutrients (certain minerals and vitamins) and lower levels of cognitive stimulation, with large implications for the child's development. The evidence reviewed underscores that the most effective and cost-efficient time to prevent inequalities is early in life before trajectories have been firmly established.

The second scientific review article[8] assesses the effectiveness of early child development interventions. It concludes that parenting support and preschool enrolment can improve early child development, "[…] with effects greater for programmes of higher quality and for the most vulnerable children. Other promising interventions for the promotion of early child development include children's educational media, interventions with children at high risk, and combining the promotion of early child development with conditional cash transfer programmes. Effective investments in early child development have the potential to reduce inequalities perpetuated by poverty, poor nutrition, and restricted learning opportunities. A simulation model of the potential long-term economic effects of increasing preschool enrolment to 25% or 50% in every low-income and middle-income country showed a benefit-to-cost ratio ranging from 6·4 to 17·6, depending on preschool enrolment rate and discount rate."

The objective of this report is two-fold:

First, to provide a much needed household survey based overview on pre-school participation – institutional and at home – experienced by poor Roma children living in five EU Member States with large Roma populations: Bulgaria, Romania, Hungary, Slovakia, and the Czech Republic. In particular, seek to answer basic questions such as how do enrolment rates in kindergarten and pre-school of Roma children differ across these five Member States and whether and how have they changed over time? What is the pre-school environment like in terms of segregation, parental satisfaction with services, and access to, for example, reading materials and active parenting at home? And, how do early learning cognitive and socio-emotional outcomes as well as later life outcomes such as being streamed into special education, completing secondary education, having a job, and being on social assistance differ when comparing Roma living in the same neighborhood and sharing similar socio-economic characteristics, but some participated in pre-school and others did not?

Second, use the survey evidence to explore in more detail why some Roma children are accessing pre-school services and others not. For example, are Roma parents reluctant to send their children to preschool because of low education aspirations more generally? Because of negative experiences with

[7] Walker et al. (2011) "*Inequality in early childhood: risk and protective factors for early child development*", The Lancet, Volume 378, Issue 9799, Pages 1325 - 1338

[8] Engle et al. (2011) "*Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries*". The Lancet, Volume 378, Issue 9799, Pages 1339 - 1353

kindergartens where they don't feel their children are welcomed, or where they lack the necessary documentation to enroll their child? Or can it be that parents underestimate the returns to pre-school, or do not find that the pre-school environment is sufficiently inclusive of parents? Are costs prohibitive for some? Are there simply no spaces available or are the institutions too far?

Developing a better understanding of these two dimensions is critical to guide pre-school policies. For example, if there is little return to preschool because the quality of care is no better than learning that takes place at home, or if parents generally perceive the pre-school environment as hostile, then demand side interventions such as the provision of information on the benefits of preschool or supporting poor parents with material needs, including subsidies conditioned on attendance, or supply side interventions that merely expand the number of preschool places will have little impact on enrolment. On the other hand, while improving the quality of care will surely benefit those already enrolled, it may have little impact on enrolment of those children currently outside the system if parents are either not in a good position to make judgments about the quality of care, or cannot afford basic necessities such as shoes to make the walk to pre-school, or simply have a strong preference to care for the child at home.

The findings in this report rely primarily on a new household survey: the UNDP/World Bank/EC regional Roma survey of concentrated Roma communities. The survey questionnaire was designed by the World Bank and UNDP in partnership, and implemented by UNDP through IPSOS polling agency in May-July 2011 on a random sample of Roma living in communities with concentrated Roma populations in Bulgaria, Romania, Hungary, Slovakia, and the Czech Republic (henceforth: the Roma Regional Survey). The European Commission DG Regional Policy financed the survey in these countries. In each of the countries, approximately 750 Roma households and approximately 350 non-Roma households living in the same neighborhoods or vicinity were interviewed. The sample was purposefully not representative of all Roma in these countries, but rather focused on those communities where the share of the Roma population equals or is higher than national share of Roma population. This covers 88% of the Roma population in Bulgaria, 90% in the Czech Republic, 78% in Hungary, 89% in Romania, and 83% in Slovakia. Once identified, a random sample of these areas was drawn, and households were randomly sampled within these enumeration areas.

TABLE 1: DISTRIBUTION OF ROMA HOUSEHOLDS AND INDIVIDUALS IN SAMPLED ROMA MARGINALIZED COMMUNITIES.

	Bulgaria	Czech Republic	Hungary	Romania	Slovakia
Households:					
Roma	763	756	753	757	756
Non-Roma	366	350	354	350	350
Individuals:					
Roma	3,058	3,353	3,204	3,514	3,511
Non-Roma	938	1,049	931	1,021	1,197
Urban	53%	98%	35%	39%	27%

Source: UNDP/World Bank/EC regional Roma survey (2011).

PRESCHOOL ENROLLMENT AMONG ROMA AND NON-ROMA

Preschool enrollment among Roma children is very low. Hungary, while still experiencing a gap with the majority population, stands out for its much higher Roma preschool enrolment rate than its neighbors. As shown in Table 2, the gap in pre-school enrolment between Roma and the national average is the largest in Slovakia and the Czech Republic; approx. 50 percentage points. In Slovakia, only 24% of Roma children aged 3-5 are enrolled in pre-school compared with more than 70% as the national average. Similarly in the Czech Republic, only 28% of Roma children in the same age category compared with nearly 79% as the national average. The gap is somewhat smaller in Bulgaria and Romania, but continues to be very large. In Romania 37% of Roma children aged 3-6 are enrolled in preschool compared with the national average of 77%. In Bulgaria the gap is smaller but still large: 45% versus 75% nationally. Hungary stands out as the country with the smallest gap and the highest enrolment rate among the Roma children in the survey: 76% (in 2011) compared with the national average of 88% (in 2010).

TABLE 2: PRESCHOOL NET ENROLMENT RATES

	Bulgaria	Czech Republic*	Slovakia*	Hungary	Romania
Roma average (2011) [3-5, and 3-6]	**45**	**28***	**24***	**76**	**37**
National average (2009-10)[9]	**75**	**79***	**72***	**88**	**77**
Roma average (2011) [3-6]	**45**	**32**	**28**	**76**	**37**
Predominantly Roma neighborhood (3-6)	41	33	28	77	36
Rural neighborhood (3-6)	48	17	29	78	43
Roma boys (3-6)	46	37	29	72	36
Roma girls (3-6)	43	28	28	80	39
Non-Roma neighbors *(3-6)*	81	69	59	94	68

To make comparison with national data, we rely on the UNICEF's TransMONEE database 2011. National data for Slovakia are for the year 2008-09. *To make the estimates consistent with age groups used to report preschool enrollments in the TransMONEE 2011 database, enrollments for the Czech Republic and Slovakia were estimated for the 3-5 year age group. For the other countries, the TransMONEE age group is 3-6 years.
Source: UNDP/World Bank/EC regional Roma survey (2011)

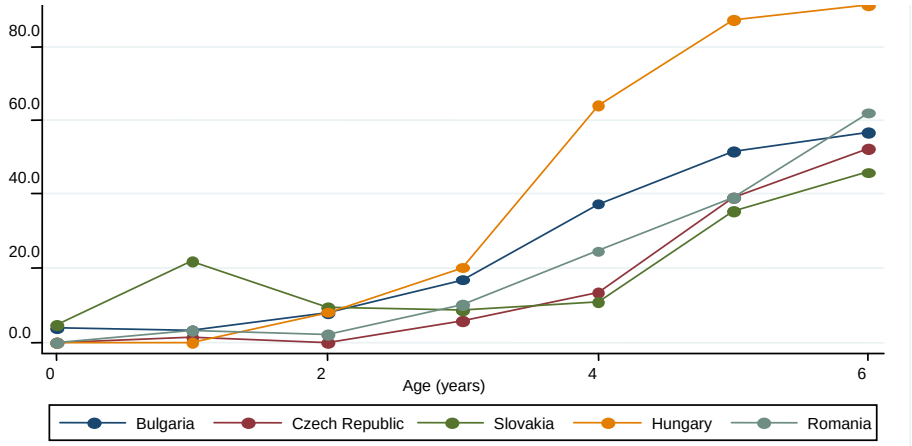
There are few systematic differences in enrolment rates across Roma children when comparing by (non-)segregated communities, by rural-urban, and by gender. As shown in Table 2, the average Roma enrolment rate in predominantly Roma neighborhoods is not substantially lower in any of the

[9] TransMONEE, UNICEF (2011). See footnote to Table 2 for details on the age categories used.

countries. The differences in enrolment between urban and rural areas are also not large with the exception of the Czech Republic where urban rates are twice as high. In Romania, rural rates are somewhat higher; 7 percentage points. With regards to gender, boys are somewhat more likely to be enrolled than girls in the Czech Republic, 37 verus 28 percent, but the reverse holds in Hungary, 72 versus 80 percent. Lastly, comparisons with non-Roma neighbors show large gaps in all countries.

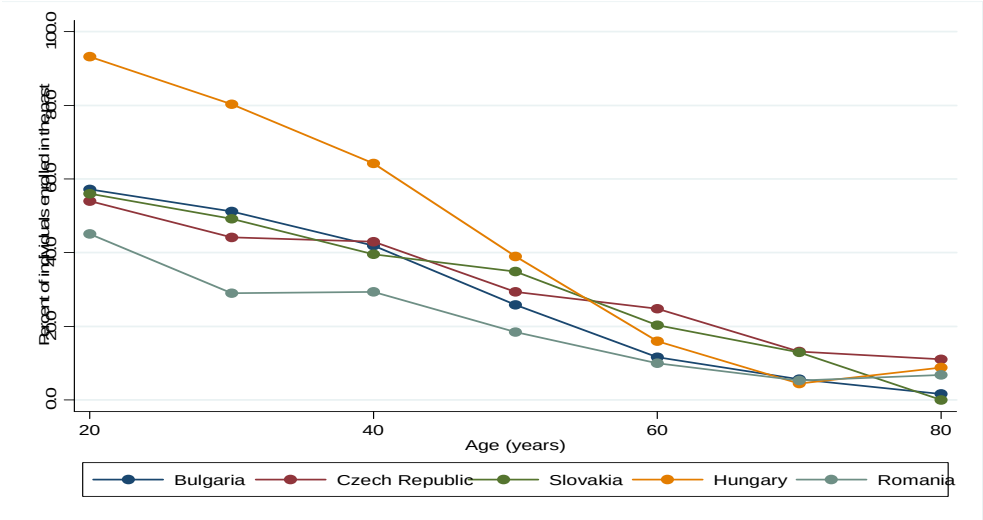
Figure 1 shows the age profile of preschool enrollment among the Roma. In all five countries, enrollment remains low up to age 3 years, and increases steadily afterwards. With the exception of Hungary, where almost 90% of children aged 5 and 6 years are enrolled, enrollment stands at only 60% even among children aged 6 years.

FIGURE 1: ROMA CURRENT PRE-SCHOOL ENROLMENT BY AGE



Preschool enrolment among the Roma has increased over time, but progress is slow. Educational attainment histories of Roma adults interviewed in the survey shed light on trends in preschool enrollment over time (Figure 2). For each household member the survey recorded whether s/he had enrolled in pre-school as a young child. While under a mere fifth of all adults over the age of 60 years reported having attended preschool, the fraction of adults reporting attending preschool has been increasing steadily in each country, with the youngest cohorts reporting the highest enrollments – an encouraging sign. Hungary stands out yet again, with enrollments among the oldest cohorts comparable to the same age cohorts in Romania and other countries, but taking off phenomenally among cohorts aged 50 years and younger.

FIGURE 2: ROMA PAST PRE-SCHOOL ENROLMENT FOR DIFFERENT AGE COHORTS



SOCIOECONOMIC STATUS OF THE ROMA IN THESE 5 COUNTRIES

The Roma in these five countries make up one of the largest and most vulnerable minority groups Although exact population estimates vary, Bulgaria, Hungary, Romania, and Slovakia contain the highest shares of Roma population in the EU. Roma communities are subject to considerable economic vulnerability, reflecting a complex set of interrelated challenges (e.g. FRA and UNDP (2012), UNDP (2003), World Bank (2005, 2010)). Anecdotal evidence suggests that the post-cold war market liberalization in Eastern Europe resulted in a large increase in unemployment and poverty, and a decrease in social protection among Roma (e.g. World Bank, 2005).

Despite overall gains in the standard of living in these countries, Roma households living in marginalized communities still face high levels of insecurity in relation to very basic needs. As shown in Table 3, over 35 percent of the surveyed households report that at least one person in the household went to bed hungry in the previous month in four out of five countries– reaching 56 percent in Romania. Even in the Czech Republic – the country with the lowest proportion – this figure exceeds 20 percent. Moreover, more than half of Roma households in each country report facing difficulties in paying for basic goods and services. Overall self-reported economic insecurity affects 54 percent of all Roma households in the Czech Republic and reaches 70 percent in Hungary. This lack of economic safety reflects low levels of disposable income. Roma living in marginalized communities have a per capita disposable income less than half of the average disposable income in the country – and as little as 36 percent in Romania. A majority of Roma households interviewed in the Czech Republic, Hungary, and Slovakia receive social assistance.

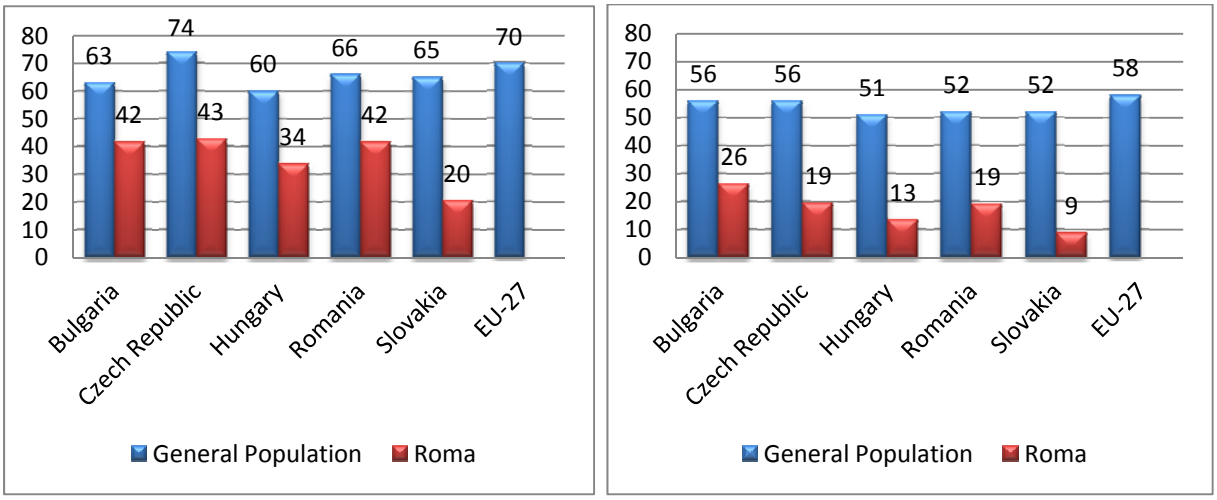
TABLE 3: BASIC NEEDS AND ECONOMIC SAFETY (% OF HOUSEHOLDS).

	Bulgaria	Czech Republic	Hungary	Romania	Slovakia
Go to Bed Hungry (%)	44%	24%	35%	56%	40%
Unsafe Economic Situation (%)	62%	54%	71%	67%	56%
Social Assistance (%)	17%	61%	60%	27%	56%
Monthly Disposable Income per Capita:					
Roma (€)[a]	62	190	102	35	125
General Population (€)[b]	148	398	285	134	291
Roma Relative to General Population (%)	42%	48%	36%	26%	43%

Source: UNDP/World Bank/EC regional Roma survey (2011), and EU SILC (Eurostat, 2008) for GDP per capita, and Finance Statistics (Eurostat, 2011) for nominal exchange rates. Authors' calculations.
[a] Monthly income calculated in current prices using the July 2011 nominal exchange rate.
[b] Country average of household disposable income.

Economic insecurity among Roma reflects low employment rates. Among the working-age population, Figure 3 shows employment rates for men and women, comparing Roma with the general population. Individuals are considered employed regardless of the nature of employment; i.e. these figures include informal employment. The figures show that few Roma have jobs, women especially, with the largest gaps in Slovakia and the smallest in Bulgaria and Romania.

FIGURE 3: EMPLOYMENT RATES FOR MEN AND WOMEN



Source: UNDP/ World Bank/EC regional Roma survey (2011) and FRA Regional Survey (2011).
[a] Working-age population (15-64).

Low education levels among Roma are a central cause for these low employment rates. Although some improvements in the field of education have been made in the past few years (World Bank, 2010), education levels among Roma in marginalized communities aged 25 to 64 years old remain extremely low. Table 4 shows that a majority of Roma has had some education, but only a minority has finished (upper) secondary education. Among men it ranges from 12% in Romania to 29% in the Czech Republic, while among women the rates are even lower; between 6% in Romania and 21% in the Czech Republic.

TABLE 4: HIGHEST INDIVIDUAL EDUCATION LEVEL COMPLETED (%).A

	Bulgaria		**Czech Republic**		**Hungary**		**Romania**		**Slovakia**	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Below lower secondary (ISCED1)	37	49	14	16	21	32	54	67	16	19
Lower secondary (ISCED 2)	48	41	57	62	61	57	34	27	63	66
Upper Secondary (ISCED 3)	14	9	29	21	18	10	12	6	20	14
Tertiary (ISCED 4+)	0	1	0	0	0	0	0	0	0	0

Source: UNDP/World Bank/EC regional Roma survey (2011).

[a] Sample restricted to individuals aged 25-64 years old.

Finally, among individuals aged 10-19 years, past attendance of special schools for children with special education needs is exceptionally high in the Czech Republic and Slovakia, and to some extent Hungary. As shown in Table 5, in the Czech Republic, 18% and 12% respectively of individuals in this age group reported having attended a special school in the past, with 6.5% in Hungary. These figures are much higher than non-Roma neighbors interviewed in the survey. The assessment tests to identify children with mental disabilities have been criticized as flawed. In Slovakia testing has resulted in disproportionate amounts of Roma children without mental disabilities being streamed into the special school system, in some cases starting with special kindergartens. In both countries the tests have been noted as not being administered properly by holistic teams or by centers that are too closely tied to special schools. Moreover the tests have been criticized as not taking into account cultural and linguistic differences, and conflating categories of mental disabilities, mild learning disabilities and delayed development due to socio-economic disadvantage[10].

[10] E.g. "School as a Ghetto" by Friedman et al. (2009)

TABLE 5: ATTENDED A SPECIAL SCHOOL

	Bulgaria	Czech Rep	Slovakia	Hungary	Romania
Roma	0.7%	18.5%	12.0%	6.5%	1.8%
Non-Roma neighbors	0.1%	6.8%	7.8%	3.0%	1.7%

*Cohort of people currently 10-19 years old (UNDP/World Bank/EC regional Roma survey 2011)

A more mixed picture emerges when analyzing the data in terms of segregation. Most households in Hungary, Romania, and Slovakia live in rural communities, while most in Bulgaria and particularly in the Czech Republic live in urban neighborhoods. Apart from the Czech Republic where urban neighborhoods are predominant, at least two thirds of Roma households in the other countries live more than 3 km away from the nearest city or city center. In all five countries most Roma households are not located in predominantly Roma communities, but most of the sampled Roma in the Czech Republic, Romania, and Slovakia live in such neighborhoods. Besides, most Roma in Bulgaria and Slovakia speak Romani at home, and almost half in the Czech Republic and Romania do so as well. Only in Hungary does a minority of Roma speak Romani as the main language in the household.

TABLE 6: MAIN SAMPLE CHARACTERISTICS (%)

	Bulgaria	Czech Republic	Hungary	Romania	Slovakia
Rural Community	48	2	65	62	74
Predominantly Roma community or neighborhood	32	62	39	56	53
Romani Spoken at Home	66	45	7	44	73
Nearest City Less than 3 km	31	60	28	23	28
Secondary School Less than 3 km	52	59	33	95	39

Source: UNDP/World Bank/EC regional Roma survey (2011). Authors' calculations.

THE CASE FOR EARLY CHILDHOOD DEVELOPMENT (ECD)

Investing in early childhood development provides an invaluable opportunity to support a crucial period of cognitive, emotional, social, and physical development of children. There is a broad consensus among both the academic community and development institutions on the essential role played by the early years in the acquisition of skills and capacities that form the basis for future learning and development (see for example, Shonkoff and Phillips 2000; UNESCO 2007; World Bank 2010). Brain development begins shortly after conception and continues throughout adolescence. The early years play a particularly crucial role in organizing brain cells, forming a network of neuron-to-neuron connections (synapses) for communication with other cells, and generating specific developmental competencies (Shonkoff and Phillips 2000). Stimulating activities and good nutrition are vital to healthy development during the first years of life, when the human brain is most sensitive to the influences of the external environment (WHO 2011; UNESCO 2007), and when early cognitive and socio-emotional skills are acquired (Shonkoff and Phillips 2000). ECD interventions can help children develop these necessary

skills by complementing the care children receive at home or compensating when such care is lacking (UNESCO 2007).

Lack of stimulating environment and exposure to risk factors can lead to delays in development of essential functions and undermine a child's development to full potential. The absence of a stimulating home environment, emotional stress, exposure to violence, undernutrition and malnutrition are just some of the factors that can adversely affect brain development and contribute to cognitive, behavioral, and physical delays (WHO 2009; World Bank 2010). Studies in the Philippines, Pakistan, and Tanzania on the impact of undernutrition on school enrollment and performance find lower enrollment rates, delays in school participation, and higher chances of dropping out among stunted children (see UNESCO 2007: 111). Other research on the impact of nutrition demonstrates that stunting in early childhood can have a lasting negative impact in adulthood; for example, lower earning potential (Grantham-McGregor et al. 2007; see World Bank 2010 for a review of studies).

Evidence suggests that ECD investments can enhance overall child development, with integrated approaches showing greater benefits than nutritional interventions targeted at survival only. Systematic reviews of US studies of early intervention programs find compelling results: ECD programs show positive impacts on test scores, reduction in grade retention and higher chances of high school graduation (see Heckman 2000). In addition, they seem effective in preventing developmental delays and placement in special education (see Anderson et al. 2003). There is growing recognition of the undeniable importance of educational factors in most ECD interventions (UNESCO 2007, World Bank 2010; WHO 2011). Review of international research evidence demonstrates that nutritional interventions combined with education are more effective in improving overall child development than interventions focused solely on nutrition (Nores and Barnett 2010). Some of the reasons relate to reduced chances of developing mental health problems among children with stronger cognitive and socio-emotional abilities; others concern more informed views on safety and dangers of substance abuse (World Bank 2010).

Investing in ECD is a cost-effective strategy to encourage early success and mitigate some of the social and economic costs from corrective measures later. When developmental delays are left unaddressed, children lagging behind their peers may be confronted with learning difficulties upon entering primary school. While not absolute in predicting success, noticeable differences in children's knowledge and ability even before kindergarten are indications of future academic performance (Shonkoff and Phillips 2000). Poor school performance, grade repetition, dropping out, and general loss of interest in learning can filter through and contribute to failures in the labor market; by not being able to move out of employment in lower income jobs, poor performers would consequently contribute less to the growth of overall economy (World Bank 2010). Also, poor performing children and young adults are more likely to fall victim to high risk behaviors, make unfortunate choices, and become early parents, which imposes additional costs on the education and health sectors (World Bank 2010). Corrective measures and training programs targeted at older children and adults can compensate for some of the schooling disadvantages, but evidence increasingly suggests that they are less effective than early interventions (Heckman 2000). On the other hand, high quality early childhood interventions bring high economic returns, offering a rate of return for each dollar invested well in excess of interventions for

other age groups (World Bank 2010). Two reasons may underlie this: (i) younger children have a longer productive time ahead of them to recoup the investment (Heckman 2000); and (ii) learning promotes further learning (Heckman 2000), making investments in further education more effective (Young 1996). Hence, investing in ECD may help to avoid additional public welfare expenditure and other costs that attempt to remedy labor market problems (Young 1996; World Bank 2010).

Investing in ECD is both an efficient and equitable policy option. Research studies have shown that early childhood development programs are particularly beneficial to children from disadvantaged backgrounds (Burger 2010; Heckman and Masterov 2007; Young 1996). Such children often lack safe and stimulating home environments necessary for overall healthy development, which makes them particularly vulnerable to falling behind in school, dropping out, and following in the footsteps of their parents. Good quality ECD programs can reduce this social inequality (UNESCO 2007) and lessen or break the cycle of intergenerational transmission of poverty (Bird 2007). By endowing initially disadvantaged children with stronger foundations for learning, they are better prepared to learn and succeed in school. ECD investments targeted towards children from disadvantaged backgrounds also have higher social returns through reduced spending on police and the justice system, convict rehabilitation, job training, and tuition subsidies, all of which are more often associated with lower socio-economic background (Heckman 2006). In addition, investing in ECD programs can help to promote gender equality. Emerging research evidence shows that girls who attend early childhood programs are more likely to complete primary education and enroll at an appropriate age (see UNESCO 2007). ECD programs are also beneficial to older girls who are often left behind or out of school because of the need to take care of younger siblings (World Bank 2010). The potential benefits from investing in ECD programs provide a compelling number of supporting social and economic arguments. In light of this, some scholars have argued that 'investing in disadvantaged young children is a rare public policy with no equity-efficiency tradeoff' (Heckman and Masterov 2007: 2). The ECD programs promote 'fairness and social justice' together with 'productivity in the economy and in society at large' (Heckman 2006: 1902).

PART 2: PROVISION OF PRESCHOOL: LEGISLATIVE BASIS AND NATIONAL POLICIES

In all five countries there is one education act that regulates the provision of public education, including ECE, which determines the overall administration, the distribution of responsibilities, and the general aims of the education services. In Bulgaria, this is the Public Education Act from 1991, in Romania – the National Education Law from 2003, in Hungary – the Act of 1993 on Public Education, in Slovakia – the School Act from 2008 and in the Czech Republic – the Education Act from 2005. All five acts stipulate that compulsory education is free of charge and is deemed a universal right of all children in the five countries, irrespective of factors such as gender, socio-economic background, nationality, ethnicity and religion. The Romanian and Hungarian legislation further stipulates that educational programs for minority children include the minority language, culture and history. Additionally, the Hungarian act grants the right of minority self-government to set up their own educational establishment, which has not happened due to financial constraints (Molnar and Dupcsik 2008). The recently-adopted Slovak and Czech education acts aim to address disparities in education and pay special attention to equality (Vrabcova et al 2008; (Eurydice 2010d). Besides the education acts, discrimination in education is addressed by a variety pieces of legislation and policy-documents. For example, the Hungarian Equal Treatment Act has been described as "the most important tool of anti-discrimination efforts" by the Edumigrom report (Vajda and Dupcsik 2008: 18).

Preschool education is primarily provided in kindergartens for children aged 3 to 6, in some cases 7, and in primary school preparatory classes. **Some year(s) of preschool is obligatory in Bulgaria and Hungary, and will become obligatory in Romania.** In Bulgaria recent legal amendments from September 2010 provide for 2 years of compulsory preschool education, which would encompass all 5-year-olds. However, the municipalities have 2 years to ensure that they are able to accommodate all children. In Romania, according to a legal amendment from January 2011, as of academic year 2012-2013, there will be one compulsory year of preschool education which is meant to equalize the level of preparation of all children for the primary grades. This preparatory year will be included in the primary education. In Hungary, preschool is generally compulsory from the age of 5 (the last pre-school year). In Slovakia pre-primary education remains voluntary, although there has been discussion to introduce compulsory ECE. Preparatory classes called the zero grade can be set up in primary schools. Children who are 6 or older, but who are not ready to enter primary school can be placed into this grade at the discretion of the legal guardian (Dral et al. 2008). Finally, in the Czech Republic, preschool is not compulsory, but municipalities are obliged to ensure access to free kindergarten for children with residency within a given municipality, and who have one year left before primary school enrolment.

BOX 2: MAKING PRESCHOOL COMPULSORY, AFFORDABLE, AND PROVIDING INCENTIVES TO ENROLL EARLY: THE CASE OF HUNGARY

Preschool enrolment among Roma in Hungary and the poor in Hungary more generally, is considerably higher than in neighboring countries. For example, while 49% of Hungarian Roma children report attending some form of preschool, the corresponding rate among Slovak non-Roma neighbors is 17%, and among Slovak Roma 10%. At age 5, 86% of Hungarian Roma children are enrolled compared with 75% of Slovak non-Roma neighbors, and still a mere 36% of Slovak Roma.

TABLE 7: NET PRESCHOOL ENROLMENT BY AGE: SLOVAKIA AND HUNGARY

Age	Slovakia		Hungary	
	Roma	Non-Roma Neighbors	Roma	Non-Roma Neighbors
3	10%	17%	49%	81%
4	22%	45%	77%	100%
5	36%	75%	86%	100%
6	63%	81%	91%	100%

In Hungary, until the recent December 2011 change in the education law, kindergarten had been optional from the age of 3 and compulsory from the age of 5. The new education law, passed in December 2011, calls for compulsory preschool from age 3. Mandatory primary school entry age is 6 years, although children may stay in kindergarten for an extra year, until turning 7. Public-sector kindergartens are free of charge; they charge a compensation for extra services not included in their basic tasks, e.g. for meals, excursions and extracurricular activities. Non state kindergartens may charge fees.[11]

Financing of preschool has come from a combination of central government funding (30-40 percent), parents (10 parents), and municipal governments (the rest). Parents' fees are lowered or cancelled completely for those with low incomes. Municipal financing has been a challenge for poor municipalities. It is possible for them to contract with private and voluntary sector providers, services are almost entirely public. [12]

To improve access for the poor, meals have been free for families receiving a supplemental child protection allowance.[13] Furthermore, since 2009, parents of multiply disadvantaged children have been encouraged by law through subsidies to enrol their children to kindergarten as early as possible.[14] The so-called "kindergarten subsidy program" grants disadvantaged families a twice a year subsidy of 10 000 HUF (approx 35 Euro) per child aged 3-4 years conditional on the child attending pre-school regularly.[15] The eligibility criteria consists of multiple disadvantaged (a legal category, it includes low education of the mother and means testing by the local notary, and the latter has idiosyncratic elements to it).

To address the extension of places at kindergartens, the government issued specific calls for proposals in 2009 partly for the improvement of school education and partly for the development of kindergartens and kindergarten-related projects in the 33 most disadvantaged micro-regions. These fell under the scheme of

[11] Eurodyce (2011). National system overview on education systems in Europe; 2011 Edition. Hungary
[12] Marta Korintus (2008). "Early Childhood Education and Care in Hungary: Challenges and Recent Developments" International Journal of Child Care and Education Policy. Vol. 2, No.2, 43-52
[13] Ibid.
[14] Hungary MINISTRY OF NATIONAL RESOURCES (2011). 2011 national report on the implementation of the Strategic framework for European cooperation in education and training (ET2020)
[15] Medgyesi, M., and A. Scharle (Ed.) (2012). "Mobility with joint forces: the decreasing of deep poverty with conditional transfers". Budapest Institute of Policy Analysis and TARKI Social Research Institute.

the infrastructure development within the Regional Operational Programme.[16] Nevertheless, lack of physical space and personnel in kindergartens was a constraint in many instances.

The education systems in all five countries are decentralized (Hungary especially), or undergoing a decentralization process. Municipalities are the primary maintainer of public kindergartens. Generally, curricula, planning, coordination of state policies, financing, and quality standards are set at a central level, although individual educational establishments in Hungary, Slovakia and the Czech Republic have a relatively large degree of freedom when it comes to developing their own school or kindergarten education program. The core funding that is allocated to local authorities from the central budget is calculated on a per student basis and depends on the level of schooling and the student's individual learning needs. The main authorities are the principals, or heads, who may have deputy principals (as in Hungary and Romania), as well as organizations of the teaching staff - school boards in Hungary, pedagogical councils in Bulgaria and teacher's councils in Romania. Bulgarian Pedagogical Councils, which make decisions regarding the yearly plans, the rules of functioning of the kindergarten or school, and the results of the educational process. Principals are typically responsible for staff and financial management, ensuring quality of services as well as a safe environment for the children (Eurydice 2007/2008).

The aim of decentralization is increasing local relevance, but there is also a risk of enabling segregation. In theory, decentralized educational services can address local needs better by paying greater respect to the diverse situations and problems of communities and students' individual needs and interests. As such this approach should ensure access and equity in education for vulnerable groups such as the Roma. However, as pointed out by some (OSI 2007a), decentralization may also fuel segregation of Roma, unless the central government clearly delineates the responsibilities of local authorities and develops effective mechanisms to implementing national desegregation policies. Mechanisms for parent involvement are generally available but not compulsory (Eurydice, Cedefop, ETF, 2009/2010c), so in practice it is not clear whether parents, and especially low educated Roma parents, have a say in the way their children are cared for and educated.

In all five countries parents of children generally need to provide a mix of documentation, some set at national level and others determined by municipalities. In Bulgaria, parents typically need birth and medical certificates, written request, and, in some municipalities, proof of paid taxes[17]. In Romania, the requirements are similar. Admission to kindergartens is also usually contingent upon availability of spaces and proximity to the child's home. In Hungary it is up to the maintainers to decide on the specific application method. Parents are free to choose which kindergarten they want their children enrolled at, but kindergartens may also refuse applications, unless they are for children from their "catchment areas" or regions, in which case they are obliged to provide services. With recent changes in legislation multiply

[16] Hungary MINISTRY OF NATIONAL RESOURCES (2011). 2011 national report on the implementation of the Strategic framework for European cooperation in education and training (ET2020)

17 See http://www.economynews.bg/приемат-в-детските-градини-след-платени-осигуровки-news16855.html – in Bulgarian

disadvantaged children are given priority (Eurydice, Cedefop, ETF 2009/2010c; Eurydice 2010c). In Slovakia, a child's legal guardian or parents are also required to submit a written application and the requisite health certificate to the kindergarten head. Children are admitted to special kindergartens (classes) based on testing, and with the consent of the parents (OSI 2007b). In the Czech Republic and Slovakia, children who have a year left before primary school are given preference. Other admission criteria are set by the school head, and admission is contingent on available spaces. According to their parent's wishes children can enter preparatory classes instead of kindergarten or are transferred there if they are not successful at the start of compulsory education (REF 2007e). For placement in any of the special school provisions, including preparatory classes and special kindergartens, the explicit consent of parents is needed as well as recommendations from a group of experts. However, there is evidence that Roma parents are often poorly informed on the negative impact of special education. Furthermore concerns have been raised with regard to the nature and administering of the placement tests and the work of the expert committees (Friedman et al. 2009).

Kindergarten and pre-school tuition fees are generally free of charge, with the exception of additional activities and especially fees to cover meals. Compulsory preschool in Bulgaria and Hungary are free of charge. In Hungary preschool services for children aged 3 onwards are free of charge. In Bulgaria, Romania and Hungary there are small kindergarten fees for non-compulsory preschool education, which are meant to cover the cost of meals. Furthermore, parents are charged for additional activities such as excursions, sports and language lessons. In Romania, as of 2012-2013, the compulsory preschool year will become part of the primary school system and will be free of charge. Kindergarten services for children aged 3 to 6 are also free of charge, but there are fees for extracurricular activities and other indirect costs, and fees for extended or weekly programs. Kindergarten services in Slovakia and the Czech Republic are co-funded by parents, however in both countries the last year of (non-compulsory) preschool is free of charge. All five countries offer subsidies and in some cases kindergarten fee exemptions to disadvantaged families.

All five countries have somewhat flexible service provision, with kindergartens offering full-day as well as half-day services. In Bulgaria there are also seasonal groups especially in rural areas during the summer when parents are especially busy with farm work. In rural areas in Romania, primary school buildings also often accommodate preschool groups (OSI 2007a).The organization of time follows the school year of the public education. Children are divided into groups on the basis of their age, but when necessary exceptions can be made (Bulgaria, Romania, and Hungary). In Slovakia primary schools also have the option of setting up a zero grade for children who are 6 or older. The zero grade is "[…] aimed at helping children adjust to the transition from a domestic to a distinctively institutionalized environment." (REF 2007d: 9). In the Czech Republic there are two types of preparatory classes: for children with "mental or physical disadvantage;" and for children who are "socially disadvantaged" (Katzorkova et al 2008: 4).

In all five countries recently-adopted national education programs seek to move toward more child-centered interactive pedagogical methods, which take into account the individual learning needs of the children. In the child-centered approach, preschool education's main aim is to foster the physical, socio-emotional and cognitive development of young children through a child-centered individualized approach, that encourages self-exploration and autonomous and creative and learning, and which builds

positive self-image, confidence, and social skills. The main method for teaching and evaluating children is pedagogical play. Notably, Romania has adopted the Unicef-promoted *Early Learning and Development Standards* for children from birth to 7 years old, which regulates and sets standards for early childhood services (including preschool curriculum, teacher/parent training and evaluation practices). Hungary, according to the OECD (2004) report, early childhood education in Hungary has a well-developed child-centered methodology. The content is focused on the acquisition of social and learning skills and fostering an interest in the learning process, rather than on direct teaching of literacy and numeracy. However, other reports have evaluated the prevailing pedagogical approach in the education system in general as being dominant and rigid (REF 2007c; OSI, 2007;Molnar and Dupcsik 2008). In Slovakia, with the enactment of the 2008 Education Act, the preschool education system similarly seeks to move away from rote learning and teacher centered methods, to more child centered methods. Lastly, besides the national programs, curricula in Hungary, Slovakia and the Czech Republic are also based on the educational programs of individual school and kindergarten establishments.

NATIONAL POLICIES SPECIFICALLY TOWARD ROMA INCLUSION [18]

Governments have sought to address the education needs of minorities in general and Roma in specific through legal safeguards and through social measures. Firstly, governments have granted minorities certain minority rights with regard to preserving their language and culture. For example, provisions are contained in the basic legislation - the constitutions and the national education acts – and mostly focus on the right to study in one's minority language, or there are separate legal documents (for example, Hungary's Minorities Act of 1993, the Czech Rights of Members of National Minorities Act No. 273/2001). In Bulgaria, Slovakia and the Czech Republic the law focuses on the right to be educated in one's mother tongue, whereas Hungarian and Romanian legislation additionally emphasize the right to learn of one's minority history and traditions.

Secondly, there have been many policy documents and strategies aimed at their integration through primarily social measures. One such example is the National Action Plans for the Decade of Roma Inclusion, in which all five countries take part. A strength of these strategies is that they approach the issue of educational inclusion in an integrated manner and the efforts are coordinated with other priority spheres, such as health, housing and employment. Increasing Roma preschool enrollment and introducing material support have been specific objectives of the Romanian (see Stoian and Mark 2010) and Hungarian (see OSI 2007a; REF 2007c) action plans. Both these policy-documents, as well as the Bulgarian plan, explicitly mention the inclusion of Roma culture and heritage into the education curricula. The Bulgarian and Hungarian action plans pay special attention to educational desegregation, and the Romanian one promotes the involvement of school mediators. The Slovak action plan, on the other hand, emphasizes the need to decrease the number of Roma children attending specials schools and classes

18 Unless otherwise specified, information in this section is based on the Eurydice reports for all five countries found online at http://eacea.ec.europa.eu/education/eurydice/eurybase_en.php

(REF 2007d). However, with most action plans, questions have been raised about the efforts to implement them (e.g. OSI 2007, REF 2007, UNICEF 2007).

Besides the Decade Action Plans, governments have produced a series of other policy-documents that reconfirm old commitments and methods, or place emphasis on new aspects and approaches. A leading policy-document in Bulgaria is the Framework Programme for Equal Integration of Roma into Bulgarian Society, which includes desegregation of Roma education, combating racism in the classroom and introducing mother-tongue education as some of its strategic objectives (OSI 2007a). The Bulgarian National Strategy for the Child 2008-2018[19] emphasizes the role of preschool education as a main factor for the social inclusion of Roma children. The Romanian Strategy for the Improvement of the Condition of the Roma (OSI 2007a), adopted in 2001 and modified in 2006, is the main government document that addresses the situation of the Roma. It promotes social inclusion measures in a 6 main domains, one of which is child protection and education. In the Czech *Concept of Early Intervention for Socio-Culturally Disadvantaged Children*, language and identity are specifically, as well as the importance of preschool education, are taken into account (REF 2007e). In Slovakia, multicultural education was introduced as a cross-cutting theme to a new National Curriculum adopted in 2008 (OSF forthcoming). Finally, the Czech The National Programme of the Development of Education in the Czech Republic (the White Paper) and Long-term Strategy of Education and Development of the Education System in the Czech Republic from 2005 both emphasize equal educational opportunities and the inclusion of disadvantaged children (REF 2007e).

The Operational Programme documents (OPs), which are agreed upon between the EU Member States and the European Commission, and which set out the priorities for spending of EU structural funds in each of the countries, highlight Roma education. In Bulgaria and Romania the strategic framework for absorption of ESF funds for Roma education for the programming period 2007 – 2013 has been defined by the Operational Programmes Human Resources Development (OP HRD). In Hungary it is defined by the OP Social Infrastructure and the Social Renewal OP; in Slovakia by the OP Education; and in the Czech Republic by the Human Resources and Employment Operation Programme and the Operational Programme Education for Competitiveness. The issue of Roma education features importantly in each of these policy-documents, with the Bulgarian OP HRD and the Czech OP Education for Competitiveness paying special attention to the central role of ECE in the social inclusion of the Roma. However, in Slovakia preschool education was not among eligible activities in OP Education 2007-2013. This was criticized by NGOs, and in the Revised Decade Action Plan, there is Activity 1.2.4 aiming to include preschool education into OP Education in the next programming period. Across the countries, there is little concrete information on the amount of ESF Roma education project financing or their effectiveness.

Almost all countries have central-level institutions whose primary field is Roma integration in addition to specialized departments within the ministries of education. Bulgaria has two important

19 Found online at http://www.strategy.bg/FileHandler.ashx?fileId=667

institutions - the Centre for Educational Integration of Children and Young People from the Minorities and the National Council for Cooperation on Ethnic and Integration Issues (NCCEII). The former is an organ of the Ministry of Education, and is responsible for the programs for educational integration of ethnic minority children. The NCCEII was created in Bulgaria as a consultative and coordinating body for governmental policies and activities in the field of ethnic minority issues, including education. In Romania, the Department Policies for Minorities, and the Relations with Parliament Department deal with a wide range of minority-related issues including the provision of protection and educational support for Roma students. In Slovakia, the Roma Education, Information, Documentation, Counseling and Consultation Center is responsible for making sure the specific conditions and needs of the Roma are reflected in schools with a high Roma populations (REF 2007d: 23). The Plenipotentiary of Roma Affairs also bears some responsibility in the administration of preschool education for Roma children. The Czech Republic seems to lag behind in this respect especially since a specialized department within the ministry of education was dismantled[20].

Hungary has stood out for a greater focus on institutions dedicated to either Roma inclusion in general, or Roma educational integration in specific, as well as a network of minority self-governments. The Hungarian Ministerial Commission of Integration of Roma and Socially Disadvantaged Children participates in the preparation of programs that address the issues of integration, individual learning needs and the special class placement procedures (Molnar and Dupcsik 2008). The Hungarian National Network of Integration in Education provides consultations and support to relevant stakeholders (including educational institutions, municipalities and teacher training institutions) aimed at increasing their capacity and competencies when dealing with disadvantaged children. A special focus falls on Roma children in integrated classes (Keller & Mártonfi, 2007). The Hungarian Directorate of Roma Affairs, established in 2004, combines policy-making and coordination functions. However, according to the Edumigrom (Vajda and Dupcsik 2008) report, despite the fact that this body has a good amount of authority and funding, government offices that deal with Roma issues are loosely connected and the distribution of responsibilities is poorly organized. Finally, Hungary is also notable for its system of minority self-government, but the functions of minority self-governments are mostly limited to cultural activities and do not encompass any substantive decision-making powers (Edumigrom, Vajda and Dupcsik 2008).

Efforts to implement the laws and policy measures have been slow, although there are signs of improvement. According to the OSI (2007b) report and REF (2007a) country assessment, the Bulgarian and Romanian strategies have been implemented unevenly, the former not being backed up by proper funding. In 2011, however, the Bulgarian government began implementation of a new World Bank supported "Social Inclusion Project", which specifically seeks to promote preschool among poor and vulnerable Bulgarians, including Roma. According to a national report from 2010 (Matache and Ionescu 2010), the most important legislative developments in Romania with regards to Roma over the past few years include a prohibition of segregated education[21], the promotion of cultural diversity in the curricula[22]

20 See http://blog.soros.org/2011/02/still-waiting-czech-republic-drags-its-feet-on-roma-education-reform/
21 Notification no. 29323 of 20 April 2004 and Ministerial Order no. 1540

including teaching Romani in preschools and Roma history, and providing food subsidies to disadvantaged children[23]. Hungary has a longer history of implementing programs in support of Roma pre-school. According to the REF report from 2007, the initiatives, policies and programs of the various Hungarian governments have indeed demonstrated a commitment to the educational inclusion of the Roma and have been, for the most part, heading in the right direction. In fact, the report criticizes the fact that various new measures have been *too* overwhelming for local actors to properly implement..An impact evaluation of Hungary's integration program of the National Educational Integration Network (2005-2007), which was initially implemented in 45 schools and focused on the provision of integrated education combined with teacher training and other forms of support, the REF states that the program was generally successful (Kézdi and Surányi 2009; described in more detail below). The Slovak policies toward Roma on the other hand have been criticized as being ineffective; not results oriented; lacking evaluations, monitoring as well as funding; and weak in their implementation (Salner 2005; OSF forthcoming). Similarly, REF (2007e) in its evaluation of the Czech government's Roma education initiatives, emphasized the conceptual vagueness regarding a number of barriers that Roma face in accessing education. Furthermore, the report states that neither the Decade Action Plan, nor other government strategies are well integrated and effectively implemented. More generally, the very large enrolment gaps that remain in all but Hungary demonstrate that despite the recognition in policy documents, actual inclusion at pre-school level is still a distant goal.

22 Ministerial Order no. 1529

23 The program "bread and milk" launched in 2004

PART 3: THE EARLY LEARNING ENVIRONMENT

The chapter describes in more detail the early learning environment of Roma children, focusing first on the kindergarten and pre-school characteristics and parental (qualitative) perceptions of this environment. The survey also asked parents some questions about the home environment, which is presented below. The chapter then looks into more detail and several measures of self-reported cognitive and socio-emotional outcomes, and explores whether Roma children attending pre-school perform differently on these measures when compared to their immediate neighboring Roma children with similar socio-economic characteristics but not attending pre-school. Finally, the chapter also compares later life outcomes – enrolment into special school, secondary completion, having a job, and being on social assistance – between Roma adults who went to pre-school in their youth, and Roma adults from the same neighborhood with similar socio-economic characteristics who did not attend pre-school in their youth.

KINDERGARTEN AND PRE-SCHOOL CHARACTERISTICS

Most Roma households in the survey report having a kindergarten within walking distance to their residence (regardless of whether their child, if any, attends)**.** As shown in Table 8, in all countries, between 50% of the households in the case of the Czech Republic and as many as 72.9% of the households in Romania reporting having one within 1 kilometer of their house. And, with the exception of the Czech Republic, more than 90% of households in the group of countries report being within 3 kilometers of the nearest kindergarten.

TABLE 8: DISTANCE TO CLOSEST KINDERGARTEN, ROMA HOUSEHOLDS(%).

	Bulgaria	Czech Republic	Hungary	Romania	Slovakia
<1 km	61	50	56	73	56
1-3 km	31	33	36	24	38
3-5 km	6	15	7	2	2
5-10 km	2	2	1	0	2
10+ km	0	0	1	1	2

Source: UNDP/World Bank/EC regional Roma survey (2011). .Authors' calculations

Almost all Roma children reported to be in preschool were accessing services through the public sector, with a minority being in preschools within the settlements. As shown in Table 9, across the 5 countries, 97% of all children in preschool were attending public preschools. Furthermore, with the exception of Slovakia where only 11% of Roma children were attending pre-school schools located within Roma settlements, in Bulgaria and Hungary almost a third of attending children were in preschools in the Roma communities, while the fraction stood at 39% in the Czech Republic and 43% in Romania.

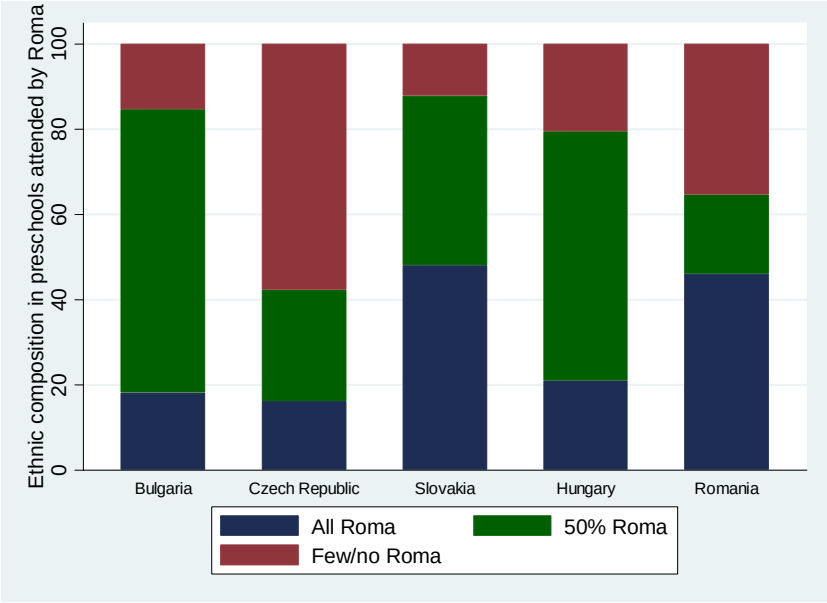
TABLE 9: PRESCHOOL CHARACTERISTICS (%)

	Bulgaria	Czech Republic	Hungary	Romania	Slovakia
Type of school					
Public	100	95	100	96	95
Private	0	3	0	2	4
NGO/Community based	0	2	1	2	1
% in located in a Roma settlement	28	39	29	43	11

Source: UNDP/World Bank/EC regional Roma survey (2011). Authors' calculations
Percentages of Roma children reported to be in preschool.

The ethnic composition of children in preschools attended by Roma provides a mixed picture with high levels of segregation in Slovakia and Romania. As shown in Figure 4, Slovakia, with the lowest fraction of children reporting going to schools located within a Roma settlement, had the highest fraction of children attending all-Roma kindergartens – 48% -, indicating a high degree of segregation in early education. In Romania the figure is similar: 46%. On the other hand, in Bulgaria, Czech Republic, and Hungary, 18%, 16%, and 21% of Roma children attending preschool are in schools with nearly all Roma children.

FIGURE 4: WHAT IS THE COMPOSITION OF CHILDREN IN THE KINDERGARTEN?

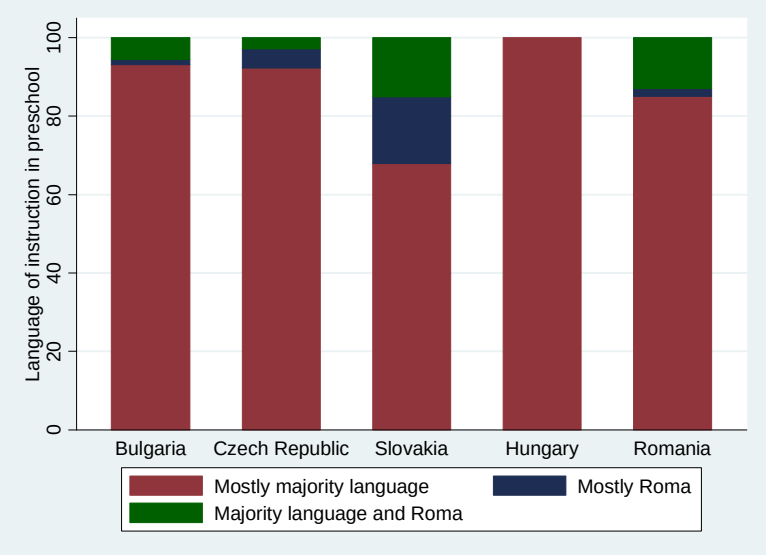


Source: UNDP/World Bank/EC regional Roma survey (2011). Authors' calculations

The vast majority of enrolled children were taught in the majority language, with the exception of Slovakia. As shown in Figure 5, caregivers for 100% of children in Hungary and for more than 95% of children in preschool in Bulgaria and the Czech Republic report their children being taught in the majority language (formally or informally). In Romania too, more than 4 out of 5 Roma children receive instruction in the majority language. Slovakia, the higher ethnic segregation at preschool level is also

reflected in the (informal) language of instruction; more than a third of Roma children receive part or nearly all their instruction in Romani.

FIGURE 5: LANGUAGE OF INSTRUCTION IN PRESCHOOLS ROMA CHILDREN ATTEND.



Source: UNDP/World Bank/EC regional Roma survey (2011). Authors' calculations

Household expenditures on pre-school are low in Hungary, modest in Slovakia, and (relatively) high in Bulgaria, Czech Republic, and Romania. The regional Roma survey also asked parents directly the expenses on fees, books, transport, clothes (uniform), and food. This is shown in table 10, which confirms the low actual costs in Hungary (on average euro 1.3 per month), with the highest expenses reported in the Czech Republic (euro 25.6). Bulgaria stands out as having relatively high expenses at euro 15.4 per month.

TABLE 10: MONTHLY COSTS (EURO) OF PRE-SCHOOL FOR ROMA CHILDREN

	Bulgaria	Czech Republic	Hungary	Romania	Slovakia
Monthly cost (mean - Euro)	15.4	25.6	1.3	7.5	7.2
Monthly cost (median - Euro)	17.4	24.7	0.0	2.2	4.0

Source: UNDP/World Bank/EC regional Roma survey (2011). Authors' calculations

The provision of food varies across the countries. Hungary stands out for freely providing food to virtually all children. On the other hand, a large majority of Roma parents in Bulgaria, Czech Republic, and Slovakia report that children receive food that is covered by a fee charged to the parents, while in Romania the majority of parents report that their children are expected to take their own lunch with them.

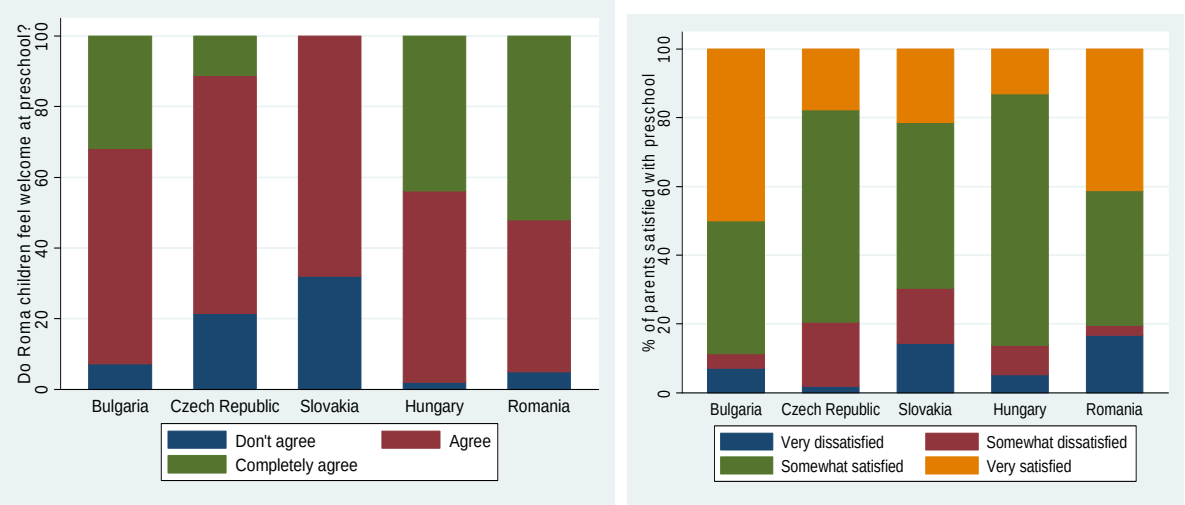
TABLE 11: PROVISION OF FOOD ACROSS THE COUNTRIES (%).

	Bulgaria	Czech Republic	Hungary	Romania	Slovakia
Yes, freely provided	23	5	97	33	28
Covered by fee	76	92	2	3	72
Children must bring own lunch	1	3	1	64	0
Total	100	100	100	100	100

Source: UNDP/World Bank/EC regional Roma survey (2011). Authors' calculations

Caregivers of Roma children enrolled in preschool generally feel that their children are welcomed and feel satisfied with the preschool, although significant minorities in Slovakia and Czech Republic are not. The survey also collected data on perceptions of preschools among primary caregivers of school-going children. With the exception of the Czech Republic and Slovakia, where roughly a fifth and a third of caregivers respectively disagreed with the statement that Roma children felt welcome at preschools, almost all caregivers in each country agreed that Roma children were welcome (Figure 6a). Dissatisfaction with preschools was also relatively low (Figure 6b): less than 20% of caregivers were very or somewhat dissatisfied; in Slovakia, this fraction rose to about a third of caregivers.

FIGURE 6: DO ROMA CHILDREN FEEL WELCOME IN PRESCHOOLS? AND PARENTAL SATISFACTION



HOME ENVIRONMENT

Roma children are growing up in poverty, with low educated and often unemployed parents. Not surprisingly, this translates into Roma children lacking access to reading (materials), especially in Bulgaria, Romania, and Slovakia. Educational outcomes and learning in early childhood depend of course not just on schooling, but importantly on the home environment. Parenting practices and time spent with children can be particularly important inputs in this regard. The regional Roma survey (2011) asked several questions seeking to capture the home environment. First, reflecting the high levels of

poverty, Table 12 shows that few Roma households with at least one child between the ages of 3 and 5 years have significant numbers books at home in Bulgaria, Romania, and Slovakia: at least 50% of children in Bulgaria and Romania have 0 books at home, and only 1 book in Slovakia. In both the Czech Republic and Hungary, households have significantly more books: 50% have 5 and 4 books at home, respectively.

Time spent with children in stimulating activities is an important input to cognitive development. The survey asked parents if they had done each of the following three activities: (1) look at picture books or read books; (2) draw or paint; and (3) teach letters or count. There is similarly considerable variation, as shown in table 10. Around half of Roma children aged 3-5 in Hungary and the Czech Republic were reported to be read to, compared with 44% in Slovakia, 23% in Bulgaria, and 17% in Romania. Responses to drawing or painting were similar. Differences between countries in 'teaching letters or count' were smaller: 12% in Romania to 29% in Hungary.

TABLE 12: PARENTING TECHNIQUES

	Bulgaria	Czech Republic	Hungary	Romania	Slovakia
Number of books at home					
Mean	1.8	7.0	7.2	1.2	2.6
Median	0	5	4	0	1
Activities with children, past 3 days					
Look at picture books or read books	23%	50%	57%	17%	44%
Draw or paint	21%	51%	42%	19%	45%
Teach letters or count	15%	21%	29%	12%	22%

Limited to households with children aged 3-5 years old.
Source: UNDP/World Bank/ EC regional Roma survey (2011). Authors' calculations

PRESCHOOL QUALITY: PARTICIPATION IN PRE-SCHOOL AND CHILD LEARNING OUTCOMES

To further assess the issue of kindergarten quality, we compare learning outcomes between Roma attending/attended preschool and those who do/did not. The measures above told us something about the preschool environment experienced by Roma children, as well as caregivers' perceptions of this environment. However, they did not provide concrete evidence on the quality of pre-school. Parental and caregiver satisfaction levels, in particular, will not reflect how good a school really is if caregivers don't have complete information about what constitutes good instruction and adequate child performance in school. The survey allows us to shed some more light on this question of quality by comparing (a) learning outcomes of children currently (not) enrolled in pre-school, and by comparing (b) later life outcomes – special school enrolment, educational attainment, and employment outcomes. The survey collected information on 5 learning and 2 socio-emotional outcomes for all children aged 3-6 as reported by the primary caregiver. These are: (1) Can he/she identify/name at least ten letters of the alphabet?; (2)

Can he/she read at least four simple, popular words?; (3) Can he/she write his/her own name?; (4) Can he/she understand simple sentences in the national/regional language?; (5) Does he/she recognize the symbols for numbers 1 to 10?; (6) Does he/she show confidence in self?; and, (7) Does he/she get along well with other children? Table 13 below provides a breakdown for children 5-6 years old.

TABLE 13: LEARNING OUTCOMES (% OF CHILDREN)

	Bulgaria		Czech Republic		Hungary		Romania		Slovakia	
	Roma	Non-Roma	Roma	Non-Roma	Roma	Non-Roma	Roma	Non-Roma	Roma	Non-Roma
Can he/she...										
Identify/name at least ten letters of the alphabet?	50%	94%	52%	77%	49%	63%	26%	74%	46%	50%
Read at least four simple, popular words?	24%	29%	27%	43%	20%	38%	12%	47%	31%	45%
Write his/her own name?	30%	41%	44%	77%	28%	46%	14%	53%	37%	60%
Understand simple sentences in the national/regional language?	82%	88%	94%	98%	74%	67%	82%	84%	83%	95%
Recognize the symbols for numbers 1 to 10?	61%	94%	66%	91%	64%	83%	49%	79%	66%	90%
Does he/she show confidence in self?	76%	100%	89%	89%	91%	96%	88%	89%	85%	97%
Does he/she get along well with other children?	88%	100%	95%	100%	98%	96%	93%	95%	97%	100%
N	94	17	174	56	145	42	137	24	175	19

Source: UNDP/World Bank/EC regional Roma survey (2011). Sample restricted to 5-6 year olds

Roma children aged 5-6 years old lag behind their non-Roma children in cognitive outcomes. The gaps are large. For example, while approximately half of Roma children are able to identify at least ten letters of the alphabet (with the exception of Romania, where the level is one quarter), between 50-94% of non-Roma neighboring children can. Similarly, whereas approx. two-thirds recognize the symbols for numbers 1 to 10 (with the exception of Romania where this is half), between 79-94% of their non-Roma peers can. Finally, note that differences in socio-emotional outcomes (confidence and getting along) are high for all children.

METHODOLOGY

So-called 'enumeration area fixed effects estimations' allow us to compare the outcomes of Roma children within the same neighborhood (the survey enumeration areas), some of whom attend the

nearby pre-school(s) and some of who do not. To see the correlation between these binary (yes/no) learning outcomes, OLS estimations are done in which each of these become a dependent variable that is regressed on a variable indicating whether the child is enrolled in pre-school or not. If preschool has a positive impact on learning outcomes, we expect this correlation to be positive. However, a positive correlation may also show up if, for example, children are more likely to attend pre-school in communities that have other conditions favorable to learning outcomes such as better health services. To address this bias, each of the estimations include so-called enumeration area fixed effects, which effectively controls for all differences in neighborhood characteristics that may exist; instead of comparing children across different neighborhoods, the enumeration area fixed effects imply that the learning outcomes of children *within the same* neighborhood are being compared, some of who attend the nearby pre-school, and some who do not.

Additionally, the estimations focus on comparisons of children not only in the same neighborhood but also sharing similar socio-economic and parenting conditions. Even within the same neighborhood, some Roma children attending pre-school may benefit from favorable conditions at home that have a positive effect on learning outcomes. For example, some families within the same neighborhood may be less poor than others, or encourage learning at home more, and may also be more likely to send their child to preschool. Again, this may create a positive correlation – even after controlling for neighborhood effects – between pre-school and learning outcomes. To address this bias, the estimations control for a number of different variables capturing the family's socio-economic status (e.g. education, income level, whether Romani is spoken at home) and parenting practices (whether the parent reads, draws, or teaches letters/numbers to the child). Effectively this means that each estimation compares the learning outcomes between children attending pre-school and those that do not, but that come from the same neighborhood, share similar socio-economic characteristics, and share similar parenting styles at home.[24]

Even after controlling for all neighborhood characteristics and some socio-economic and parenting characteristics, we cannot rule out that some of the differences in learning outcomes between those Roma children attending preschool and those that do not are the result of factors not related to preschool. For example, perhaps Roma parents are more likely to send a child to preschool that is particularly eager to learn than a child that is less eager. Since we cannot capture the child's inherent willingness to learn, such a variable cannot be 'controlled for'. As such, any differences in learning outcomes that we see between children attending preschool and those that do not attend, cannot automatically be attributed to pre-school itself. For this, a rigorous randomized evaluation would be necessary. To assess whether the correlation between pre-school and learning outcomes is sensitive to household background characteristics, and thus likely to be biased since not all background characteristics are (naturally) captured in the survey, each estimation is done twice: once with and once without the background characteristics. As it turns out, the correlation between learning outcomes and preschool, or

[24] A full list of controls is provided in the footnote to the ANNEX TABLE 1showing the estimation coefficients.

the correlation between learning outcomes and parenting practices, does not change significantly when background characteristics are controlled for.

ESTIMATION OUTCOMES: PARTICIPATION IN PRE-SCHOOL AND CHILD LEARNING OUTCOMES

Preschool enrolment is associated with significant and large improvements in cognitive outcomes such as recognizing the alphabet and reading in Bulgaria, Czech Republic, Hungary, and Slovakia, while in Romania the association is positive but not significant. The results are shown in ANNEX TABLE 1. Although there is some variation and not all results are significant for each of the countries and all indicators, the general pattern is a positive one. In particular, (1) *Probability of being able to identify letters of the alphabet*: Bulgarian children enrolled in preschool are 43 percentage points more likely to be able to identify at least ten letters of the alphabet than children who are not in preschool, other factors held constant. The correlation is highly significant at the 1% level. In other countries, preschool enrollment is associated with an increase that varies from 13 percentage points in Romania (not statistically significant at the 5 percent level) to 24 percentage points in the Czech Republic (coefficients jointly significant at the 1 percent level); (2) Preschool is associated with an increase in the *probability of being able to read four simple popular words* that varies from 6 percentage points in Romania (not significant) to 19 percentage points in the Czech Republic (significant at the 5 percent level); (3) Preschool is associated with an increase in the p*robability of being able to write own name* that varies from 10 percentage points in Bulgaria (insignificant) to 26 percentage points in the Czech Republic (significant at the 5 percent level). The association is essentially 0 for Romania; (4) *probability of being able to understand simple sentences in the national/regional language*: the effect varied from 7 percentage points in the Czech Republic and Romania (insignificant) to 25 percentage points in Bulgaria (sig at the 10 percent level). The association is (insignificantly) negative for Hungary, but recall that only 7 percent of Hungarian Roma households speak Romani at home. Lastly, the p*robability of being able to recognize numbers from 1-10*: here the association with preschool attendance varies from 13 percentage points and being insignificant in Bulgaria and Romania to 29 percentage points and significant in the Czech Republic.

Preschool enrolment is not associated with significant increases in caregiver reported socio-emotional outcomes of the child. In particular, with regards to (1) *the probability of showing confidence in self* and *(2) getting along with peers*, the coefficient estimates are close to zero and insignificant with the exception of the Czech Republic, where preschool enrollment increased the probability of showing self confidence and getting along with peers by 19 and 10 percentage points respectively.

ESTIMATION OUTCOMES: PARENTING PRACTICES AND CHILD LEARNING OUTCOMES

Parenting practices have large and significant effects on cognitive and non-cognitive outcomes among the Roma. This is also shown in ANNEX TABLE 1. On average, across the five countries, teaching a child letters or numbers at home was associated with an increase of between 3 and 20 percentage points in probability on four of the five cognitive outcomes checked. Spending time with a

child looking at or reading books was associated with an increase of 14 and 8 percentage points respectively in probability of understanding sentences in the national language, and of getting along with peers (both effects significant at the 5 percent level). Time spent with children paining or drawing increased the probability of being able to read four simple, popular words by 6 percentage points (significant at the 10 percent level) and of being able to recognize numbers from 1 to 10 by 13 percentage points (significant at the 5 percent level).

A closer look at the table reveals although the effect of parenting practices (where significant) on cognitive and non-cognitive skills was in general smaller than that of preschool attendance, the effect was still non-trivial. The fact that in many cases the coefficients on both the parenting variables and preschool attendance remained significant and large points to the value of parental inputs and the home environment on education outcomes among children. This, combined with the fact that the quality of parental inputs appears to be low in Roma households, presents a strong case for more thinking and research to explore why Roma households may not be investing enough time and other resources in children at home.

ESTIMATION OUTCOMES: PARTICIPATION IN PRE-SCHOOL AND LATER LIFE OUTCOMES

The estimation methodology linking pre-school and later life outcomes is very similar to that of pre-school and child learning outcomes. We explore the association between attending preschool and outcomes in 4 areas: (1) subsequent enrolment in special primary schools for the disabled; (2) completion of secondary school; (3) currently being in paid work; and (4) currently being in a household receiving social assistance. These estimations take advantage of the fact that the survey asked for each of the household members whether s/he attended pre-school as a young child, as well as subsequent educational and current employment outcomes. The estimation approach is very similar as before: comparing individuals within the same neighborhood by including enumeration area fixed effects into the regressions, and additionally controlling for household/individual background characteristics. This set of estimations has the additional challenge that household/individual background characteristics may be endogenous to pre-school attendance; i.e. be outcomes themselves, and thus introduce simultaneity bias in the coefficient estimate on preschool. For example, introducing current household income as a control will introduce this. Ideally, apart from age and gender, all background characteristics would have been measured at the time the person was attending (or not) preschool years ago. The only early life measure we have is whether the child was born in a hospital. Because omitting household controls may lead to omitted variable bias, while introducing household controls that themselves may be outcomes of preschool may lead to simultaneity bias, we present both sets of estimates. Fortunately, the association between preschool and later life outcomes is not significantly different between the two approaches.

Preschool enrollment is associated with much lower chances of enrollment in special schools in the Czech Republic and Slovakia. Results are shown in ANNEX TABLE 2. Recall that among 10-49 year old Roma individuals in the Czech Republic and Slovakia, 18 and 10 percent, respectively, attend(ed) special schools for disabled children (a figure that is much higher among current Roma children in Slovakia). However, those who attended preschool as children were 6 and 7 percentage points, respectively, less likely to have subsequently enrolled into a special school for the disabled as their

neighbors with similar characteristics; a reduction of 33% and 70%. In both cases, these were significant at the 5% level. No effects are found for the other three countries, but recall that special school enrolment has been much lower to begin with.

Preschool enrollment is associated with much higher chances of secondary school completion. Results are shown in Annex Table 3. As noted earlier, enrollment histories of Roma adults in the survey reveal poor completion of basic education, with the vast majority either dropping out prior to or not completing secondary education. Among Roma adults aged 30-59 years, enrollment in preschool is associated with an increase – significant at the 1% level in all countries – in the probability of secondary school enrollment or completion by 13-17 percentage points, depending on the country. This association is very large considering the very low levels of secondary attainment.

There is no significant association between preschool enrolment and currently working, except in the Czech Republic. Results are shown in Annex Table 4. Preschool enrollment was not associated with a significantly higher probability of having been employed in paid work during the week prior to the survey interview. Nor was the coefficient significant in regression specifications run separately for men and women in order to determine whether the effect of preschool attendance varied by gender. The exception was the Czech Republic presented a striking case in this regard: preschool enrollment was associated with a 13 percentage point increase in the probability of being employed in paid work, an association significant at the 1% level. Moreover, the coefficient on the preschool variable was even larger among women (15 percentage points) and remained significant at the 1% level.

Preschool attendance in childhood is associated with a significantly lower probability of receiving social assistance as an adult in the Czech Republic, Slovakia, and Romania. Results are shown in Annex Table 6. In the Czech Republic, Slovakia and Romania, preschool attendance during childhood was significantly associated with a 17, 11 and 7 percentage point lower probability, respectively, of belonging to a household receiving social assistance at the time of the survey.

PART 4: WHO ENROLLS? BARRIERS TO ENROLMENT

This section explores in more detail the reasons underlying (non-)enrolment. The regional Roma survey (2011) allows us to explore the reasons for non-enrolment from several angles. First, the survey asked parents whose young children were not enrolled to state the main reasons for not doing so. Second, the survey asked detailed background characteristics of all the families, which can be combined with information on attendance to see if there are background characteristics that are particularly correlated with attendance. Because the survey also asked these same questions to non-Roma neighbors, it is also possible to see if there are structural differences between Roma and non-Roma after controlling for background characteristics. And third, the survey asked the parents of not enrolled children if they would reconsider sending their child to pre-school if each of the four policy options included in the survey were implemented. Furthermore, we compare the results from the regional Roma survey (2011) with the findings from existing studies.

MULTIVARIATE ESTIMATES OF PRE-SCHOOL ENROLMENT

To investigate the determinants of pre-school enrolment, similar 'enumeration area fixed effects OLS estimations' with controls for socio-economic background characteristics are carried out as before when looking at learning and later life outcomes. This estimation approach allows us to make comparisons between Roma children living in the same neighborhood (and thus face the same pre-school infrastructure) where some attend and others do not attend preschool, and explore which background characteristics correlate with enrolment. The results are presented in .

There are gender differences in Roma preschool enrollments, although these vary from country to country and are not precisely estimated. In the case of Bulgaria and Hungary, there are gender differences in enrollment that persist after controlling for background characteristics, although in all cases the effects are not precisely estimated and insignificant at the 5% level. In Bulgaria, a Roma boy is about 8 percentage points more likely to be enrolled than a girl (column 1), holding other factors constant. In Hungary, the gap is reversed with girls about 8 percentage points likelier to be enrolled than boys.

Children under care of more educated adults are likelier to be in preschool today, but the effect is not precisely estimated. With the exception of Bulgaria[25], the coefficients on the primary caregiver's education are in the expected direction: a caregiver's completion or enrollment in secondary or higher education in the past is associated with a higher probability of the child being enrolled in preschool. However, the coefficients are not precisely estimated and are not statistically significant, and magnitudes on them were small. Slovakia was an exception: completion of secondary or higher education was associated with a 17% percentage point increase in probability of preschool enrollment and the coefficient was significant at 5% level.

[25] And to a lesser extent Romania, although the coefficient is very small.

Past preschool attendance among caregivers is also positively associated with preschool enrollment of children in their care today in the Czech Republic and Romania: children under care of individuals who themselves attended preschool in the past were roughly 17 and 15 percentage points respectively more likely to be enrolled in preschool today, but only the Czech Republic coefficient was significant at the 5% level.

There was no significant association between preschool enrolment and household income, but children in households that experienced hunger were less likely to be enrolled. Preschool enrollment did not vary systematically with household income – while in the Czech Republic, children living in households in the top income quintile were 8 percentage points likelier to be in preschool relative to those in the bottom quintile (coefficient not significant at the 5% level), holding other factors constant, in Slovakia, children in the richest households were 25 percentage points less likely to be enrolled, and this effect was significant at the 10% level. However, these results should be interpreted with caution: these are income quintiles *among a very poor group of people* where there is not much variation in incomes. One explanation for this finding might be that lowest-income families in Slovakia in rural areas have slightly better access to preschools offering full meals and school materials subsidies (these are preschools with above 50% share of low-income families and have subsidized meals and school materials for each child - not just those children from low-income families).

Responses to the question on hunger – whether an adult in the household had gone to bed hungry in the last month due to scarcity of food – shed light on the socioeconomic situation of the household in the shorter run, or the ability of households to cope in times of crisis. This measure, unlike household income, presented a clearer relationship with preschool enrollment: in Bulgaria and Hungary, Roma children in households that had experienced hunger were 11 and 6 percentage points respectively less likely to be enrolled in preschool. The coefficients were significant at the 5 and 10 percent level respectively.

Use of Romani as the main language at home was significantly associated with probability of preschool enrollment in Slovakia only, while in other countries, the relationship varied and was imprecisely estimated. In Slovakia, children in Roma households that primary used the Roma language at home were 28 percentage points likelier to be enrolled than those in households where Roma was not the primary language spoken at home (significant at the 1% level); this may be a spurious correlation with income. In the Czech Republic, use of Roma at home was associated with an 11 percentage point lower probability of preschool enrollment (the coefficient was not significant).

Preschool enrollments overall are lower among Roma children than among non-Roma neighboring children in the sample. Some of this difference can be explained by differences in socio-economic background characteristics, especially in Slovakia, but an enrolment gap remains. In addition to the estimations above which focused on the Roma-children only sample, one specification for each country was done which included the entire sample of Roma and non-Roma children. The goal of this estimation is to assess whether preschool enrollment among the Roma and the non-Roma remained different, after controlling for individual and household level socioeconomic characteristics (i.e. was there an effect of being Roma, that could be attributable to something other than just the observable and measured socioeconomic differences between the two groups). The coefficient on the Roma indicator remained negative except for Slovakia. In Bulgaria and the Czech Republic, it was large: a Roma child was 20 and

14 percentage points respectively less likely to be enrolled in preschool than a non-Roma child of comparable individual and background characteristics. The effect was significant only in the Czech Republic, but small non-Roma samples provide little statistical power to establish differences. For Slovakia, the coefficient was positive, but small and imprecisely estimated.

SELF-REPORTED REASONS FOR NON-ENROLMENT

In all five countries, most Roma households report not sending a child to preschool because they thought the child was too young or that there was no need for preschool because of home care. Caregivers of children aged 3-6 not in preschool were asked the main reasons why the child was not attending school. Different categories of responses were pre-coded and respondents could give multiple answers. Table 14: Reason for not sending child (aged 3,4,5,6) to preschool below provides an overview what % of respondents mentioned a particular reason, ranked in the order of reasons most commonly mentioned in the overall sample.

TABLE 14: REASON FOR NOT SENDING CHILD (AGED 3,4,5,6) TO PRESCHOOL

	Bulgaria	Czech Republic	Slovakia	Hungary	Romania
Child is too young	28%	26%	23%	49%	46%
No need (have home care)	29%	40%	37%	24%	21%
Too expensive	40%	21%	5%	4%	22%
Child should stay home	8%	13%	7%	3%	2%
Too far	4%	2%	16%	0%	6%
No place	3%	5%	3%	2%	0%
On the waiting list	1%	5%	2%	3%	1%
Don't trust teachers	0%	2%	1%	0%	0%
Language	0%	1%	2%	0%	0%
Child is ill-treated	1%	2%	0%	0%	0%
Other	6%	4%	12%	13%	12%

Source: UNDP/World Bank/ EC regional Roma survey (2011). Authors' calculations

In all five countries, three out of the four most commonly mentioned reasons by the Roma parents is that they prefer to care for the child at home because of young age and ability to provide home care instead: approximately a quarter of respondents in Bulgaria, Czech Republic, and Slovakia, and almost half of respondents in Hungary and Romania highlight they find the child too young; similarly, between 21-40% of respondents in the five countries highlight there is no need since there is home care, and between 2-13% simply mentioned that the child should stay at home. Of course, with few Roma caregivers being employed, there is ample availability of child care at home.

This finding is consistent with some other research. For example, in Bulgaria a World Bank/OSI (2007) study found that to the question of with whom young children should spend the bigger part of their day with, 86% of the Roma respondents thought it should be with their parents, compared to 66% country average. Only 6 % Roma answered that children should attend a nursery or kindergarten, compared to 22% country average.

Self-reported preferences among Roma parents, however, do not support the idea that the preference to keep young children at home reflects a lack of interest in education more generally. While the responses (in Table 15 below) to such questions are only illustrative, they suggest that a large majority of parents hopes that Roma boys and girls complete secondary or tertiary education. Anecdotal evidence, however, suggests that school officials frequently consider Roma lacking interest in education. For example, a study in the Czech Republic revealed that principals cited low educational aspirations as being one of the "key issues associated with the education of Roma children from a socially excluded environment" [GAC 2009, pp 46]. The sentiment that the barrier to education stems from the attitude of Roma toward education has also been documented as shared among some teachers in Bulgaria and Romania (Kyuchukov in REF 2004a: 17; IMIR 2005).

TABLE 15: SELF-REPORTED PREFERENCES FOR EDUCATIONAL ATTAINMENT OF ROMA CHILDREN

	Bulgaria		Czech Republic		Hungary		Romania		Slovakia	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Basic	19	24	17	23	16	17	25	29	16	19
Secondary	65	62	77	69	81	79	56	53	70	69
Tertiary	16	14	6	8	3	3	19	19	15	12

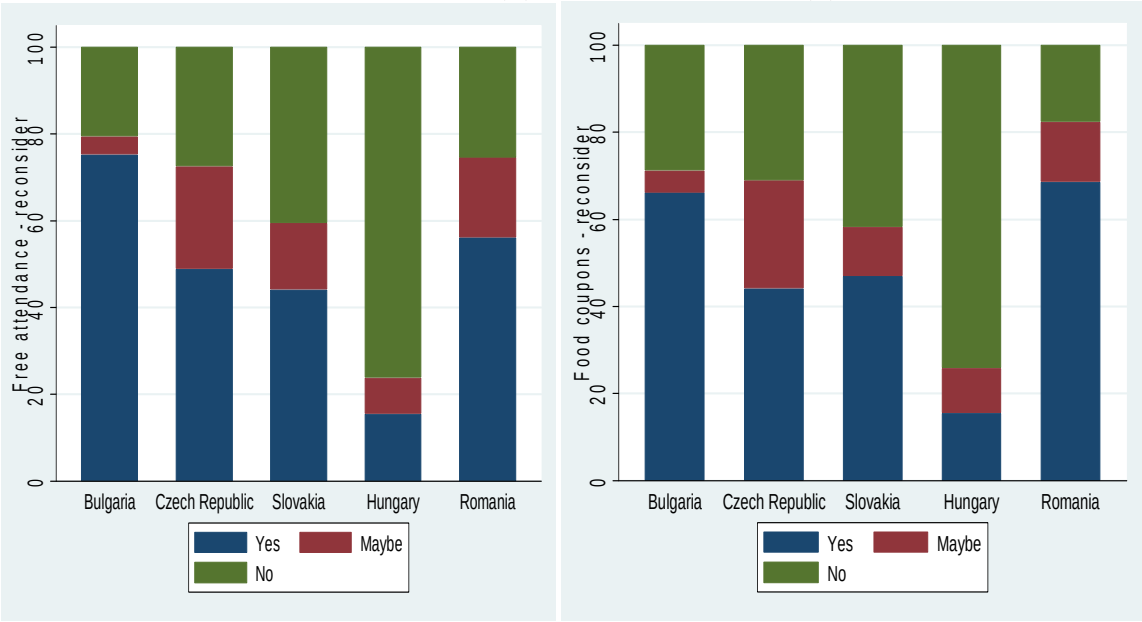
Source: UNDP/WB/EC regional Roma survey (2011). Authors' calculations

In Romania and the Czech Republic, and especially in Bulgaria, cost was also highlighted as a primary reason. In fact, in Bulgaria, "too expensive" was the most commonly cited reason by 40% of caregivers, while 21% of caregivers in Romania and the Czech Republic also mentioned this. In Hungary and Slovakia, less than 5% of Roma caregivers mentioned this as a main reason for non attendance. These responses are fully consistent with the reported average expenses incurred by parents whose children are enrolled; in Bulgaria and Romania, the poorest two countries, average monthly expenses were Euro 15.4 and Euro 7.5, respectively, and Euro 25.6 in the Czech Republic, compared with only Euro 7.2 in Slovakia and Euro 1.3 in Hungary. With average monthly per capita disposable income of the Roma families in Bulgaria standing at Euro 62, the monthly fees of Euro 15.4 for preschool is very substantial.

Conversely, most Roma households also expressed a willingness to send a currently non-enrolled child to preschool if direct or indirect costs of schooling were lowered. In a separate question, caregivers of non-enrolled children were explicitly asked if they would reconsider the attendance decision if (a) there were a Roma teacher/mediator in school, (b) free attendance, (c) food coupons for the family, (d) free transport, and (e) other (self-reported) reason. Figures 6a and 6b below show the responses to (b) and (c). A majority in all countries but Hungary report that they would reconsider if given monetary/in-kind incentives. As many as 75% of caregivers in Bulgaria and 56% in Romania report that they would reconsider in case of free attendance. Including those who responded 'maybe', these figures are 79% and 75%, respectively. In fact, only in Hungary, where costs area already near zero, around 20% report reconsidering attendance if provided monetary/in-kind incentives. The responses to 'free transport' are

very similar. Among unsolicited responses (by approx 5% of caregivers), free clothes and shoes, financial help for the family, and provision of school requisites were similarly mentioned among the most common incentives for reconsideration (alongside distance and the mother working).

FIGURE 7: RECONSIDER ENROLMENT IF (A) FREE ATTENDANCE; (B) FOOD COUPONS



*Responses by Roma caregivers with a non-enrolled child aged 3-6.
Source: UNDP/World Bank/EC regional Roma survey (2011). Authors' calculations

This finding is consistent with other studies. For example REF (2007) highlights that in Bulgaria the reduction of or exemption from the kindergarten fees need to be decided upon by the individual municipalities, and as a result, poor municipalities with substantial Roma populations are often unable to provide such forms of assistance. Conversely, in Hungary, the country where the fewest caregivers mentioned cost as a main constraint is also the country which has the most comprehensive system of social support toward pre-school**.** As of 2005, disadvantaged families are given double the monthly social allowance they are entitled to in August (the month before the official start of the school year), so that they can afford to cover the educational materials for their children for the new year. Single parents are also entitled to additional support (REF 2007c). Finally, since 2008 there is a "ovoda enrollment allowance" for multiply disadvantaged children, but only if they are enrolled in preschool , whose impact has not been evaluated (Eurydice European Unit 2009).

Distance is highlighted as a constraint to attendance by a significant minority of caregivers in Slovakia, and by some in Romania, but not elsewhere. In Slovakia, "too far" is mentioned as a main reason by 16% of caregivers, and in Bulgaria by 6% of caregivers. Recall that between 50% and 73% of households across the five countries report living within 1 km of a pre-school, while between 83% and 97% report living within 3km. **Space constraint is not highlighted as a main constraint in the countries.** Only in the Czech Republic there is a significant minority 5% that highlighted "No place" and

5% highlighted "On the waiting list" as main reasons. Smaller numbers of respondents in the other 3 countries referred to space constraints.

That distance and lack of spaces are not considered main reasons for non-attendance is contrary to the findings in some other studies, which highlight space/distance constraints, especially in rural areas of Bulgaria, Hungary, Slovakia, and the Czech Republic, and urban areas of Romania (OSI 2007; REF 2007a and 2007c; Gerbery 2010; OSI 2007b). Additionally, researchers highlight that roads are not always accessible, especially in the winter (Matache and Ionescu 2010).

Reasons that fall more under the rubric of discrimination and related barriers are not reported to be a main constraint to attendance by Roma parents in any of the five countries. The question included "Don't trust teachers", "Language", and "Child is ill-treated", but few of the Roma parents highlighted these as main reasons for non-attending. This is consistent with the responses reported before by caregivers whose children are attending pre-school and who reported generally feeling that their child was welcome at school (only in Slovakia and to a lesser extent Czech Republic is there a significant minority who does not agree), and were generally satisfied with the pre-school services received. Also, Table 13 below presents evidence on bullying among school-attending children aged 6 and above, which does not point to systematic ill-treatment based on ethnicity, with the exception of Czech Republic where 19% of Roma children in schools with mostly non-Roma children and 22% in mixed schools report bullying. In the other countries, the level of reported bullying is much lower (although a significant proportion of school-attending children in Romania report bullying) and, importantly, across the countries it is not systematically higher in schools with mixed or mostly majority population children than in schools with mostly Roma children.

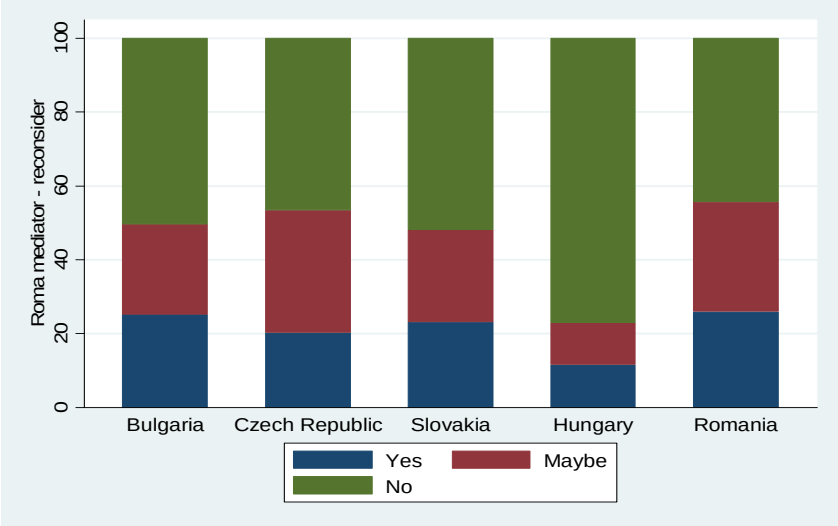
TABLE 16: HAS S/HE EVER BEEN BULLIED IN SCHOOL DURING THE LAST YEAR?

Bullied? (%). In school with:	Bulgaria	Czech Republic	Hungary	Romania	Slovakia
Mostly non-Roma schoolmates	4	19	6	8	2
Mostly Roma schoolmates	1	9	6	12	4
Mixed schoolmates	1	22	5	10	5

*Roma students 6+ currently in school
Source: UNDP/World Bank/EC regional Roma survey (2011). Authors' calculations

On the other hand, a substantial minority of respondents whose child was not enrolled did indicate reconsidering preschool attendance if there was a Roma teacher or mediator in the school; as shown in Figure 8, about 25% of respondents in Bulgaria, Czech Republic, Slovakia, and Romania, and 11% in Hungary said yes, and about 50% and 23%, respectively, if respondents answering 'maybe' are included. In other words, while those not having their child attend pre-school may not feel that the local pre-school environment is outright hostile, these answers do indicate that a substantial minority do also experience a socio-cultural barrier, alongside the socio-economic one above, that can be alleviated through greater involvement of a Roma community member in the pre-school.

FIGURE 8: RECONSIDER ENROLLING CHILD (3-6) IF PRE-SCHOOL HAD A ROMA TEACHER OR MEDIATOR



Source: UNDP/World Bank/EC regional Roma survey (2011). Authors' calculations

These findings do not contradict findings from other studies pointing to cases of discrimination in the school system, but do not support the notion that discriminatory practices are the main barrier to pre-school enrolment for most Roma children. For example, studies have found that in Romania, Roma have experienced discrimination when attempting to enroll their children in mainstream schools (OSI 2007: 358), or teachers ignoring, harassing and physically abusing Roma children (see REF 2007a); or, in Slovakia documented cases exist in which heads of kindergartens were unwilling to enroll Roma children; or of teachers requesting that Roma parents remove their child from a mixed kindergartens because non-Roma parents objected to the presence of that child (OSI 2007: 484); or, Amnesty International (2010: 22) has criticized the term "socio-culturally disadvantaged" in the Czech Republic *Concept on Early Care* document as potentially discriminatory, vague, and appearing alongside categories of children with health disabilities, all of which may contribute to confusion, and explicit discrimination (Amnesty International 2010: 22). Similar concerns have been raised in relation to the category of social disadvantage as used in Slovak policy documents (see Friedman et al. 2009). In Hungary, discrimination of Roma has been reported with Roma not receiving the municipal support they are entitled to, due to for one, clerks in charge of disbursing aid more often discouraging Roma to not to apply due to the local financial situation (Vajda and Dupcsik 2008). And, more generally, right-wing extremist in various European countries have made no secret of their discriminatory beliefs regarding Roma and other minority populations. Still, the UNDP/World Bank/EC regional Roma survey (2011) responses suggest that such discriminatory practices are not the main barrier in relation to pre-school enrolment according to the average Roma parent.

Lack of birth certificates is unlikely to be a main constraint to accessing pre-school. The lack of birth certificates has been raised in the past as potential barrier to accessing education services (e.g. ERIO 2007; REF 2004b). As shown in Table 17, data from the regional survey, however, suggest that currently this may be a barrier for a small proportion of children only. In Bulgaria, Czech Republic, Hungary, and Romania, more than 97% of Roma children under 7 years of age are reported to have birth certificates by the household head. For Slovakia, 9% are missing responses, which may reflect missing documents.

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TABLE 17: CHILD 0-6 HAS BIRTH CERTIFICATE?

	Bulgaria	Czech Republic	Hungary	Romania	Slovakia
Yes	99	97	100	97	89
No	1	1	0	3	2
Missing	0	2	0	0	9
Total	100	100	100	100	100

Source: UNDP/World Bank/EC regional Roma survey (2011). Authors' calculations

Even if lack of birth certificates is not a main barrier, there may be certain normative and administrative measures that affect the access to early childhood education services. For example, in Bulgaria in larger cities, there is increasingly a practice of internet enrollment, which automatically excludes poor Roma families who do not have access to the internet (Tomova, 2010). Additionally, priority is now given to children of working mothers (Tomova, 2010). Finally, as reported by media [26], the recently-introduced measure in some municipalities to demand proof of paid taxes for kindergarten enrollment is also likely to affect disadvantaged families.

HOW MUCH ARE PRE-SCHOOL QUALITY AND ENROLMENT LINKED?

Several studies have raised concern about the quality of pre-school education experienced especially by Roma children, which in turn can be a barrier to enrolment. Recall that in all five countries recently-adopted national education programs seek to move toward more child-centered interactive pedagogical methods, which take into account the individual learning needs of the children. However, various studies cite particular challenges in (pre-)schools attended by majority Roma children. First, that schools attended by Roma children disproportionately suffer from a poor material base and poor conditions. For example, REF (2007a) found that schools in Bulgaria as being generally in poor condition, but that conditions are worse for schools with a majority Roma. According to the PHARE report (OSI 2007) the Romanian Roma schools that were evaluated had overcrowded classrooms, much

26 See http://www.economynews.bg/приемат-в-детските-градини-след-платени-осигуровки-news16855.html – in Bulgarian

worse facilities, and generally worse learning environment when compared to an average school in the country. Similarly, a study on Hungary (Molnar and Dupcsik 2008) points to the difficulty of retaining high quality teachers, as those teachers who are qualified move onto less challenging positions working with non-Roma students. And, more generally, reports have voiced criticism that teachers lack adequate training for work in a multi-cultural setting (e.g. OSI 2007; REF 2007a). More systematic and large-scale research is needed on quality measures of pre-school education that will allow for clear comparisons of quality experienced by Roma and children from majority populations.

The regional Roma survey (2011) lacks detailed information to measure various dimensions of pre-school quality, although it does seem to benefit those children who enroll. Being a household based survey, it has limited direct information on measures that capture dimensions of quality, let alone measures of quality that allow comparisons between the pre-school education experience of Roma and non-Roma children. The comparisons above (through regression estimations) between Roma children in the same neighborhood and with similar socio-economic status attending pre-school with those non attending found that the former scored significantly better in various dimensions of self-reported cognitive outcomes (with the exception of Romania), and later-life outcomes This suggests that among those Roma children enrolled in pre-school, the pre-school experience is raising their outcomes. This is consistent with the observation that - with the exception of Slovakia - more than 80% of Roma parents with children in pre-school reported to be somewhat or very satisfied with the kindergarten attended by the child. Similarly, lack of trust or ill-treatment is rarely mentioned as a reason for non-enrolment by parents whose children are not enrolled. However, the fact that despite these responses many caregivers report preferring to keep the children at home does indicate that most pre-schools lack the parental engagement necessary to make Roma parents feel comfortable that the preschool is an integral part of raising the child.

PRE-SCHOOL QUALITY AND SEGREGATION

Residential segregation translates into segregation in pre-school in all countries, and especially Romania and Slovakia. Educational segregation by streaming large proportions of Roma children into special schools for disabled children as is the case in the Czech Republic, Slovakia, and to lesser extent Hungary, is widely recognized as harmful to the long-term learning outcomes of most of these children who simply do not belong in schools for the mentally handicapped. Some studies also report that Roma children are also disproportionately tracked into special pre-schools and special classes within standard primary schools (OSI 2007: 488; Katzorkova et al 2008). Unfortunately, the regional Roma survey (2011) only collected information on special schools starting at primary level.

Educational segregation in the regular school system is a matter of a complex number of factors. Among these factors is first residential segregation: from 32% of Roma households interviewed in Bulgaria to 60% in the Czech Republic live in predominantly Roma communities or neighborhoods. The first rows in Table 18 compare residential segregation and segregation in pre-schools. It suggests that pre-school segregation is still substantial, but less pronounced than residential segregation, in Bulgaria, the Czech Republic, and Hungary, while pre-school segregation almost mirrors residential segregation in Romania,

and is actually more pronounced in Slovakia. Furthermore, as shown by the comparison with the rows 'mostly Roma' under primary and secondary classmates and school mates, segregation at the primary and secondary level is more pronounced than segregation at pre-school in Bulgaria, Czech Republic, Hungary, nearly identical in Slovakia, and less pronounced in Romania. Overall, primary and secondary schooling segregation is highest in Slovakia followed by Bulgaria.

TABLE 18: RESIDENTIAL AND PRE-SCHOOL SEGREGATION (%)

	Bulgaria	Czech Republic	Hungary	Romania	Slovakia
Predominantly Roma community	32	60	40	54	42
All/almost Roma children in the kindergarten	18	16	21	46	48
Primary/Sec classmates?					
Mostly non-Roma	32	53	35	56	20
Mostly Roma	39	21	30	27	52
Mixed	30	27	35	17	28

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

While segregation is generally considered to perpetuate (negative) stereotypes, there is little rigorous evidence on the impact of segregation in regular (pre-)school education on pupil outcomes. The most rigorous study on its impact is "A successful school integration program" by Kezdi and Suranyi (2009), and supported by the Roma Education Fund. The study exploits quasi experimental variation to analyze the impact on cognitive as well as socio-emotional outcomes of primary education students attending one of 45 schools in the Hungarian National Educational Integration Network (OOIH), which aimed to provide quality education for students in an integrated environment. It finds small positive results in cognitive outcomes and larger positive results in socio-emotional outcomes, as well as increased mutual acceptance.

BOX 3: "A SUCCESSFUL SCHOOL INTEGRATION PROGRAM"

The Kezdi and Suranyi (2009) study highlights that "Integrated education of students of differing family background is a hot policy issue in Central and Eastern Europe in general and in Hungary in particular[27]. [...] The debate is characterized by heated emotions and little evidence. […] Supporters of integrated education believe that integration itself is crucial in the successful education of minorities. Separation is viewed to be discriminatory in itself, regardless its consequences. A more outcome-oriented argument uses the fact that segregated education of disadvantaged minorities almost always results in low-quality

[27] Gábor Kézdi and Éva Surányi (2009). A Successful School Integration Program. An Evaluation of the Hungarian National Government's School Integration Program. 2005-2007. Roma Education Fund. Working paper No. 2

education for them[28], which undermines the common goal of improving the labor market perspectives of the minority. Yet another argument emphasizes inter-group contact: Integrated education creates an opportunity for everyday interactions and can reduce prejudice. This is important because prejudice, often in very subtle forms, may be in part responsible for the lower success of Romanies both in education and the labor market.[…] Appropriate evidence would help a lot in this debate. […] However, there is very little evidence in the context of Roma education in general, and in Hungary in particular. At most we have what some call "anecdotal evidence:" pieces of knowledge based on the selective use of few examples. There is a pressing need for real evidence."

The study finds that students in integrated schools had small improvements on standardized reading comprehension tests, and, importantly, that there was no group with lower results in program schools. As the authors point out: "Program schools seem to achieve integrated education without hurting non-Roma and non-disadvantaged students' skills development." Importantly, the program also finds a positive impact on the development of non-cognitive skills, both among Roma and non-Roma, disadvantaged and non-disadvantaged, and sees improvements on overall tolerance.

International evidence on peer effects at the primary and secondary level suggests (weakly) that on average lower achieving peers may benefit more from tailor made education than from positive peer effect by high achieving peers, but that racial homogeneity is a particularly powerful predictor of student outcomes, particularly non-cognitive (socio-emotional) ones. Do the Hungary findings translate to the other countries? And, importantly for the purposes of this study, do they also hold at the pre-school level? Unfortunately, the argument is not altogether clear cut. On the one hand, integrated education is likely to promote greater mutual acceptance as the Hungary study found. This is obviously a key objective in all cases, and perhaps the most important one of integrated education. However, whether achieving mutual acceptance requires integrated education also at the preschool level is an empirical question. This is an important question because, as pointed out by the economics of education literature on peer effects and class room heterogeneity, there may be a tradeoff – at least in theory - with regards to the impact on cognitive learning outcomes of underachieving students as a result of more integrated (or less heterogenous) classrooms, where heterogeneity is defined along differences in starting scholastic achievement of children and outcomes refer to cognitive outcomes, not mutual acceptance. On the hand, integrated (or more heterogeneous) classrooms may benefit learning outcomes of vulnerable students through positive peer learning effects. On the other hand, homogenous classrooms may benefit the same vulnerable students by allowing for more tailored teaching. A recent review of the scientific literature suggests that more often than not, the latter effect seems to dominate. Sacerdote (2011) writing in the Handbook of the Economics of Education[29] on "Peer Effects in Education: How Might They Work, How Big Are They and How Much Do We Know Thus Far?", reports that "Several but not all studies find that reductions in peer heterogeneity improve outcomes [of primary and secondary pupils] […]".On the other

[28] For example: the REF website http://www.romaeducationfund.hu/desegregation-programmes makes this argument: "Lower quality segregated schools and classrooms deny Roma students equitable opportunities in education"

[29] Volume 3, 2011, Pages 249-277

hand, Sacerdote (2011), also highlights that while there is considerable variation in the magnitude of the impact on test score outcomes, effects on "nontest score outcomes for youth are quite possibly larger and the existence of such effects less controversial." Studies focusing on race in the Unite States, suggests that peer racial composition is strongly correlated with own achievement. As Sacerdote (2011) points out, there are numerous channels through which peer effects from racial composition may occur, including the possibility that teachers lower their expectations or the level at which they teach as the fraction black in a school rises (p. 266). Similar concerns have also been raised about the political economy surrounding schooling segregation of Roma, namely as exclusionary practice keeping Roma children away from majority children and offering poorer quality services.

In light of the residential segregation that exists, the question to use, for example, EU structural funds to expand access to and quality of preschools inside Roma communities or outside, is a very real one. The little scientific evidence that exists provides support to proponents of integrated education; on the other hand, proponents of community based (and thus less integrated) ECD services may argue that – if set up with the right *inclusionary* intentions – such services may allow for more tailor made ECD services, and may increase *access* to ECD services by lowering transport cost, the cost of extra clothing, and more generally lowering barriers to enroll children into preschool that relate to stigma, the stated preference to have young children close to home etc. Having this debate be based on more rigorous evidence such as the Kezdi and Suranyi (2009) is critical given the importance of the outcome.

DISCUSSION

The regional Roma survey (2011) points to 3 main policy measures to increase enrolment: (1) providing basic information on the returns to preschool and on registration procedures, (2) promote inclusive preschools by enhancing parental involvement, and (3) removal of cost barriers possibly coupled with regular attendance subsidies. In addition: (4) support parenting at home.

That better information on the benefits of pre-school as well as the pre-school choices may boost enrolment is suggested by the fact that the number one self-reported reason for non-enrolment is a stated preference to keep young children at home (in part because they are considered too young) despite an otherwise strong ambition for later life educational attainment for boys and girls. The lack of information has also been highlighted elsewhere. For example, in the Czech Republic and Slovakia, Roma parents are not always informed of the consequences of educational choices. This is the case in choosing a preparatory class in a practical school in the Czech Republic and Slovakia, or in choosing a special kindergarten in Slovakia. In Slovakia Roma parents in some cases are not aware that they have the right to send their child to a regular kindergarten (REF 2007e: 26).

That efforts to create a more welcoming environment may boost enrolment is suggested by the responses that a substantial minority of respondents whose child was not enrolled did indicate reconsidering preschool attendance if there was a Roma teacher or mediator in the school. Other responses in the survey

suggest that this reflects a desire for a 'bridge' person, rather than a desire to systematically address a deep seated distrust for the preschool institution; recall that a majority of parents with children enrolled in school were generally satisfied, while very few parents with children not enrolled cited 'don't trust teachers', 'language', and 'child is ill-treated' as reasons for non-enrolment.

And, finally, that financial and or in-kind incentives may boost enrolment is suggested by several factors: (a) the negative link between reported hunger in the household and pre-school enrolment; (b) the fact that many parents in Bulgaria, Czech Republic, and Romania highlighted pre-school being 'too expensive' as a key barrier; and (c) conversely, with the exception of Hungary, most Roma households expressed a willingness to send a currently non-enrolled child to preschool if direct or indirect costs of schooling were lowered. Finally, this is also consistent with the observation that pre-school enrolment among Roma is much higher in Hungary than in the other four countries despite similar socio-economic and employment conditions, while pre-school expenditures by Roma in Hungary are much lower.

In some cases, this may not necessitate new programs but rather providing Roma parents about existing opportunities to receive support. For example, OSI (2007, p.254) reported that in Hungary many economically disadvantaged Roma are not aware of the benefits they are entitled to assist them in sending their children to preschools. And in the Czech Republic, Amnesty International (2010: 45) reports that despite the fact that the government has made the last year of kindergarten before primary school free of charge, "[…] many Roma parents do not know this fact, as there are no information channels available." (Amnesty International 2010: 45).

Lastly, with the exception of a significant minority of Roma parents in Slovakia and some in Romania, distance was not highlighted as a constraint to attendance. This is consistent with the information on actual distances to nearest pre-schools. Similarly, the survey suggests that lack of birth certificates is not a main constraint to accessing pre-school. Finally, lack of spaces – with the exception of the Czech Republic – was not a significant constraint according to Roma parents. However, even if correct, this can be an outcome of the current situation with few Roma parents enrolling their children into pre-school, and space constraints can become increasingly binding if parents increasingly seek enrolment.

PART 5: PROGRAMS AND PROJECTS ADDRESSING PRE-SCHOOL ACCESS

This chapter highlights different initiatives seeking to improve pre-school attendance and quality for Roma in the five countries.[30] The intent is not to be comprehensive – an impossibility with the limited information available – or to highlight projects which have been subject to a rigorous impact evaluation – also an impossibility because these do not yet exist - but rather to provide an overview of the different types of initiatives being undertaken, and to highlight some relevant experiences elsewhere in the world to expand preschool. Recall that the regional Roma survey (2011) points to three areas that are likely to have the greatest impact on boosting enrolment: (1) better informing Roma parents about the returns to pre-school; (2) providing parents with incentives such as financial incentives and/or clothes, food, and transport (possibly conditional on enrolment/attendance) that lower the direct or indirect cost of preschool as well as providing information about existing government schemes that parents may be entitled too; and, (3) efforts to create a bridge through mediation between service providers and Roma parents; i.e. making the preschools more welcoming to Roma families and actively reaching out to parents and children. Initiatives seeking to expand preschool services will be covered since higher demand for preschool will require more preschool spaces to become available; the Hungary experience has shown that this can be a constraint when enrolment rates rise.

INFORMATION AND BRIDGING PROGRAMS THROUGH ACTIVE OUTREACH

There are several initiatives that seek to inform Roma parents of the benefits of pre-school. For example, the EC Roma Pilots "A Good Start" (AGS) initiative by the Roma Education Fund (REF)[31] as well as the Slovak project within the Roma Education Initiative, include components focusing on information campaigns among Roma communities. A project in Bulgaria, "Effective approaches for encouraging early childhood education in high-risk communities" launched by the NGO A World Without Boarders employs an innovative strategy - "POL" (popular opinion leaders), which makes use of the influence of the informal community leaders in popularizing pre-school among Roma. The Roma-Lom project in Bulgaria include lobbying and advocacy through the organization of public forums, publishing articles in regional and local media. On a nation-wide scale, the Bulgarian government has provided funding to awareness-raising projects through the program "Educational Integration of children and pupils from the Roma community," co-funded by the REF.

Two rigorous experimental studies found that informing families about the returns of education increased student enrolment in the Dominican Republic and Madagascar (Jensen 2007; Nguyen 2008). Because

[30] Unless otherwise noted, Romania specific information comes from a World Bank organized workshop on ECD for Roma organized in Bucharest in March 2011 and sponsored by DG Regional Policy.

[31] More information on this initiative can be found online at http://www.romaeducationfund.hu/good-start-eu-roma-pilot

providing information is cheap, these were highly cost-effective ways of increasing school participation in contexts where most families underestimate the benefits of going to school[32].

The regional Roma survey (2011) suggests that an important vehicle through which to disseminate messages about the value of pre-school education are doctors, nurses, or health workers. As shown in Table 19, in all five countries, children's caregivers reported that when they have questions about the development of their child, they mostly rely on health workers, including community health workers. As such, governments and NGOs should consider more explicitly including this group of professionals in reaching out to Roma parents on the importance of pre-school education.

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TABLE 19: PARENTS' SOURCES OF INFORMATION ABOUT THEIR CHILD'S DEVELOPMENT

	Bulgaria	Czech Republic	Hungary	Romania	Slovakia
Doctor / nurse / health worker	86	85	64	71	71
Teacher	62	72	15	41	41
Social worker / community health worker	24	46	4	30	33
Family member	38	79	73	65	64
Friend / neighbor	31	65	29	50	36
Books / television / radio / Internet	14	49	5	21	31
Information service (by phone or in face)	0	9	1	5	5
I don`t know where to get information	0	0	3	3	2
I don`t need any information	0	4	8	5	5

Source: UNDP/World Bank/EC regional Roma survey (2011). Authors' calculations.

Roma teaching assistants or mediators, as well as short summer programs have become increasingly popular to help Roma children integrate in the educational environment and to act as a liaison between children, parents and educational institutions. Mediators are being used in different projects. The average mediator not only communicates to Roma parents the benefits of preschool, but also assists with enrollment procedures. For example, REF's "A Good Start" projects in Romania, Hungary and Slovakia offers enrollment assistance by Roma community mediators, some who work as teaching assistants in the preschool or kindergarten. They also organize community motivation events promoting the importance of pre-school, and help organize open days with Roam parents, as well as provide practical support on how to fill out applications. And in some cases they help the families get identify documents or vaccinations. They also help monitor attendance, visit parents to promote attendance, and help with transport etc. if necessary. Within the Romanian Roma Children project by Save the Children, mediators went to Roma families to explain the benefits of ECE. Also in Romania, Ovidiu Rom's program 'Every Child in Pre-School and Kindergarten'

[32] For a discussion on the topic by Rachel Glennerster and Michael Kremer, see: http://bostonreview.net/BR36.2/glennerster_kremer_behavioral_economics_global_development.php

provided enrollment assistance. For the project of Minority Rights Group International (MRGI) in Slovakia, a Roma mother was selected to perform the functions of a mediator between the kindergarten and the community (Guy and Kovats 2006). There are also several projects that organize short summer programs seeking to boost enrolment in kindergarten and primary school. For example, the Save the Children's project in Romania organized summer groups for disadvantaged children aged 3 to 5/6, the vast majority of whom were Roma. About 1700 children from 86 (mostly rural) locations in all counties were reached – 860 in the first year of the project and 849 in the second. A considerable portion of children who participated (85 percent for the first year and 94 percent for the second) continued their preschool education after the summer program.

Note that the role of Roma mediators/teaching assistants goes considerably further than merely providing information. While more expensive to implement, this extra dimension may be necessary to boost enrolment rates and subsequent attendance. This is, however, an empirical question, which could be readily evaluated in a rigorous, randomized way, as other studies have shown. Such studies would help answer an important policy question: which method – providing basic information only, or much more active bridging and parental engagement – is the more cost-effective approach?

Finally, projects emphasizing the inclusion of Roma language, history and culture in the preschool curricula can also be considered 'bridging' project that may boost attendance, in addition to their quality enhancing role. On a national level, Romania is reportedly the country in which bilingual education in Romanes is most wide-spread (CE and ERCE 2003). According to the Romani language and Roma Counselor at the Ministry of Education, Research, Youth and Sports, out of 260000 Roma (self identified) students attending kindergartens, schools and high schools, 31000 children learn Romani (three or four hours a week), and 400 students from kindergarten and grades I to VIII are taught in mother tongue and have a class in "History and Roma traditions".[33]

In addition to projects seeking to boost enrolment through information and mediation, there are also initiatives that seek to avoid the misplacement of Roma children in institutions for special education, although the focus is mostly on primary school children. The project by Ester NGO in the Czech Republic is such an example. It emphasizes prevention of misdiagnosis at preschool level, through cooperation with kindergartens. As part of Ester's efforts, discussions were initiated on the importance of preschool education and its role in avoiding Roma placement in special classes (ISSA 2009). The unnecessary over-streaming of children into special needs education is also discussed at education motivation workshops organized as a part of REF's AGS initiative.

[33] Personal communication

PROVIDING MONETARY AND IN-KIND SUPPORT AND INCENTIVES

While governments in each of the five countries have put programs in place to help poor and disadvantaged families cover the material needs, out of pocket expenses and material needs (e.g. clothing) continue to be a barrier with the exception of Hungary. In Bulgaria, an amendment to the Rules and Regulations for the Application of the Social Assistance Act from 2005 introduced free textbooks and manuals for the one year of compulsorily preschool and primary education, free transport or boarding for children who go to preschool or school outside their place of residence, and social benefits to help cover costs related to education fees, school meals and supplies (OSI 2007). In Romania, the Ministry of Labor, Family and Social Protection grants social coupons for 0 to 5-year-old children from poor families for educational purposes in accordance with the legislation of social assistance and depending on family income. However, the legal provisions are new and there are no regulations for the implementation of some of the articles. In Hungary, educational institutions are entitled to additional funding for disadvantaged children, which usually covers free education materials and free meals, among other things. Furthermore, in August (the month before the official start of the school year) disadvantaged families are given double the monthly social allowance they are entitled to, so that they can afford to cover the educational materials for their children for the new school year. (REF 2007c). Since 2008, the Hungarian government also provides "ovoda (=kindergarten) enrollment allowance" for multiply disadvantaged children, but only if they are enrolled in preschool. The impact of enrollment allowances has not been evaluated (Eurydice European Unit 2009). In Slovakia, families below a certain income level or who are receiving social assistance are eligible for subsidies for their child's meals and school materials and there is waived tuition for all children regardless the income in the last year of kindergarten prior to compulsory primary enrollment. The Czech government also offers subsidized meals for disadvantaged children. However, as highlighted previously (and reproduced below), expenditures on pre-school for Roma parents are low only in Hungary, while modest in Slovakia, and (relatively) high in Romania, but especially in Bulgaria and Czech Republic.

TABLE 20: MONTHLY COSTS (EURO) OF PRE-SCHOOL FOR ROMA CHILDREN

	Bulgaria	Czech Republic	Hungary	Romania	Slovakia
Monthly cost (mean - Euro)	15.4	25.6	1.3	7.5	7.2
Monthly cost (median - Euro)	17.4	24.7	0.0	2.2	4.0

Source: UNDP/World Bank/EC regional Roma survey (2011).

Various NGOs also offer needs-based support, including providing additional subsidies conditional on attendance. REF's "A Good Start" initiatives in Romania and Slovakia, and the Romanian Save the Children project Roma Children also prepares children for kindergarten by providing them with snacks, clothes, and food supplies. Ovidiu Rom's project "Every Child in Pre-School and Kindergarten" similarly provides need based supports. In addition, it provides subsidies to poor parents provided the child enrolls into preschool and attends regularly. This is similar to the subsidy program put in place in Hungary in 2009 and the 'conditional cash transfer' programs common in other parts of the world, especially Latin America (e.g. Opportunidades in Mexico, Bolsa Familia in Brazil, and Chile Solidario in Chile). See Box 4 for more details.

BOX 4: "EVERY CHILD IN PRE-SCHOOL AND KINDERGARTEN" BY OVIDIU ROM IN ROMANIA

The project Every Child in Pre-school and Kindergarten is carried out by the Romanian NGO Ovidiu Rom in collaboration with the Ministry of Education and funded through a grant from a US-based non-profit organization. Ovidiu Rom previously worked with children of all age groups, but decided to focus on the preschool given the high long-term positive effects proven in other settings. For the school year 2010/2011 it was implemented in 13 communities. The project has four main components: (1) community action, (2) parental incentives, (3) teacher training, and, (4) 'systemic oversight'. The direct cost of the project per child amounts to €210.

The provision of additional classroom space and teaching staff is the responsibility of local authorities and school administration, whereas Ovidiu Rom organizes short teacher training courses, provides new teaching materials selected by teachers, and helps teachers set up weekly courses to inform parents of toddlers (aged two to three) about ECE as well as summer workshops for preschool children.

The project also seeks to motivate parents to participate in the program in a number of ways. At the start of the year (in September) members of local action groups go door-to-door explaining the benefits of ECE and offering assistance with the application procedure, including in cases of missing identity documents. School mediators are also actively involved in follow-up visits, and parents are offered to participate in a direct incentives component of the program under certain conditions: parents are offered food coupons worth €11 per month if they insure 100% attendance of their children and if they attend monthly parent-teacher meetings (in which they are given the coupons). Shoes and clothing are also provided to children who needed them.

To monitor attendance, Ovidiu Rom organizes random visits to the participating schools for monitoring and data collection purposes. It finds that for the first year of its implementation preschool attendance rates were at least 40 percentage points higher than in the previous school year; by March 2011 the project found that 84% of eligible children had 100% attendance rate. The project will be continued in 11 out of the 13 municipalities; 12 of the 13 communities reapplied to continue. One was rejected because the community missed the deadline and a spot check visit found children not present who had been marked as present on the attendance sheet and one of the teachers had filled out the attendance sheet for the next day. In the community that did not reapply, both the teacher and the social worker/coordinator will be on maternity leave next year.

SUPPORT FOR PARENTING

Support for parenting styles has been recognized an as integral and complementary component of effective early childhood education and care. Recall that the information on parenting practices showed that few Roma children have access to reading materials, especially in Bulgaria, Romania, and Slovakia. The importance of parenting support has been highlighted in several key documents. For example, the Eurydice European Unit (2009a: 23) report calls for "intensive, early starting, child-focused, centre-based education together with strong parent involvement, parent education, program educational home activities and measures of family support". Similarly, according to the EFA Global Monitoring report (Unesco

2007) good early childhood education and care program characteristics include parental support, especially during the earliest years. And, the recent discussion paper "Preventing social exclusion through the European 2020 Strategy. Early childhood development and the inclusion of Roma families Europe 2020 Strategy" calls for a comprehensive approach to ECE services, which focuses not only on child education but also on home and community environments. Work with parents is seen as especially important and includes advice on parenting, assistance with employment, and job training (UNICEF and ESO 2011). This is also echoed in the RECI (2012) report by UNICEF/REF/OSF. And, finally, recall that the regional Roma survey (2011) underscored the need for parental support by highlighting the lack of, for example reading materials in Roma homes, and highlighting the strong correlation between active parenting and reported cognitive child outcomes.

Support for parenting comes in different forms, but the available information suggests that it has not been implemented systematically and on large scale, nor have there been rigorous evaluations which could guide the most cost-effective techniques. For example, parental participation in extracurricular or in-class activities has been encouraged in the Step-by-Step projects and projects financed by the Bulgarian Centre for Educational Integration of Children and Young People from the Minorities. Discussion groups on parenting practices has also been has been a component of the preschool project of Wide Open School Foundation and Project Schola in Slovakia, and an explicit focus of the Hungary's Meséd project, which is a part of REF's "A Good Start" initiative, and described in more detail in the Box 5 below. Finally, the Council of Europe's "Teaching Kit for Roma Children" is a set of teaching materials developed to help aide young Roma children prepare for school in a home environment. Besides conforming to the school syllabi, it is also practically-oriented towards the every-day-life worlds of the Roma. The kit provides examples of how cheap and readily available material such as lemons, buckets and sand, can be used for engaging educational activities (see ISSA, 2009).

BOX 5: THE MESÉD PROJECT – "YOUR TALE"

The Meséd Project is implemented by Unity in Diversity Foundation with the help of students from the College of Nyíregyháza in six locations in Hungary as a part of Roma Education Fund's EC Roma Pilots "A Good Start". A major project objective is to improve parenting practices.

As a part of the project mothers meet in small groups (8 to 15) on a weekly basis for two-hour sessions and take turns to practice reading out high quality children's story books, which they also get to keep. A trained facilitator, who is also usually a Roma woman, guides the reading and initiates discussions on certain elements and messages of the story, thus providing the mothers with a teaching technique they can use with their children at home. Furthermore, parenting problems and techniques are discussed during the sessions. Mothers report using the reading techniques they learned during the Meséd sessions and their children taking pride in the books they have received.

There are also relevant experiences from large scale programs around the world supporting parenting practices. For example, disadvantaged mothers of preschool-aged children are provided with a set of learning and training materials as part of the nation-wide "**Home Instruction Program for Preschool Youngsters" (HIPPY) in Israel**. The program aims to enhance their children's language, sensory, perceptual discrimination and problem solving skills. Mothers are assisted in their educating

tasks by aides, who visit them twice a month, bring a new set of materials, and practice their use with the mothers through role-playing. Mothers are instructed to spend a certain amount of time per week on educational activities with their children. There are also group sessions in which HIPPY mothers get together to exchange practices. The program has been implemented on a nation-wide scale since 1969 and impact evaluation demonstrates significantly higher performance of the HIPPY children, who have participated in the program for three years, when compared to the control group (Young 1996). **The Program for the Improvement of Education, Health and the Environment (PROMSEA)** in Colombia is a long-term large-scale project that trained disadvantaged Columbian mothers of young preschool-aged children appropriate educational approaches, such as play-based and cognitive methods. "Promoters" taught mothers about play-based and cognitive methods, culturally-appropriate games and toys, and how older siblings can be involved (Arango et al in Siraj-Blatchford and Woodhead 2009). Another parenting program which has proven successful is **the Mother-Child Education Program in Turkey.** On a nation-wide scale mothers are instructed on their children's development needs and on ways to create a stimulating home environment. Children who participated in the program demonstrated better cognitive skills and greater school readiness (Bekman in Siraj-Blatchford and Woodhead 2009).

INCREASING THE AVAILABILITY OF PRESCHOOL SPACES

Infrastructure development is the most straight-forward way of increasing the quantity of institutionalized early childhood education services. Lack of appropriate infrastructure in many peripheral and disadvantaged areas has prompted the national governments (often in cooperation with international organizations) to focus on renovating, expanding, and building new preschools to improve the quantity and quality of preschool units. World Bank's Social Inclusion Project, which is currently implemented in **Bulgaria and Romania**, seeks to enhance the social inclusion of vulnerable groups, including Roma, through improving their access to preschool services. To this end, old ECE units in predominantly Roma communities are renovated, repaired and refurnished, other new units are built, and, finally, technical assistance and training of teaching and administrative staff is also provided. The project is financed not only by WB funds, but also by EU Structural Funds and is included in the national budgets (WB 2006; WB 2008). Another national project in **Romania**, ECER – Early Childhood Education Reform Project is co-financed by the government and the Council of Europe Development Bank. It has a value of 105 million euro and is being implemented between 2007 and 2011. The main objectives are (i) to improve the quality of the education system infrastructure for children aged 3 to 6/7 through rehabilitating and developing of educational units; (ii) to improve the quality of preschool education through teacher training and provision of appropriate equipment; (iii) to establish Resource Centers for Education; and (iv) to develop the MERYS's educational management system.[34], the **Hungarian** government also started a large-scale nation-wide project, which provides financing for the building,

34 http://proiecte.pmu.ro/web/guest/pret

extending and renovating of early childhood education and care units in the most disadvantaged settlements in the country. The envisaged increase in supply of ECD places amount to 15 000 for the period 2009-2013 (Eurydice European Unit 2009b). Efforts of previous Hungarian governments include the "Hundred Steps" program, whose second step, "Education in Small Villages Creating Opportunities and Supporting Micro-Region Cooperation", involved the enhancement of preschool provision in small villages, among other things (OSI 2007).

Using alternative spaces is a second option to increase the availability of preschool education units. Sometimes new infrastructure development may not be affordable or economically justifiable, especially in small and distant rural areas. In such cases, using alternative places for service provision could be a good solution. However, it is important to ensure that this alternative is not used as a way to create parallel forms of schooling for Roma children, which serve to segregate them from the mainstream education system. A success story in this context is the kindergarten set up by Ruhama Foundation in Telechiu, Romania, as part of the AGS initiative to cater for children for whom there were not enough places in the locality. Eventually, the local government agreed to open a new kindergarten for the school year 2011/2012. Another such example of alternative use of spaces is the "Proyecto Integral de Desarrollo Infantil (PIDI)" in Bolivia (in World Bank 2011: p.93). Instead of building ECD centres, the home of a local woman chosen by the community is used for the provision of care, nutrition and education services of groups of children aged 6 months to 6 years. The program targets poor families in urban areas. An impact evaluation using quasi-experimental data show its positive impact on multiple aspects of the children's development. Similarly, the "Gardens of Mothers and Children" in northern Albania (see ISSA 2009) are ECD services primarily in remote or rural areas provided at locations donated by families or the local government. The organization and provision of services is largely in the hands of the community, partner organizations and volunteers. Children from birth to 6 years of age receive care and preschool education whereas their mothers can participate in training seminars. Finally, in rural areas in Poland, municipalities aided by the Comenius Foundation organize preschool centers in a variety of locations including schools, libraries, community centers, and fire stations. Education is provided for a few hours a day three to four day per week (see ISSA 2009).

Another way of tackling the insufficiency in kindergarten places is through moving to a shift model of ECE provision. Instead of providing full-day services, kindergartens in Kyrgyzstan tend to children in shifts (one in the morning and one in the afternoon), which ensures better use of the available resources and a much larger coverage (see ISSA 2009). In this manner the shortage of kindergartens is partially overcome and, reportedly, the negative impact on the quality of preschool preparation are is not that great since the learning/playing program at full-day centres is about three hours a day. The shift model is found also in rural areas in Poland and the satellite or mobile kindergartens in Kyrgyzstan and Bosnia and Herzegovina (see ISSA 2009). Satellite kindergartens apply the shift model in locations that are too distant from ECE centres and rural villages which cannot afford their own centres. Similarly, for the "Mobile Kindergartens in Mostar and Gorazde" in Bosnia and Herzegovina (see ISSA 2009), teachers are sent in each location twice a week and teach the children for two or three hours using the space and facilities of the primary school as well as toys and materials donated by the SOS.

Giving priority to disadvantaged children is also a possibility to overcome shortage of spaces for Roma. In Hungary preschool attendance is compulsory from the age of 3 onwards in the case of disadvantaged children (and from the age of 5 for the general population) and kindergartens are obliged to give priority to give them priority when deciding on applications.

PART 6: CONCLUSION

The report finds a large gap between Roma and non-Roma in pre-school enrolment with the exception of Hungary. Roma children also lack basic reading materials at home, and perform much worse in self-reported measures of cognitive outcomes. The gap in pre-school enrolment is largest in Slovakia and the Czech Republic; at least 50 percentage points. The gap is somewhat smaller in Bulgaria and Romania, but continues to be very large. Hungary stands out as the country with the highest enrolment among Roma children (76%) and the smallest enrolment gap with the majority population. Looking over time, preschool enrolment among the Roma has increased in all countries, but with the exception of Hungary progress is slow. Furthermore, Roma children, and especially those in Romania, Bulgaria, and Slovakia lack basic reading materials at home. And, in each of the countries, there are large gaps between Roma and non-Roma neighbors in measures of cognitive outcomes such as early literacy and numeracy.

The pre-school enrolment and home parenting gap must be urgently addressed. There is a large body of international evidence, including the recent Lancet (2011) reviews, pointing to the long term benefits of early childhood development - institutionalized and care at home -, including quality preschool. The large and positive correlations found in this report between Roma preschool participation on the one hand and a host of cognitive learning and later life outcomes (avoiding special education, completing secondary, and not being on social assistance) on the other - even when comparing individuals within the same neighborhood and with similar socio-economic characteristics – are consistent with the positive findings from the international evidence.

The report points to 4 main policy measures to increase pre-school enrolment and improve early learning at home: (1) better inform parents on the benefits of preschool for children's later-life outcomes; (2) promote inclusive pre-schools by reaching out to parents and by involving them more directly in pre-school with the help of Roma teaching assistants; (3) remove cost barriers possibly coupled with regular attendance subsidies. In addition: (4) support parenting at home.

These conclusions follow from the fact that the vast majority of Roma parents wishes their children to complete secondary education, but in the early years of children's lives, many parents expressed a desire to raise their children at home when asked the main reasons not to enroll their child into preschool, alongside cost considerations. Nearly half of parents reported reconsidering enrolment if there were a Roma teaching assistant, and more than half of parents reported reconsidering enrolment if there were no fees, or if provided food coupons. Practical experience from a number of government and NGO led initiatives also support these observations. For example, Hungary's much higher enrolment coupled with programs to remove cost barriers and even providing explicit subsidies to enroll children conditional attendance.

Recent local Roma secondary graduates hired as kindergarten teaching assistants would be well-placed to provide the information and outreach. They can provide information to parents, get them more involved in the local pre-school, and support them with parenting techniques at home. Recent secondary graduates are also inexpensive to hire and this early work experience may boost long-term employment prospects. International evidence on similar support programs reaching out to disadvantaged children and youth,

from Big Brother Big Sister mentoring in the USA[35] to Balsakhi remedial tutoring in India[36], underscore that young and inexpensive 'role models' can provide effective mentoring and remedial education.

International evidence, including the recent Lancet (2011) review on effective ECD programs, also support the notion that subsidy programs providing extra financial incentives upon regular school attendance ('conditional cash transfers' common in other parts of the world; e.g. Opportunidades in Mexico)) can be effective. Of course, initiatives should also pay careful attention to sometimes subtle but important differences between the countries. For example, the pre-school experiences of parents in Slovakia were considerably less positive than those in reported in the other countries, and financial constraints were not reported to be a key constraint to participation, pointing to the importance of reaching out to parents and making kindergartens more inclusive.

Governments and NGOs should systematically piloting (variations of) different programs and implementing randomized impact evaluations since findings from impact evaluations can identify what works best and build public support for scale-up of proven programs. For example, impact evaluations can address questions such as: how far can the provision of information alone – which is a very inexpensive program – go in boosting pre-school enrolment rates, or is continuous outreach also necessary? How effective are preschool attendance subsidies in boosting enrolment relative to information and outreach? Similar education evaluations from around the world have shown that finding answers to these policy question is entirely feasible and can provide valuable information not only to further guide policy options, but also build public trust in inclusive education investments. The report points to various government and NGO led initiatives that fall under the policy measures mentioned above to address the early learning gap. Systematically evaluating their effectiveness can shift the debate toward implementation and scale-up of proven initiatives.

Ensuring that poor Roma and non-Roma children alike receive an equal start in life by investing in early childhood development is both essential to break the cycle of intergenerational poverty and is smart economics. The majority of Roma youth enter the labor market unprepared. This not only perpetuates the intergenerational cycle of poverty, but with more than 30% of Roma in Eastern European countries younger than 15 years of age, which is double the proportion found among the general populations in these countries, young Roma contribute a large and growing share of young people entering the labor force. Countries cannot afford having such inequalities in opportunities translate into wasted productive resources, lower productivity, and lower growth.

[35] http://evidencebasedprograms.org/wordpress/?page_id=117
[36] http://www.povertyactionlab.org/scale-ups/remedial-education

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ANNEX 1: ESTIMATION RESULTS

ANNEX TABLE 1: PRESCHOOL AND LEARNING OUTCOMES (A,B,C)

	Knows 10 letters	Read 4 simple words	Write own name	Knows simple sentences national language	Knows symbols 1 through 10	Shows confidence in self	Gets along with other children
Bulgaria	0.43***	0.17	0.10	0.25*	0.13	0.10	0.03
Czech Republic	0.24***	0.19**	0.26***	0.07	0.29***	0.19**	0.10
Slovakia	0.21**	0.14	0.17	0.20*	0.19	-0.11	0.00
Hungary	0.18	0.16*	0.14*	-0.09	0.21**	-0.00	0.03
Romania	0.13	0.06	-0.01	0.07	0.14	0.00	0.05
Look at picture books or read books with child (past 3 days)	0.02 (0.05)	-0.02 (0.04)	0.03 (0.05)	0.14*** (0.05)	-0.00 (0.07)	0.08 (0.05)	0.08** (0.03)
Draw or paint with child (past 3 days)	0.06 (0.05)	0.07* (0.04)	0.05 (0.04)	0.06 (0.05)	0.13** (0.06)	0.004 (0.05)	-0.00 (0.02)
Teach letters or count with child (past 3 days)	0.17*** (0.06)	0.10** (0.05)	0.09* (0.05)	0.03 (0.05)	0.21*** (0.06)	0.036 (0.05)	-0.00 (0.03)
Background household and individual level characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.657	0.611	0.583	0.651	0.665	0.662	0.587
N	991	993	995	990	979	917	977

OLS estimations with enumeration area fixed effects. Robust standard errors in parentheses. Example: In Bulgaria, those children aged 4-6 attending pre-school are 43 percentage points more likely to know 10 letters than those not attending preschool

*** p<0.01, ** p<0.05, * p<0.1

[a] Sum of coefficient on the preschool variable and coefficient on the country interaction

[b] The specifications were run including the main effect of the binary preschool attendance variable, interacted with country dummies. The coefficients reported here are sum of the main effect and the country effect for each country. Significance levels are based on p-values estimated for F-tests of joint significance of the combined main and country effect of the preschool variable for each country.

[c] Background individual level controls of child included place of birth (binary variable: hospital birth or elsewhere), gender, age and general health status as reported by the primary caregiver. Other controls included characteristics of the primary caregiver (age, gender, whether the individual has a job or engaged in paid work, whether the individual attended preschool, and whether the individual had completed or attended secondary school). Household level variables consisted of quintiles of per capita household income

ANNEX TABLE 2: PRESCHOOL ENROLLMENT AND SUBSEQUENT ENROLMENT INTO SPECIAL SCHOOL

	Bulgaria *(N=1,441)*		Czech Republic *(N=1,461)*		Hungary *(N=1,887)*		Romania *(N=1,785)*		Slovakia *(N=1,195)*	
Attended preschool as a child?	0.00	0.00	-0.07***	-0.06**	0.00	-0.01	0.02*	0.02	-0.05*	-0.07**
	(0.00)	(0.00)	(0.02)	(0.03)	(0.01)	(0.02)	(0.01)	(0.01)	(0.03)	(0.03)
Background households and individual level characteristics	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
R^2	0.158	0.173	0.308	0.335	0.281	0.287	0.132	0.148	0.295	0.324

Robust standard errors in parentheses. OLS estimations with enumeration area fixed effects. Dependent variable (=1) if attended a special school in youth. Sample limited to 10-49 year olds.

*** p<0.01, ** p<0.05, * p<0.1

a Background individual level controls included place of birth (binary variable: hospital birth or elsewhere), gender and age. Background household level variables consisted of quintiles of per capita household income, whether the main language spoken in the household was Roma, indicators for primary source for potable water, and whether an adult in the household had gone to bed hungry because the household didn't have enough food.

ANNEX TABLE 3: PRESCHOOL ENROLLMENT AND SECONDARY EDUCATION

	Bulgaria *(N=1,077)*		Czech Republic *(N=978)*		Hungary *(N=1,215)*		Romania *(N=1,209)*		Slovakia *(N=819)*	
	(1)	(2)	(3)	(4)	(7)	(8)	(9)	(10)	(5)	(6)
Attended preschool as a child?	0.15*** (0.03)	0.13*** (0.03)	0.18*** (0.04)	0.15*** (0.04)	0.17*** (0.03)	0.15*** (0.03)	0.20*** (0.04)	0.16*** (0.04)	0.13*** (0.04)	0.14*** (0.04)
Male?		0.08*** (0.02)		0.09*** (0.02)		0.08*** (0.02)		0.08*** (0.02)		0.07*** (0.03)
Background households and individual level characteristics	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
R^2	0.400	0.432	0.471	0.501	0.211	0.241	0.255	0.294	0.379	0.395

Robust standard errors in parentheses. OLS estimations with enumeration area fixed effects. Dependent variable (=1) if enrolled (and/or completed) secondary school. Sample limited to 30-49 year olds.

*** p<0.01, ** p<0.05, * p<0.1

[a] Background individual level controls included place of birth (binary variable: hospital birth or elsewhere) and age. Background household level variables consisted of whether the main language spoken in the household was Roma, indicators for primary source for potable water, and whether an adult in the household had gone to bed hungry because the household didn't have enough food. A third set of specifications was run for each country, controlling in addition for per capita household income. The coefficients did not change much and therefore not shown here.

ANNEX TABLE 4: PRESCHOOL ENROLMENT AND SUBSEQUENT LABOR MARKET OUTCOMES

	Bulgaria		Czech Republic		Hungary		Romania		Slovakia	
	(1)	(2)	(5)	(6)	(13)	(14)	(17)	(18)	(9)	(10)
Attended preschool as a child?	-0.00	-0.01	0.11**	0.13***	0.01	0.01	0.04	0.02	0.01	0.03
	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)	(0.03)	(0.04)	(0.04)	(0.03)	(0.03)
Male?		0.18***		0.32***		0.28***		0.26***		0.15***
		(0.03)		(0.03)		(0.03)		(0.03)		(0.02)
Background household and individual level characteristics	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
R^2	0.323	0.385	0.259	0.388	0.151	0.252	0.235	0.327	0.328	0.383
N	1071	1071	963	963	1215	1215	1210	1210	822	822

Robust standard errors in parentheses. OLS estimations with enumeration area fixed effects. Binary dependent variable for whether an adult had engaged in paid work during the previous week, or has a job.

*** p<0.01, ** p<0.05, * p<0.1

[a] Background individual level controls included place of birth (binary variable: hospital birth or elsewhere) and age. Background household level variables consisted of whether the main language spoken in the household was Roma, indicators for primary source for potable water, and whether an adult in the household had gone to bed hungry because the household didn't have enough food.

ANNEX TABLE 5: PRESCHOOL ENROLMENT AND LABOR MARKET OUTCOMES, BY GENDER (A)

	Bulgaria		Czech Republic		Hungary		Romania		Slovakia	
	F	M	F	M	F	M	F	M	F	M
Attended preschool as a child?	0.02 (0.05)	-0.02 (0.05)	0.16*** (0.05)	0.08 (0.06)	0.01 (0.04)	0.01 (0.06)	0.06 (0.05)	-0.02 (0.06)	0.04 (0.04)	0.05 (0.06)
Male?	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Back-ground household and individual level character-istics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.445	0.490	0.367	0.449	0.262	0.280	0.336	0.407	0.412	0.511
N	527	544	512	451	612	603	598	612	422	400

Robust standard errors in parentheses. OLS estimations with enumeration area fixed effects. Binary dependent variable for whether an adult had engaged in paid work during the previous week, or has a job.
*** p<0.01, ** p<0.05, * p<0.1

[a] Background individual level controls included place of birth (binary variable: hospital birth or elsewhere) and age. Background household level variables consisted of whether the main language spoken in the household was Roma, indicators for primary source for potable water, and whether an adult in the household had gone to bed hungry because the household didn't have enough food.

ANNEX TABLE 6: : PRESCHOOL ENROLMENT AND SUBSEQUENT SOCIAL ASSISTANCE

	Bulgaria *(N=1,005)*		Czech Republic *(N=765)*		Hungary *(N=1,193)*		Romania *(N=1,196)*		Slovakia *(N=610)*	
	(1)	(2)	(5)	(13)	(14)	(6)	(17)	(18)	(9)	(10)
Attended preschool as a child?	-0.01	-0.01	-0.13***	0.01	-0.05	-0.17***	-0.09***	-0.07**	-0.10*	-0.11*
	(0.03)	(0.04)	(0.05)	(0.03)	(0.04)	(0.05)	(0.03)	(0.03)	(0.05)	(0.06)
Back-ground household and individual level character-istics	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
R^2	0.416	0.450	0.404	0.307	0.333	0.432	0.326	0.347	0.651	0.673

Robust standard errors in parentheses. OLS estimations with enumeration area fixed effects. Dependent variable (=1) if in a household on social assistance.

*** p<0.01, ** p<0.05, * p<0.1

[a] Background individual level controls included place of birth (binary variable: hospital birth or elsewhere), gender and age. Background household level variables consisted of whether the main language spoken in the household was Roma, indicators for primary source for potable water, and whether an adult in the household had gone to bed hungry becuase the household didn't have enough food.

ANNEX TABLE 7: DETERMINANTS OF PRESCHOOL ENROLMENT

	Bulgaria		Czech Republic		Hungary		Romania		Slovakia	
		Roma & Non-Roma		Roma & Non-Roma		Roma & Non-Roma		Roma & Non-Roma		Roma & Non-Roma
Roma?		-0.21		-0.14**		-0.03		-0.03		0.01
		(0.17)		(0.06)		(0.07)		(0.12)		(0.07)
Age of child ==4?	-0.08	0.017	0.04	0.11*	0.32***	0.45***	0.20***	0.19***	0.057	0.036
	(0.13)	(0.13)	(0.07)	(0.06)	(0.10)	(0.08)	(0.07)	(0.06)	(0.06)	(0.05)
Age of child ==5?	0.15	0.21*	0.26***	0.32***	0.64***	0.69***	0.34***	0.33***	0.21***	0.22***
	(0.12)	(0.12)	(0.07)	(0.06)	(0.10)	(0.07)	(0.07)	(0.07)	(0.07)	(0.06)
Age of child ==6?	0.16	0.11	0.47***	0.49***	0.61***	0.69***	0.61***	0.58***	0.36***	0.36***
	(0.14)	(0.12)	(0.08)	(0.06)	(0.09)	(0.07)	(0.07)	(0.07)	(0.09)	(0.07)
Child is male?	0.07	-0.014	-0.02	-0.01	-0.08	-0.06	0.00	0.00	-0.034	0.00
	(0.10)	(0.09)	(0.05)	(0.05)	(0.05)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
Child was born in a hospital?	0.35	0.34	0.06	0.08	0.05	0.010	-0.06	0.04	0.06	-0.02
	(0.40)	(0.23)	(0.11)	(0.14)	(0.10)	(0.09)	(0.11)	(0.12)	(0.17)	(0.12)
Caregiver is male?	0.19	0.05	-0.28	-0.11	-0.27**	-0.18**	-0.17	-0.13	0.02	-0.16
	(0.15)	(0.16)	(0.20)	(0.13)	(0.11)	(0.08)	(0.20)	(0.19)	(0.21)	(0.16)
Caregiver attended/completed secondary school?	-0.61**	-0.27*	0.02	0.12*	0.018	0.07	-0.03	0.03	0.17**	0.16**
	(0.27)	(0.16)	(0.08)	(0.06)	(0.07)	(0.06)	(0.11)	(0.09)	(0.08)	(0.07)
Caregiver attended preschool?	-0.11	-0.00	0.17**	0.22***	-0.01	-0.05	0.15*	0.11	-0.02	0.07
	(0.09)	(0.10)	(0.07)	(0.06)	(0.09)	(0.07)	(0.08)	(0.07)	(0.09)	(0.07)
Age of caregiver	0.042*	0.052***	-0.01	0.01	-0.01	0.01	0.01	0.00	0.027	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.03)	(0.02)
Age of caregiver, squared	-0.00*	-0.00**	0.00	0.00	0.00	-0.00	-0.00	0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
HH per capita income quintile==2?	-0.04	0.10	0.00	-0.06	-0.05	-0.01	-0.06	-0.06	-0.15	-0.04
	(0.16)	(0.15)	(0.11)	(0.08)	(0.10)	(0.07)	(0.10)	(0.08)	(0.11)	(0.07)

HH per capita income quintile==3?	-0.03	0.15	0.05	0.01	0.19**	0.09	-0.04	-0.02	-0.12	-0.01
	(0.18)	(0.15)	(0.10)	(0.08)	(0.10)	(0.07)	(0.10)	(0.08)	(0.11)	(0.09)
HH per capita income quintile==4?	0.10	0.25*	0.00	0.051	0.10	0.05	-0.06	-0.02	-0.03	0.07
	(0.20)	(0.14)	(0.11)	(0.09)	(0.10)	(0.08)	(0.11)	(0.10)	(0.12)	(0.11)
HH per capita income quintile==5?	-0.04	0.00	0.09	0.18*	0.038	0.04	-0.09	-0.02	-0.25*	-0.06
	(0.20)	(0.18)	(0.11)	(0.0919)	(0.10)	(0.09)	(0.11)	(0.10)	(0.14)	(0.12)
HH per capita income quintile== missing?	0.12	0.24**	-0.09	-0.0173	0.20	0.18*	-0.23	-0.17	-0.025	0.15
	(0.13)	(0.12)	(0.12)	(0.08)	(0.15)	(0.10)	(0.15)	(0.12)	(0.14)	(0.12)
HH language is Roma?	0.07	-0.01	-0.11	-0.08	-0.05	-0.01	0.08	-0.04	0.28***	-0.06
	(0.18)	(0.13)	(0.07)	(0.06)	(0.11)	(0.10)	(0.09)	(0.09)	(0.09)	(0.08)
HH experienced hunger?	-0.11**	-0.11**	0.02	-0.00	-0.06*	-0.03	-0.04	-0.05*	0.04	-0.00
	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)	(0.03)	(0.03)	(0.02)	(0.04)	(0.03)
Constant	-0.56	-0.65	0.06	-0.28	0.574	0.22	-0.03	0.17	-0.57	-0.15
	(0.66)	(0.43)	(0.43)	(0.40)	(0.41)	(0.36)	(0.30)	(0.26)	(0.58)	(0.41)
Full set of background household and individual level characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	186	219	317	446	284	353	325	371	218	364
R-squared	0.782	0.726	0.632	0.580	0.686	0.678	0.659	0.626	0.690	0.650

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

[a] The full set of background individual level controls of child included place of birth (binary variable: hospital birth or elsewhere), gender, and age. Other controls included characteristics of the primary caregiver (age, gender, whether the individual has a job or engaged in paid work, whether the individual attended preschool, and whether the individual had completed or attended secondary school). Household level variables consisted of quintiles of per capita household income, whether any household member had gone to bed hungry due to unaffordability of food, and whether Romani was the main language spoken at home.

ANNEX 2: PROGRAMS AIMING TO IMPROVE PEDAGOGY

The debate over the most effective pedagogical approach is characterized by two paradigms. Some experts have argued in support of developmentally appropriate practices (DAP), which emphasize the socio-emotional development of the children, while others have been more in favour of academic approaches, which focus more on verbal and cognitive development. On the basis of review of existing studies, the WB (2011) report concludes that child-centred methods which allow for active child-initiated learning usually yield better results (p.90). Overall, the studies have demonstrated that the DAP approach is more beneficial for younger children whereas the academic approach is more effective for older children. Furthermore, both approaches can be combined and academic skills can be acquired through playful and authentic activities (Eurydice European Unit 2009a: 32-33. Similarly, discussing ECE in the context of Roma inclusion, the Europe 2020 Strategy warns against a strong focus on the academic aspect of preschool services. Kindergartens that work with marginalized children should pay extra attention to the element of care, help the children develop their self-confidence and be "competent and active learners in their own right" (Unicefand & ESO 2011).

The Step-by-Step (SbS) child centered educational program is becoming more popular. The Step-by-Step (SbS) educational program, which is child-centered, is now implemented in institutionalized service provision as well as various non-governmental projects across Europe. OSI has importantly contributed to the popularization of child-centered inter-cultural and multicultural preschool education through its "Step by Step Program". Activities within it encompass projects in nurseries, kindergartens, schools and institutions for higher education and include the development of educational technologies and strategies, project monitoring and evaluation, teacher training as well as the development and dissemination of literature.

Numerous initiatives, governmental and non-governmental alike, include a SbS-based teacher training component. A number of nation-wide government programs in Bulgaria and Romania serve to increase service quality through training of teaching and administrative staff, as well as the publishing and dissemination of literature of intercultural methods and work with Roma. In Bulgaria, as a part of the achievements of the Phare-funded program "Educational and medical integration of vulnerable minority groups with a special focus on the Roma" for the period 2006-2007, the Bulgarian government emphasized the training of teachers, heads and educational administration representatives on organizing and carrying out the educational process in a multicultural environment. As a part of the program, 35 masters courses were taken by teachers and heads of schools, and additional qualification courses taken by 60 teachers, and 115 experts from the state administration. Furthermore, intercultural anti-bias education was included in university programs. Additionally, the long-term program (2003-2010) "Improvement of the situation and integration of minority groups in disadvantaged position with a special focus on the Roma", again funded through Phare, financed projects that include training of teachers and people in the administration in work in multicultural environment and work with ethnic minorities respectively. Programs funded through the Structural Funds, which also finance projects with a teacher training component, include the "Creating a favourable multicultural environment for the practical application of inter-cultural education and upbringing", as well as the ongoing "Integration of children and students from ethnic minorities in the education system". Finally, The Centre for Educational

Integration of Children and Young People from the Minorities, which is under the jurisdiction of the ministry of education, also offers financing for teacher training projects. **In Romania, o**ne of the main components of the Romanian Early Childhood Education Reform Project (mentioned above) is to improve the quality of preschool education through teacher training on center based and community general approaches to everyday and parenting activities (Matache and Ionescu 2010). The improvement of curriculum and the training of teachers is also a main focus of the Inclusive Early Childhood Education Project (IECE), which is financed through The World Bank (6.1 million euro) and by the Romanian Government (1.7 million euro) and is a component of the Social Inclusion Project (2007-2012). Within this initiative, 2500 kindergarten teachers and managers received training in non-biased, non-discriminatory intercultural teaching methods.

A range of small-scale NGO projects also seek to implement the SbS program. All projects within OSI's primarily desegregation-focused "Roma Education Initiative" (2002-2005), which supports activities in seven countries including Bulgaria, Hungary and Slovakia, pay special attention to the promotion of child-centered and intercultural methods. Similarly, REF's "A Good Start" initiative seeks to minimize the effects of the low socio-economic status of Roma children on their development through a range of interventions including staff training. The pilot program is implemented in 16 locations across Romania, Hungary, Slovakia, and Macedonia.

Child-centered approach training is also on the increase in Slovakia and the Czech Republic. Furthermore, ahe main goal of the a project in Slovakia (2002-2003) funded by the Minority Rights Group International and implemented in cooperation with Wide Open School Foundation (WOSF) (Nadácia Škola dokorán) and Project Schola (PS) (Projekt Schola), is "to reinforce a comprehensive pre-school education system for Roma children including a child-centred approach" (Guy and Kovats 2006: p.11). In the Czech Republic, The SbS program is popularized in the Czech Republic by the Czech branch of the Step by Step organization, which educates new teachers from all school levels yearly. Recent estimates indicate that about 700 teachers throughout the country work in the program (ISSA 2009).

Finally, desegregation of the educational environment of Roma children has been a priority of governments and NGOs alike. In Bulgaria, the creation of the Centre for Educational Integration of Children and Young People from the Minorities and its program "Educational Integration of children and pupils from the Roma community" (co-funded by REF) has been a major effort in this direction. Structural Funds have also been used to this aim through the national programs "Creating a favorable multicultural environment for the practical application of inter-cultural education and upbringing" and "Integration of children and students from ethnic minorities in the education system." Both programs finance projects that seek to provide education to Roma children in an integrated multicultural environment. In Hungary, the government has taken several steps to battle different forms of segregation. The system of integration support was introduced in 2007, providing additional funding only to institutions that educate disadvantaged children in an integrated environment and have introduced project-based, personality-centered and cooperative education methods. The support system from 2007 was extended to encompass kindergartens as well. Additionally, as of 2007, local governments are redrawing their catchment areas to reduce the impact of residential segregation (Molnar and Dupcsik 2008).