Early Childhood Development among Romani Children: A Comparative Analyses of Eastern European Countries

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Abstract

The early childhood period is considered to be the most important developmental phase throughout an individual's lifespan. The potential benefits from supporting early childhood development (ECD) play a vital role in building human capital, breaking the cycle of poverty, promoting economic productivity, and eliminating social disparities and inequities, not only for the duration of childhood, but throughout life. If the window of opportunity presented by the early years is missed, it becomes increasingly difficult to prevent the intergenerational transmission of disadvantages. Evidence from both developed and developing countries suggests that an additional dollar invested in high quality preschool programs will yield a return of anywhere between $6 and $17. This study aims to cover one of the most disadvantaged groups, Romani children, in the Eastern European Countries (Serbia, Montenegro, Bosnia-Herzegovina, Kosovo, Macedonia), and analyze the status of ECD indicators defined by UNICEF. The indicators we will produce are as follows: attendance to early childhood education, support for learning, father's support for learning, mother's support for learning, availability of children's book, availability of playthings, early childhood development index (ECDI). The data will be from Multiple Indicator Cluster Surveys (MICS) that were conducted in those countries in the period of 2011-2014. We conducted not only a comparative analyses in descriptive manner, but at the same time conducted a multivariate analysis with logistic regression technique in order to understand whether the children in different socio-economic groups are on track in early childhood development process. The descriptive analyses put forward that mean ECDI score for Romani children in all countries is approximately 83 percent of the children of major ethnic groups. In line with the desriptive analyses, the multivariate analyses show that Romani children are obviously in disadvantaged position compared with other children in early childhood development process.

Introduction

The Council of Europe provides an "*average estimate*" of Roma in Europe of 11,166,500, with upper estimates of over 16,000,000. For countries under examination in this paper, the estimated number of Roma population is given in Table 1 (Council of Europe, 2010).

Table 1 and Figure 1 reveals that the share of Romani population in the Eastern European Countries varies between 1 to 10 percent. According to average estimate, the total Romani population reaches to 906,000 which consists of 5.3 percent of all countries. Furthermore, more than one third of this population is under 15 as a result of higher fertility rate among Romani population (Council of Europe, 2010).

Table 1. Estimated Romani Population in the Countries Under Examination, 2010

Countries	Minimum Estimate	Maxsimum Estimate	Average Estimate	Percentage in the population
Serbia	400,000	800,000	600,000	8,2
Kosovo	25,000	50,000	38,000	1,5
Montenegro	15,000	25,000	20,000	3,0
Bosnia-Herzegovina (BH)	40,000	60,000	50,000	1,1
Macedonia	135,000	260,000	198,000	9,6
Total	*615,000*	*1,295,000*	*906,000*	*5,3*

Figure 1. Share of Roman Population in Selected Countries

Source: Liegeois (2008)

Children are the foundation of sustainable development. A child's earliest years present a window of opportunity to address inequality. The potential benefits from supporting early childhood development (ECD) play a vital role in building human capital, breaking the cycle of poverty, promoting economic productivity, and eliminating social disparities and inequities. Evidence from both developed and developing countries suggests that an additional dollar invested in high quality preschool programs will yield a return of anywhere between $6 and $17. Developing countries have expanded access to preschool provision in the past decade, with all regions of the world increasing pre-primary enrolment. Yet, today, far too few children, especially those from the poorest families, benefit from this critical service. This study aims to cover one of the most disadvantaged groups, Romani children, in the Eastern European Countries (Serbia, Montenegro, Bosnia-Herzegovina, Kosovo, Macedonia), and analyze the status of ECD indicators defined by UNICEF.

Data, Methodology and Definitions
The data will be from Multiple Indicator Cluster Surveys (MICS) that were conducted in those countries in the period of 2011-2014. The similaritie in sampling design and questionnaires used in these countries make comparative analysis possible among the selected countries.

We will conduct not only a comparative analyses in descriptive manner, but at the same time conduct a multivariate analysis with logistic regression technique in order to understand whether the children in different socio-economic groups are on track in early childhood development process.

The indicators that will be used in the study can be examined under two groups. The first group indicators is related with the quality care. It is well recognized that a period of rapid brain development occurs in the first 3-4 years of life, and the quality of home care is a major determinant of the child's development during this period. In this context, engagement of adults in activities with children, the presence of books in the home for the child, and the conditions of care are important indicators of quality of home care. Information on a number of activities that support early learning was collected in the survey. These included the involvement of adults with children in the following activities: reading books or looking at picture books, telling stories, singing songs, taking children outside the home, compound or yard, playing with children, and spending time with children naming, counting, or drawing things. The indicators and thier destription are given in the Table 2.

Table 2. Quality care indicators and their descriptions

Indicator name	Description
Attandence to Early childhood education	Percentage of children age 36-59 months who are attending an early childhood education programme
Support for learning	Percentage of children age 36-59 months with whom an adult has engaged in four or more activities to promote learning and school readiness in the last 3 days
Father's support for learning	Percentage of children age 36-59 months whose biological father has engaged in four or more activities to promote learning and school readiness in the last 3 days
Mother's support for learning	Percentage of children age 36-59 months whose biological mother has engaged in four or more activities to promote learning and school readiness in the last 3 days
Availability of children's books	Percentage of children under age 5 who have three or more children´s books
Availability of playthings	Percentage of children under age 5 who play with two or more types of playthings
Inedequate care	Percentage of children under age 5 left alone or in the care of another child younger than 10 years of age for more than one hour at least once in the last week

The second group of indicators is related with the developmental status of children. Early childhood development is defined as an orderly, predictable process along a continuous path, in which a child learns to handle more complicated levels of moving, thinking, speaking, feeling and relating to others. Physical growth, literacy and numeracy skills, socio-emotional development and readiness to learn are vital domains of a child's overall development, which is a basis for overall human development.

A 10-item module was used to calculate the Early Child Development Index (ECDI). The primary purpose of the ECDI is to inform public policy regarding the developmental status of children. The index is based on selected milestones that children are expected to achieve by ages 3 and 4. The 10 items are used to determine if children are developmentally on track in four domains:

Literacy-numeracy: Children are identified as being developmentally on track based on whether they can identify/name at least ten letters of the alphabet (1), whether they can read at least four simple, popular words (2), and whether they know the name and recognize the symbols of all numbers from 1 to 10 (3). If at least two of these are true, then the child is considered developmentally on track.

Physical: If the child can pick up a small object with two fingers, like a stick or a rock from the ground (4) and/or the mother/caretaker does not indicate that the child is sometimes too sick to play (5), then the child is regarded as being developmentally on track in the physical domain.

Social-emotional: Children are considered to be developmentally on track if two of the following are true: If the child gets along well with other children (6), if the child does not kick, bite, or hit other children (7) and if the child does not get distracted easily (8).

Learning: If the child follows simple directions on how to do something correctly (9) and/or when given something to do, is able to do it independently(10), then the child is considered to be developmentally on track in this domain.

ECDI is then calculated as the percentage of children who are developmentally on track in at least three of these four domains.

Preliminary Findings
Readiness of children for primary school can be improved through attendance to early childhood education programmes or through pre-school attendance. Figures in Table 3 show that only 30 percent of children age 36-59 months attend an organised early childhood education programme in the countries under examination. On the other hand, only 19 percent of Romani children attends such programmes. Supports for learning for Romani children from both their father and mother are also quite limited as opposed to other children. Ethnicty negatively influences the presence of children's books as only 21 percent of Romani children have 3 or more books, compared with 77 percent of other children living in the countries (Table 3).

As Table 3 shows of all children age 0-59 months, 66 percent have 2 or more types of playthings to play with in their homes, while this percentage decreases to 72 percent for Romani children. Leaving children alone or in the presence of other young children is known to increase the risk of injuries. It is seen that on average only 4 percent of children age 0-59 months were left in the care of other children in the countries under examination. On the

other hand, among Romani children this percentage was found to be more tahn double (8 percent).

Table 3. Children's Quality of care by countries, 2011-2014

Countries	Attandance to early childhood education	Support for learning	Father's support for learning	Mother's support for learning	Availability of children's books	Availability of playthings	Inedequate care
Serbia-All	50.2	95.5	38.5	89.6	71.9	75.0	1.3
Serbia-Roman	5.7	68.0	17.3	48.3	11.9	53.2	3.6
Roman/All	*11.4*	*71.2*	*44.9*	*53.9*	*16.6*	*70.9*	*276.9*
Kosovo-All	13.9	66.3	6.0	42.8	31.1	66.6	5.9
Kosovo-Roman	16.1	40.7	7.0	20.5	6.0	68.6	12.5
Roman/All	*115.8*	*61.4*	*116.7*	*47.9*	*19.3*	*103.0*	*211.9*
Montenegro-All	39.9	97.7	45.1	91.2	72.7	59.7	2.5
Montenegro-Roman	18.5	59.0	15.3	21.9	19.1	60.6	4.1
Roman/All	*46.4*	*60.4*	*33.9*	*24.0*	*26.3*	*101.5*	*164.0*
BH-All	13.1	95.1	30.9	86.3	55.8	56.0	1.6
BH-Roman	1.5	66.1	9.2	43.5	10.8	47.7	6.6
Roman/All	*11.5*	*69.5*	*29.8*	*50.4*	*19.4*	*85.2*	*412.5*
Macedonia-All	21.8	91.5	18.9	60.6	52.4	70.7	5.0
Macedonia-Roman	3.9	61.8	9.6	31.3	27.1	62.1	7.4
Roman/All	*17.9*	*67.5*	*50.8*	*51.7*	*51.7*	*87.8*	*148.0*
All	**30.0**	**90.0**	**19.1**	**77.2**	**76.8**	**78.5**	**3.7**
Roman	**18.9**	**60.6**	**12.9**	**35.9**	**20.9**	**72.2**	**7.6**
Roman/All	***63.0***	***67.3***	***67.5***	***46.5***	***27.2***	***92.0***	***205.4***

In the countries under examination, 93 percent of children age 36-59 months are developmentally on track. Among Romani children, on the other hand, the ECDI was found to be significantly lower than overall population, only 78 percent of Romani children age 36-59 months are developmentally on track. The analysis of four domains of child development shows that 98 percent of children are on track in the learning domain, 99 percent in the physical domain and 92 percent in the social-emotional domain. A much lower proportions of children age 36-59 months is on track (29 percent) in the literacy-numeracy domain. Especially in the literacy-numeracy and social-emotional domains, we observe quite lower scores among Romani children (12 percent and 79 percent respectively). Overall, the mean ECDI score for Romani children in all countries is approximately 78 percent of the children of the score for all children (Table 4).

The study conducts not only a comparative analyses in descriptive manner, but at the same time conducts a series of multivariate analyses with logistic regression models in order to understand whether the children in different ethnic groups are developmentally on track in early childhood development process. Under the control of all covariates (quality of care variables together with other covariates such as sex of the children, country, wealth index and etc...), the final logistic regression model put forward that all other children are 2.2 times more developmentally on track compared with the Romani children (Table 5).

Table 4. Developmental status of children based on four domains by countries, 2011-2014

| Countries | Percentage of children age 36-59 months who are developmentally on track for indicated domains | | | | Early Child Development Index (ECDI) |
	Literacy-Numaracy	Physical	Socio-Emotional	Learning	
Serbia-All	35.4	98.5	94.6	98.4	95.1
Serbia-Roman	15.7	96.1	82.8	95.3	83.3
Roman/All	*44.4*	*97.6*	*87.5*	*96.8*	*87.6*
Kosovo-All	18.3	97.1	83.4	95.8	83.4
Kosovo-Roman	9.0	98.1	76.2	98.1	77.2
Roman/All	*49.2*	*101.0*	*91.4*	*102.4*	*92.6*
Montenegro-All	23.5	98.9	94.4	98.0	94.3
Montenegro-Roman	10.0	92.6	72.4	86.0	62.5
Roman/All	*42.6*	*93.6*	*76.7*	*87.8*	*66.3*
BH-All	25.1	99.6	95.3	99.1	96.4
BH-Roman	8.1	98.3	86.3	98.5	84.9
Roman/All	*32.3*	*98.7*	*90.6*	*99.4*	*88.1*
Macedonia-All	43.4	99.1	91.2	98.5	92.7
Macedonia-Roman	15.7	97.9	71.9	92.0	72.2
Roman/All	*36.2*	*98.8*	*78.8*	*93.4*	*77.9*
All	**29.3**	**98.8**	**92.4**	**98.1**	**93.0**
Roman	**12.2**	**96.4**	**79.2**	**94.1**	**77.5**
Roman/All	**41.6**	**97.6**	**85.7**	**95.9**	**83.3**

Table 5. Final logistic regression model

Variables/Categories	Odds ratios
Ethnicity	
All other	2.192*
Roman	1.000
Availability of books	
Yes	1.457*
No	1.000
Inadequate care	
No	2.007*
Yes	1.000
Support for learning	
Yes	1.811*
No	1.000
Father's support for learning	
Yes	1.574*
No	1.000
Early childhood education	
Yes	1.949*
No	1.000
Sex of child	
Male	1.330*
Female	1.000
Age of child (months)	0.952*
Country	
Serbia	1.628*
Kosovo	2.647*
Montenegro	3.454*
BH	1.000
Macedonia	2.334*
Ever vaccinated	
Yes	1.975*
No	1.000
Constant	0.104*
R^2	0.193

*$p < 0.01$; **$p < 0.05$

References

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