



INTERPLAY BETWEEN GENDER AND ETHNICITY:

# EXPOSING STRUCTURAL DISPARITIES OF ROMANI WOMEN

ANALYSIS OF THE UNDP/WORLD BANK/EC  
REGIONAL ROMA SURVEY DATA

# Interplay between gender and ethnicity: **Exposing Structural Disparities of Romani women**

Analysis of the UNDP/World Bank/EC regional Roma survey data

*Ewa Cukrowska, Angela Kóczé*

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# Introduction

“Roma integration” has been a hot topic for more than a decade and in 2005 the issue was formalized in the “Decade of Roma Inclusion” initiative<sup>1</sup>. The European Commission is also increasingly concerned by the slow progress in Roma inclusion and aims to support it.<sup>2</sup> However, in most cases the process has been perceived as a gender-neutral minority one and as a social inclusion one<sup>3</sup>. Only recently some international organizations showed a specific interest in how ethnicity interacts with gender.

The early policy driven scholarship on Roma paid none or only limited attention to Romani women’s social status or how gender and poverty intertwine in a specific local context. In most of the social research the gender is treated as an isolated category rather than as a social factor which interplays with other social categories. Joint ethnic and gender data analysis still requires much more attention from the researchers and policy specialists. The lack of comprehensive analysis integrating gender and ethnicity and in particular addressing the social status of Romani women has certainly been caused by the lack of appropriate gender and ethnic disaggregated data collection. The UNDP is one of the first international organizations that conducted regional surveys on Roma, in which the links between poverty and gender were exposed.<sup>4</sup>

- 1 The Decade of Roma Inclusion 2005-2015 initiative (hereafter referred to as the ‘Decade’) was initiated by the Open Society Institute (OSI), the World Bank (WB) and the UNDP in 2003 and was launched by the governments of the Decade countries in January 2005. The Decade is a unique international initiative formulated by the most important non-governmental and intergovernmental actors. Member states of the Decade, which were encouraged to join the initiative on a voluntary basis, have to demonstrate their political commitment to improve the socio-economic status and social inclusion of the Roma by developing their own national ‘Decade Action Plans’, specifying goals and indicators in four priority areas: education, employment, health and housing. Learning from the failures of the national Roma strategies that Eastern European governments had drafted during the period of EU enlargement, the Decade incorporated a ‘transparent and quantifiable’ review of the progress of Decade Action Plans. <http://www.romadecade.org/>
- 2 In April 2011 the EC issued its Communication on an EU Framework for National Roma Integration Strategies by 2020, in May 2012 the Communication on National Roma Integration Strategies: a first step in the implementation of the EU Framework ([http://ec.europa.eu/justice/discrimination/roma/index\\_en.htm](http://ec.europa.eu/justice/discrimination/roma/index_en.htm))
- 3 Andrey Ivanov (2012a) in his article “Let’s make inclusion inclusive.. Opportunities for Roma Inclusion” offers and explains various terms which have been used for Roma related policies, such as “Roma integration” and “Roma inclusion”. The term “Roma Inclusion” that is used in the EU’s documents is mainly based upon the principles of social inclusion policy. The inclusion refers to the process that requires changes from both parties, in this case from the Roma as well as from the non-Roma majority.
- 4 As a founding member of the Decade of Roma Inclusion, from the very outset UNDP took the responsibility for the data and monitoring aspects of the Decade. As part of these responsibilities it invested in developing the methodology and conducting the first comprehensive survey on the status of Roma facing the risk of marginalization and their non-Roma neighbors. This survey provided the baseline against which the progress of the Decade can be assessed. The basic indicators were summarized in the Research Report “Faces of Poverty, Faces of Hope: Vulnerability Profiles for Decade of Roma Inclusion Countries”, January 2005.



This research paper attempts to follow the UNDP's legacy and to address the issue of the intersectional status of Romani women in various thematic fields such as education, employment, health and housing, when compared with non-Romani women and Romani men. The primary goal of this paper is to encourage the policy makers to recognize the structural gender inequalities and their interplay with ethnic dimensions. Related but nevertheless not less important than the first goal is the need to address the gender inequality amongst Roma in an adequate and sustainable manner as well as to provide an insight into the importance of addressing gender equality issues as crucial aspects of the Roma inclusion.

By "adequate and sustainable" we understand approaches that take into consideration the structural determinants of the gender inequalities and address them in a pragmatic manner, being aware of the economic, political, cultural and behavioral aspects of the issue. In that context this paper aims to stimulate a pragmatic change-oriented discussion at the transnational as well as at the national levels on how to develop and adopt gender equality measures within various policy interventions. The desired outcome is to minimize the social distance between Romani men and Romani women as well as between Romani and non-Romani women with regard to their human development outcomes.

For the purpose of policy making, this paper identifies the key gender inequalities in four areas prioritized by the Decade of Roma Inclusion (2005–2015), namely education, employment, health and housing. The starting point of the analysis is a discussion of the observable disparities reflected in the statistical data. Furthermore, the paper analyzes the hidden gender inequalities together with their possible sources and explains the potential causes and social implications.

In order to explore the primary intertwining features of gender and ethnicity the authors of this paper use the theoretical concept of intersectionality as a core analytical tool. Most of the documents and articles describe and conceptualize Romani women's struggle as "double or multiple forms of discrimination". The intersectional conceptualization refers particularly to Romani women's social and political position and indicates both the internal Roma patriarchal oppression and the external political, social and economic exclusion experienced from the non-Roma societal structures (Kóczé 2009, Oprea 2003, Magyar-Vincze 2008). In a majority of the EU policy context the intersectional inequalities are contextualized as multiple inequalities, which mainly refer to migrants and women from ethnic minorities.

However, Verloo (2006) makes a conceptual difference between multiple and intersectional discrimination and argues that the conceptualization of multiple discrimination assumes equivalence amongst various social categories and ignores the differentiated nature and dynamics of inequalities. For example, reporting higher unemployment rates for women than for men ignores the fact that the unemployment rate for Romani men is still higher than the non-Romani women. In this case

the disadvantaged ethnic social categories may prevail over the gendered factors. She also highlights the point that in the policymaking there is a little development concerning intersectional policy thinking and practice. In most of the cases the policymaking is limited to devising anti-discrimination legislation (Verloo 2006).

We highlight the manifestations of intersectional discrimination against Romani women in South-Eastern Europe in four prioritized areas mentioned above by investigating the empirical material stemming from the 2011 UNDP/WB/EC regional survey on Roma communities. The UNDP/WB/EC survey contains gender and ethnic disaggregated data, which serve as basis for intersectional analysis of gender and ethnic discrimination. This survey is the most recent and comprehensive data collection exercise that allows for a comparative analysis between Roma who live in areas of compact Roma population and the non-Roma populations living in close proximity to the Roma.

Overall, the data outlines the intersecting structural inequalities that Romani women face. The data and the analysis of the dimensions (and the roots) of those inequalities will hopefully also help to make the Roma inclusion policy interventions gender sensitive and effective in eliminating the distance not just between Roma and non-Roma but also the gender gap amongst the Roma themselves. There is a strong argument that investing in women goes beyond just their personal gains and rather makes an intergenerational impact on their children as well as on their wider communities (e.g. Summers 1994, World Bank 2001). In this framework, investing in Romani women will have long-lasting impact on the Roma community through the intergenerational transmission and consequently will make the efforts with regard to the Roma inclusion more effective for the benefit of the present as well as future generations.



# Data Description

The analytical part of this research paper uses the disaggregated data collected of the 2011 UNDP/WB/EC regional survey on Roma communities. In order to analyze the changes over time, an earlier release of UNDP regional survey on Roma communities that was conducted in 2004 is also being used. The two datasets are combined to an extent that they remain consistent. However, some of the variables' definitions do differ as per survey. Furthermore, not all the countries were covered by both of the surveys.<sup>5</sup> In order to acquire coherent dataset structure we therefore limit the degree of merging the data to the following countries: Albania, Bulgaria, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia, and Romania.

The UNDP/World Bank/EC regional Roma survey was conducted in May-July 2011 on a random sample of Roma and non-Roma households living in areas with higher density (or concentration) of Roma populations in the EU Member States of Bulgaria, Czech Republic, Hungary, Romania, Slovakia, and the non-EU Member States of Albania, Bosnia and Herzegovina, Croatia, Former Yugoslav Republic of Macedonia, Montenegro, Republic of Moldova and Serbia.<sup>6</sup> Two parallel and complementary surveys were carried out in 2011 in an effort to map the current situation of Roma in Europe: one focusing on social and economic development aspects and carried out by the UNDP and the World Bank, and one focusing on the fulfillment of key fundamental rights carried out by the EU Agency for Fundamental Rights (FRA). In each of the countries, approximately 750 Roma households and approximately 350 non-Roma households living in their proximity were interviewed.

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

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

The UNDP/World Bank/EC regional Roma survey was implemented by the IPSOS polling agency and the FRA Roma Pilot Survey through Gallup Europe. Both sur-

5 For example, in 2004 Moldova was not covered and in 2011 Kosovo (as per UNSC 1244) was not covered (the survey in Kosovo was conducted in 2010 and was used as a "one-country pilot" to fine-tune the methodology and the survey instrument).

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

veys applied the same sampling methodology in the overlapping countries allowing for the development of a common dataset on core indicators and thus ensuring comparability and consistency of results (FRA and UNDP 2012).

In line with the methodology used in the FRA Roma Pilot Survey, the UNDP/World Bank/EC regional Roma survey was constructed through a three stage random representative sampling. All areas with an above average density of the Roma population were differentiated into clusters, with approximately 30 households making up one cluster (primary sampling unit). About 110 clusters were randomly chosen in each country.

In each cluster, seven households (secondary sampling unit) were interviewed using the method of a random start and equal random walk. Altogether, about 750 households were interviewed by a team of two interviewers in each country. The interviews were based on a questionnaire developed by UNDP and World Bank, in cooperation with the EU Fundamental Rights Agency, altogether containing over 100 questions on education, health, housing, the economic situation, migration, discrimination and other perceptions.

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

In addition to Roma households, 350 non-Roma households, situated in close proximity to the Roma households, were interviewed using the same questionnaire and technique, with a selection of three or four households in each primary sampling unit. Questions concerning education of the household members were answered by the self-identified head of the household. Questions on pre-school education were answered by the primary caretaker.<sup>7</sup>

7 For more detailed description of the method of data collection within the 2011 UNDP/WB/EC regional survey on Roma communities see Ivanov, Kagin and Kling (2012).

## Education

Over the last two decades there has been a consensus amongst experts, policy makers and activists that equal access to quality education for boys and girls not only increases the education level of Roma but also provides them with more employment opportunities. Several international policy and strategy documents have made explicit commitments in that regard. The most recent and relevant document is the European Commission Communication on the EU Framework for National Roma Integration Strategies through 2020.<sup>8</sup> This document clearly states that all the EU Member States should act *“to ensure that all Roma children have access to quality education and are not subject to discrimination or segregation, regardless of whether they are sedentary or not. Member States should ensure as a minimum that all Roma children complete at least primary school.”* Prior to the EU Framework, under the Decade of Roma Inclusion 2005–2015, the respective countries had to work out their own Action Plans with the specific priority areas being education, employment, health and housing. There have also been several governmental and non-governmental initiatives, based on the aforementioned, which attempt to increase the educational opportunities for Romani students at all levels – from preschool to university. One of such prominent international NGOs, which provides a generous fund enabling Romani students to succeed in studying, is The Roma Educational Fund. However, despite this significant commitment to Roma education, no specific policy intervention has been developed to address the gender differences in accessing and succeeding in the educational system.

### Empirical Findings

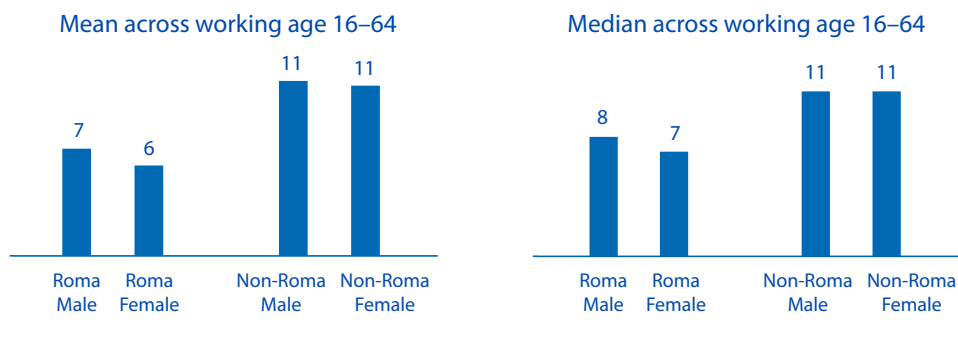
Education may be measured in several dimensions, as both the educational attainment itself and its quality are important factors determining intellectual and personal development and employment prospects. The 2011 UNDP/WB/EC regional survey on Roma communities provides several measures of education and its quality. However, we limit the discussion to a few most representative educational indicators, which are: the total number of years spent in school, the highest level of education obtained, the dropout rate and the overall and computer literacy.

8 An EU Framework for National Roma Integration Strategies up to 2020, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: An EU Framework for National Roma Integration Strategies up to 2020, Brussels, COM(2011) 173/4.

As far as the total number of years spent in school is concerned, the data shows differences in the time spent in education **between males and females both amongst Roma and Non-Roma** (Figure 1). Based on the sample averages of working age individuals (16–64), Romani males spent on average 6.71 years in education, while Romani women 5.66 years. The respective numbers for non-Roma individuals are 10.95 and 10.7. **The gender gap in the total years of education is thus higher amongst the Roma group** – 17% in favor of Romani males and just 3% in favor of non-Romani. On the other hand, non-Romani women spend in education nearly twice as many years as Romani women (10.7 and 5.66 years respectively). Similarly, Romani males spend in education 61% of the time the non-Romani males do (the same share for Romani women is 53%). The data thus shows that while **Romani men are subject to ethnic gap, Romani women are subject both to ethnic as well as gender gaps when it comes to the time spent in an educational system**. Some variation in the average years spent in education across the countries is present, but in all the countries the patterns concerning the gender and ethnic gaps remain the same. Similar results are found once the median of the distribution of the years spent in education instead of the mean is considered. The comparison of the mean and median outcomes amongst the Roma suggests that there are some individuals that did not participate in schooling or spent very limited time in education. For non-Roma group the mean and median values are comparable.

### Figure 1: Years in education by ethnicity and gender

*Average and median number of years spent in education by ethnicity and gender*



Source: UNDP/WB/EC regional Roma survey 2011

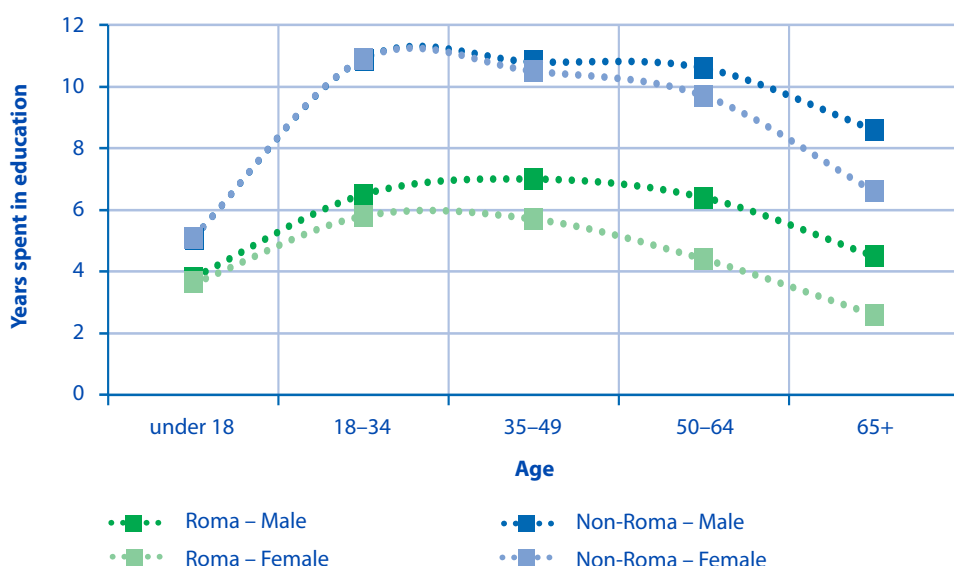
Based on the question "How many years did s/he spend in school in total?"

We further look at the differences in the time spent in education defined by the age groups (Figure 2). Generally **the difference in the average number of years spent in education between Roma and non-Roma increases with age**. This might be to a high extent caused by the fact that Roma individuals are less likely to remain in the

educational system.<sup>9</sup> Still, even for the youngest age group significant differences between Roma and non-Roma in the average number of years spent in school are present – 25% in case of men and 29% in case of women. The highest ethnic inequality amongst both men and women is observed for individuals, who are 18 to 34 years old. Within the group of 18-34 year-olds Romani women spend on average 5.8 years in the education system when compared to non-Romani women within the same age group, who study almost twice as long (10.9 years). For men the respective numbers are 6.5 and 10.9 years.

## Figure 2: Years in education by age groups

*Average number of years spent in education by gender and ethnicity in each age group*



Source: UNDP/WB/EC regional Roma survey 2011

Based on the question "How many years did s/he spend in school in total?"

Similar patterns can be observed in the gender gaps both amongst Roma and non-Roma: the gender gap tends to increase together with age. Under the age of 18 there is nearly no gender gap in either the Roma or the non-Roma groups. These findings indicate that for younger individuals the gender gap when it comes to the number of years spent in school tends to diminish, particularly amongst the non-

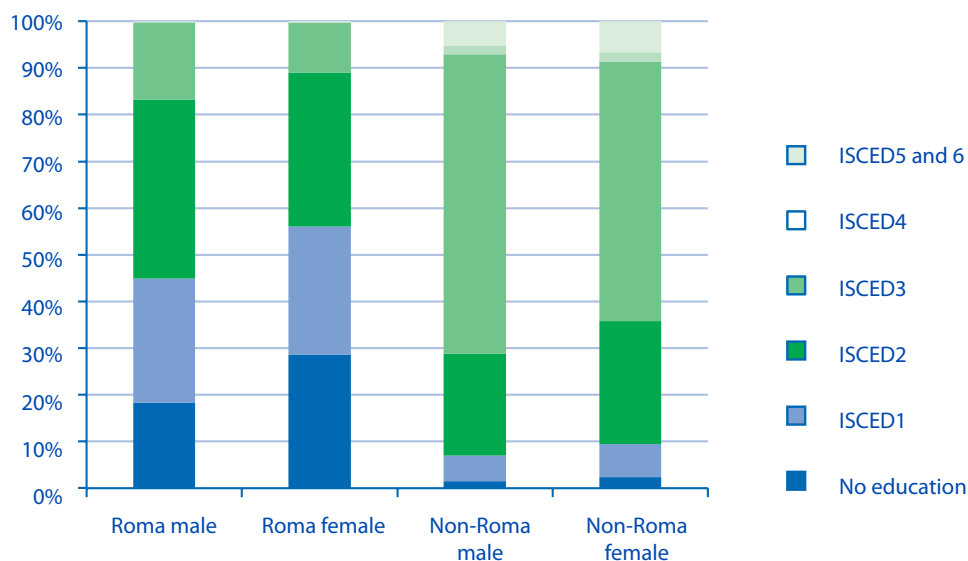
9 The analysis of dropout rates of 9 to 17 year-old individuals as well as the rate of individuals that attain the secondary and higher education level of education are provided in the next section. The results indeed reveal that Roma individuals are more likely to drop out of school and less likely to obtain secondary and higher educational level.



Roma individuals. This indicates that in the last two decades women from the majority population were able to overcome the educational gender gap. In contrast, amongst the Roma population the gender gap is constantly present and increases significantly with age. For instance, Romani males in the 18-34 age group spend 6.5 years in the education system compared to Romani females within the same age group, who spend 5.8 years in school. In the 35-49 age group Romani males spent an average of 7 years enrolled in school while Romani females only 5.7 years.

The comparison of the measure indicating the total number of years spent in the education amongst ethnic and gender subgroups already reveals intersectional inequalities based on gender and ethnicity. The measure, however, does not account for individual's success in acquiring education. This means that five years spent in education do not have to be comparable across the different groups. The more conclusive indicator of education is, therefore, the highest attained level of education (Figure 3).

**Figure 3: The highest education level of respondents of working age (16-64) by ethnicity and gender<sup>10</sup>**



Source: UNDP/WB/EC regional Roma survey 2011

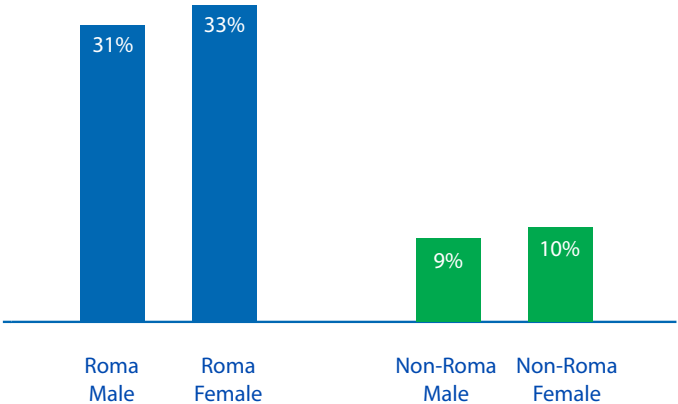
Based on the question "What is his/her highest attained education level?"

<sup>10</sup> Level of education is classified according to International Standard Classification of Education (ISCED) terminology. For more on ISCED classification see e.g. Brüggemann (2012).

The figure shows that 28% of Romani women aged 16 to 64 have no formal level of education compared to 18% of Romani men and 2% of non-Romani women. The high percentage of Romani men and women in the survey who did not have any formal education at all is, however, partly due to the nature of the sample. The survey was carried out amongst those households which are situated in the most disadvantaged and segregated Roma settlements or in the areas with compact Roma population. In consequence, those Roma who are living in integrated communities and have higher education were not considered in the survey.

In the framework of the above results, it is not surprising that Romani women also experience higher dropout rates than Romani men (Figure 4), but the difference is not that drastically high (approximately 2%).<sup>11</sup> Substantial ethnic gap in that regard is present both for women and men: dropout rates amongst Roma are more than three times higher than amongst non-Roma. The disaggregated data at the country level reveal that a high variation is present within the gender and ethnic gaps in dropout rates across the countries (Table 1). In Hungary and Czech Republic the difference in the average dropout rates amongst Roma and non-Roma is the smallest, whereas in Bosnia and Herzegovina, Moldova, Montenegro and Albania it is extremely high. In Moldova it is not only the ethnic gap that is noticeable, but also a significantly higher gender gap.

**Figure 4: Dropout rates by ethnicity and gender (individuals 9 to 17 years old)**



Source: UNDP/WB/EC regional Roma survey 2011

Based on the question "Does s/he still attend school or training?"

<sup>11</sup> The dropout rate analysis is carried out only for the individuals of school age, i.e. 9 to 17 years old.

**Table 1: Dropout rates by ethnicity, gender and country (individuals 9 to 17 years old)**

Country	Roma		Non-Roma	
	Male	Female	Male	Female
Hungary	6%	8%	2%	0%
Czech Republic	15%	10%	6%	3%
Croatia	18%	20%	3%	12%
Bulgaria	20%	23%	15%	6%
Slovakia	23%	19%	15%	11%
Romania	27%	33%	6%	5%
FYR Macedonia	31%	37%	11%	18%
Serbia	32%	29%	10%	9%
Bosnia and Herzegovina	45%	48%	6%	3%
Moldova	48%	56%	7%	16%
Montenegro	52%	52%	8%	9%
Albania	58%	60%	12%	15%

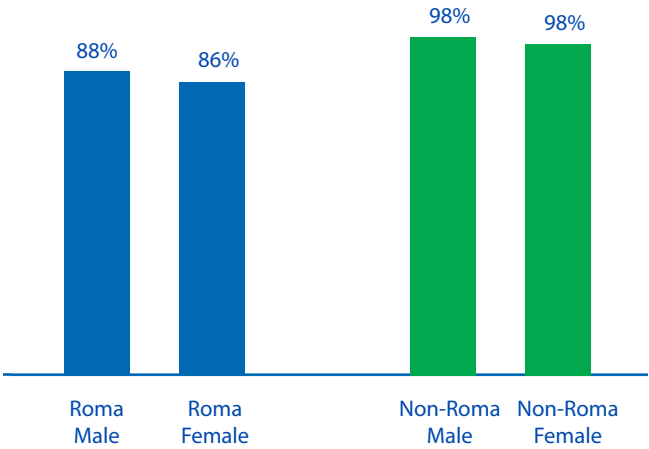
Source: UNDP/WB/EC regional Roma survey 2011

Not only the level of education, but also its quality measured by the acquired skills and knowledge, which is being rewarded by the labor market, should be of a concern when investigating Roma and gender inequalities in education. Brüggemann (2012) in order to measure acquired skills considers computer literacy and finds that “(with the exception of Hungary) the majority of Roma aged 15 to 24 are not able to use a word processing programme”. In contrast, the observed percentage of individuals living in close proximity to Roma households who have this ability is equal to 80%. Undoubtedly, the lower Roma computer literacy rate may be caused by limited access to computers and the Internet which is due to the high poverty rates observed amongst Roma (UNDP 2002, Milcher 2006). However, despite the high ethnic based differences in the computer literacy, attention should be paid to significant gender differences that are observed in both Roma and non-Roma groups. Amongst non-Roma aged 15-24 approximately 78% of females and 81% of males is able to use word processing program. Amongst Roma respective shares are 32% and 39%. Brüggemann reports that statistically significant differences between Romani males and females in the computer literacy exist in Romania, Montenegro, Moldova, Serbia and Albania but not in the other countries surveyed.

We additionally considered the general literacy rate that is based on the question whether the interviewed individual can read and write and thus is also a self-per-

ceived measure. The summary statistics show that **the differences in the literacy rate are mainly due to ethnicity**: the ratio of Roma to non-Roma share of literate young individuals is equal to 0.90 for men and 0.88 for women (Figure 5). **The gender dimension in the literacy gap is much less explicit**: both amongst Roma and non-Roma the share of women who can read and write is only slightly lower than the respective share for men.

**Figure 5: Literacy rates by ethnicity and gender**  
(individuals 9 to 25 years old)



Source: UNDP/WB/EC regional Roma survey 2011

Based on the question "Can s/he read and write?"

## Drivers of the educational disadvantage

The analysis above has revealed that there are significant gender and ethnic-based disparities with regard to the educational outcomes. In this subsection we further look for the factors that may explain the observable gaps in education. In order to do so we perform econometric analysis and employ the linear probability model as well as Nöpo decomposition method for decomposing ethnicity- and gender-based gaps within the specific educational indicators.

In the educational analysis as well as in the subsequent econometric analysis presented in this paper, we deliberately choose to follow the linear probability model (LPM) instead of the non-linear probability models such as probit or logit. Our choice of the model is mainly caused by the fact that we are interested in exploring the marginal effects of being Roma or female (i.e. ethnic or gender gaps) on the binary

outcome variables. Because of the high possibility that these gaps might vary amongst the groups of individuals (i.e. the gender gap may vary between Roma and non-Roma groups and the ethnic gap may vary amongst men and women), in the set of explanatory variables of our models we include not only two dummy variables indicating whether an individual is Roma and female but also their interaction. Existing econometric literature has shown that in the non-linear models marginal effect on the interaction term is not equal to the marginal effect derived, based on the common procedure done for single variables which is usually enforced in the econometric software (for the discussion see Norton, Wang and Ai (2004) and Ai and Norton (2003)). In consequence, in the non-linear models the interpretation of the marginal effect of an interaction term is much more complex than in the linear probability models. In order to ease the interpretation of the marginal effect of an interaction term we therefore choose to follow the LPM.<sup>12</sup>

The econometric analysis is done based on all the available data and includes country specific fixed effects. This means that for the run regressions we keep the assumption that the gaps are the same across the countries and the results represent the average gender and ethnic gaps across all the countries in which the survey was conducted.<sup>13</sup>

Based on the sample of individuals, who are 25 to 65 years old, we run the linear probability model (Table 2) to see that Romani males when compared with non-Romani males are more than twice less likely to gain at least secondary education (marginal effect of -0.537). The ethnic gap amongst women is not significantly different as the interaction term remains small and statistically insignificant. When the gender gap is considered amongst non-Roma, females are by 0.084 less likely to obtain at least secondary education. The insignificance of the interaction term indicates that Romani women in comparison to Romani men are not significantly more disadvantaged than non-Romani women to non-Romani men. We additionally look for factors that may explain these gaps in educational attainment.<sup>14</sup> **The findings show that family background characteristics account for a substantial part of the ethnic gap** and as once controlled for, the ethnic gap is reduced to -0.218 (com-

12 It is worth noting that there is an ongoing discussion between the defenders of using the LPM and the advocates for the non-linear models, with Joshua Angrist and Steffen Pischke being in the first group and Dave Giles in the second. The authors are aware of the methodological problems the analysis using the LPM involves. However, given our interest in the marginal effect of being in particular group (female/Roma) and the fact that the analysis involves the interaction term that is difficult to interpret in the non-linear case, we decide to follow the LPM keeping in mind that the predicted probabilities may be outside the interval of 0 and 1 and consequently the results may be biased and inconsistent (Horrace and Oaxaca 2006). We do, however, address the problem of heteroskedasticity that is embedded in the LPM by the use of robust standard errors, which is now a common practice. In order to assess the bias and inconsistency of our results we also perform the analysis with the use of probit models and correct the marginal effect on the interaction terms in the manner shown by Ai and Norton (2003). The results from probit models are available from the authors upon request. Except for the analysis of employment probability, the results obtained from probit and the LPM are comparable but only the findings of the LPM are presented.

13 The same assumption is maintained in all subsequent regressions done in the next sections of this paper.

pare Model 6 – Family background controls Table 2). At the same time, family background variables do not cause the gender gap to change drastically (-0.078). Additional controlling for the housing conditions and values concerning education only slightly influences the initial findings.

**Table 2: Partial effects of the linear probability model estimates; dependent variable secondary or higher education (ISCED level 3 and higher), sample of individuals 25 to 65 years old<sup>15</sup>**

Variables	Model 1 coef/se	Model 2 coef/se	Model 3 coef/se	Model 4 coef/se	Model 5 coef/se	Model 6 coef/se	Model 7 coef/se	Model 8 coef/se	Model 9 coef/se
Roma	-0.537*** (0.009)	-0.544*** (0.009)	-0.512*** (0.009)	-0.505*** (0.009)	-0.505*** (0.009)	-0.218*** (0.009)	-0.216*** (0.009)	-0.208*** (0.009)	-0.199*** (0.009)
Female	-0.084*** (0.011)	-0.084*** (0.011)	-0.083*** (0.011)	-0.081*** (0.011)	-0.081*** (0.011)	-0.078*** (0.010)	-0.078*** (0.010)	-0.078*** (0.010)	-0.078*** (0.009)
Interaction	0.016 (0.012)	0.016 (0.012)	0.017 (0.012)	0.016 (0.012)	0.016 (0.012)	0.008 (0.010)	0.008 (0.010)	0.008 (0.010)	0.010 (0.010)
Number of observations	24 555	24 555	24 555	24 555	24 555	24 555	24 555	24 555	24 555
R2	0.326	0.330	0.346	0.349	0.350	0.540	0.540	0.543	0.544

Source: estimated on the basis of UNDP/WB/EC regional Roma survey 2011

Notes: 1. Model 1: Gross model; Model 2: + Age control; Model 3: + Schooling controls; Model 4: + Health control; Model 5: + Living environment controls; Model 6: + Family background controls; Model 7: + Poverty control; Model 8: + Housing conditions controls; Model 9: + Values controls.

2. Gross model and all successive models also include country fixed effects;

3. Robust standard errors reported in the parenthesis: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1;

4. Detailed estimation results are presented in Appendix.

- 14 We look at how the initial values of the Roma/gender coefficient change (decrease) with the inclusion of the control variables; in other words we look at what factors explain Roma/gender differences within the probability of having obtained secondary or higher education. We subsequently control the set of following characteristics: demographic characteristics (age and education level), schooling conditions (preschool, special school), health factors (long-lasting illness), living environment (urban area, walking distance to school), family background variables (books, internet, HH's size, total number of unemployed adults in the HH, HH's head has at least secondary education, partner of the HH's head has at least secondary education), poverty (poor person (income less than 4.30\$)) and housing conditions (rooms per capita, squared meters per capita, inside bathroom indicator, electricity indicator). We additionally test the hypothesis whether the values and opinions on education and work of children play any role. The consideration of such indicators is, however, problematic, because they are based on the answers of the surveyed question posed to a randomly selected household member. The restriction of the sample to those who answered the question would have significantly reduced its size. To avoid this problem we therefore assume that the opinions of the randomly selected respondent are representative for the household he lives in and extrapolate the variable for all the household members. Such procedure may however not be accurate. We thus do not include the variables into the group of family background characteristics, but consider them separately. Two variables representing the value of education are used: 1) appropriate age to stop the education; 2) whether it is acceptable to work for children of primary school age. Following Kertesi and Kézdi (2011) we account for the missing values of the explanatory variables by the inclusion of dummy variables indicating the missing status.

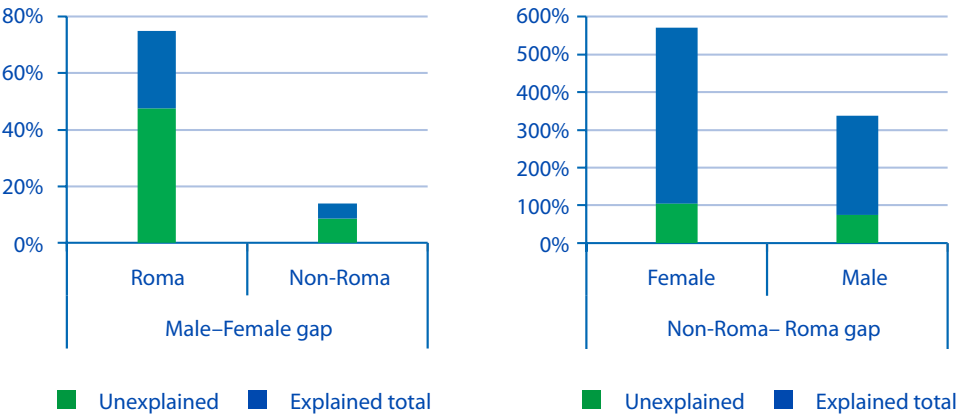
Negative marginal effects on the female variable in the linear probability models as well as a high percentage of Romani women who do not have any education when compared with Romani men (Figure 3), show that there are some complex structural factors which lead to gender disparities in the educational attainment amongst the Roma population. According to Pantea (2009) these factors may include: a.) Customs and values b.) Conditions of Roma families and communities c.) Structural constraints related to school systems d.) (Perceived) returns of education e.) Policy ineffectiveness. Furthermore, these factors are likely to intertwine and consequently may have a long lasting impact on the lives of Romani women.

In order to determine to what extent these unobservable factors may explain the gender gaps in education we apply the decomposition technique. The decomposition allows us to report what part of the gap cannot be explained due to the differences in the observable characteristics and most likely can be attributed to the unobserved factors listed by Pantea (2009).<sup>16</sup> Indeed, the results (Figure 6) show that only a part of the gender gap in the education level obtained amongst the Roma individuals may be attributed to the distribution of the observable characteristics. The part which can be explained accounts for 37% amongst Roma and for 39% amongst non-Roma.<sup>17</sup> Moreover, amongst the Roma individuals a significant part is explained by the fact that some characteristics that the Romani men have are not shared by the Romani women; as a consequence if the Romani women had the same attributes as Romani men, that remain unreachable by them, then the gap in education attainment would decrease. Nevertheless, the high unexplainable parts of the gender gap indicate that there exists some unobservable factors that contribute towards the lower educational attainment of females. We also analyze the ethnic gap amongst both men and women. Once the gap between Roma and non-Roma is considered, a meaningful part is explained by the differences in distribution of characteristics of Roma and non-Roma. Similarly, detailed decomposition results (see Appendix, Table 17) show that there are some characteristics of the non-Roma individuals which are not shared by Roma that contribute to the continuity of the gap in education. If Roma achieved the characteristics of non-Roma – especially with regard to the family background – then the gap would decrease by more than 50%. This is true both for men and women. The unobserved factors also contribute towards the ethnic gap in education which is shown by the unexplained component, however, the gap still remains mostly due to the differences in the family background between Roma and non-Roma.

16 For the decomposition of the ethnic-gender gaps in education as well as further decompositions presented in this paper Nôpo decomposition is performed. We use Nôpo decomposition technique (Nôpo 2008) as opposed to the most commonly applied Oaxaca-Blinder decomposition method (Oaxaca and Blinder 1973), in order to account for insufficient overlap of the subpopulation compared (e.g. Roma females and non-Roma females) in terms of the distribution of characteristics. For the discussion of the problem of common support in Roma inequalities decomposition as well as for a brief review of the method applied see O'Higgins (2012), who uses the method for the analysis of Roma-non-Roma employment inequalities. For more on decomposition techniques see Fortin et al. (2010).

17 Detailed decomposition results are presented in the Appendix.

**Figure 6: Nôpo decomposition results of educational attainment gap, sample of individuals 25-65 years old.**



Source: estimated on the basis of UNDP/WB/EC regional Roma survey 2011

Note: Detailed decomposition results are presented in the Appendix.

The decomposition is performed based on the following characteristics: Age (age dummies), health (long-lasting illness indicator), schooling controls (preschool indicator, special school indicator), urban dummy, family background characteristics (books indicator, Internet indicator, log of household's size, total number of unemployed individuals living in the household, household head has at least secondary education (ISCED 3), partner of the household head has at least secondary education (ISCED 3)). Country fixed effects are additionally included.

The vertical axis presents the total gap defined as a difference in the outcome variable between men and women (non-Roma and Roma) as a percentage of the average value of the outcome variable for women (Roma). The total gap is equal to the sum of explained and unexplained parts.

We further address other measures indicating probability of staying in the educational system and its quality. Particularly, two variables are considered: dropout and overall literacy rates.

The econometrics findings (Table 3) confirm that women – both amongst Roma and non-Roma – are not subject to significantly higher dropout rates than men. However, a significant gap is present in that regard amongst Roma and non-Roma groups: Roma are by 10% more likely to drop out from school even if the ethnic differences in the demographic characteristics, family background, living environment and values concerning education have been controlled for. Similarly to the previous analysis the insignificance of the interaction term means that the ethnic disparity in the dropout rate does not vary amongst men and women. As the previous analysis confirms **that family background is the key observed determinant that contributes towards formulation of ethnic-based inequalities in education** (compare Model 6 – Family background Table 3).



**Table 3: Partial effects of the linear probability model estimates; dependent variable dropout rate, sample of individuals 9 to 17 years old**

Variables	Model 1 coef/se	Model 2 coef/se	Model 3 coef/se	Model 4 coef/se	Model 5 coef/se	Model 6 coef/se	Model 7 coef/se	Model 8 coef/se	Model 9 coef/se
Roma	0.258*** (0.013)	0.274*** (0.013)	0.232*** (0.013)	0.231*** (0.013)	0.231*** (0.013)	0.146*** (0.015)	0.141*** (0.015)	0.132*** (0.015)	0.104*** (0.015)
Female	0.016 (0.016)	0.021 (0.016)	0.018 (0.016)	0.019 (0.016)	0.020 (0.016)	0.016 (0.016)	0.015 (0.016)	0.015 (0.016)	0.013 (0.016)
Interaction	0.001 (0.019)	-0.004 (0.019)	0.001 (0.019)	0.000 (0.019)	-0.001 (0.018)	0.000 (0.018)	0.003 (0.018)	0.003 (0.018)	0.004 (0.018)
Number of observations	9 972	9 972	9 972	9 972	9 972	9 972	9 972	9 972	9 972
R2	0.133	0.219	0.248	0.250	0.251	0.266	0.272	0.280	0.293

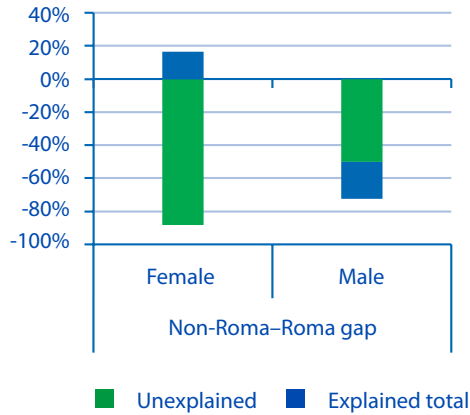
Source: estimated on the basis of UNDP/WB/EC regional Roma survey 2011

- Notes: 1. Model 1: Gross model; Model 2: +age control; Model 3: + schooling controls; Model 4: +health control; Model 5: + Living environment controls; Model 6: + family background controls; Model 7: + poverty control; Model 8: + housing conditions controls; Model 9: + values controls.  
 2. Gross model and all successive models additionally include country fixed effects;  
 3. Robust standard errors reported in the parenthesis: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1;  
 4. Detailed estimation results are presented in the Appendix.

Similarly, we study the unobserved factors that may contribute to explain the ethnic differences in dropping out of school (Figure 7).<sup>18</sup> The decomposition results show that amongst females the ethnic gap is left unexplained, suggesting that the differences in the distribution of characteristics amongst Romani women and non-Romani women are solely not enough to explain the higher dropout rates in case of Romani women. Amongst men, the differences in the distribution of characteristics may explain to some extent the higher dropout rates for Romani men. However, still the large part (app. 70%) is due to some other complex unobserved factors that cause for Romani boys to be a subject of higher dropout rates.

18 The results of the decomposition of the gender gaps for the dropout rates are not presented as the gender gaps both amongst Roma and non-Roma are rather small and insignificant.

**Figure 7: Nôpo decomposition results of ethnic gap in dropout rates by gender, sample of individuals 9-17 years old**



Source: estimated on the basis of UNDP/WB/EC regional Roma survey 2011

Note: Detailed decomposition results are presented in Appendix.

The decomposition is performed based on the following characteristics: Age (age dummies), health (long-lasting illness indicator), schooling controls (preschool indicator, special school indicator, walking distance to school), urban dummy, family background characteristics (books indicator, Internet indicator, log of household's size, total number of unemployed individuals living in the household, household head has at least secondary education (ISCED 3), partner of the household head has at least secondary education (ISCED 3)). Country fixed effects are additionally included.

The vertical axis presents the total gap defined as a difference in the outcome variable between men and women (non-Roma and Roma) as a percentage of the average value of the outcome variable for women (Roma). The total gap is equal to the sum of explained and unexplained parts.

Finally, we look at the overall self-perceived literacy rate and run the linear probability model on the sample of individuals, who are 9 to 25 years old. The econometric analysis shows that after controlling for education, living and schooling conditions and the family background, the effects of being Roma and a female are very small in magnitude (Model 6 Table 4).<sup>19</sup> Insignificance of the interaction term indicates that the ethnic gap is essentially of the same size for men and women. However, once again the results confirm that **family background constitutes the key factor that explains the ethnic gap in literacy of young persons**. Additionally, there are some other less obvious influential factors in case of the Romani family background which are not conceptualized by the research such as lack of role models, lack of supportive contacts with educated persons as well as lack of accessible educational and social services.

19 The results obtained from a probit model that we performed as a robustness check show that when the non-linear probability model is enforced the marginal effect on Roma variable in Model 6 is even lower and accounts for 0.009 (statistical significance at  $p < 0.01$ ).

**Table 4: Marginal effects of probit estimates; dependent variable literacy rate, sample of individuals 9 to 25 years old**

Variables	Model 1 coef/se	Model 2 coef/se	Model 3 coef/se	Model 4 coef/se	Model 5 coef/se	Model 6 coef/se	Model 7 coef/se	Model 8 coef/se	Model 9 coef/se
Roma	-0.111*** (0.005)	-0.059*** (0.005)	-0.043*** (0.005)	-0.042*** (0.005)	-0.042*** (0.005)	-0.021*** (0.006)	-0.019*** (0.006)	-0.014** (0.006)	-0.004 (0.006)
Female	-0.008 (0.005)	-0.010** (0.005)	-0.008 (0.005)	-0.008 (0.005)	-0.009* (0.005)	-0.007 (0.005)	-0.006 (0.005)	-0.007 (0.005)	-0.008 (0.005)
Interaction	-0.012 (0.008)	-0.003 (0.007)	-0.007 (0.007)	-0.007 (0.007)	-0.006 (0.007)	-0.008 (0.007)	-0.008 (0.007)	-0.008 (0.007)	-0.007 (0.007)
Number of observations	17 360	17 360	17 360	17 360	17 360	17 360	17 360	17 360	17 360
R2	0.089	0.150	0.170	0.173	0.174	0.180	0.185	0.190	0.194

Source: estimated on the basis of UNDP/WB/EC regional Roma survey 2011

Notes: 1. Model 1: Gross model; Model 2: +age and education level controls; Model 3: + schooling controls; Model 4: +Health control; Model 5: + Living environment controls; Model 6: + family background controls; Model 7: + poverty control; Model 8: + housing conditions controls; Model 9: + values controls;  
2. Gross model and all successive models additionally include country fixed effects;  
3. Robust standard errors reported in the parenthesis: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1;  
4. Detailed estimation results are presented in the Appendix.

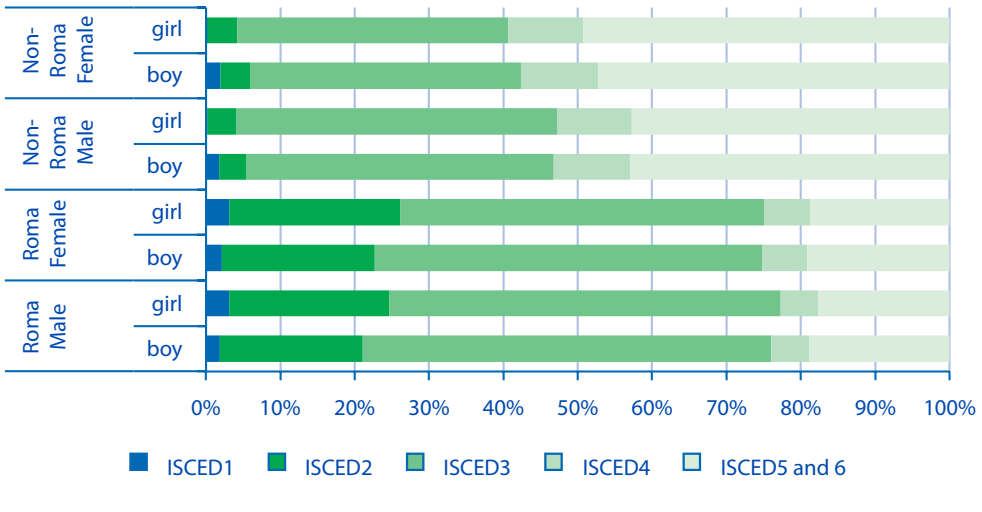
## The impact of values and aspirations

Besides exploring the patterns concerning the level and quality of education of Roma women, we additionally consider their background determinants and look at the educational aspirations and the perceived value of education. The analysis below is based on the subset of the 2011 UNDP/WB/EC Regional Survey questionnaire, in which only one randomly selected respondent was interviewed. In consequence, the derived results are based on a smaller sample than the ones already presented.

The econometric results presented above to some extent confirm the hypothesis that already established valuation of education may play an important role in explaining Roma-non-Roma differences in educational outcomes. In the estimated models we controlled for two indicators aiming at reflecting the perception and valuation of education, namely the appropriate age to stop participating in the education system and whether it is acceptable for children of primary school age to work. The results show that these factors somewhat contribute towards explaining the ethnic gap in the educational attainment, dropout and literacy rates (compare Model 9 in Table 2 for educational attainment, Model 9 in Table 3 for dropout rate and Model 9 in Table 4 for literacy rate). Their relative contribution is, however, rather minor.

Figure 8 shows that significant differences exist in Roma and non-Roma beliefs on the sufficient level of education both for girls and boys.

**Figure 8: Sufficient level of education for a girl and a boy by ethnicity and gender (working age population 16-64)**



Source: UNDP/WB/EC regional Roma survey 2011

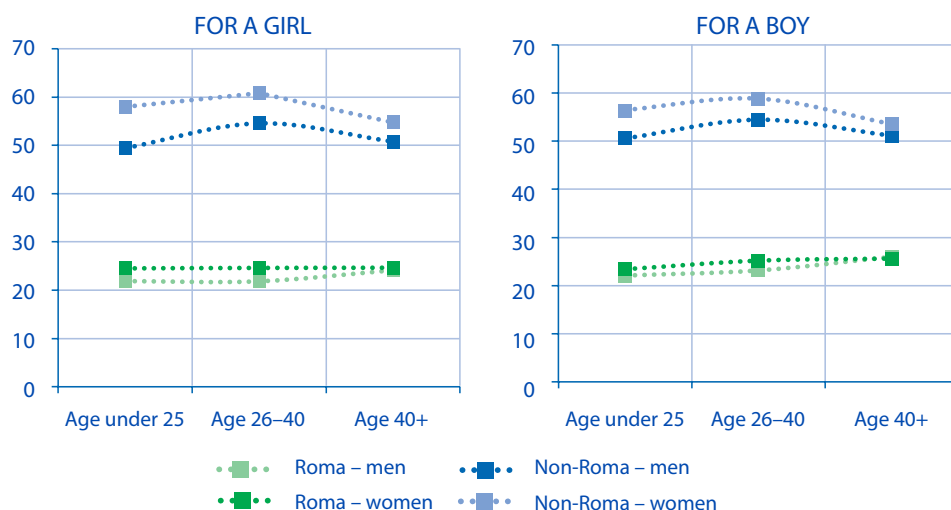
Based on the questions “What do you believe is a sufficient level of education for a child? – girl and boy”

More than 50% of Romani men and women believe that the sufficient level of attained education is ISCED 3 (upper secondary education) or lower. Little differences in that regard are present between Romani men and women, which means that no gender-based aspiration gap is present. On the contrary, non-Romani women have higher expectations than non-Romani men regarding the sufficient level of education: 45% of non-Romani women point at ISCED 5 and 6 (university or higher level) to be sufficient in case of boys and nearly 47% in case of girls. It is worth noting that there are high disparities between the attained level of education (Figure 3) and sufficient level of education. **Both Roma and non-Roma consider the sufficient level of education to be higher than the level that they on average succeed to obtain.**

The aspirations and perception of the relative value of education for young adults might be, however, different from those of older individuals, who have been studying for many years already and whose perception of education might have been influenced by their educational experiences as well as the labor market prospects and their occupation. Furthermore, distribution of the perception of sufficient level of education by age may reflect whether there has been positive changes and whether

young individuals do have higher educational aspirations. Consequently, this distribution may to some extent allow us to assess the degree of intergenerational transmission of educational aspirations. Figure 9 presents the distribution of individuals by age, who perceive university or higher education to be a sufficient level of attained education. The share of individuals under 25 years old who believe that tertiary education is sufficient is slightly lower than the respective share of individuals aged 26 to 40 years, but higher than amongst the subgroup of individuals who are older than 40 years old. Higher disparities in this regard are present amongst non-Roma – both men and women. Amongst Roma group, the distribution by age is comparable, which suggest that **younger Romani men and women do not have significantly different (and particularly higher) aspirations when it comes to education than elderly Roma.**

**Figure 9: Share of individuals, who perceive university or higher level of education as sufficient by age groups, ethnicity and gender (%)**



Source: UNDP/WB/EC regional Roma survey 2011

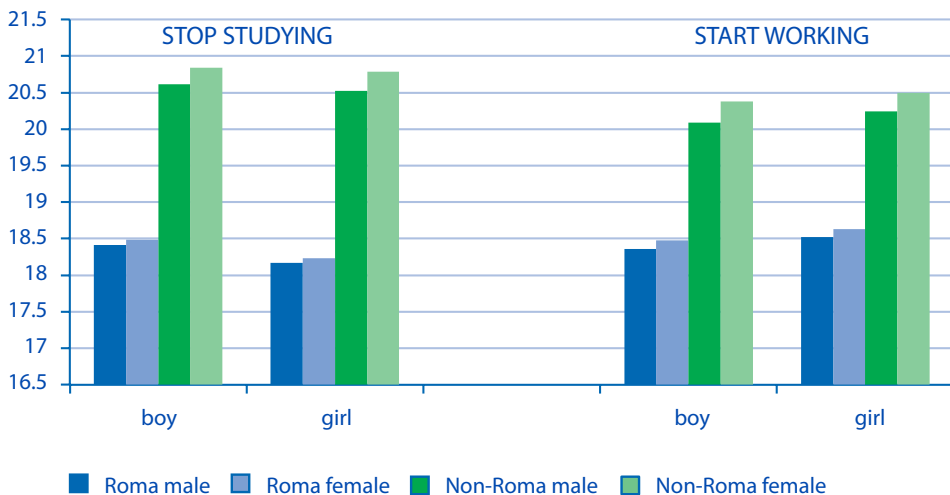
Based on the questions “What do you believe is a sufficient level of education for a child? – girl and boy”

In this framework it is not surprising that there are differences between Roma and non-Roma in the average age at which they find it relevant to stop studying and to start working. The ethnic- based difference in the average age of terminating education is approximately 2 years and it is only slightly higher for girls. The average appropriate age to stop studying for girls in the view of Romani women is equal to 18.23 and in Romani men’s opinion 18.17. Amongst Roma – both males and females – the perceived appropriate age to terminate their education is slightly lower for

girls than for boys. Very similar observations are shown with regard to the age when it is appropriate to start working. It is interesting that for Roma the average appropriate age to start working is roughly the same as the average age to stop studying, whereas amongst non-Roma these two overlap.

Overall, this analysis reveals that the main gap in educational aspiration is due to ethnicity, not gender. As a consequence, although a gender gap in the educational attainment is present (compare Table 2 Figure 3), **Romani women do not have significantly different aspirations and do not assign significantly different values to education than Romani men. Substantial ethnic gap – both amongst men and women – is present with regard to beliefs on the sufficient level of education and the appropriate age to stop studying and enter the labor market and it stays the same regardless of the age. The ethnic gap concerning the educational aspirations of Roma may be explained by the condescending and prejudiced perception that majority of the population has of them. They internalize this negative explicit/implicit message that can limit their imagination and even their educational aspirations.**

**Figure 10: Average appropriate age to stop education and start working by ethnicity and gender**



Source: UNDP/WB/EC regional Roma survey 2011

Based on the questions at approximately "What age do you feel that it is appropriate to stop education" and "What age do you feel that it is appropriate to start work for money"

## Is it getting better?

### Changes in education between 2004 and 2011

In addition to the analysis of Roma/non-Roma and female/male situation in 2011, we track the changes over 2004-2011. We take advantage of the earlier data collection from 2004 and investigate the changes that happened in regards to education with effect on Roma and gender. For the examination of changes over 2004-2011 we apply difference in difference estimator.<sup>20</sup> The difference in difference estimator eventually represents the change in the premium (which – depending on the explored phenomenon – is either negative or positive) from being Roma or female over the years 2004-2011. As shown in Table 5 **both the ethnic gap as well as the gender gap for the average dropout rates were higher in 2004 and declined significantly in 2011**. The ethnic gap is represented by the Roma effect as it reveals the average difference in the dropout rates between non-Roma and Roma. Similarly, the gender gap is represented by the gender effect as it discloses the average difference in the dropout rates between men and women. As regards the Roma effect, the most significant decline occurred amongst Roma males – the probability of dropping out from school for this group of individuals (if compared with non-Roma males) has declined nearly by half. For females, **the changes in the ethnic gap in the dropout rates are less significant, but still present**.

The estimates for literacy rate show that over the period of 2004-2011 the overall gender gap has increased. The closer examination of the gender gap by performing separate estimation for Roma and non-Roma groups reveals that an increase of negative premium in case of females is found for non-Roma individuals; **for Roma the gender gap in literacy rate remains the same throughout these two periods**. The effects on Roma in regards to literacy rate are found to be insignificant and rather small in magnitude.

Last but not least, the changes that took place with an effect on females in terms of **educational attainment show that the gender gap in this aspect has slightly decreased over the period of 2004-2011**. This means that women are more likely to obtain secondary and higher education. Similar patterns can be observed within Roma and non-Roma groups of individuals. **The difference in difference estimate of being Roma also indicates that negative premium of being Roma has declined**. More detailed consideration of the changes in the ethnic gap for females and males shows that similar patterns are present for both groups, i.e. the ethnic gap in the educational attainment has decreased for both males and females.

20 Difference in difference estimator (Ashenfelter and Card 1985) is mainly used to track the changes of policy introduction over a period of time. It allows not only to quantify a direct effect of a policy by comparing the outcome for individuals affected and not affected by the policy instrument (treatment effect), but also to eliminate other factors that could contribute to incorrect policy effect quantification (e.g. trends). In the current setup the resulting estimates show the difference over time (i.e. 2004 and 2011) in the average difference of outcome variables amongst Roma and non-Roma (alternatively male and female) individuals.

Overall, amongst both Roma and non-Roma groups females are slightly more likely to obtain the higher level of education and less likely to dropout from school, but still the gender gap in these dimensions is present. Similarly, changes in the ethnic gap in educational outcomes between 2004 and 2011 were positive but rather minor. They were also more noticeable amongst men than women.

In the framework of a lack of gender sensitive policy intervention aimed at Roma in the area of education, these findings should not come as a surprise. Romani women are still affected by a lower educational attainment, fewer years spent in education, higher dropout rates and lower computer as well as overall literacy – both in comparison to non-Romani women (higher disparities) and Romani men. The findings do not, however, show that Romani women's disadvantage due to their ethnicity is greater than that of Romani men and their deprivation due to gender is greater than that of non-Roma. Family background, the perceived value of education as well as other unobserved factors that cannot be accounted for are the key driving forces of the existing ethnic gaps in education, which are found to be substantial and significant. In order to confront these factors there is, therefore, a strong need for gender sensitive policy interventions which will create a path for social mobilization and support from a wider community.

**Table 5: Difference-in-difference estimates of the educational outcomes**

Dropout rate					
Gender effect 2004	0.037***	(0.013)	Roma effect 2004	0.157***	(0.020)
Gender effect 2011	0.019**	(0.009)	Roma effect 2011	0.097***	(0.015)
Diff-in-diff estimator	-0.018	(0.016)	Diff-in-diff estimator	-0.061***	(0.023)
Amongst Roma			Amongst males		
Gender effect 2004	0.052***	(0.019)	Roma effect 2004	0.155***	(0.026)
Gender effect 2011	0.019*	(0.011)	Roma effect 2011	0.085***	(0.021)
Diff-in-diff estimator	-0.032	(0.021)	Diff-in-diff estimator	-0.07**	(0.031)
Amongst non-Roma			Amongst females		
Gender effect 2004	0.014	(0.012)	Roma effect 2004	0.156***	(0.029)
Gender effect 2011	0.001	(0.014)	Roma effect 2011	0.106***	(0.022)
Diff-in-diff estimator	-0.013	(0.018)	Diff-in-diff estimator	-0.049	(0.034)
Literacy					
Gender effect 2004	-0.009	(0.007)	Roma effect 2004	-0.024**	(0.010)
Gender effect 2011	-0.021***	(0.005)	Roma effect 2011	0.006	(0.008)
Diff-in-diff estimator	-0.012	(0.008)	Diff-in-diff estimator	0.030***	(0.011)



Amongst Roma			Amongst males		
Gender effect 2004	-0.021**	(0.010)	Roma effect 2004	-0.017	(0.013)
Gender effect 2011	-0.021***	(0.006)	Roma effect 2011	0.007	(0.011)
Diff-in-diff estimator	0	(0.012)	Diff-in-diff estimator	0.023	(0.015)
Amongst non-Roma			Amongst females		
Gender effect 2004	0.006	(0.005)	Roma effect 2004	-0.022	(0.015)
Gender effect 2011	-0.010*	(0.006)	Roma effect 2011	0.006	(0.012)
Diff-in-diff estimator	-0.016**	(0.007)	Diff-in-diff estimator	0.028	(0.017)
Educational attainment					
Gender effect 2004	-0.113***	(0.005)	Roma effect 2004	-0.092***	(0.007)
Gender effect 2011	-0.092***	(0.004)	Roma effect 2011	-0.078***	(0.006)
Diff-in-diff estimator	0.021***	(0.006)	Diff-in-diff estimator	0.014**	(0.007)
Amongst Roma			Amongst males		
Gender effect 2004	-0.103***	(0.007)	Roma effect 2004	0.081***	(0.008)
Gender effect 2011	-0.090***	(0.005)	Roma effect 2011	-0.076***	(0.007)
Diff-in-diff estimator	0.013	(0.008)	Diff-in-diff estimator	0.004	(0.009)
Amongst non-Roma			Amongst females		
Gender effect 2004	-0.123***	(0.007)	Roma effect 2004	-0.098***	(0.008)
Gender effect 2011	-0.094***	(0.008)	Roma effect 2011	-0.080***	(0.006)
Diff-in-diff estimator	0.029***	(0.011)	Diff-in-diff estimator	0.018***	(0.009)

Source: Estimated based on UNDP/WB/EC regional Roma survey 2011 and UNDP Roma survey 2004

Notes: DiD estimator based on the regression with the following right-hand side variables: dropout rate: age, illness indicator, urban area, books indicator, Internet indicator, log of household size, total number of unemployed adults in the household, household's head and partner's education, poverty indicator, squared meters per capita, rooms per capita, bathroom indicator, electricity indicator and country fixed effects; literacy: lower basic or no education, age, urban area, books indicator, Internet indicator, log of household size, household's head and partner's education, poverty indicator, bathroom indicator, electricity indicator and country fixed effects; education level: age, illness indicator, urban area, books indicator, Internet indicator, log of household size, total number of unemployed adults in the household, household's head and partner's education, poverty indicator, squared meters per capita, rooms per capita, bathroom indicator, electricity indicator and country fixed effects (estimates based on a sample from the following countries: Albania, Bulgaria, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia, and Romania)

Standard errors reported in the parenthesis: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

## Employment

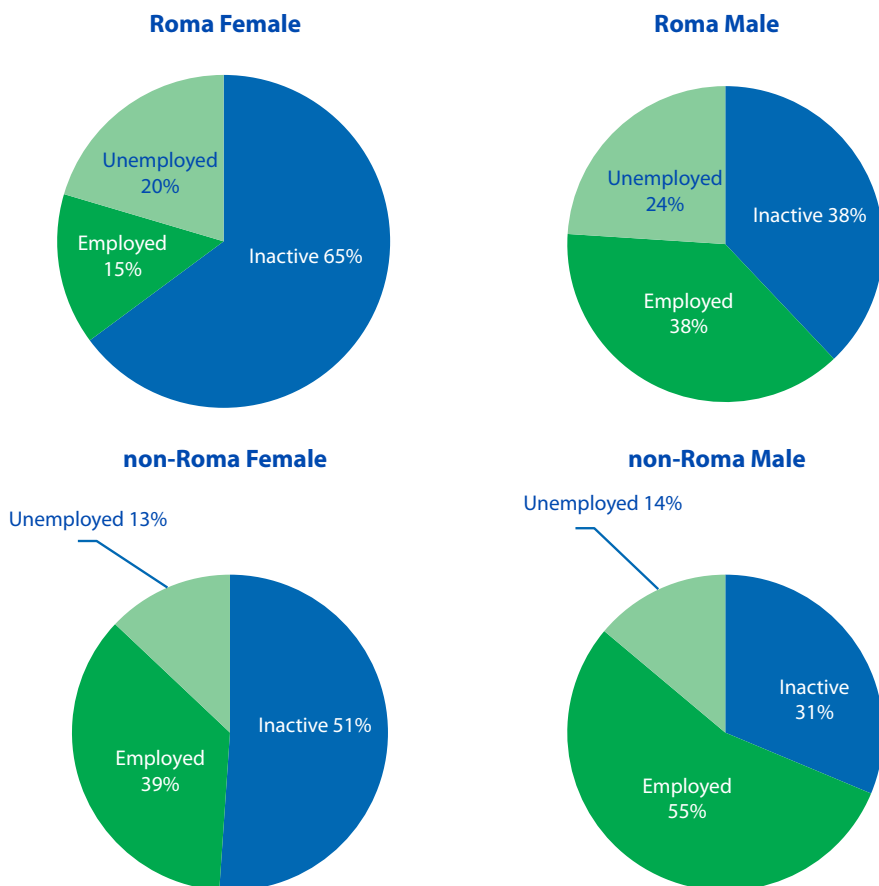
Under the Decade of Roma Inclusion 2005-2015 as well as EU actions and many NGOs field works and programs, several attempts have been undertaken to increase the participation of the Roma population in the labor market and as a consequence to narrow down the employment gap between Roma and the rest of the population. Still, in most of the EU Member States the unemployment rate for Roma in comparison to non-Roma has at least doubled (UNDP 2012). The current economic crisis, due to the employers' attempts to cut down on the costs of employment, certainly contributes to limiting the employment prospects and as a consequence of that to the rising unemployment rates. So far the experience has shown that previously disadvantaged groups during the slowdown may be subject to a higher risk of unemployment (European Commission 2011). As a result, the current economic crisis may exacerbate – the already high – Roma unemployment rates. Moreover, European Commission's and national government's commitments to improve the Roma employment rates are also undermined by the worsened economic conditions.

Recently, a majority of governments have enacted stimulus packages, mainly in a form of public works to alleviate poverty and increase the employment rates amongst disadvantaged populations such as Roma. As the analysis below indicates there is a tremendous need to incorporate the gender dimensions in these stimulus packages, as high gender disparities are present. The employment of Romani women combined with training in social services such as social care, health and education would not only open up opportunities and increase the employment rate of Romani women, but also would make an impact on inter-ethnic relations between the Roma and non-Roma populations.

### Empirical findings

The 2011 UNDP/WB/EC regional survey on Roma communities uses three categories to analyze the employment patterns: employed, unemployed and inactive/not in a labor force. According to the OECD definition inactive group consists of individuals, who are not classified either as employed or unemployed.<sup>21</sup> The summary of the UNDP/WB/EC regional Roma survey 2011 for the data on employment is presented in Figure 11.

**Figure 11: Gender and ethnic differences in economic activity (%); working age population**



Source: UNDP/WB/EC regional Roma survey 2011

Based on the questions "During the last week did do any paid work?", "Although did not work in a paid job during the last week, does have a paid job" and "Did s/he do anything to find a job during the last 4 weeks"

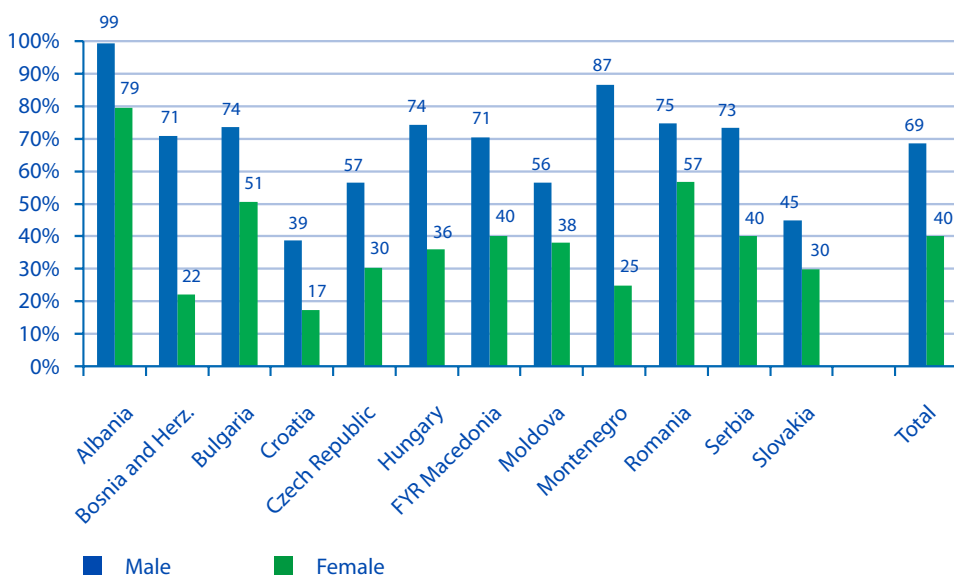
Data reveal that amongst the working-age population (16 to 65) share of inactive Romani women in comparison to Romani men and non-Romani women is significantly higher: **almost 65% of Romani women is not participating in the labor market.** Moreover, the share of **Romani women who are employed is extremely**

21 Based on the ILO definition "The inactive population can include pre-school children, school children, students, pensioners and housewives or -men, for example, provided that they are not working at all and not available or looking for work either; some of these may be of working-age." [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Glossary:Inactive](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Inactive)

**low (15%).** High disparities prevail in the shares of employed Roma males and females (38% and 15% respectively). On the contrary, the shares of employed non-Roma males and females are equal to 55% and 36%. Less noticeable dissimilarities are present when one considers the share of unemployed individuals and also the differences in the share of unemployed persons are primarily due to their ethnicity, not gender. Moreover, the share of employed Roma males is comparable to non-Roma females but the relative share of unemployed individuals is much higher for Roma males.

The ratio of Roma to non-Roma male employment rates defined as the share of employed individuals is equal to approximately 0.69, whereas for women it is much lower – around 0.40. O’Higgins (2012) whilst using the data from the UNDP/WB/EC regional Roma survey 2011 shows that significant differences exist between individual countries in regards the ratio of Roma to non-Roma employment, with Croatia showing the highest gap and Albania – the lowest (Figure 12).

**Figure 12: Roma employment rate as a percentage of non-Roma employment rate by gender**



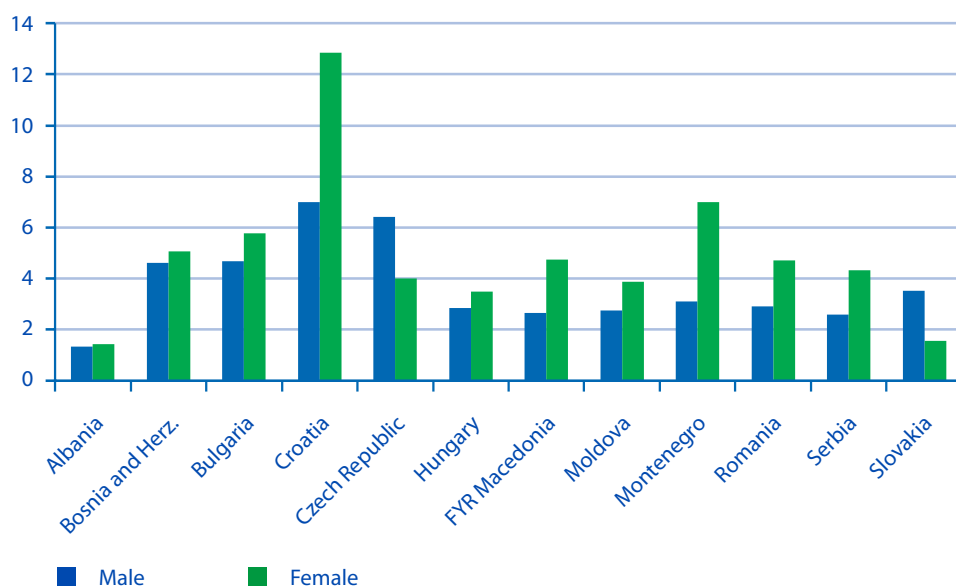
Source: UNDP/WB/EC regional Roma survey 2011

Notes: 1. The employment rate is calculated on the working age (16-64) population;  
2. The employment rate is defined as the proportion of the gender/ethnic specific population which is employed.

An economic marginalization of disadvantaged groups, such as Roma or females, is also reflected in the high rates of informal employment that prevails amongst them. The data positively shows that the **prevalence of informal work is much higher for Roma than for non-Roma**. Moreover, in case of Roma the **informal employment is much more common for women, whereas for non-Roma it prevails mainly amongst men** (Figure 13) (with the exception of the Czech Republic and Slovakia); (O'Higgins 2012).

Finally, the labor market position of an individual is also reflected by the wage he or she receives. The data shows that employed **Roma receive significantly lower wages than their non-Roma counterparts**. Romani men earn on average from 45% (in Serbia) to 80% (in Slovakia) of non-Romani men's wage (Figure 14). In most of the surveyed countries Romani women experience even lower relative wages when compared to non-Romani women (Figure 14); (O'Higgins, 2012).<sup>22</sup>

**Figure 13: Roma/non-Roma ratio of prevalence of informal employment by gender**

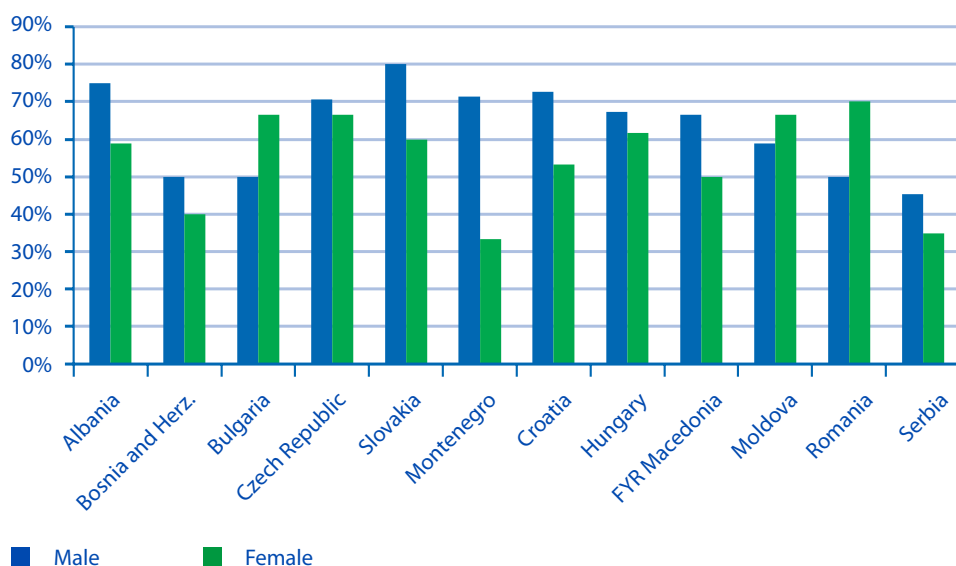


Source: UNDP/WB/EC regional Roma survey 2011

Note: The prevalence of informal employment is calculated as the percentage of workers aged 16-64 who are not paying health or pension contributions.

22 This is not true for Bulgaria, Romania and Moldova (Figure 15).

**Figure 14: Roma median wages as a percentage of non-Roma median wages**



Source: UNDP/WB/EC regional Roma survey 2011

Based on the question "Salaries/income working as employees (cash and in-kind), or self-employment income"

In general, the findings show that Roma and especially Romani women are highly disadvantaged within the labor market, both in terms of employment rates and wages that they receive. The data reveals that **Romani women experience the lowest share of the employment rate, the highest share of inactivity amongst all subgroups based on ethnicity and gender, greater prevalence of informal employment and high disadvantage when compared with non-Romani women in terms of the wage rates.**

## Drivers of the labor market disadvantage

The initial findings by simple exploration of the summary statistics on employment patterns and wages by ethnicity and gender have confirmed that Romani women tend to suffer from labor market marginalization which is both due to ethnicity as well as gender. The econometric analysis further reveals Romani women's cumulated disadvantage. Similarly to the previous section, based on the working age population we run the linear probability model to explore the impact of being Roma and female on the employment probability and the linear regression model for the wage determinants.<sup>23</sup>

The estimates of the probability of being employed obtained from the linear probability model show that Romani men when compared with non-Romani men are by approximately 5% less likely to be working (Table 6). Romani women are by additional 21%, i.e. by 26%, less likely to be employed compared to non-Romani men, and by app. 10% less likely than non-Romani women. The significantly negative interaction term shows that the ethnic gap is greater amongst females and that the extent of the gender gap is more notable amongst Roma than non-Roma. This means that Romani women are subject to a greater gender-based difference in the employment probability than non-Romani women and to a greater ethnic-based difference in the employment probability than Romani men.

**Table 6: Partial effects from the linear probability model and marginal effects from the probit model; dependent variable employment; sample of individuals aged 15 to 65**

Variables	LPM coefficients
	coef/se
Roma	-0.052** (0.021)
Female	-0.165*** (0.022)
Interaction	-0.044*** (0.015)
Number of observations	33 705
Fitted values	0.204

Source: estimated on the basis of the UNDP/WB/EC regional Roma survey 2011.

- Notes: 1. Control variables included in the model are age, level of education, household size and composition, urban area and country fixed effects;  
 2. Statistical significance is indicated as follows: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ;  
 3. Clustered standard errors in the parenthesis. Standard errors are clustered across the countries;  
 4. Detailed estimation results are presented in the Appendix.

Furthermore, empirical analysis regarding the wage rates confirms that Roma receive substantially lower wages – even if they are of the same age, have comparable education and household's composition is similar to the one of non-Roma individuals (Model 1 Table 7).<sup>24</sup> Previous results have shown that informal employment is more likely to occur amongst Roma and as a consequence it may have

23 Since the results of employment probability obtained from the linear probability model slightly differ from the marginal effects obtained from the nonlinear probit model we report both their estimates. The output of the probit model estimations is presented in the Appendix.

a negative effect on their wages (O'Higgins 2012). Moreover, the wage differences may also occur due to the difference in the average hours worked. Indeed, once controlled for the effect of being Roma decreases in magnitude, showing that Roma's employment in informal sector and differences in the hours worked may partially explain their lower wage rates (compare Model 2 Table 7).

**Table 7: Partial effects from wage equations, dependent variable natural logarithm of monthly wage; sample of individuals aged 15 to 65**

	Model 1	Model 2	Model 1 selectivity corrected	Model 2 selectivity corrected
	coef/se	coef/se	coef/se	coef/se
Roma	-0.262*** (0.025)	-0.150*** (0.021)	-0.233*** (0.024)	-0.142*** (0.021)
Female	-0.214*** (0.035)	-0.222*** (0.031)	0.006 (0.062)	-0.064 (0.059)
Interaction	0.023 (0.044)	0.004 (0.035)	0.224*** (0.040)	0.143*** (0.043)
Lambda (selection term)			-0.538*** (0.123)	-0.507*** (0.135)
Number of observations	8 552	8 552	8 366	8 366
R2	0.364	0.456		

Source: estimated on the basis of the UNDP/WB/EC regional Roma survey 2011.

- Notes:
1. Model 1 controls for age, level of education, urban area and country fixed effects;
  2. Model 2 additionally controls for informality of employment and usual hours worked per week;
  3. Robust coefficients are corrected for in-sample selection (Heckman Maximum Likelihood estimation) Number of children below 6 years, total number of household's members, non-labor income and marital status are used for exclusion restrictions;
  4. Statistical significance is indicated as follows: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ;
  5. Cluster standard errors in the parenthesis. Standard errors are clustered across countries;
  6. Monthly wages are adjusted for PPP to produce comparable cross-country values;
  7. Detailed estimation results are presented in the Appendix.

24 However, the negative effect for women is found only once the selection into employment is not considered, i.e. when the fact that not all Roma/women are working and may self-select themselves into employment is not being accounted for. If individuals, who have lower potential to receive higher wages are not considered (e.g. low educated women), then the estimates will be upward bias. If opposite is the case, i.e. individuals with higher potential to receive higher wages are not working, then the coefficient estimated on the observed sample will be downward bias. The Heckman correction (1973) is used to correct the selection into the labor market.



However, the results should be interpreted carefully. Firstly, the imposed linear model assumes that the returns to education are the same for all the subpopulations based on ethnicity and gender. Secondly, the obtained results are based only on the working-age population and as a consequence do not account for the possible selection in labor market participation. If we take into account that not all the individuals are working and some choose not to work, then the negative impacts of being Roma and female change (compare Column 3 and 4 Table 7). Once the selection in labor market participation is accounted for, women are not found to have significantly lower wages than men.

When corrected for the fact that not all women and Roma are actually working (and thus do not receive a wage) the interaction term in the estimates is significant and positive, showing that the disadvantage due to ethnicity is **greater amongst men**. Furthermore, amongst comparable Roma individuals, it is the women who tend to receive higher wages. This unexpected finding may also be caused by the strong assumptions which might not be entirely valid (e.g. that the returns to education in the case of males are the same as in the case of females); (O'Higgins 2012). The negative and significant selection term shows that the (unobserved) factors that make the probability of employment higher tend to be associated with lower wages. In consequence, once the estimates are corrected for this fact, women are not found to receive considerably lower wages than men.

Besides the simple summary statistics presented in the previous subsection, O'Higgins (2012) further disaggregates the observed wage rates amongst the defined subpopulations based on ethnicity and gender and looks into the effects of changes in the education level. He shows that the ratio of Roma to non-Roma wage rates increases, which means that the inequality decreases, as the level of education gets higher. This increasing trend is particularly observed for women and suggests that achieving **higher education tends to close the wage gap between working Roma and non-Romani women**. Does this mean that the differences in education between Roma and non-Roma may explain the existing wage gap? In order to see whether this may be the case, we decompose the gaps and derive the share of that gap, which is explained by the disparities between Roma and non-Roma in terms of education and other observable characteristics that determine the employment and remuneration patterns.<sup>25</sup>

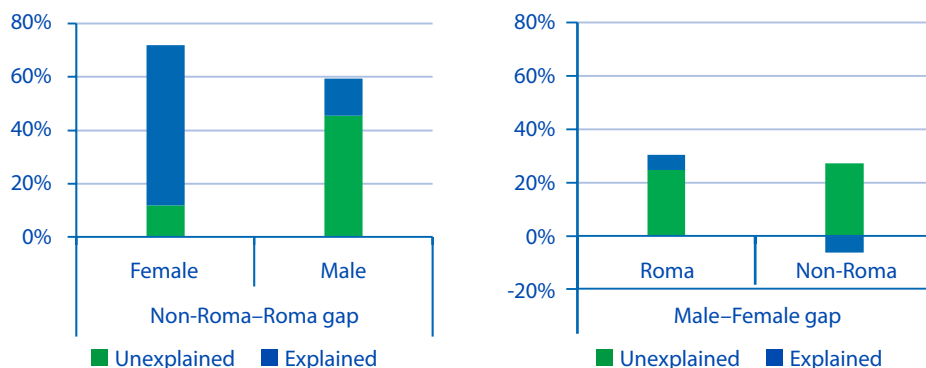
The decomposition results (Figure 15) show that amongst females the part of the ethnic wage gap, which may be explained by the differences in characteristics (e.g. education), accounts for 84%.<sup>26</sup> The rest of the gap – 16% is left unexplained, suggesting

25 As before, the Nöpo decomposition method is applied.

26 The wage gap is decomposed based on the following variables: age dummies, education level dummies, urban area indicator, usual hours worked per week, contract indicator. The country fixed effects are additionally controlled for.

that there are still some other unobserved factors such as lower ability to work, mismatched skills as well as discrimination, that cause Romani women to receive lower wages than non-Romani women. For men the unexplained part is much greater – 76%, which may suggest that Roma men are subject to more serious ethnicity-based discrimination in the labor market. But, again, at least part of the unexplained difference may be due to other unobserved factors unrelated to discrimination.

**Figure 15: Nôpo decomposition results of wage gap, sample of individuals 16 to 64 years old.<sup>27</sup>**



Source: estimated on the basis of UNDP/WB/EC regional Roma survey 2011

Note: Detailed decomposition results are presented in Appendix.

The decomposition is performed based on the following characteristics: Age (age dummies), education (educational dummies), household size, urban dummy, usual hours worked per week, contract indicator. Country fixed effects are additionally included.

The vertical axis presents the total gap defined as a difference in the outcome variable between men and women (non-Roma and Roma) as a percentage of the average value of the outcome variable for women (Roma). The total gap is equal to the sum of explained and unexplained parts.

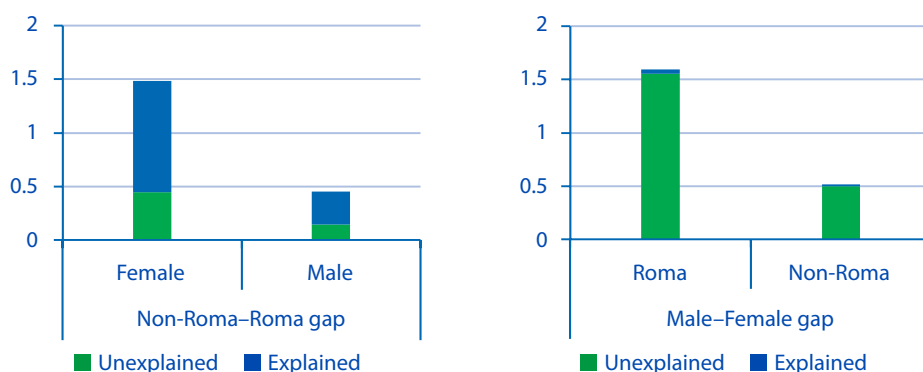
The results concerning the gender wage gap decomposition **show that the gender wage gap amongst Roma is higher than that of non-Roma**. The differences in the level of education as well as other factors determining the wage rates – which are age, household size and composition, area of living, having a written contract with the employer and usual hours worked – partially explain the existing gender wage gap, but only amongst Roma. The unexplained component of the gender wage gap amongst the non-Roma population accounts for more than 100% and the explained part for -29%, which means that women have on average better observable characteristics than men do and if it happened that men's and women's characteristics were comparable the gap would have increased. The results thus show that non-Romani women are experiencing gender wage gap even though they have better observable characteristics, such as education. Romani women are

<sup>27</sup> Due to the interpretation of the decomposition terms, the decomposition is performed based on the wage rate, not the logarithm.

also subject to the gender wage gap in wages, but on contrary to non-Romani women, their characteristics are lower than that of Romani men. The results thus indicate that **whilst Romani women are subject to lower rewarding at the labor market compared to men caused by unobserved factors, including gender based discrimination, non-Romani women are disadvantaged twofold as they are rewarded less even though they have better observable skills than men.**<sup>28</sup>

Similarly, we look whether the differences in characteristics between the ethnic-gender subgroups may contribute to explaining the gaps in employment. The decomposition results (Figure 16) show that amongst females the part of the ethnic employment gap, which may be explained by the differences in characteristics (e.g. education), accounts for 70%. The rest of the gap – 30% – is left unexplained. Similar patterns can be observed for men. This means that **education and household composition of Romani women and men may explain their lower share of employment when compared with their non-Roma counterparts.** As before, these factors may but do not have to be an evidence of discrimination.

**Figure 16: Nôpo decomposition results of employment gap, sample of individuals 25-64 years old.**



Source: estimated on the basis of UNDP/WB/EC regional Roma survey 2011

Note: Detailed decomposition results are presented in Appendix.

The decomposition is performed based on the following characteristics: Age (age dummies), education (educational dummies), household size, number of children in the household who are below 6 years old or younger, urban dummy. Country fixed effects are additionally included.

The vertical axis presents the total gap defined as a difference in the outcome variable between men and women (non-Roma and Roma) as a percentage of the average value of the outcome variable for women (Roma). The total gap is equal to the sum of explained and unexplained parts.

The comparison of ethnic gaps for men and women across the countries (O'Higgins 2012) additionally reveals substantial cross-country variations in the size of both the employment gap and the wage gap as well as the extent to which this can be

28 However, this may stem from the fact that decompositions were done conditionally on employment and consequently do not account for the selection into the labor market.

attributed to differences in attained education and acquired experiences between Roma and non-Roma. The highest ethnic employment gaps amongst men are observed in Croatia, Czech Republic and Slovakia; the lowest in Albania, Hungary and Montenegro. Similarly for women the ethnic employment gaps are the highest in the Czech Republic and Croatia, and the lowest in Albania. As far as the wages are concerned the highest ethnic gaps amongst both men and women are observed in Bosnia and Herzegovina; the lowest in Moldova and Montenegro (amongst men) and Moldova and Hungary (amongst women).<sup>29</sup>

Overall, the decomposition results show that the **differences in the level of education and other individual observable characteristics are not sufficient enough to explain the gender employment and wage disparities both amongst non-Roma and Roma**, as a majority of the gender gap is left unexplained. Nevertheless, the **distribution of these characteristics can partially justify the existing gaps in employment and wages based on ethnicity**. The part with the highest percentage that can be explained by those factors is observed for the female ethnic gap in employment and wages, meaning that the differences in the employment and wage levels between Romani and non-Romani women are mostly due to the differences in their education and household composition (e.g. higher number of children that Romani women need to take care of or higher prevalence of informal employment amongst Romani women). However, this is not true for men as the ethnic gaps in employment and wage rates are found unexplained to a greater extent – which means that Romani men are subjected to greater disadvantage that may be caused by the labor market discrimination against them. Moreover, there is a high variation across the countries both in size of the ethnic gap and in the parts explained by the individual attributes.

## Economic dependency and incomes

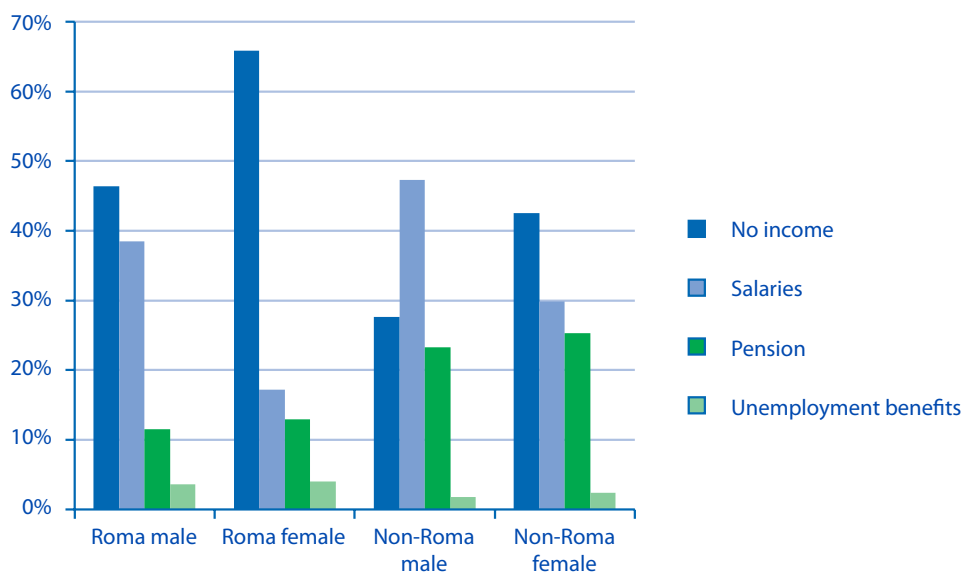
Researchers investigating gender inequalities devote a lot of attention to the concept of women's empowerment and its relative importance for measuring the degree of gender inequality in societies. Page and Czuba (1999) define the empowerment of women as a 'multidimensional social process that helps people gain control over their own lives. It is a process that fosters power (that is, the capacity to implement) in people, for use in their own lives, their communities, and in their society, by acting on issues that they define as important'. On the other hand, Batliwala (1995) defines women's empowerment as 'the process, and the outcome of the process, by which women gain greater control over material and intellectual resources, and challenge the ideology of patriarchy and the gender-based discrimination against women in all the institutions and structures of society'. Empowerment of women has many distinct priority areas such as sociological, psychological, economic or political em-

29 For details see O'Higgins (2012)

powerment. In this section we particularly refer to a degree of women's control over economic resources and concentrate on a scale of women's financial dependency. To this end, we look at the differences in the relative men's and women's contribution to the household's total income, explore differences in the sources of their incomes and look at the degree of entrepreneurial potential.

Figure 17 shows that amongst Romani women more than 60 percent do not have any income (66%). This is a substantially higher share than that of both Roma men (46%) and non-Romani women (43%). Furthermore, salary from a paid employment constitutes the main source of income for only 17% of Romani women; the respective percentage for Roma men is 39% and non-Romani women 30%.

**Figure 17: Main source of income by ethnicity and gender, sample of individuals who are at least 16 years old**



Source: UNDP/WB/EC regional Roma survey 2011

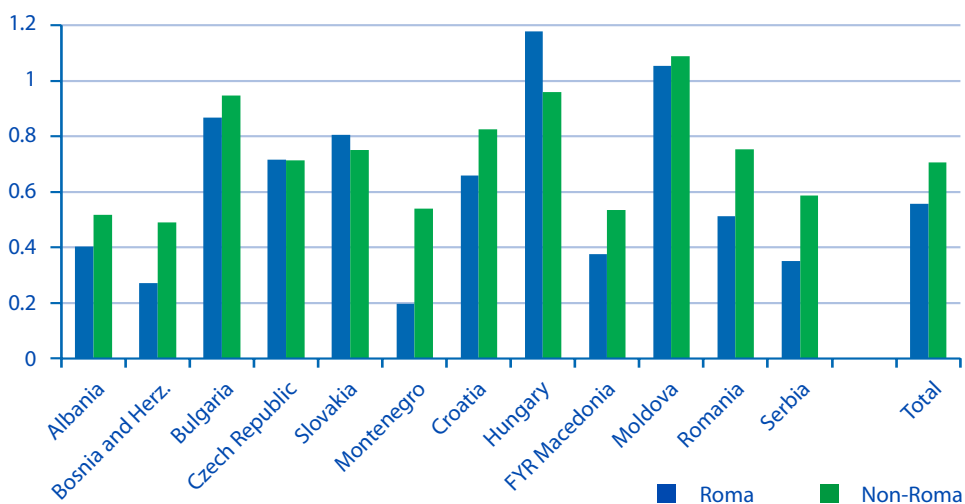
Based on the questions "Salaries/incomeworking as employees(cash and in-kind),or self-employment income", "Unemployment benefits" and "Any pension – social old age, disability, survivor pension, war veteran pension, etc."

On the other hand, more noticeable gender-based inequalities are present amongst Roma than amongst non-Roma: the ratio of female-to-male share of individuals whose main source of income is a salary is equal to 0.44 for Roma and 0.62 for non-Roma. This means that **Romani women constitute not only the highest share of**

**individuals with no income and the lowest share of individuals whose main source of income is paid work, but also experience higher relative disadvantage compared to men than the relative disadvantage experienced by non-Romani women.**

Based on the results above, it should not come as a surprise that women – both Romani and non-Romani – tend to contribute less than men to the total household income. Their average share of income in the total household income is on average equal to 20% amongst Roma and 30% amongst non-Roma. Women's contribution to the total household income is on average half of men's (Figure 18). The ratio of male to female contribution to the total income amongst Roma individuals in most countries is lower than amongst non-Roma (Hungary and Slovakia are exceptions). Moreover, there is a substantial cross-country variation in that regard with Montenegro showing the lowest ratio of male/female contribution in the case of Roma.

**Figure 18: Ratio of female to male average contribution to the total household income by country**



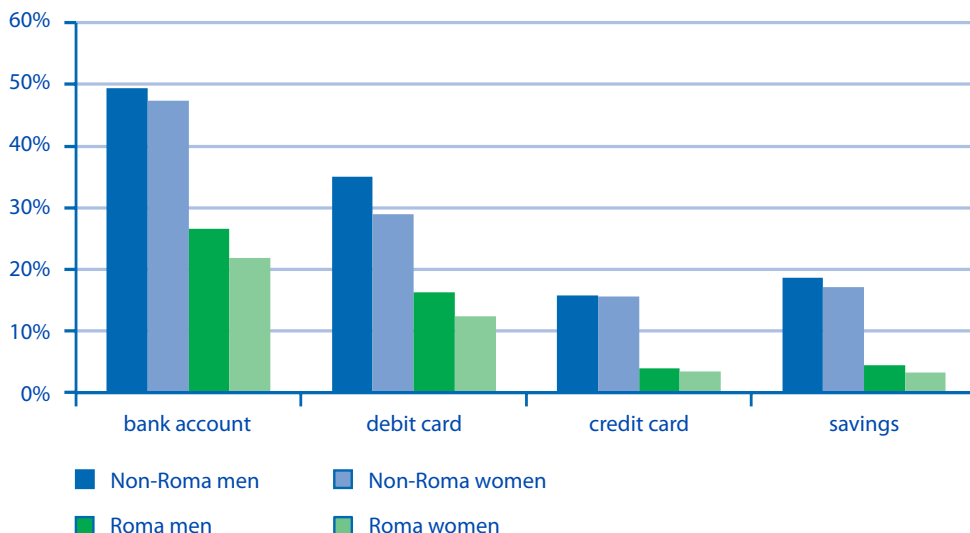
Source: UNDP/WB/EC regional Roma survey 2011

Based on the questions "Salaries/income working as employees (cash and in-kind), or self-employment income", "Unemployment benefits" and "Any pension – social old age, disability, survivor pension, war veteran pension, etc."

In addition to being less likely to work and receive remuneration and as a consequence contributing less to the total household income, women both amongst Roma and non-Roma are also less likely to use the basic banking services (Figure 19).

High gender disparities prevail especially with regard to holding a debit card: the women/men ratio of debit card holders is 0.83 amongst non-Roma and 0.76 amongst Roma. However it should be noted that inter-ethnic differences are more explicit than those defined by gender. This is particularly the case in regards to savings – **Roma are nearly five times less likely to have savings than non-Roma.**

**Figure 19: Savings and financial security. Ownership of a bank account, credit and debit cards and having savings – by ethnicity and gender**



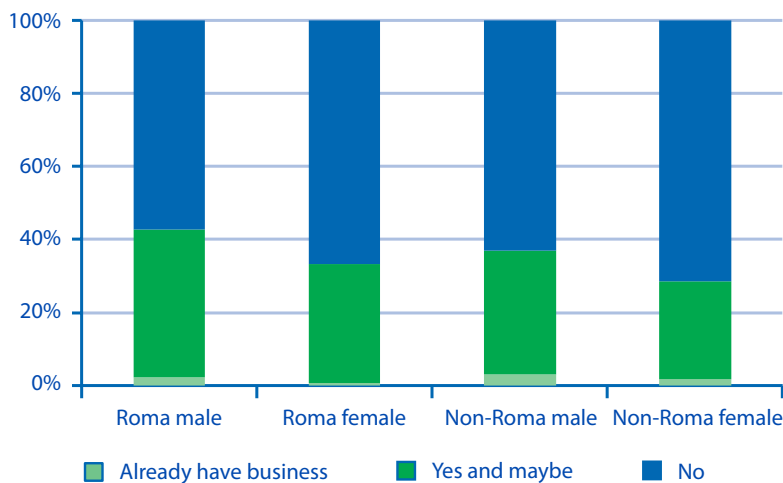
Source: UNDP/WB/EC regional Roma survey 2011

Note: The derived statistics are based on the answers to the question posed to the head of the household.

Based on the questions "Does your household have current bank account", "Does your household have debit/payment card" "Does your household have credit cards and/or store cards" and "Does your household have any savings, such as cash or bank deposit"

Finally, we look at the gender and ethnic disaggregated data on entrepreneurship measured by a variable which indicates whether an individual is self-employed and if not, whether s/he is interested in such an employment. Figure 20 shows that both amongst Roma and non-Roma it is the men who are more likely to be running their own business.

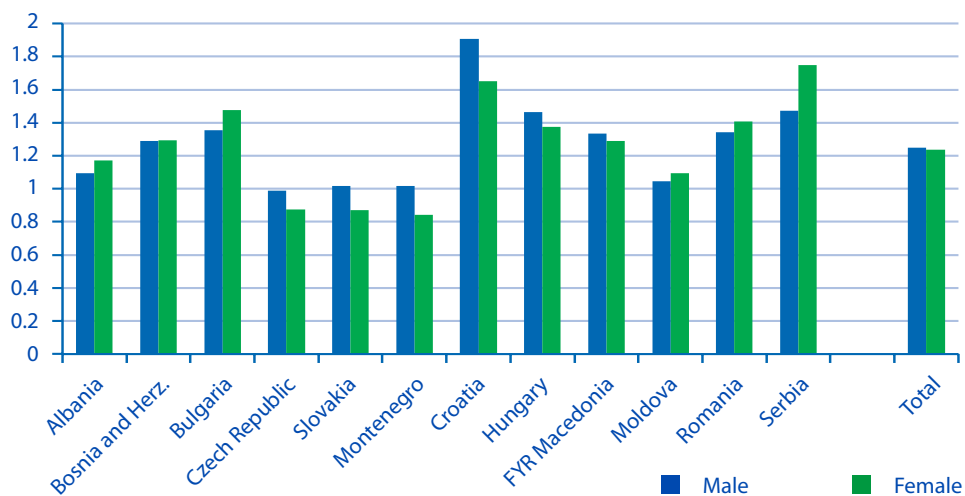
**Figure 20: Interest in becoming self-employed and starting own business by ethnicity and gender, sample of individuals who are at least 16 years old**



Source: UNDP/WB/EC regional Roma survey 2011

Based on the question "Is s/he interested in becoming self-employed and starting own-business?"

**Figure 21: Ratio of Roma to non-Roma interest in becoming self-employed and starting own business by gender and country, sample of individuals who are at least 16 years old**



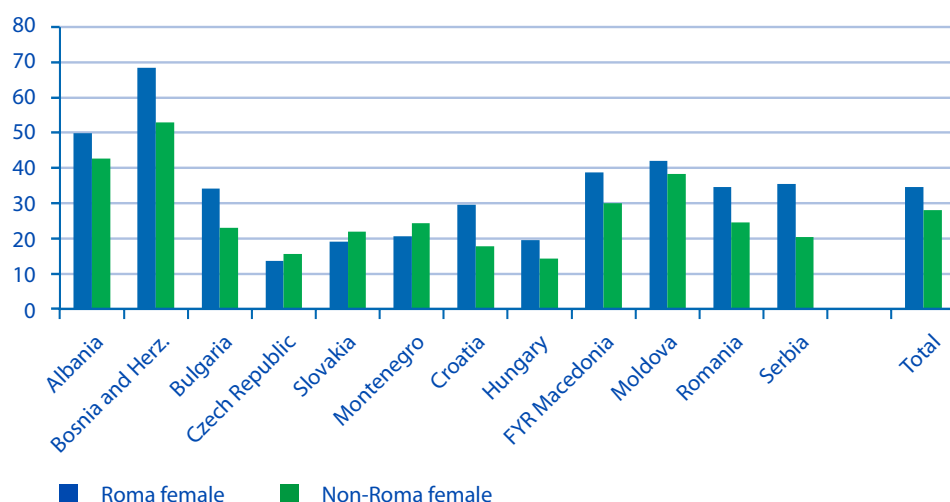
Source: UNDP/WB/EC regional Roma survey 2011

Based on the question "Is s/he interested in becoming self-employed and starting own-business?"



Furthermore, amongst those who are not self-employed, men are more willing to set up their own business than women. Ethnic differences can also be observed: Roma individuals show higher interest in being self-employed than non-Roma. This is true for both men and women; the ratio of Roma to non-Roma individuals answering affirmatively on their willingness to become self-employed is equal to 1.21 both for men and women (Figure 21). Figure 22 additionally shows that women's interest in establishing their own business varies considerably amongst the surveyed countries implying significant cross-country differences in entrepreneurial potential.

**Figure 22: Share of women who consider establishing their own business by ethnicity and country (%)**



Source: UNDP/WB/EC regional Roma survey 2011

Based on the question "Is s/he interested in becoming self-employed and starting own-business?"

## Is it getting better?

### Changes in employment between 2004 and 2011

Previous analysis has shown that Romani women are less likely to be active in the labor market, and consequently they are more at risk of being financially dependent on men. In this subsection we look at whether the women's situation with respect to their employment prospects and thus their financial empowerment have improved over the period of 2004-2011.

As formerly discussed the economic crisis might have caused the disadvantaged groups to be exposed to a higher risk of unemployment (European Commission 2011). As far as the females are concerned this has certainly been the case. Over the years (2004-2011) we observe an increase in the gender-based employment gap: during the period of 2004-2011 the gender gap in employment has increased both amongst Roma and non-Roma (Table 8). However, the observation is true especially amongst Romani individuals, for whom the average difference in the employment probability between men and women has increased by more than a half. **Therefore, over the years (2004-2011) Romani women in comparison to Romani men have become even more disadvantaged in terms of their employment prospects, which may consequently contribute to an increase in their financial dependency on men.**

**Table 8: Difference-in-difference estimates of employment**

Employment					
Full sample					
Gender effect 2004	-0.147***	(0.006)	Roma effect 2004	-0.086***	(0.007)
Gender effect 2011	-0.210***	(0.005)	Roma effect 2011	-0.074***	(0.006)
Diff-in-diff est.	-0.063***	(0.008)	Diff-in-diff est.	0.012	(0.008)
Amongst Roma			Amongst males		
Gender effect 2004	-0.143***	(0.009)	Roma effect 2004	-0.122***	(0.011)
Gender effect 2011	-0.222***	(0.005)	Roma effect 2011	-0.072***	(0.009)
Diff-in-diff est.	-0.080***	(0.010)	Diff-in-diff est.	0.049***	(0.013)
Amongst non-Roma			Amongst females		
Gender effect 2004	-0.151***	(0.009)	Roma effect 2004	-0.052***	(0.009)
Gender effect 2011	-0.177***	(0.009)	Roma effect 2011	-0.074***	(0.014)
Diff-in-diff est.	-0.026	(0.013)	Diff-in-diff est.	-0.022**	(0.010)

Source: estimated on the basis of UNDP/WB/EC regional Roma survey 2011

Notes: DiD estimator based on the regression with the following RHS variables: age dummies, educational level dummies, urban area and country fixed effects (estimates based on a sample of the following countries: Albania, Bulgaria, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia, and Romania).

Standard errors reported in the parenthesis: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

On the other hand, the ethnic gap between all Roma and all non-Roma individuals (irrespective of their gender) can be observed to have slightly decreased. Nevertheless, the closer inspection of the patterns by a separate investigation of the ethnic gap amongst males and females shows that the positive changes occurred mainly amongst men; **for women the ethnic gap is found to have rather increased.**

The findings, therefore, confirm the expectations that economic vulnerability in the time of the economic crisis may have had severe effects especially on disadvantaged groups, as the **position of Romani women in terms of employment probability has worsened, both in comparison to Romani males and non-Romani females.**

## Health

Issues related to the health of Roma population are gradually gaining more attention within the political debates. Recent studies focusing on Central and –East European countries show that Roma minorities are subject to a significantly higher health vulnerability (e.g. Bulgaria (OSI 2007), Slovakia (Ginter et al. 2001) or the whole region (UNDP 2005, Masseria et al. 2010). Some of the studies focus explicitly on the health status of Romani women (e.g. EU 2003, Krumova and Ilieva 2008), who are often considered in the context of reproductive health. It has been widely documented that many Romani women lack the access to family planning and as a consequence the usage of the unaffordable contraceptives is relatively low, whereas the abortion rates are high (Krumova and Ilieva 2008). Human rights NGOs have reported several high-profile cases of forced and non-consensual sterilization of Romani women.<sup>30</sup> Because of the high fertility rates Romani women are exposed to a higher risk in terms of their overall health condition.

### Empirical findings

The UNDP/WB/EC regional Roma survey 2011 gathers the data concerning health status from many dimensions. Firstly, the self-perceived health status is reported.<sup>31</sup> Furthermore, the data on access to medical services, holding the medical insurance, as well as the way the individual has been born (either in a hospital or not) and whether the inpatient stayed in the hospital have also been collected. However, only limited data is available for all the respondents as most of the information is

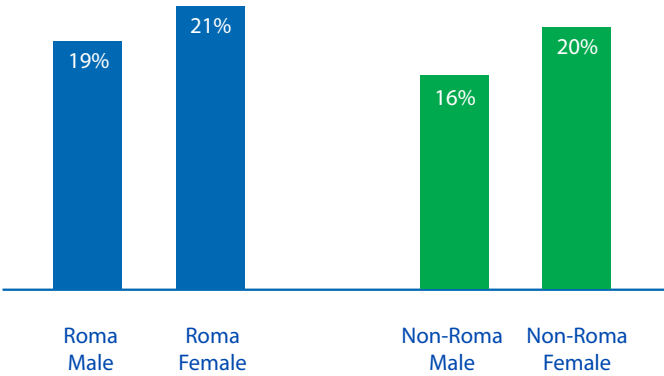
30 There are several reports which focus on the sterilization of Romani women: Coercive Sterilization of Romani women (ERRC 2008), at: [http://www.soros.org/initiatives/health/focus/roma/events/roma-women\\_20080703/errcbrochure\\_20080703.pdf](http://www.soros.org/initiatives/health/focus/roma/events/roma-women_20080703/errcbrochure_20080703.pdf); Final Statement of the Public Defender of Rights in the Matter of Sterilizations Performed in Contravention of the Law and Proposed Remedial Measures (Ombudsman of the Czech Republic 2005), at: <http://www.ochrance.cz/documents/doc1142289721.pdf>; A.S. vs Hungary, Communication 4/2004 (Committee on the Elimination of All Forms of Discrimination against Women 2004), at: <http://www.un.org/womenwatch/daw/cedaw/protocol/decisions-views/Decisionpercent204-2004percent20-percent20English.pdf>

31 Certainly, the results based on the self-perceived health conditions may not be a reflection of objective health assessment, as they are likely to be constrained by the problems related to the subjective responsiveness, in the sense that individuals who are more health-aware might be better informed of their own health status. Consequently, the individuals who use medical services more often may report a poorer health status but the opposite may be the case: individuals, who have a better access to health services, could be more likely to report a better health status.

based on randomly selected or household questionnaires, which significantly reduces the number of observations.

Mihailov (2012), who analyzes the 2011 UNDP data on health of Roma in comparison with non-Roma individuals, reports that Roma’s self-perceived health status is not significantly poorer. However, in the paper he argues that “health problems are only perceived by the Roma once they reach acute forms that are recognised as disabilities, long-standing illnesses at higher age or require inpatient visits”. Once the health status is assessed in terms of the prevalence of chronic disorders, the share of Roma individuals responding affirmatively is equal to 17%, whereas for non-Roma to 18%. The percentage of reported chronic illnesses rises with age both amongst Roma and non-Roma and amongst the older population the differences between Roma and non-Roma tend to be greater (with Roma reporting higher rates of suffering from chronic illnesses). The disaggregation of the data with respect to gender reveals that **females are reporting chronic illnesses more frequently – both amongst Roma and non-Roma** (Figure 23).

**Figure 23: Rate of prevalence of chronic illness by ethnicity and gender (individuals 9 to 75 years old)**



Source: Mihailov (2012) based on UNDP/WB/EC regional Roma survey 2011

Based on the question “Does s/he have any long-standing illness or health problem?”

Moreover, significant differences (even though small in magnitude) between Roma and non-Roma can be noted when it comes to the share of individuals, who are unable to work due to a long-term illness or disability (1.3% and 0.96% respectively); (Mihailov 2012). In both sub-samples Roma and non-Roma males report a higher number of illnesses and disabilities that make them unable to work compared to

females. Therefore, **even though women report higher rates of chronic illnesses it is mostly the men, who proclaim themselves as unable to work due to poor health conditions.** Nevertheless, this observation may be correlated with the overall lower participation of women in the labor market.

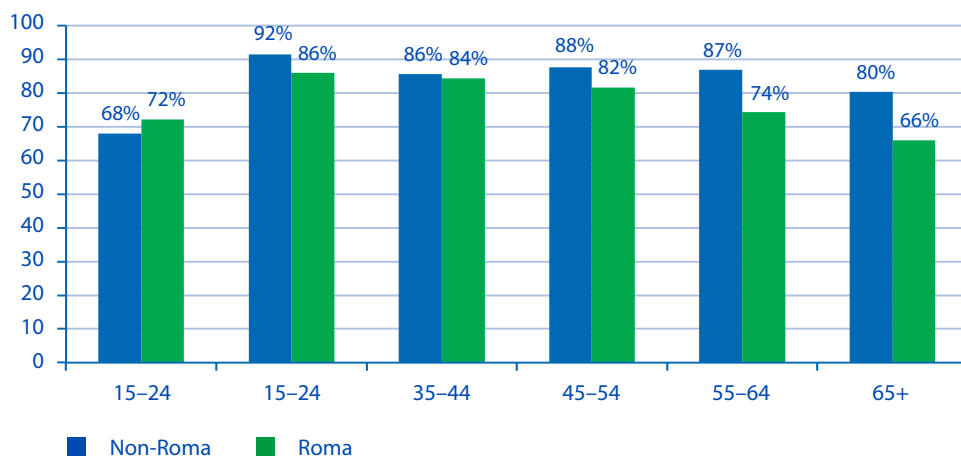
Furthermore, the data on reproductive health, which is a central issue in the debate on women's health, reveal that over the last six years the rate of births given outside of a hospital was higher for Romani women than for non-Romani women (5% and 3% respectively). Three percent of the births given by Romani women were still attended by professionals and two percent were delivered without any medical support. For non-Romani women these rates are a bit lower – 2% and 1% respectively.

Significant variations with respect to these rates are present across the countries in which the survey was conducted. Slovakia is a country with the highest percentage of Romani women for whom the childbirth was attended by a professional (97%). On the contrary, the countries with a very low rate of births attended by a professional are FYR Macedonia (23%), Bosnia and Herzegovina (18%), Serbia (16%) and Montenegro (16%). This is a somehow unexpected finding as the countries scored well in most of the survey's other medical indicators.<sup>32</sup> The remaining countries have similar inpatient birth delivery rates for Romani women, around 90% (Mihailov 2012). **Overall, although the average numbers show a rather positive trend, there are still some countries where the conditions for giving birth to a child in case of Romani women are still severe, which may be dangerous for both the mother's and the child's health as well as the child's future development.**

Based on the available data we find that Romani women do not visit a gynecologist less frequently than non-Romani women. However, the low differences may be caused by the measurement method, which is based on an affirmative answer to the question whether the individual **has ever visited a gynecologist** and as a consequence does not account for periodicity of the visits. Mihailov (2012) shows that there is a significant variation within the results across age groups: amongst the young population (aged 15-24), Roma women have a higher rate of visiting a **gynecologist** than their non-Roma peers (Figure 24). The results also show that the rate of affirmative responses of older Romani women is significantly lower than that of non-Romani women, which may suggest that health awareness amongst the young Romani women has been improved.

32 High and unexpected rates of unattended births observed in the countries of Former Yugoslavia may be direct consequences of dissolution of the country. The dissolution has triggered an increase in migration, especially amongst Roma people, which had further impacted on their reputation within the region. In particular, the problem of not having an ID card and having only a limited health insurance may have an influence on the higher observed rates of unattended births. Whilst analyzing the Roma situation in the countries of Former Yugoslavia, the implications of the forced Roma migration may shed an additional light on a particular problem (Cherkezova and Tomova 2013).

**Figure 24: Percentage of affirmative response to the question whether an individual has ever visited a gynecologist by ethnicity and age**



Source: Mihailov (2012) based on UNDP/WB/EC regional Roma survey 2011

Based on the question "If woman – have you ever visited a gynecologist?"

## Drivers of women's health vulnerability

The initial findings concerning the self-perceived health status are further confirmed by the econometric analysis that we perform based on the linear probability model.<sup>33</sup> Within the surveyed countries Roma when compared to non-Roma are by 3.7% more likely to report a chronic illness. Moreover, females are by 2.8% more likely to do so than men. However, the findings also suggest that the differences between Roma and non-Roma are the same amongst males and females and the gender differences are comparable for Roma and non-Roma, which is shown by the insignificance of the interaction term. If we compare the individuals of the same age and with the same level of attained education, we find that ethnic gap increases but on the contrary the gender gap decreases (Model 3 Table 9). **This means that both age and level of education contribute to widening the gap between Roma and non-Roma in terms of the self-reported prevalence of chronic illnesses. Consequently, Roma of the same age and with the same level of education as non-Roma are more likely to report the case of a long-lasting health problem.** Controlling for poverty and poor housing conditions of Roma only slightly decreases the probability of reporting health problems amongst Roma (Model 6 and 7 Table 9).

33 Similar to the previous analysis, the results from the linear probability model are compared with the non-linear probit model. The results from both models are similar. In order to make the interpretation of the interaction term easier only the results from the LPM are considered.

**Table 9: Marginal effect from long-standing illness probit model, sample of individuals who are 9 to 75 years old**

Variable	Model 1 coef/se	Model 2 coef/se	Model 3 coef/se	Model 4 coef/se	Model 5 coef/se	Model 6 coef/se	Model 7 coef/se	Model 8 coef/se
Roma	0.037*** (0.006)	0.112*** (0.006)	0.067*** (0.007)	0.066*** (0.007)	0.065*** (0.007)	0.062*** (0.007)	0.059*** (0.007)	0.061*** (0.007)
Female	0.028*** (0.008)	0.020*** (0.007)	0.016** (0.007)	0.016** (0.007)	0.016** (0.007)	0.016** (0.007)	0.016** (0.007)	0.007 (0.007)
Interaction	-0.008 (0.009)	-0.002 (0.008)	-0.006 (0.008)	-0.006 (0.008)	-0.006 (0.008)	-0.006 (0.008)	-0.006 (0.008)	-0.010 (0.008)
Number of observations	43 093	43 093	43 093	43 093	43 093	43 093	43 093	43 093
R2	0.017	0.167	0.176	0.179	0.180	0.181	0.182	0.201

Source: Estimated on the basis of UNDP/WB/EC regional Roma survey 2011

Notes: 1. Model 1: Gross model; Model 2: +Age and relation controls; Model 3: + Education level controls; Model 4: +Medical controls (assisted birth indicator, access to doctor when needed indicator); Model 5: +Living environment controls (urban area); Model 6: +Poverty indicator; Model 7: +Housing conditions (squared meter per capita, rooms per capita, bathroom indicator, electricity indicator); Model 8: +Employment controls (employment indicator, non-labor income indicator).  
2. Gross model and all the successive models additionally include country fixed effects.  
3. Robust standard errors reported in the parenthesis: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

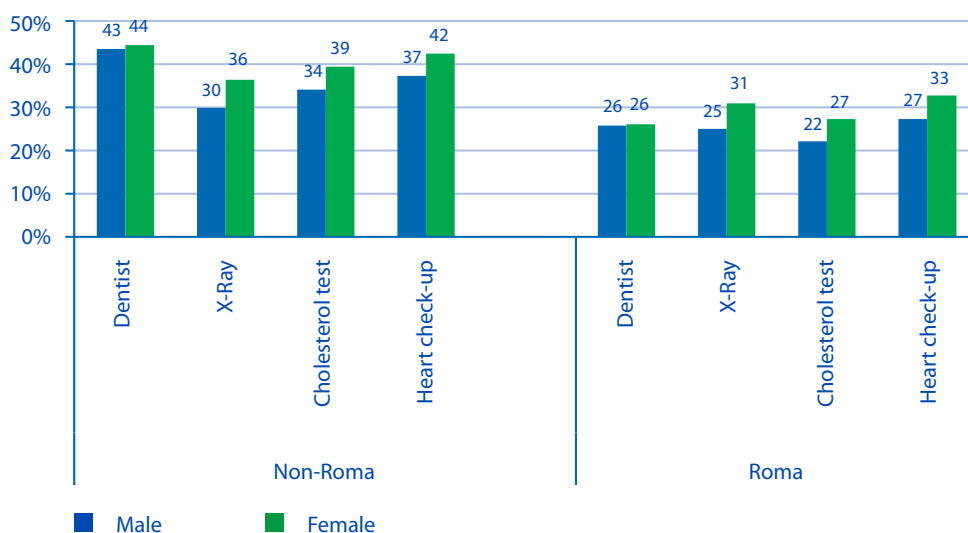
In the estimating equations the level of education may partially serve as a measure of unobserved health awareness. If we consider the education level as a proxy indicator of unobserved awareness, Roma are found to be more likely to report health difficulties (there is an increase in the marginal effect of being Roma on the probability of reporting health problems once the education is controlled for). Mihailov (2012) in addition shows that education is an important factor that determines Romani women's gynecological awareness, as the percentage of affirmative responses increases with the level of attained education. Furthermore, he also shows that the gynecological visits are heavily influenced by cultural and religious values and norms and concludes that "the analyses suggest that **masculine marital values, low educational values, and values evading interethnic interactions** are associated with lower access to reproductive health, and gynaecological attendance in particular."

Not only health awareness may be important for determining whether Roma men and women indeed suffer from more health disorders, but also the degree of medical accessibility might play a crucial role. Although medical care, especially having access to a doctor, has not been found to explain the higher probability of reporting chronic disorders for Roma (compare Model 4 Table 8); the limited access to medical help may be significant when determining the poor health conditions of Romani women, who tend to have a greater need to visit a specialist due to their rel-



actively high reproduction rate. In order to analyze Roma-non-Roma inequality in access to medical services, Mihailov (2012) looks at whether the individuals have a health insurance and if they have access to various medical check-ups such as for dental health, X-rays, heart diseases, blood pressure, blood cholesterol, and blood sugar tests. He finds that amongst **Roma individuals the access to these services is much more limited than amongst non-Roma**. As far as the gender differences are concerned he notes that women are more likely than men to attend blood pressure check-ups, but gender becomes irrelevant when it comes to the probability of having a health insurance. Overall, these results are **rather inconclusive as to whether Romani women are more or less likely than Romani men to see a doctor when it is needed**.<sup>34</sup> In order to explore the gender-based differences in access to medical services we, therefore, further explore the gender dimension of more specialized medical services, such as dental health and X-rays.

**Figure 25: Percentage of affirmative response to the question whether an individual had tests or check up in the last 12 months by ethnicity and gender; sample of individuals who are 16 years old or older**



Source: Mihailov (2012) based on UNDP/WB/EC regional Roma survey 2011

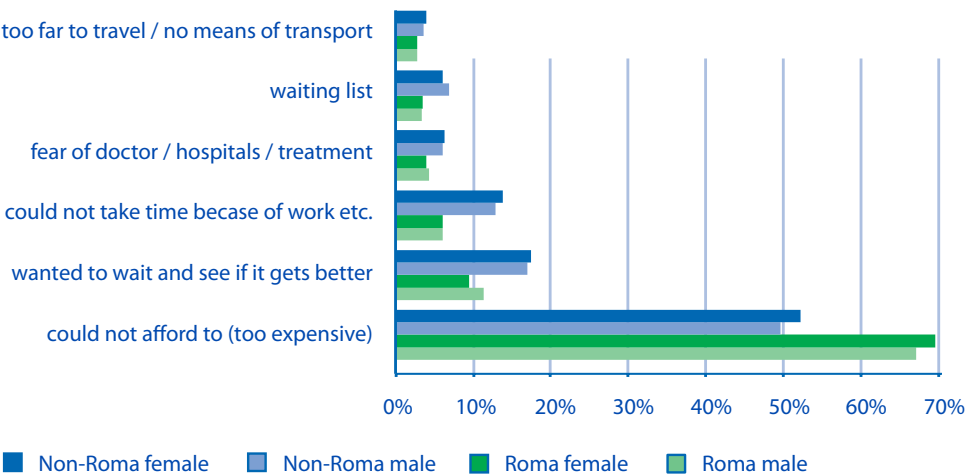
Based on the questions "In the last 12 months did you have a dental check-up?", "In the last 12 months did you have an x-ray?", "In the last 12 months did you have cholesterol test?" and "In the last 12 months did you have heart check-up?"

34 However, in general we could expect Romani women to undergo health checks more often than Romani men due to reproduction and childbirth.

Figure 25 indicates that the magnitude of the gender differences both amongst Roma and non-Roma is similar. With regard to the dental check-ups the gender gap remains rather small, but it is the ethnic differences that are the most significant. More specialized check-ups are observed to be more frequent for women than men. This observation indicates that Romani men undergo health monitoring less often both in comparison to non-Romani men and Romani women.

The data show that **lack of financial resources and thus affordability of medical service is the main reason for not seeing a doctor when it is needed** (Figure 26). Particularly high is the share of Romani women who stated that they could not afford to see a doctor when it was necessary. 68% of surveyed Romani women and 51% of surveyed non-Romani women were unable to see a doctor due to their insufficient resources, which represents a considerable difference. In particular, Romani women from either segregated neighborhoods or small-sized settlements, where there is no doctor present, may be unlikely to consult a physician even when they are suffering from a serious health problem.

**Figure 26: Respondents' reasons for not going to see a doctor when it is needed by ethnicity and gender (%)**



Source: Mihailov (2012) based on UNDP/WB/EC regional Roma survey 2011

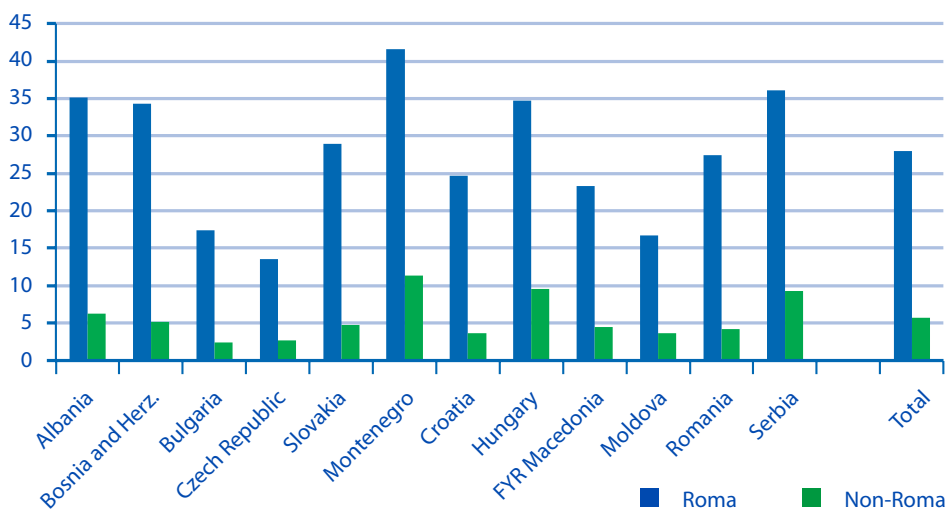
Based on the question "(If needed to consult a doctor and did not) what was the main reason for not consulting a doctor?"

## Housing and the impact of substandard conditions on the position of women

The housing issues of Romani women overlap with many other areas and thus have an impact on health, education and consequently on their employment status. As previous analysis has shown, housing conditions substantially affect the ethnic gap in health (compare Model 7 Table 8) as well as in educational achievement (Figure 3) and as a consequence also in employment.

The 2011 UNDP survey exposes the substandard housing conditions of Romani households (Figure 27). Perić (2012) writes extensively about the characterization of those Romani households that lack the adequate access to water, sanitation and electricity compared to non-Romani households in the same communities. She also argues that Romani women use energy sources of lower quality for cooking and heating more often than non-Romani women. One of the burning issues in the region is the lack of waste collection in predominantly Romani settlements when compared with non-Roma settlements. Moreover, based on the research majority of Roma identify little infrastructure investment and improvements in their settlements. Perić also refers to the poor housing conditions of Roma which she finds to be “considerably less secure, less habitable and more overcrowded compared to non-Roma housing”.

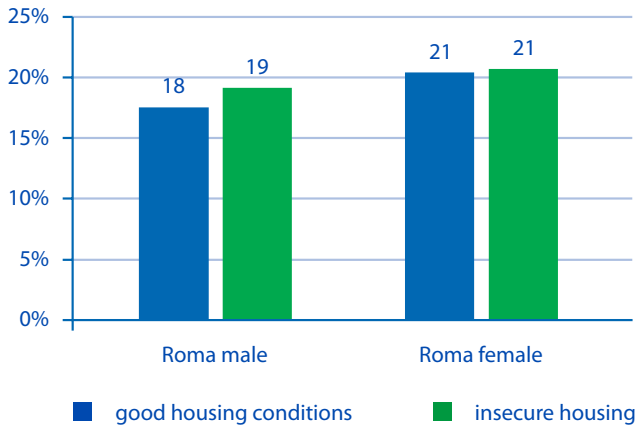
**Figure 27: Share of individuals living in insecure housing conditions by ethnicity and country (%)**



Source: Perić (2012) based on UNDP/WB/EC regional Roma survey 2011

Based on the question “External evaluation of the household’s dwelling: Ruined house or slums”

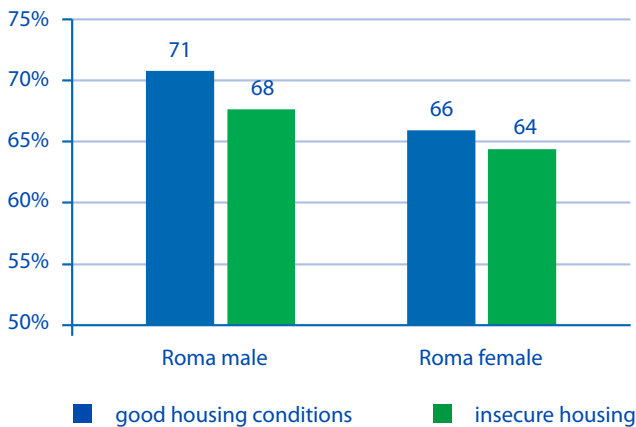
**Figure 28: Incidence of chronic health amongst amongst Roma by gender and housing conditions**



Source: UNDP/WB/EC regional Roma survey 2011

Based on the questions “Does s/he have any long-standing illness or health problem?” and “External evaluation of the household’s dwelling: Ruined house or slums”

**Figure 29: Share of Roma who perceive their health status as “good” and “fairly good” by gender and housing conditions**

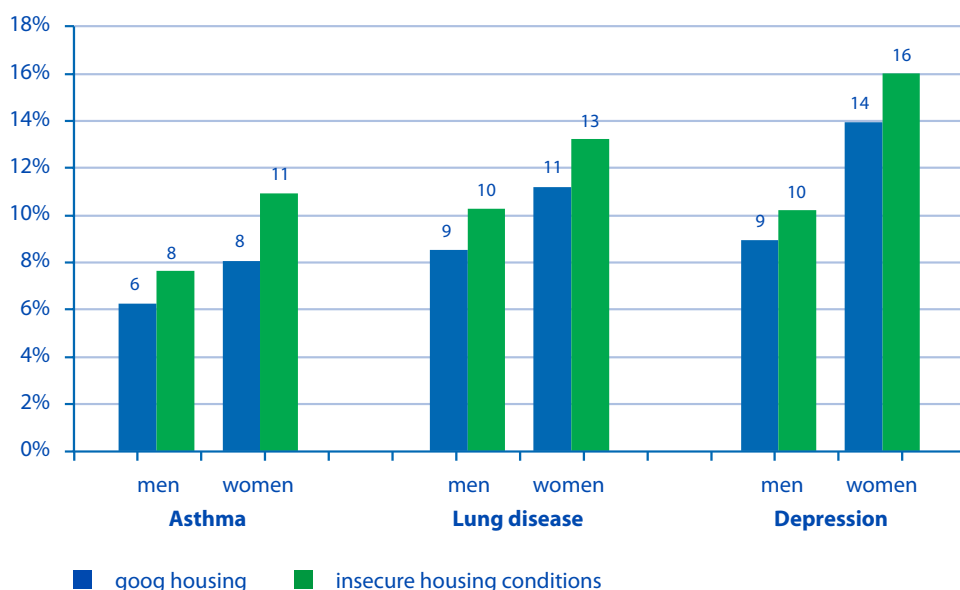


Source: UNDP/WB/EC regional Roma survey 2011

Based on the questions “Does s/he have any long-standing illness or health problem?” and “External evaluation of the household’s dwelling: Ruined house or slums”

The negative effects of substandard housing conditions on Roma health are most evident in case of Roma who inhabit ruined houses and slums (Perić 2012). Slight differences in the occurrence of chronic illnesses and the general health conditions (Figure 28 and Figure 29) can be observed amongst Roma living in good or insecure housing conditions. Gender differentiation in that regard is rather not distinguished and amongst individuals living in slums and in insecure housing conditions, it is rather the men who suffer relatively more in terms of their health than women.

**Figure 30: The incidence of asthma, lung disease, anxiety and depression by gender and housing conditions**



Source: Perić (2012) based on UNDP/WB/EC regional Roma survey 2011

Based on the questions “Do you have any of the following health problems: asthma, lung disease, depression” and “External evaluation of the household’s dwelling: Ruined house or slums,,

There are numerous aspects of substandard housing of the surveyed Romani households outlined above, especially in the area of habitability, which have detrimental impact on human health and on its gender dimension. The 2011 UNDP/WB/EC regional Roma survey data confirm the expected disproportional presence of health problems, such **as the incidence of airways and lung diseases related to dampness or the effects of overcrowding on mental health**, which are more likely to occur in substandard housing conditions. Additionally, **all of these phenomena were more widespread amongst Roma than non-Roma respondents in all the surveyed countries**. With regard to gender differences, Romani women are ex-

posed to the substandard housing conditions for longer periods of time because of the prevailing traditional division of labor and the ingrained male breadwinner model. As a consequence Roma women might be more affected by asthma and certain lung diseases than Roma men in most of the countries (Perić 2012). On the other hand, when we look at differences in the prevalence of those diseases separately amongst those living in secure or insecure housing, the differences remain the same and it is just the incidence rate that changes. This suggests that poor housing conditions contribute more to the actual risk of the diseases than to the gender disparities (Figure 30).

The 2011 survey also confirms that there is a higher exposure of Roma households to threats to security of tenure as Roma are less likely to be in a legal possession of their dwellings than non-Roma. The issue of insecurity and illegality of Roma settlements puts an additional psychological burden on Romani women and children who may be more vulnerable in the course of eviction (Perić 2012).

## Is it getting better?

### Changes in health between 2004 and 2011

Similarly to the previous sections, we consider how the situation with respect to prevalence of chronic illnesses has changed over the period of 2004-2011 (Table 9). The results show that **when compared with men, women are less likely to report long-standing illness in 2011 than in 2004 (the gender effect)**. The subsample estimates also show that amongst Roma the decline in reporting long-standing illness is substantial, as in 2004 women were by 3.7% more likely to report such an illness. Amongst non-Roma individuals the average difference in reporting a chronic illness between men and women has changed from being positive to negative. This means that whereas in 2004 women were more likely than men to report health problems, in 2011 men are more likely to do so. On the other hand, the average difference in the probability of reporting poor health between non-Roma and Roma has more than doubled over the period of 2004-2011, which means that **ethnic-based differential in reporting chronic illness has increased**. This is true for both females and males.

**Table 10: Difference-in-difference estimates of health status**

Health					
Full sample					
Gender effect 2004	0.032***	(0.005)	Roma effect 2004	0.022***	(0.006)
Gender effect 2011	-0.0175***	(0.004)	Roma effect 2011	0.058***	(0.005)
Diff-in-diff est.	-0.019***	(0.006)	Diff-in-diff est.	0.036**	(0.007)
Amongst Roma			Amongst males		
Gender effect 2004	0.037***	(0.007)	Roma effect 2004	0.027***	(0.009)
Gender effect 2011	0.011**	(0.004)	Roma effect 2011	0.062***	(0.007)
Diff-in-diff est.	-0.025***	(0.008)	Diff-in-diff est.	0.035***	(0.010)
Amongst non-Roma			Amongst females		
Gender effect 2004	0.028***	(0.006)	Roma effect 2004	0.015	(0.009)
Gender effect 2011	-0.015***	(0.007)	Roma effect 2011	0.054***	(0.007)
Diff-in-diff est.	-0.009	(0.010)	Diff-in-diff est.	0.039***	(0.011)

Source: estimated on the basis of UNDP/WB/EC regional Roma survey 2011

Notes: DiD estimator based on the regression with the following RHS variables: age, relation, education level dummies, urban area, poverty indicator, squared meters per capita, rooms per capita, bathroom indicator, electricity indicator, employment indicator and country fixed effects (estimates based on a sample of following countries: Albania, Bulgaria, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia, and Romania).

Standard errors reported in the parenthesis: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

# 4

## Civic and political engagement

Similarly to the mainstream academic studies, Roma related studies and political analyses have also ignored women's participation in politics and civic engagement. This attitude is attributed to the believed cultural values which have relegated women into the private sphere. In fact, women's participation in public and political life is considered to be inappropriate. These kinds of explanations become a cultural legacy which is demonstrated by a lack of civic and political participation of women or by its public invisibility when such participation occurs.

Romani women's involvement in civic and political activism has contradictory characteristics to the progress and oppression in the 1990s (Kóczé 2011). Several political analyses describe that after the changes in Central and Eastern Europe, Roma civic and political groups employed the human rights discourse to draw attention to the ongoing human rights violations against Roma in European countries (Trehan 2008; Kóczé 2011). In this specific rights movement focused discourse Roma women activism gained additional a transformative power because women's rights were seen as integral part of the rights movement and women were also increasingly involved in that process.

Romani gendered politics challenged the ethnic identity based politics which had been dominated by male activists. On one hand, the marginalization of women in Romani politics still prevails at the transnational as well as at the local level. On the other hand, Romani women's political engagement challenged the Roma political activism and provided a great potential for emancipation of Roma people and transformation of the mainstream politics (Kóczé 2011: 6). As described and analyzed by Izsák (2009) and Kóczé (2011), Roma women's political and civic activism is mainly prevailing at the transnational level; although in the last couple of years there have been certain efforts – initiated by the donors such as the Open Society Foundation Roma Initiative Office – to strengthen the local Romani women activism through various funding schemes.

The 2004 UNDP regional Roma survey and the 2011 UNDP/WB/EC survey are the primary sources for the present analysis focusing on Romani households, which are located in the areas where Roma are overrepresented, and on non-Roma populations living in a close proximity to them. By the nature of the sample, the analysis of these data will show political and civic engagement of the most marginalized group.



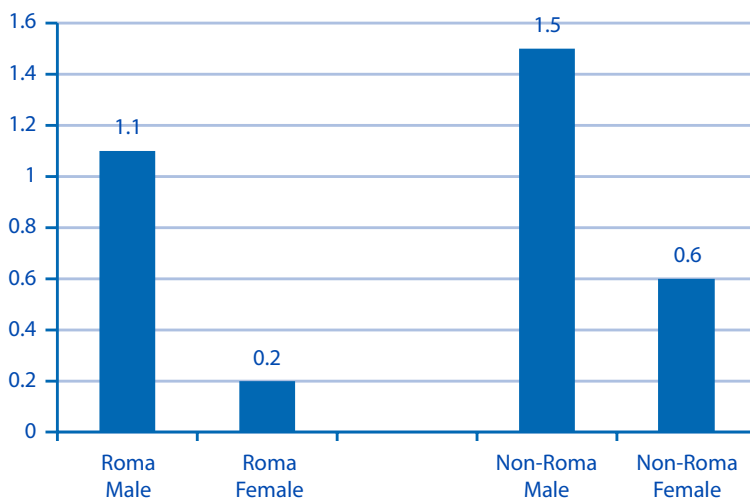
The 2004 UNDP regional Roma survey included questions that relate to the civic and political activism of Roma and non-Roma. There was a specific question concerning the efforts to initiate NGOs in the local communities. The question was posed in the following way: “Has anyone from your household ever tried to found an NGO?”. It turns out that only 1.7% of Roma and 1% of non-Roma from the sample have ever tried to found an NGO. The data shows that Roma are a bit more engaged than the non-Roma living in a close proximity to them, but given the low percentages in both cases this difference is negligible. The lack of substantial difference is self-explanatory. It may suggest that both groups are equally not interested in founding an NGO, albeit for different reasons, as well as that they are in the same way deprived of material and intellectual resources to found an NGO (Kóczé 2012).

Both the 2004 and the 2011 UNDP/WB/EC data show that besides the inadequate local authority’s support, the most marginalized communities are also lacking support from NGOs and the services which could be offered by the NGOs, such as educational and social services, might not be available to the local communities. In that case the burden of delivering them might fall on the women in the community with no remuneration for that. Moreover, the recent economic crisis accelerated the marginalization and dispossession of Roma in Central and South-Eastern Europe. The social and economic exclusions push poorer households into the vicious cycle of poverty, whereas in the majority of cases women and children are the most vulnerable. They are forced to respond with measures that actually make them remain poor: reducing the number and quality of their meals, postponing health-related expenditures, withdrawing children from school and taking loans from informal lenders that disadvantage them even further. If there are not even NGOs within the communities that could provide support and access to various social and financial programs then these actions may eventually lead to encircling Roma in deep-rooted and permanent poverty diminishing the future generations’ chances of escaping it.

In the 2004 UNDP regional Roma survey, there was also a question concerning the participation of members of the household in the local municipal council or assembly. Furthermore, the respondents were also asked about the affiliation of household members with the local leadership of some political party. These two questions offered some indication about the involvement of Roma and non-Roma, male and female in the local, decision making mechanisms (Kóczé 2012).

According to the 2004 data, 1.1% of Roma families had a male family member and 0.2% had a female family member in the local government. At the same time, 1.5% of non-Roma families had a male member and 0.6% had a female member in the local government (see Figure 31). The values are extremely low and don’t allow further disaggregation but they are already indicative of the extremely low participation in the decision and local policy making process and outline the deep gender gap in that regard, particularly in the Roma sub-sample.

**Figure 31: Percent of the families that have a (male or female) member in the local government by ethnicity and gender**



Source: Kóczé (2012) based on the UNDP Roma Regional Survey, 2004

Based on the question “Is there a member of your household in the local municipal council or assembly? If yes, a man or a woman?”

The very low level of Roma civic and political participation suggests that the interests of Roma communities are not represented in the local decision-making processes and policy making mechanisms and this might affect the daily life of the communities. The low civil and political involvement of Roma is deepening the lack of trust and affecting the access and interest in the political structure, as well as increasing the intentional/unintentional social and political exclusion of Roma by the political elite.

The exclusion of Romani women from politics is even further worsened by the gender disparities within the local political parties. However, in the last decade we witnessed an interesting political window dressing by mainstream political parties, particularly in Hungary. Quantitative data on that is extremely difficult to produce but there is increasing amount of evidence that political parties put the Romani women high on their political lists to show a “progressive external commitment”, whilst normalizing racist discourse within the political forum and disadvantaging Roma through various policies and legislations that keep them in a socially and economically devastating situation. Through this kind of “window dressing political strategies” some Romani women become visible in politics but their presence does not make a significant impact on the political and civic participation of local Romani women, but quite the opposite – it contributes to the legitimization of racist party politics.



## Values and behavioral patterns

Cultural differences between Roma and non-Roma are reflected in underlying values, ingrained norms and behavioral patterns. We conceptualize culture not as an essential and static characteristic of Roma; rather it is a constantly interacting and in the process of continuous change, it is integrating the system of learned behavioral patterns and symbolic schemes. The analysis in this section is based on Julius Wilson's theoretical reconciliation of cultural and structural forces (Wilson 2009) and attempts to problematize Roma culture in this framework.

Wilson distinguishes two types of cultural forces: (1) *national views and beliefs on race* and (2) *cultural traits-shared outlooks, modes of behavior, traditions, belief systems, worldviews, values, skills, preferences, styles of self-representation, etiquette, and linguistic patterns that emerge from patterns of intragroup interaction in settings created by discrimination and segregation* and they reflect collective experiences within those settings (Wilson 2009: 14-15). Furthermore, "more weight should be given to structural causes of inequality, despite the dynamic interrelationship of structure and culture" (Wilson 2009: 135). Applying this framework to the case of Roma, one might say that, seen through the dominant cultural lens, Roma are perceived as a stigmatized population which influences the internal, to use Wilson's term, 'meaning-making' and 'decision-making' process. In this sense culture (in a relational and broad sense) mediates the impact of cultural forces such as racial segregation and entrenched poverty (Kóczé 2011: 143).

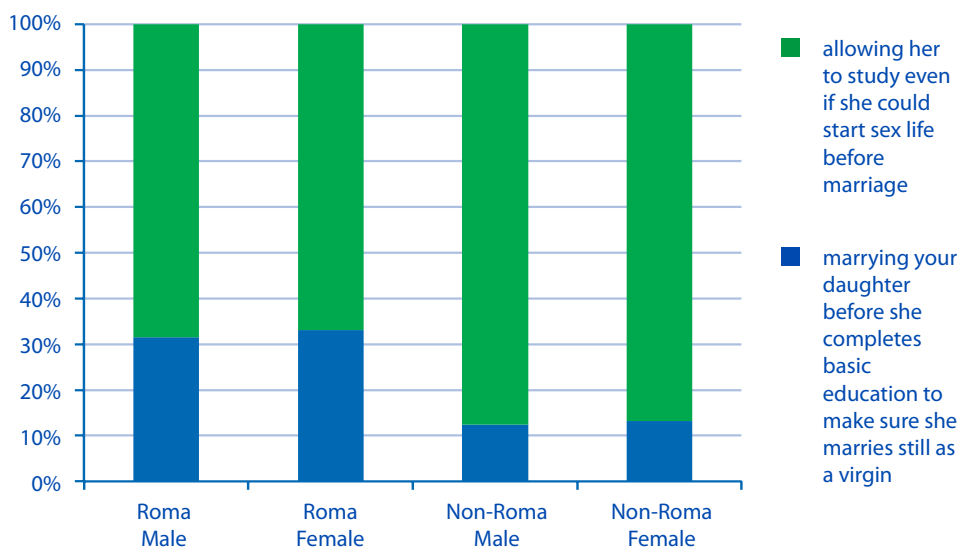
Research on early childhood education shows that values and norms play a major role in the process of early socialization of children and consequently shape their future identity. In 1997 Smith recognized that behavioral patterns ingrained into Roma children during their early childhood along with poverty and racial prejudices form great obstacles towards Roma participation and success in education (Smith 1997). Furthermore, amongst sociologists there is an agreement that early socialization is gendered, as girls and boys learn cultural roles accordingly to their sex (e.g. Coltrane and Adams 2008). Values concerning sexuality are strongly connected with future sexual activity and consequently with reproduction. Early female pregnancy and high teenage fertility rates are prevalent particularly in the segregated Romani neighborhoods where girls have limited educational and employment outlooks.

## Sexuality

The UNDP/WB/EC regional Roma survey 2011 collects data on the relative value of marriage, education and sexuality of women. The disaggregated data allow us to separately investigate men's and women's perception of the appropriate age to start sex life as well as opinions on having sex before marriage.

Figure 32 shows that amongst Roma – both male and female – masculine marital values prevail over higher valuation of education. Slightly more than 30% of Roma (31% for men and 33% for women) prefer to get their daughter married before she completes basic education to make sure she does not start sex life before the marriage, rather than allowing her to study even if she loses her virginity before the marriage.

**Figure 32: Priority values for education, marriage and sexual activity by gender and ethnicity**

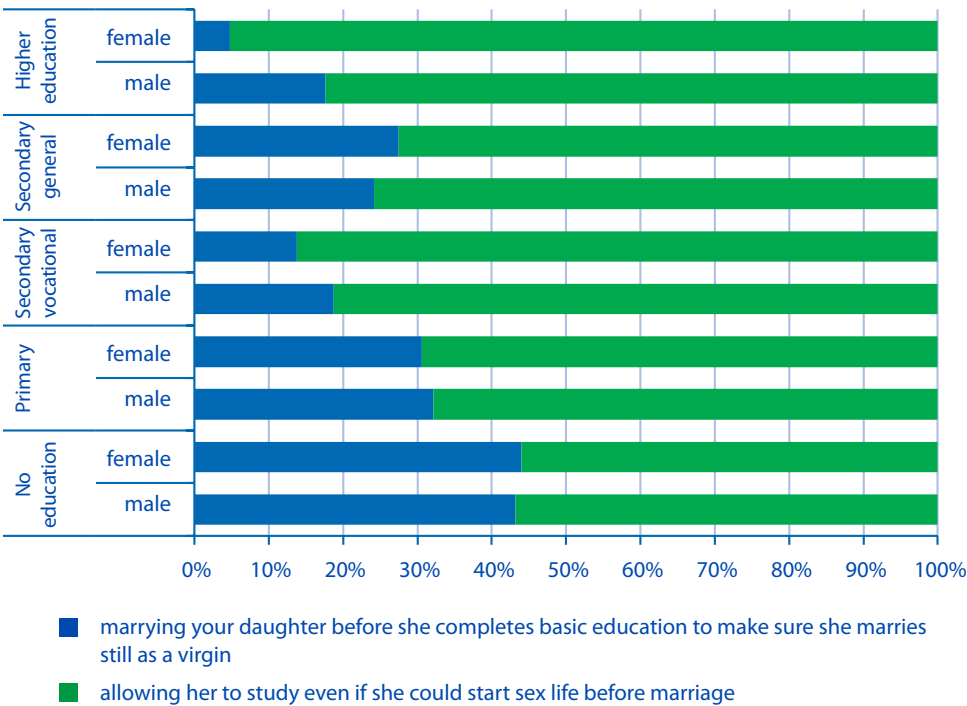


Source: Own calculations based on UNDP/WB/EC regional Roma survey 2011

Based on the questions "Which one would you choose if you face each of these options?"

Figure 33 additionally shows that masculine marital values amongst Roma individuals vary greatly with the level of education: more educated Roma – especially women – attribute a lower value to sexuality and marriage in favor of acquiring education. Mihailov (2012) shows that these values are also correlated with the lower access to reproductive health care, particularly gynecological care. Moreover, such association is valid not only for Roma, but also for non-Roma. The fact that amongst Roma the masculine marital values are more widely spread makes them, however, more affected by it.

**Figure 33: Priority values amongst Roma for education, marriage and sexual activity by gender and education**



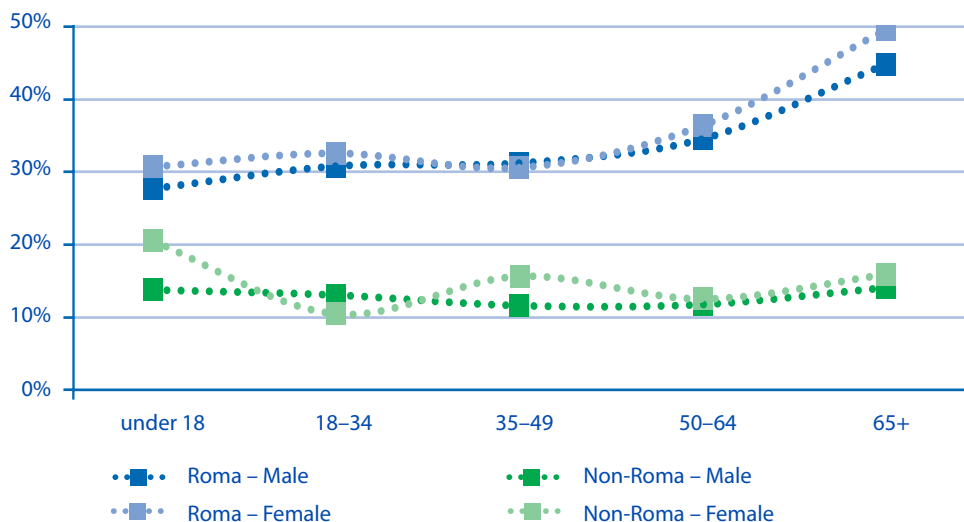
Source: Own calculations based on UNDP/WB/EC regional Roma survey 2011

Based on the questions “Which one would you choose if you face each of these options?”

During the early gender socialization, boys and girls learn their social roles and establish their basic values. A substantial role in this process is played by the local community, especially the family and the parents. The influence of older individuals and the degree of intergenerational transmission of cultural values and norms can be to

some extent revealed by the disaggregation of the data with respect to the age. As shown in Figure 34 amongst non-Roma the degree of masculine marital values is comparable across the age groups. However, this is not true **for Roma as older individuals display a stronger commitment to the importance of marriage.**

**Figure 34: Share of individuals who would rather marry their daughter before she completes basic level of education to make sure she marries still as a virgin than allowing her to study by age, ethnicity and gender**

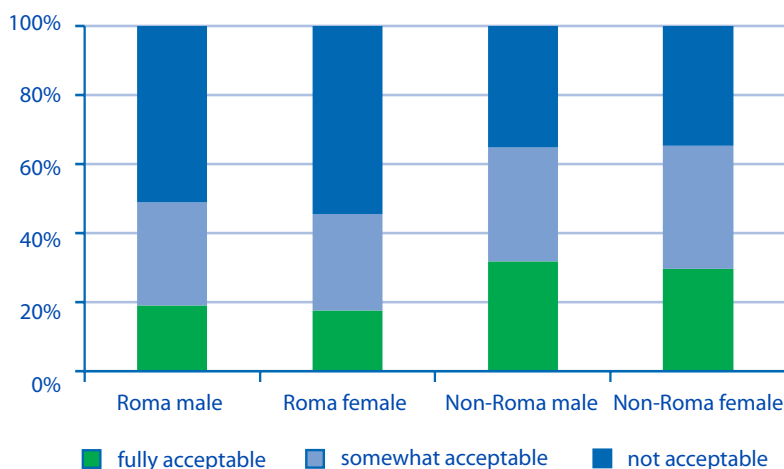


Source: Own calculations based on UNDP/WB/EC regional Roma survey 2011

Based on the questions "Which one would you choose if you face each of these options?"

Furthermore, Roma find it significantly less acceptable for women to lose their virginity before they get married (51% of Roma men and 54% of Romani women); (Figure 35). The gender differences in that regard are not, however, high neither amongst Roma nor non-Roma. This observation is consistent with the opinions on the appropriate age to get married and start sex life (Figure 36). The average numbers (for both men and women) show that Roma expect the women to abstain from having sex until they get married. Nevertheless, **these cultural norms do not prolong the age by which women start their sex life, but significantly lower the average age by which they get married.** There are minor ethnic and gender disparities present with respect to the appropriate age to start sex life.

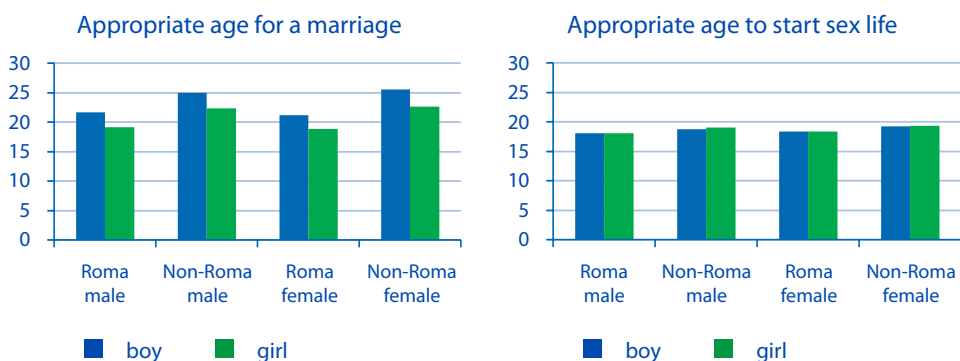
**Figure 35: Is it acceptable that a girl loses her virginity before she gets married**



Source: Own calculations based on UNDP/WB/EC regional Roma survey 2011

Based on the question "Is it acceptable for a girl to loose virginity before being married?"

**Figure 36: Appropriate age for getting married and to start sex life by ethnicity and gender**



Source: Own calculations based on UNDP/WB/EC regional Roma survey 2011

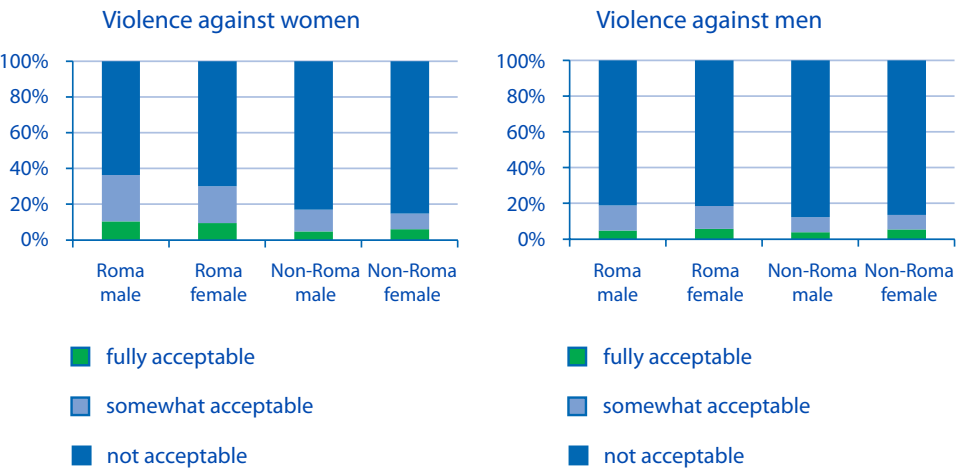
Based on the questions "At approximately what age do you feel that it is appropriate to get married?" and "At approximately what age do you feel that it is appropriate to start sex life?"



## Violence

The masculine patterns regarding norms and behaviors amongst Roma individuals are also revealed in statistics regarding domestic violence. Data show that 64% of Roma men and 70% of Romani women find it not acceptable for a husband to slap his wife (left panel Figure 37). The respective figures for non-Roma are 83% and 85%. Additionally, women’s violence against men is also more acceptable amongst Roma (right panel Figure 37). This may suggest that prevailing gender roles and masculine marital values do not directly determine the relatively severe degree of acceptability of violence against women.

**Figure 37: Acceptability of domestic abuse by gender and ethnicity**

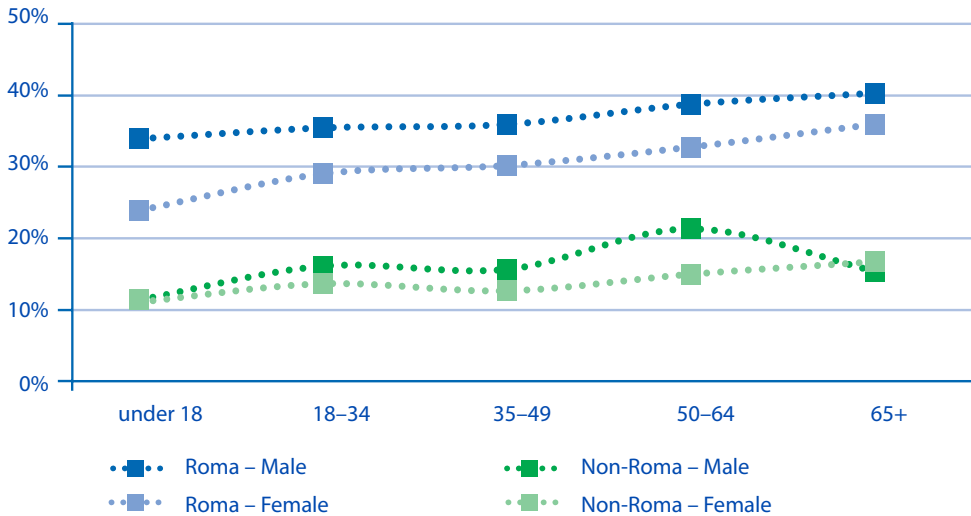


Source: Own calculations based on UNDP/WB/EC regional Roma survey 2011

Based on the questions “Is it acceptable for a husband to slap his wife” and “Is it acceptable for a wife to slap her husband”

As previously discussed, we also look at how behavioral patterns concerning violence against women vary across the age groups by gender and ethnicity (Figure 38). Similarly, there is lower acceptance of domestic violence against women amongst the younger individuals both amongst Roma and non-Roma groups. However, the variation amongst Roma men is not substantial.

**Figure 38:** Share of individuals for whom it is “fully acceptable” and “somewhat acceptable” for a husband to slap his wife, by age, ethnicity and gender



Source: Own calculations based on UNDP/WB/EC regional Roma survey 2011

Based on the question “Is it acceptable for a husband to slap his wife”

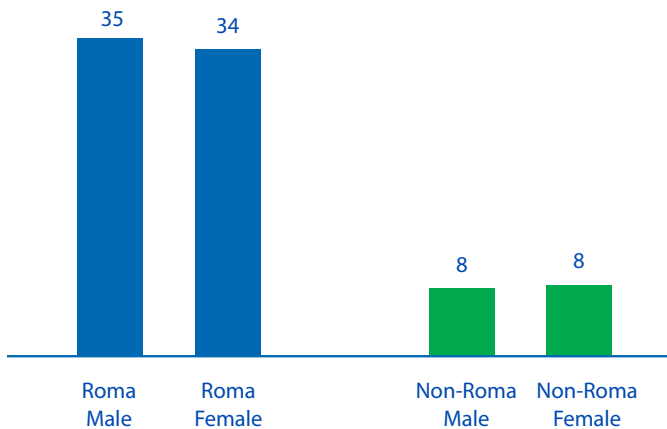


# 6

## Gender and Ethnic Based Discrimination

In the 2011 UNDP/WB/EC regional survey on Roma communities the respondents had an opportunity to report whether they had ever experienced discrimination based on their ethnicity or gender. Figure 39 shows the perception of discrimination based on ethnicity. It shows that 34.7% of Roma males and 33.5% of Roma females compared to 7.5% non-Roma males and 7.8% of non-Roma females have experienced discrimination based on their ethnicity. The perceptions of ethnicity-based discrimination are very similar amongst men and women – both for Roma and non-Roma. **Roma are approximately four times more likely to feel discriminated than non-Roma living in their close proximity.**

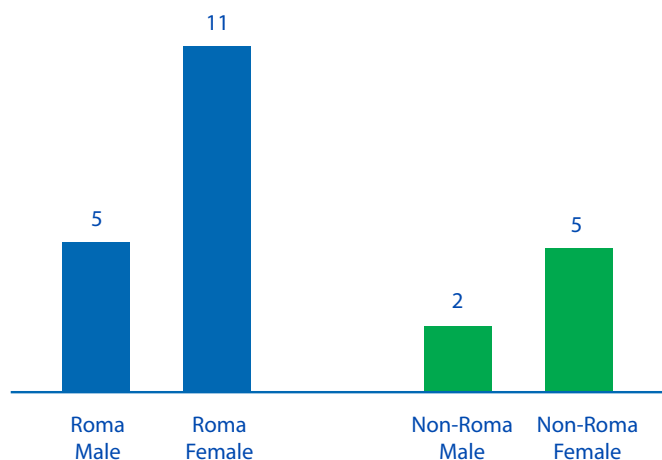
**Figure 39: Perception of ethnic based discrimination by ethnicity and gender. Respondents who reported to have been discriminated based on their ethnicity (%)**



Source: Own calculations based on UNDP/WB/EC regional Roma survey 2011

Based on the question "In the past 12 months (or since you have been in the country) have you been discriminated against for non-Roma: because of ethnicity / for Roma: because you are a Roma?"

**Figure 40: Perception of gender-based discrimination by ethnicity and gender. Respondents who reported to have been discriminated against based on their gender(%)**



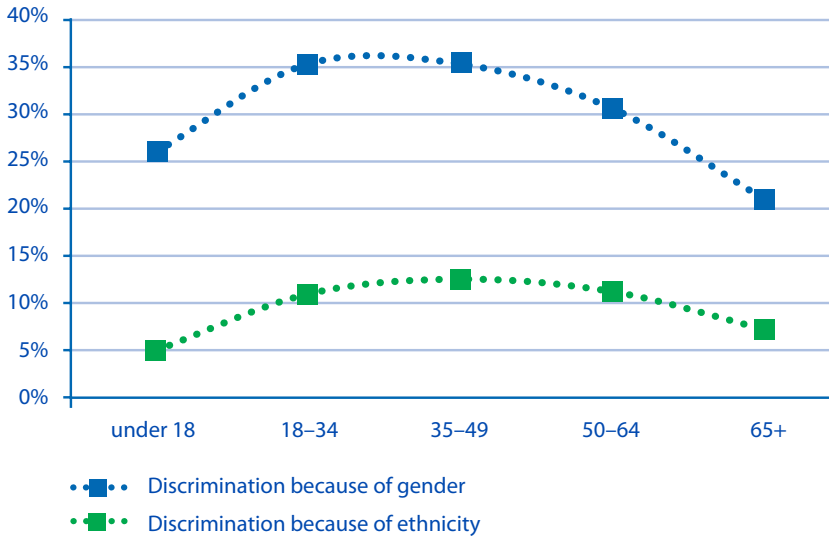
Source: Own calculations based on UNDP/WB/EC regional Roma survey 2011

Based on the question "In the past 12 months (or since you have been in the country) have you been discriminated against because you are woman/man?"

Moreover, the respondents were asked about their perception of gender discrimination. Data show that the perception of **gender discrimination is more frequent in case of Roma than non-Roma communities living in a close proximity to Roma** (Figure 40). According to the data 5% of Roma men and 2% of non-Roma men report discrimination based on their gender. In contrast 11% of Roma and 5% of non-Romani women report gender-based discrimination. **Romani women were more than twice as likely to report having experienced gender-based discrimination than either Roma men or non-Romani women.** The highest share of Romani women who are faced with (either gender-based or ethnicity-based) discrimination is observed amongst young women aged 18 to 35 (Figure 41). However, the result may underestimate the fact that intersecting ethnic and gender discrimination make Romani women more vulnerable in their daily lives.

On the other hand, the 2011 UNDP survey shows that despite having more frequent experiences of discrimination, Roma in general (but Romani women in particular) are not sufficiently familiar with either their basic human rights or with anti-discrimination organizations and institutions, which might be able to provide legal aid in case of human rights violations (Kóczé 2012).

**Figure 41: Perception of discrimination of Romani women based on ethnicity and gender by age**



Source: Own calculations based on UNDP/WB/EC regional Roma survey 2011

Based on the questions "In the past 12 months (or since you have been in the country) have you been discriminated against for non-Roma: because of ethnicity / for Roma: because you are a Roma?" and "In the past 12 months (or since you have been in the country) have you been discriminated against because you are woman/man?"



# Conclusions and recommendations

This paper outlines intersectional inequalities in gender and ethnic dimensions and demonstrates discrimination of Romani women in the intertwining areas of education, employment, health and housing. **The findings from the 2011 UNDP/WB/EC regional survey on Roma communities show that Romani women in comparison to both non-Romani women and Roma men achieve a significantly lower level of education – both in terms of quantity as well as quality (and as a consequence they are faced with lower employment prospects and worse health conditions). Moreover, Roma individuals are found to live in very poor housing conditions that have a severe impact on all of the areas listed above. Their civic and political involvement is also limited by their education and social circumstances.** Although there have been some improvements in the position of Romani women over the period of 2004-2011, they are still exposed to a higher risk of vulnerability and discrimination.

Furthermore, the ongoing economic crisis has exacerbated the ethnic- and gender-based discrimination as well as increased social tensions. When societies are faced with danger – such as during severe economic crises that many European countries are currently undergoing – there is a significant growth in suicide and crime rates, in domestic abuse (and particularly in violence against women) and in escalation of ethnic conflicts (UN report 2009). In many cases, also within the Roma communities, these issues remain underreported and it is the women who often bear the mental and embodied effects of the crisis. These effects are complex and go beyond the immediate income-related implications. On one hand, the declining income opportunities affect men and women disproportionately due to the inequality in control over resources. On the other hand, rising unemployment impacts men and women differently. Due to the gender wage gap for a similar kind of work, men are often laid off first and this puts the women into the role of the sole bread-winner. This redefinition of traditional gender roles may in some cases lead to increase in domestic violence driven by frustration. However, more research is needed in that regard.

In 2008 the UN Commission on the Status of Women held its 52<sup>nd</sup> session focusing on “Financing for gender equality and the empowerment of women”. The document, which was adopted by the Commission, noted that there is a growing body of evidence which demonstrates that investing in women and girls increases women’s economic empowerment and has a multiplier effect on productivity, efficiency and sustained economic growth. Before that the Millennium Development Goals also recognized the need for adequate resources to be allocated at all levels in order to strengthen the mechanisms and capacities to enhance women’s lives.



Nevertheless, it is important to emphasize that the EU as well as the domestic legislatures are failing to address intersectional disadvantages, such as the ones Romani women face. There are **no legal or policy regulations to tackle the discrimination of women from disadvantaged groups, such as ethnic minorities, who face several types of discrimination based on ethnicity and gender.**<sup>35</sup> Ongoing gender and racial discrimination in education and in the labor market is very costly for the European countries. **Keeping Roma out of a good quality education and out of work force will create a generational damage to Roma as well to the European society.** Therefore, this should be assessed and monitored by the EU and national agencies as there is tremendous need for gender-responsive policies that address intersectional discrimination, such as the one experienced by Romani women.

Taking these considerations into account, it is evident that investing in Romani women will have an intergenerational effect on the European population. Empowering Romani women economically and politically goes beyond their personal gains; it has a positive effect on their communities as well as on European society as a whole.

35 See *EIGE Factsheet*, <http://www.eige.europa.eu/sites/default/files/documents/EIGE-100-inequalities-Factsheet.pdf>

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### **Other publications in the “Roma Inclusion Working Papers” series**

Ivanov, A., Kagin, J. (2013). *Roma poverty in a human development perspective*. Roma Inclusion Working Papers. Bratislava: UNDP (forthcoming).

# Annex

**Table 11: Variable description used in the econometric analysis**

Variable	Description
Literacy	Dummy variable equal to 1 if an individual can read and write, 0 if not
Highest level of education	Highest level of education attained
Dropout	Dummy variable equal to 1 if individual aged 6-22 not attending school, 0 if attending
Age	Age of an individual
Preschool	Dummy variable equal to 1 if an individual has been visiting a preschool, 0 otherwise
Special school	Dummy variable equal to 1 if an individual has been visiting special school, 0 otherwise
Longstanding illness indicator	Dummy variable equal to 1 if an individual reports long-standing iles or health problem, 0 if not
Urban area	Dummy variable equal to 1 if the area the individual is living is urban, 0 if rural
Primary school walk distance	Dummy variable equal to 1 if an individual is living in the walking distance (less than 3 km) to primary school, 0 otherwise
Books indicator	Dummy variable equal to 1 if in the household the individual is living there are more than 30 books, 0 if not
Internet indicator	Dummy variable equal to 1 if in the household the individual is living there is an Internet access
Log of the HHs size	Logarithm of the total number of individuals living in the household
No. of unemployed adults	Total number of adults living in the household who are unemployed
HH head secondary and higher education	Dummy variable equal to 1 if the head of the household the individual is living has completed at least secondary education
Partner of the HHs head secondary and higher education	Dummy variable equal to 1 if the partner of the head of the household the individual is living has completed at least secondary education
Poverty indicator (income below 4.30\$)	Dummy variable equal to one if the income per day of the household the individual is ling in is less than 4.30\$ PPP
Square meters per capita	Square meters of the dwelling per capita (household member)
Rooms per capita	Rooms of the dwelling per capita (household member)
Bathroom inside the dwelling	Dummy variable equal to 1 if the dwelling has bathroom located inside the dwelling, 0 otherwise

Electricity supply of the dwelling	Dummy variable equal to 1 if the dwelling has an electricity supply, 0 otherwise
Appropriate age to stop education	Appropriate age to stop the education for each individual, derived from the randomly selected household member survey. The answer of the randomly selected respondent has been assigned to all HHs members.
Acceptable to work than go to school for children	Dummy variable equal to 1 if it is acceptable to work for a child who is of primary level school age, derived from the randomly selected household member survey. The answer of the randomly selected respondent has been assigned to all HHs members.
Education level	Dummy variables indicating the educational level attained
Married/relation	Dummy variable indicating whether an individual lives in a relation
Assisted birth	Dummy variable indicating whether an individual was born with the assistance of medical professional (value 1) or not (value 0)
Access to doctor	Dummy variable indicating whether the household the individual lives in has an access to doctor when it is needed (value 1) or not (value 0)
Employment	Dummy variable equal to 1 if individual is employed, 0 otherwise
Non-labor income	Dummy variable indicating whether an individual does have non-labor incomes other than unemployment benefits (value 1) or not (value 0)

**Table 13: Summary statistics, sample of individuals aged 9-75**

	Non-Roma					
	Females			Males		
Variable	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
Illness	5730	0.1970	0.3978	5437	0.1611	0.3677
Age	5756	39.5332	18.3311	5468	38.6074	18.0174
Lower basic and lower educ.	5733	0.1587	0.3655	5442	0.1251	0.3309
Upper basic education	5733	0.2747	0.4464	5442	0.2299	0.4208
Secondary vocational educ.	5733	0.3304	0.4704	5442	0.4280	0.4948
Secondary general educ.	5733	0.1333	0.3399	5442	0.1275	0.3336
Higher education	5733	0.1029	0.3039	5442	0.0895	0.2855
Assisted birth	5698	0.8794	0.3257	5412	0.8938	0.3082
Doctor access	5720	0.9407	0.2361	5430	0.9366	0.2436

Poverty indicator	5156	0.1003	0.3004	4875	0.0995	0.2993
Squared meters per capita	5627	24.3604	17.5496	5351	23.7759	17.5597
Rooms per capita	5722	0.9623	0.6482	5429	0.9359	0.6394
Bathroom inside	5728	0.8444	0.3625	5437	0.8358	0.3705
Electricity	5728	0.9759	0.1533	5435	0.9730	0.1622
Employment	5756	0.2882	0.4530	5468	0.4440	0.4969
Non-labor income	5423	0.2015	0.4012	5116	0.1855	0.3887
	Roma					
	Females			Males		
Variable	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
Illness	15925	0.2131	0.4095	15426	0.1866	0.3896
Age	16071	31.2987	16.3918	15578	30.9205	16.3471
Lower basic and lower educ.	15984	0.5199	0.4996	15493	0.4365	0.4960
Upper basic education	15984	0.3677	0.4822	15493	0.3987	0.4896
Secondary vocational educ.	15984	0.0871	0.2820	15493	0.1367	0.3435
Secondary general educ.	15984	0.0218	0.1461	15493	0.0245	0.1547
Higher education	15984	0.0035	0.0591	15493	0.0036	0.0595
Assisted birth	15767	0.8775	0.3279	15289	0.8814	0.3233
Doctor access	15869	0.8582	0.3488	15377	0.8538	0.3533
Poverty indicator	14567	0.2987	0.4577	14070	0.2969	0.4569
Squared meters per capita	15681	12.6495	11.2035	15173	12.4654	10.9763
Rooms per capita	15978	0.5361	0.4307	15483	0.5249	0.4167
Bathroom inside	15951	0.5096	0.4999	15466	0.5130	0.4998
Electricity	15934	0.9032	0.2957	15457	0.8991	0.3012
Employment	16071	0.1155	0.3196	15578	0.2955	0.4563
Non-labor income	15039	0.1079	0.3103	14548	0.0955	0.2940



**Table 12: Summary statistics, samples of 9 to 17 and 9 to 25 years old**

Variable	Sample 9 to 17					
	Non-Roma					
	Female			Males		
	Obs	Mean	Std. Dev.	Obs	Mean	
Dropout	821	0.0987	0.2984	847	0.0874	
Literacy	818	0.9780	0.1468	846	0.9775	
Age	825	13.1164	2.5987	852	13.1232	
Preschool	825	0.6242	0.4846	851	0.6345	
Special school	804	0.0211	0.1440	835	0.0419	
Longstanding illness indicator	822	0.0316	0.1751	841	0.0511	
Urban area	825	0.5964	0.4909	852	0.5857	
Primary school walk distance	825	0.9115	0.2842	852	0.8944	
Books indicator	820	0.4976	0.5003	843	0.4958	
Internet indicator	820	0.5024	0.5003	846	0.4988	
Log of the HHs size	825	1.5140	0.3140	852	1.5152	
No. of unemployed adults	825	0.3794	0.6793	852	0.4085	
HH head secondary and higher education	824	0.6468	0.4782	846	0.6678	
Partner of the HHs head secondary and higher education	649	0.6133	0.4874	689	0.6241	
Poverty indicator (income below 4.30\$)	737	0.1370	0.3441	761	0.1314	
Squared meters per capita	801	18.0873	11.7643	831	17.1043	
Rooms per capita	820	0.6895	0.3686	845	0.6820	
Bathroom inside the dwelling	821	0.8356	0.3709	849	0.8292	
Electricity supply of the dwelling	821	0.9695	0.1719	848	0.9682	
Appropriate age to stop education	736	20.6101	3.0172	760	20.7224	
Acceptable to work than go to school for children	806	0.1427	0.3500	830	0.1422	

		Sample 9 to 25					
		Non-Roma					
		Female			Males		
	Std. Dev.	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
	0.2825	1626	0.3641	0.4813	1598	0.3736	0.4839
	0.1483	1630	0.9779	0.1470	1602	0.9838	0.1264
	2.6156	1639	17.2550	4.8365	1611	17.1148	4.9029
	0.4818	1639	0.5772	0.4942	1610	0.6056	0.4889
	0.2005	1598	0.0163	0.1266	1580	0.0291	0.1682
	0.2204	1633	0.0355	0.1851	1596	0.0445	0.2062
	0.4929	1639	0.5888	0.4922	1611	0.5959	0.4909
	0.3075	1639	0.9085	0.2884	1611	0.9013	0.2983
	0.5003	1629	0.5120	0.5000	1592	0.5019	0.5002
	0.5003	1631	0.5402	0.4985	1600	0.5388	0.4987
	0.3101	1639	1.4445	0.3761	1611	1.4392	0.3605
	0.7399	1639	0.4131	0.7557	1611	0.4848	0.8490
	0.4713	1635	0.6697	0.4705	1603	0.6719	0.4697
	0.4847	1293	0.6102	0.4879	1269	0.6407	0.4800
	0.3381	1444	0.1198	0.3248	1410	0.1213	0.3266
	9.5847	1586	19.4030	12.4425	1565	19.1527	11.4504
	0.3615	1628	0.7470	0.4237	1596	0.7564	0.4237
	0.3765	1630	0.8325	0.3735	1602	0.8177	0.3862
	0.1757	1631	0.9730	0.1621	1601	0.9694	0.1723
	3.2632	1479	20.7654	3.1133	1448	20.7210	3.3189
	0.3494	1610	0.1348	0.3416	1577	0.1522	0.3593

Variable	Sample 9 to 17					
	Roma					
	Female			Males		
	Obs	Mean	Std. Dev.	Obs	Mean	
Dropout	4118	0.3310	0.4706	4186	0.3103	
Literacy	4098	0.8804	0.3245	4172	0.8792	
Age	4135	12.8518	2.5810	4200	12.8169	
Preschool	4131	0.4084	0.4916	4197	0.4000	
Special school	4047	0.0529	0.2238	4097	0.0649	
Longstanding illness indicator	4095	0.0625	0.2421	4151	0.0672	
Urban area	4135	0.5756	0.4943	4200	0.5810	
Primary school walk distance	4135	0.8680	0.3386	4200	0.8683	
Books indicator	4090	0.1181	0.3228	4147	0.1235	
Internet indicator	4102	0.1312	0.3376	4164	0.1453	
Log of the HHs size	4135	1.7608	0.3746	4200	1.7536	
No. of unemployed adults	4135	0.5836	0.9926	4200	0.6045	
HH head secondary and higher education	4121	0.1546	0.3615	4184	0.1730	
Partner of the HHs head secondary and higher education	3376	0.1194	0.3243	3397	0.1186	
Poverty indicator (income below 4.30\$)	3754	0.2962	0.4566	3816	0.3153	
Squared meters per capita	4065	10.1605	7.6965	4100	10.1628	
Rooms per capita	4104	0.4244	0.2701	4176	0.4228	
Bathroom inside the dwelling	4107	0.5055	0.5000	4169	0.5064	
Electricity supply of the dwelling	4100	0.8995	0.3007	4164	0.8979	
Appropriate age to stop education	3707	17.9782	3.0342	3696	18.2625	
Acceptable to work than go to school for children	3944	0.3400	0.4738	3994	0.3763	

		Sample 9 to 25					
		Roma					
		Female			Males		
	Std. Dev.	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
	0.4627	7117	0.5918	0.4915	7008	0.5636	0.4960
	0.3259	7118	0.8604	0.3466	7010	0.8815	0.3233
	2.5823	7173	16.4708	4.8859	7060	16.3098	4.9027
	0.4900	7169	0.3625	0.4808	7057	0.3541	0.4783
	0.2464	6982	0.0463	0.2101	6870	0.0565	0.2309
	0.2504	7093	0.0654	0.2473	6978	0.0698	0.2548
	0.4935	7173	0.5812	0.4934	7060	0.5806	0.4935
	0.3382	7173	0.8731	0.3328	7060	0.8686	0.3379
	0.3290	7102	0.1132	0.3169	6975	0.1147	0.3187
	0.3524	7117	0.1347	0.3415	6999	0.1496	0.3567
	0.3673	7173	1.7086	0.4086	7060	1.7091	0.4108
	0.9814	7173	0.6787	1.1297	7060	0.7018	1.1339
	0.3783	7145	0.1612	0.3678	7033	0.1691	0.3748
	0.3234	5791	0.1183	0.3230	5704	0.1134	0.3171
	0.4647	6469	0.3044	0.4602	6396	0.3154	0.4647
	7.3618	7012	10.5845	7.8968	6880	10.7450	8.2421
	0.2753	7122	0.4446	0.2819	7015	0.4541	0.3183
	0.5000	7124	0.5115	0.4999	7017	0.5177	0.4997
	0.3028	7109	0.8973	0.3036	7001	0.8953	0.3062
	2.9434	6381	18.0520	3.0361	6218	18.3282	2.9830
	0.4845	6846	0.3459	0.4757	6730	0.3859	0.4868

**Table 14: Partial effects of the linear probability model estimates;**  
**Dependent variable dropout rate, sample of individuals 9 to 17 years old**

Variables		Model 1 coef/se	Model 2 coef/se	Model 3 coef/se	
	Roma	0.258*** (0.013)	0.274*** (0.013)	0.232*** (0.013)	
	Female	0.016 (0.016)	0.021 (0.016)	0.018 (0.016)	
	Interaction	0.001 (0.019)	-0.004 (0.019)	0.001 (0.019)	
Demographic characteristics	Age (9 to 14)		-0.281*** (0.009)	-0.273*** (0.009)	
Schooling conditions	Preschool			-0.164*** (0.010)	
	Preschool – missing			-0.135* (0.073)	
	Special school			-0.066*** (0.017)	
	Special school – missing			0.243*** (0.031)	
Health	Long lasting illness				
	Long lasting illness – missing				
Living environment	Urban				
	School in walking distance				
Family background variables	Books indicator				
	Books indicator – missing				
	Internet indicator				
	Internet indicator – missing				
	log of HHs size				
	Total number of unemployed in the HH				

Notes: 1. Robust standard errors reported in the parenthesis; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1  
2. All regressions control for country fixed effects.

	Model 4 coef/se	Model 5 coef/se	Model 6 coef/se	Model 7 coef/se	Model 8 coef/se	Model 9 coef/se
	0.231*** (0.013)	0.231*** (0.013)	0.146*** (0.015)	0.141*** (0.015)	0.132*** (0.015)	0.104*** (0.015)
	0.019 (0.016)	0.020 (0.016)	0.016 (0.016)	0.015 (0.016)	0.015 (0.016)	0.013 (0.016)
	0.000 (0.019)	-0.001 (0.018)	0.000 (0.018)	0.003 (0.018)	0.003 (0.018)	0.004 (0.018)
	-0.272*** (0.009)	-0.272*** (0.009)	-0.278*** (0.009)	-0.277*** (0.009)	-0.278*** (0.009)	-0.279*** (0.009)
	-0.164*** (0.010)	-0.163*** (0.010)	-0.150*** (0.010)	-0.146*** (0.010)	-0.142*** (0.010)	-0.129*** (0.010)
	-0.139* (0.074)	-0.130* (0.074)	-0.116 (0.076)	-0.126* (0.076)	-0.111 (0.077)	-0.108 (0.079)
	-0.077*** (0.017)	-0.074*** (0.017)	-0.089*** (0.017)	-0.088*** (0.017)	-0.092*** (0.016)	-0.090*** (0.017)
	0.240*** (0.031)	0.239*** (0.031)	0.222*** (0.030)	0.216*** (0.030)	0.202*** (0.029)	0.188*** (0.029)
	0.082*** (0.019)	0.082*** (0.019)	0.087*** (0.019)	0.086*** (0.019)	0.084*** (0.019)	0.088*** (0.018)
	-0.051 (0.042)	-0.052 (0.042)	-0.044 (0.042)	-0.049 (0.043)	-0.044 (0.042)	-0.062 (0.043)
		0.003 (0.009)	0.005 (0.009)	0.006 (0.009)	0.014 (0.009)	0.016* (0.009)
		-0.039*** (0.013)	-0.038*** (0.013)	-0.035*** (0.013)	-0.037*** (0.013)	-0.034*** (0.013)
			-0.066*** (0.011)	-0.058*** (0.011)	-0.050*** (0.011)	-0.039*** (0.011)
			-0.057 (0.038)	-0.062* (0.037)	-0.067* (0.036)	-0.061 (0.037)
			-0.029*** (0.011)	-0.022** (0.011)	-0.005 (0.011)	0.005 (0.011)
			-0.064 (0.046)	-0.071 (0.046)	-0.071 (0.045)	-0.084* (0.043)
			0.055*** (0.012)	0.051*** (0.012)	0.050*** (0.014)	0.043*** (0.014)
			-0.008* (0.004)	-0.013*** (0.004)	-0.011** (0.004)	-0.009** (0.004)

	HH's head has at least secondary education				
	HH's head has at least secondary education – missing				
	Partner of HH's head has at least secondary education				
	Partner of HH's head has at least secondary education – missing				
Poverty	Poverty indicator				
	Poverty indicator – missing				
Housing conditions	Squared meters per capita				
	Rooms per capita				
	Squared meters per capita – missing				
	Rooms per capita – missing				
	Bathroom inside				
	Bathroom inside – missing				
	Electricity				
	Electricity – missing				
Values	Appropriate age to stop education				
	Appropriate age to stop education – missing				
	Acceptable to work than go to school for children at primary school age				
	Acceptable to work than go to school for children at primary school age – missing				
	Number of observations	9 972	9 972	9 972	
	R2	0.133	0.219	0.248	

			-0.080*** (0.011)	-0.076*** (0.011)	-0.069*** (0.011)	-0.063*** (0.011)
			0.092 (0.070)	0.091 (0.073)	0.092 (0.069)	0.079 (0.069)
			-0.018 (0.013)	-0.020 (0.012)	-0.019 (0.012)	-0.015 (0.012)
			0.037*** (0.012)	0.036*** (0.012)	0.036*** (0.012)	0.033*** (0.011)
				0.086*** (0.011)	0.076*** (0.011)	0.070*** (0.011)
				0.062*** (0.015)	0.056*** (0.015)	0.044*** (0.015)
					0.001 (0.001)	0.001 (0.001)
					-0.009 (0.023)	-0.011 (0.023)
					0.055 (0.034)	0.045 (0.034)
					-0.069 (0.052)	-0.073 (0.054)
					-0.069*** (0.011)	-0.059*** (0.010)
					-0.086 (0.071)	-0.065 (0.071)
					-0.095*** (0.016)	-0.094*** (0.016)
					0.009 (0.068)	-0.007 (0.070)
						-0.015*** (0.002)
						-0.269*** (0.032)
						0.059*** (0.010)
						0.068*** (0.022)
	9 972	9 972	9 972	9 972	9 972	9 972
	0.250	0.251	0.266	0.272	0.280	0.293



**Table 15: Partial effects of the linear probability model estimates; dependent variable literacy rate, sample of individuals 9 to 25 years old**

Variables		Model 1 coef/se	Model 2 coef/se	Model 3 coef/se	
	Roma	-0.111*** (0.005)	-0.059*** (0.005)	-0.043*** (0.005)	
	Female	-0.008 (0.005)	-0.010** (0.005)	-0.008 (0.005)	
	Interaction	-0.012 (0.008)	-0.003 (0.007)	-0.007 (0.007)	
Demographic characteristics	Age (9 to 14)		0.110*** (0.008)	0.094*** (0.008)	
	Age (15 to 19)		0.039*** (0.005)	0.034*** (0.005)	
	At least secondary education		-0.195*** (0.006)	-0.181*** (0.006)	
	At least secondary education – missing		-0.181*** (0.022)	-0.161*** (0.021)	
Schooling conditions	Preschool			0.060*** (0.005)	
	Special school			-0.053*** (0.012)	
	Special school – missing			-0.229*** (0.022)	
Health	Long lasting illness				
	Long lasting illness – missing				
Living environment	Urban				
Family background variables	Books indicator				
	Books indicator – missing				
	Internet indicator				
	Internet indicator – missing				
	log of HHs size				

Notes: 1. Robust standard errors reported in the parenthesis; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1  
2. All regressions control for country fixed effects.

	Model 4 coef/se	Model 5 coef/se	Model 6 coef/se	Model 7 coef/se	Model 8 coef/se	Model 9 coef/se
	-0.042*** (0.005)	-0.042*** (0.005)	-0.021*** (0.006)	-0.019*** (0.006)	-0.014** (0.006)	-0.004 (0.006)
	-0.008 (0.005)	-0.009* (0.005)	-0.007 (0.005)	-0.006 (0.005)	-0.007 (0.005)	-0.008 (0.005)
	-0.007 (0.007)	-0.006 (0.007)	-0.008 (0.007)	-0.008 (0.007)	-0.008 (0.007)	-0.007 (0.007)
	0.093*** (0.008)	0.093*** (0.008)	0.099*** (0.008)	0.097*** (0.008)	0.094*** (0.008)	0.092*** (0.008)
	0.033*** (0.005)	0.033*** (0.005)	0.038*** (0.005)	0.039*** (0.005)	0.038*** (0.005)	0.038*** (0.005)
	-0.179*** (0.006)	-0.179*** (0.006)	-0.172*** (0.005)	-0.168*** (0.005)	-0.163*** (0.005)	-0.157*** (0.005)
	-0.159*** (0.021)	-0.161*** (0.021)	-0.161*** (0.023)	-0.156*** (0.023)	-0.152*** (0.023)	-0.145*** (0.023)
	0.060*** (0.004)	0.060*** (0.004)	0.055*** (0.005)	0.053*** (0.004)	0.051*** (0.004)	0.047*** (0.004)
	-0.043*** (0.012)	-0.042*** (0.012)	-0.036*** (0.012)	-0.037*** (0.012)	-0.035*** (0.012)	-0.036*** (0.012)
	-0.227*** (0.022)	-0.227*** (0.022)	-0.222*** (0.022)	-0.218*** (0.021)	-0.215*** (0.021)	-0.213*** (0.021)
	-0.063*** (0.012)	-0.062*** (0.012)	-0.065*** (0.012)	-0.065*** (0.012)	-0.063*** (0.012)	-0.065*** (0.012)
	0.014 (0.018)	0.015 (0.018)	0.017 (0.018)	0.019 (0.018)	0.014 (0.018)	0.020 (0.019)
		-0.026*** (0.005)	-0.027*** (0.005)	-0.027*** (0.005)	-0.032*** (0.005)	-0.034*** (0.005)
			0.016*** (0.004)	0.012*** (0.004)	0.006 (0.004)	0.001 (0.004)
			0.049*** (0.014)	0.053*** (0.014)	0.056*** (0.014)	0.054*** (0.014)
			0.005 (0.004)	0.000 (0.004)	-0.011** (0.005)	-0.014*** (0.005)
			-0.009 (0.022)	-0.009 (0.021)	-0.011 (0.021)	-0.010 (0.021)
			-0.048*** (0.006)	-0.045*** (0.006)	-0.041*** (0.007)	-0.040*** (0.007)

	Total number of unemployed in the HH				
	HH's head has at least secondary education				
	HH's head has at least secondary education – missing				
	Partner of HH's head has at least secondary education				
	Partner of HH's head has at least secondary education – missing				
Poverty	Poverty indicator				
	Poverty indicator – missing				
Housing conditions	Squared meters per capita				
	Rooms per capita				
	Squared meters per capita – missing				
	Rooms per capita – missing				
	Bathroom inside				
	Bathroom inside – missing				
	Electricity				
	Electricity – missing				
Values	Appropriate age to stop education				
	Appropriate age to stop education – missing				
	Acceptable to work than go to school for children at primary school age				
	Acceptable to work than go to school for children at primary school age – missing				
	Number of observations	17 360	17 360	17 360	
	R2	0.089	0.150	0.170	

			0.011*** (0.002)	0.014*** (0.002)	0.013*** (0.002)	0.012*** (0.002)
			0.008* (0.005)	0.005 (0.005)	0.002 (0.005)	0.000 (0.005)
			0.091*** (0.030)	0.095*** (0.029)	0.087*** (0.029)	0.088*** (0.029)
			0.008* (0.004)	0.009** (0.004)	0.007 (0.004)	0.005 (0.004)
			-0.021*** (0.007)	-0.020*** (0.006)	-0.020*** (0.006)	-0.019*** (0.006)
				-0.057*** (0.007)	-0.050*** (0.007)	-0.049*** (0.007)
				-0.025*** (0.007)	-0.024*** (0.007)	-0.020*** (0.007)
					0.001** (0.000)	0.001** (0.000)
					-0.008 (0.009)	-0.008 (0.009)
					0.006 (0.014)	0.010 (0.014)
					0.020 (0.021)	0.021 (0.021)
					0.043*** (0.006)	0.040*** (0.006)
					0.034 (0.036)	0.027 (0.036)
					0.031*** (0.010)	0.030*** (0.010)
					-0.007 (0.037)	-0.002 (0.037)
						0.005*** (0.001)
						0.105*** (0.017)
						-0.021*** (0.006)
						-0.028** (0.012)
	17 360	17 360	17 360	17 360	17 360	17 360
	0.173	0.174	0.180	0.185	0.190	0.194

**Table 16: Partial effects of the linear probability model estimates; dependent variable secondary or higher education (ISCED level 3 and higher), sample of individuals 25 to 65 years old**

Variables		Model 1 coef/se	Model 2 coef/se	Model 3 coef/se	
	Roma	-0.537*** (0.009)	-0.544*** (0.009)	-0.512*** (0.009)	
	Female	-0.084*** (0.011)	-0.084*** (0.011)	-0.083*** (0.011)	
	Interaction	0.016 (0.012)	0.016 (0.012)	0.017 (0.012)	
Demographic characteristics	Age (25 to 29)		0.107*** (0.010)	0.071*** (0.010)	
	Age (30 to 34)		0.082*** (0.010)	0.051*** (0.010)	
	Age (35 to 39)		0.097*** (0.010)	0.069*** (0.010)	
	Age (40 to 44)		0.107*** (0.011)	0.083*** (0.011)	
	Age (45 to 49)		0.106*** (0.011)	0.090*** (0.011)	
	Age (50 to 54)		0.070*** (0.011)	0.060*** (0.011)	
	Age (55 to 59)		0.042*** (0.012)	0.038*** (0.012)	
Schooling conditions	Special school			-0.126*** (0.016)	
	Special school – missing			-0.059*** (0.011)	
	Preschool			0.138*** (0.007)	
Health	Long lasting illness				
	Long lasting illness – missing				
Living environment	Urban				

Notes: 1. Robust standard errors reported in the parenthesis; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

2. All regressions control for country fixed effects.

	Model 4 coef/se	Model 5 coef/se	Model 6 coef/se	Model 7 coef/se	Model 8 coef/se	Model 9 coef/se
	-0.505*** (0.009)	-0.505*** (0.009)	-0.218*** (0.009)	-0.216*** (0.009)	-0.208*** (0.009)	-0.199*** (0.009)
	-0.081*** (0.011)	-0.081*** (0.011)	-0.078*** (0.010)	-0.078*** (0.010)	-0.078*** (0.010)	-0.078*** (0.009)
	0.016 (0.012)	0.016 (0.012)	0.008 (0.010)	0.008 (0.010)	0.008 (0.010)	0.010 (0.010)
	0.049*** (0.011)	0.047*** (0.011)	0.053*** (0.009)	0.054*** (0.009)	0.064*** (0.009)	0.064*** (0.009)
	0.030*** (0.011)	0.028*** (0.010)	0.035*** (0.009)	0.036*** (0.009)	0.045*** (0.009)	0.045*** (0.009)
	0.050*** (0.011)	0.049*** (0.011)	0.040*** (0.009)	0.041*** (0.009)	0.049*** (0.009)	0.049*** (0.009)
	0.069*** (0.011)	0.068*** (0.011)	0.044*** (0.009)	0.045*** (0.009)	0.052*** (0.009)	0.052*** (0.009)
	0.080*** (0.011)	0.078*** (0.011)	0.052*** (0.009)	0.052*** (0.009)	0.059*** (0.009)	0.058*** (0.009)
	0.052*** (0.011)	0.051*** (0.011)	0.031*** (0.009)	0.032*** (0.009)	0.037*** (0.009)	0.036*** (0.009)
	0.035*** (0.012)	0.034*** (0.011)	0.026*** (0.009)	0.026*** (0.009)	0.029*** (0.009)	0.029*** (0.009)
	-0.116*** (0.016)	-0.118*** (0.015)	-0.054*** (0.014)	-0.055*** (0.014)	-0.053*** (0.014)	-0.052*** (0.014)
	-0.054*** (0.011)	-0.055*** (0.011)	-0.010 (0.010)	-0.009 (0.010)	-0.007 (0.010)	-0.007 (0.010)
	0.138*** (0.007)	0.138*** (0.007)	0.069*** (0.006)	0.068*** (0.006)	0.069*** (0.006)	0.066*** (0.006)
	-0.051*** (0.006)	-0.052*** (0.006)	-0.034*** (0.005)	-0.034*** (0.005)	-0.032*** (0.005)	-0.032*** (0.005)
	-0.151*** (0.022)	-0.151*** (0.022)	-0.107*** (0.019)	-0.105*** (0.019)	-0.103*** (0.019)	-0.100*** (0.019)
		0.034*** (0.005)	0.015*** (0.005)	0.015*** (0.005)	0.016*** (0.005)	0.016*** (0.005)

Family background variables	Books indicator				
	Books indicator – missing				
	Internet indicator				
	Internet indicator – missing				
	log of HHs size				
	Total number of unemployed in the HH				
	HH's head has at least secondary education				
	HH's head has at least secondary education – missing				
	Partner of HH's head has at least secondary education				
	Partner of HH's head has at least secondary education – missing				
Poverty	Poverty indicator				
	Poverty indicator – missing				
Housing conditions	Squared meters per capita				
	Rooms per capita				
	Squared meters per capita – missing				
	Rooms per capita – missing				
	Bathroom inside				

			0.095*** (0.007)	0.094*** (0.007)	0.085*** (0.007)	0.082*** (0.007)
			0.058*** (0.022)	0.059*** (0.022)	0.059*** (0.022)	0.059*** (0.022)
			0.088*** (0.006)	0.086*** (0.006)	0.078*** (0.006)	0.074*** (0.006)
			0.012 (0.029)	0.013 (0.029)	0.010 (0.029)	0.006 (0.029)
			-0.035*** (0.004)	-0.034*** (0.004)	-0.007 (0.005)	-0.005 (0.005)
			-0.004** (0.002)	-0.003* (0.002)	-0.004** (0.002)	-0.005** (0.002)
			0.302*** (0.008)	0.301*** (0.008)	0.297*** (0.008)	0.295*** (0.008)
			0.072 (0.113)	0.072 (0.112)	0.065 (0.111)	0.069 (0.113)
			0.260*** (0.009)	0.260*** (0.009)	0.259*** (0.009)	0.258*** (0.009)
			0.087*** (0.006)	0.088*** (0.006)	0.086*** (0.006)	0.087*** (0.006)
				-0.021*** (0.005)	-0.014*** (0.005)	-0.012** (0.005)
				-0.013* (0.007)	-0.012* (0.007)	-0.010 (0.007)
					0.001*** (0.000)	0.001*** (0.000)
					0.025*** (0.008)	0.025*** (0.008)
					0.006 (0.016)	0.007 (0.016)
					0.099*** (0.033)	0.096*** (0.033)
					0.016*** (0.005)	0.012** (0.005)



	Bathroom inside – missing				
	Electricity				
	Electricity – missing				
Values	Appropriate age to stop education				
	Appropriate age to stop education – missing				
	Acceptable to work than go to school for children at primary school age				
	Acceptable to work than go to school for children at primary school age – missing				
	Number of observations	24 555	24 555	24 555	
	R2	0.326	0.330	0.346	

					-0.005 (0.034)	-0.008 (0.034)
					0.011* (0.007)	0.010 (0.007)
					-0.047* (0.025)	-0.045* (0.025)
						0.005*** (0.001)
						0.108*** (0.015)
						-0.013*** (0.005)
						-0.018* (0.010)
	24 555	24 555	24 555	24 555	24 555	24 555
	0.349	0.350	0.540	0.540	0.543	0.544

**Table 17: Nôpo decomposition of the Roma and gender gaps in education measured by selected educational indicators**

Secondary level education attainment					
	Male–Female gap				
	Roma		Non-Roma		
Total gap	0.7501		0.1386		
Unexplained	0.4762	63%	0.0849	61%	
Explained M (in and out of CS)	0.5212	69%	-0.095	-69%	
Explained F (in and out of CS)	-0.2117	-28%	0.1124	81%	
Explained 3	-0.0356	-5%	0.0363	26%	
Explained total	0.2739	37%	0.0537	39%	
Dropout rate					
	Non-Roma–Roma gap				
	Female				
Total gap	-0.7151				
Unexplained	0.8821		123%		
Explained NR (in and out of CS)	-0.059		8%		
Explained R (in and out of CS)	0.4122		-58%		
Explained 3	-0.1862		26%		
Explained total	0.167		-23%		
Employment					
	Male–Female gap				
	Roma		Non-Roma		
Total gap	1.5972		0.5172		
Unexplained	1.5521	97%	0.4972	96%	
Explained M (in and out of CS)	0.0554	3%	0.008	2%	
Explained F (in and out of CS)	0.0264	2%	0.0519	10%	
Explained 3	-0.0367	-2%	-0.0398	-8%	
Explained total	0.0451	3%	0.0201	4%	
Wage rate					
	Male–Female gap				
	Roma		Non-Roma		
Total gap	0.3041		0.2104		
Unexplained	0.248	82%	0.2721	129%	
Explained M (in and out of CS)	-0.1234	-41%	-0.1358	-65%	
Explained F (in and out of CS)	0.133	44%	0.0911	43%	
Explained 3	0.0465	15%	-0.0171	-8%	
Explained total	0.0561	18%	-0.0618	-29%	

		Non-Roma–Roma gap			
		Female		Male	
	Total gap	5.7134		3.3676	
	Unexplained	1.0338	18%	0.7531	22%
	Explained NR (in and out of CS)	3.1753	56%	1.8454	55%
	Explained R (in and out of CS)	0.1854	3%	-0.127	-4%
	Explained 3	1.3189	23%	0.8961	27%
	Explained total	4.6796	82%	2.6145	78%
		Non-Roma–Roma gap			
		Male			
	Total gap	-0.723			
	Unexplained	-0.502		69%	
	Explained NR (in and out of CS)	-0.2256		31%	
	Explained R (in and out of CS)	0.2562		-35%	
	Explained 3	-0.2514		35%	
	Explained total	-0.2208		31%	
		Non-Roma–Roma gap			
		Female		Male	
	Total gap	1.487		0.4528	
	Unexplained	0.4458	30%	0.1442	32%
	Explained NR (in and out of CS)	0.2977	20%	0.1212	27%
	Explained R (in and out of CS)	0.2686	18%	0.0449	10%
	Explained 3	0.4749	32%	0.1425	31%
	Explained total	1.0412	70%	0.3086	68%
		Non-Roma–Roma gap			
		Female		Male	
	Total gap	0.7183		0.5948	
	Unexplained	0.1177	16%	0.455	76%
	Explained NR (in and out of CS)	-0.0186	-3%	-0.1128	-19%
	Explained R (in and out of CS)	0.5213	73%	0.3561	60%
	Explained 3	0.0979	14%	-0.1034	-17%
	Explained total	0.6006	84%	0.1399	24%

The gap (e.g. Roma-non-Roma gap) is decomposed into four components:

- 1) the unexplained part – a part that cannot be explained by the differences in the observed characteristics (notation: *Unexplained*)
- 2) the explained part that can be explained by the differences in the distribution of characteristics of one group (non-Roma) that are in and out of the common support (notation: *Explained 1*);
- 3) the explained part that can be explained by the differences in the distribution of the characteristics between the individuals of the second group (Roma) that are in and out of the common support (notation: *Explained 2*)
- 4) the explained gap over the common support – the part of the gap that can be explained by the differences in the distribution of characteristics over the common support (for matched individuals); (notation: *Explained 3*);

The reported gaps are presented as a percentage of the average outcome of the reference groups. The reference group is Roma for ethnic gap and females for gender gap.

The decomposition of the gaps in the educational level obtained is performed based on the following variables: age dummies, special school indicator, long-standing illness indicator, urban area indicator, books indicator, Internet indicator, log of HHs size, total number of unemployed adults in the HH, head of the HH has at least secondary education, partner of the HH's head has at least secondary education. Country fixed effects are additionally controlled for.

The decomposition of the gaps in the dropout rate is performed based on the following variables: age dummies, special school indicator, long-standing illness indicator, urban area indicator, walking distance to school indicator, books indicator, Internet indicator, log of HHs size, total number of unemployed adults in the HH, head of the HH has at least secondary education, partner of the HH's head has at least secondary education. Country fixed effects are additionally controlled for.

The decomposition of the gaps in the employment is performed based on the following variables: age dummies, education level dummies, household size, number of children in the household who are below 6 years old or younger, urban area indicator. Country fixed effects are additionally controlled for.

The decomposition of the gaps in the wage rate is performed based on the following variables: age dummies, education level dummies, urban area indicator, usual hours worked per week, contract indicator. Country fixed effects are additionally controlled for.

**Table 18: Partial effects of the linear probability model and marginal effects of probit model of employment, sample of 16 to 65 years old individuals.**

Variables	LPM coefficients	Probit marginal effects
	coef/se	marginal eff/se
Roma	-0.052** (0.021)	-0.035* (0.020)
Female	-0.165*** (0.022)	-0.160*** (0.021)
Interaction	-0.044*** (0.015)	-0.062*** (0.011)
Age 15 to 19	0.007 (0.021)	-0.024 (0.029)
Age 20 to 24	0.126*** (0.024)	0.186*** (0.039)
Age 25 to 29	0.231*** (0.022)	0.320*** (0.037)
Age 30 to 34	0.279*** (0.025)	0.376*** (0.036)
Age 35 to 39	0.319*** (0.029)	0.421*** (0.035)
Age 40 to 44	0.305*** (0.028)	0.404*** (0.036)
Age 45 to 49	0.279*** (0.022)	0.375*** (0.032)
Age 50 to 54	0.229*** (0.020)	0.316*** (0.030)
Age 55 to 59	0.146*** (0.021)	0.212*** (0.036)
No education	-0.399*** (0.029)	-0.280*** (0.014)
ISCED 1	-0.375*** (0.028)	-0.279*** (0.016)
ISCED 2	-0.353*** (0.028)	-0.289*** (0.022)
ISCED 3	-0.198*** (0.031)	-0.160*** (0.024)
Total number of household members	-0.009*** (0.003)	-0.011*** (0.003)
Number of household members 6 years old or younger	0.015** (0.006)	0.014* (0.007)

Urban	-0.032*** (0.012)	-0.039*** (0.014)
Number of observations	33 705	33 705
Fitted values	0.204	0.187

Notes: 1. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1'

2. Cluster standard errors in the parenthesis. Standard errors are clustered across countries;

3. The marginal effect in the probit model is calculated according to the formula:  $\Delta 2\Phi(x\beta)/\Delta x_1\Delta x_2 = \Phi(\beta_1 + \beta_2 + \beta_{12} + x\beta) - \Phi(\beta_1 + x\beta) - \Phi(\beta_2 + x\beta) + \Phi(x\beta)$  and represents the average marginal effect.

For the discussion on the technical problems with the derivation of marginal effects and standard errors of interaction terms for the probit and logit models see: Norton, E. C., H. Wang and C. Ai (2004);

4. All regressions control for country fixed effects.

**Table 19: Marginal effects from wage equations, sample of individuals 16 to 65 years old. Column 2 and 3 report estimates are not corrected for sample selection, column 4 and 5 report coefficients that are corrected for employment selection.**

	Model 1	Model 2	Model 1 selectivity corrected	Model 2 selectivity corrected
	coef/se	coef/se	coef/se	coef/se
Roma	-0.262*** (0.025)	-0.150*** (0.021)	-0.233*** (0.024)	-0.142*** (0.021)
Female	-0.214*** (0.035)	-0.222*** (0.031)	0.006 (0.062)	-0.064 (0.059)
Interaction	0.023 (0.044)	0.004 (0.035)	0.224*** (0.040)	0.143*** (0.043)
Age 15 to 19	-0.343*** (0.064)	-0.261*** (0.049)	-0.101 (0.076)	-0.075 (0.082)
Age 20 to 24	-0.034 (0.044)	-0.026 (0.032)	-0.188*** (0.037)	-0.124*** (0.039)
Age 25 to 29	0.121** (0.050)	0.112** (0.048)	-0.199** (0.079)	-0.105 (0.088)
Age 30 to 34	0.154*** (0.030)	0.132*** (0.033)	-0.255*** (0.071)	-0.146* (0.085)
Age 35 to 39	0.164*** (0.056)	0.136*** (0.048)	-0.285*** (0.104)	-0.168 (0.119)
Age 40 to 44	0.168*** (0.052)	0.127*** (0.045)	-0.281*** (0.084)	-0.176* (0.098)
Age 45 to 49	0.157*** (0.051)	0.136*** (0.045)	-0.266*** (0.068)	-0.149* (0.085)

Age 50 to 54	0.123*** (0.047)	0.095** (0.040)	-0.252*** (0.065)	-0.160** (0.068)
Age 55 to 59	0.106 (0.071)	0.077 (0.057)	-0.175*** (0.061)	-0.111* (0.062)
No education	-0.903*** (0.087)	-0.652*** (0.075)	-0.395*** (0.099)	-0.329*** (0.098)
ISCED 1	-0.721*** (0.083)	-0.483*** (0.071)	-0.260*** (0.091)	-0.193** (0.093)
ISCED 2	-0.499*** (0.063)	-0.361*** (0.065)	-0.110* (0.060)	-0.112 (0.070)
ISCED 3	-0.281*** (0.060)	-0.235*** (0.067)	-0.104 (0.089)	-0.118 (0.087)
Urban	0.106** (0.044)	0.085** (0.038)	0.129*** (0.046)	0.102*** (0.039)
Contract		0.500*** (0.046)		0.462*** (0.056)
Contract – missing		0.184 (0.120)		0.193 (0.126)
Hours worked per week		0.009*** (0.001)		0.009*** (0.001)
Hours missing		0.220** (0.092)		0.236*** (0.087)
Lambda (selection term)			-0.538*** (0.123)	-0.507*** (0.135)
Number of observations	8 552	8 552	8 366	8 366
R2	0.364	0.456		

Notes: 1. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ;  
2. Cluster standard errors in the parenthesis. Standard errors are clustered across the countries;  
3. Estimates for the sample selection are corrected by the Heckman Maximum Likelihood estimation.  
Number of children younger than 6 years old, total number of household's members, non-labor income and marital status used for exclusion restrictions;  
4. All regressions control for country fixed effects.



**Table 20: Partial effects of the linear probability model estimates, dependent variable long lasting illness; sample of individuals who are 9 to 75 years old**

Variable		Model 1 coef/se	Model 2 coef/se	
	Roma	0.037*** (0.006)	0.112*** (0.006)	
	Female	0.028*** (0.008)	0.020*** (0.007)	
	Interaction	-0.008 (0.009)	-0.002 (0.008)	
Demographic characteristics	Age (9 to 14)		-0.610*** (0.017)	
	Age (15 to 19)		-0.602*** (0.017)	
	Age (20 to 24)		-0.568*** (0.017)	
	Age (25 to 29)		-0.539*** (0.017)	
	Age (30 to 34)		-0.496*** (0.017)	
	Age (35 to 39)		-0.452*** (0.018)	
	Age (40 to 44)		-0.376*** (0.018)	
	Age (45 to 49)		-0.298*** (0.019)	
	Age (50 to 54)		-0.242*** (0.019)	
	Age (55 to 59)		-0.153*** (0.019)	
	Age (60 to 64)		-0.106*** (0.020)	
	Age (65 to 69)		0.001 (0.022)	
	Marriage		-0.059*** (0.005)	

Note: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

	Model 3 coef/se	Model 4 coef/se	Model 5 coef/se	Model 6 coef/se	Model 7 coef/se	Model 8 coef/se
	0.067*** (0.007)	0.066*** (0.007)	0.065*** (0.007)	0.062*** (0.007)	0.059*** (0.007)	0.061*** (0.007)
	0.016** (0.007)	0.016** (0.007)	0.016** (0.007)	0.016** (0.007)	0.016** (0.007)	0.007 (0.007)
	-0.006 (0.008)	-0.006 (0.008)	-0.006 (0.008)	-0.006 (0.008)	-0.006 (0.008)	-0.010 (0.008)
	-0.618*** (0.017)	-0.588*** (0.017)	-0.586*** (0.017)	-0.587*** (0.018)	-0.593*** (0.018)	-0.451*** (0.019)
	-0.583*** (0.017)	-0.554*** (0.017)	-0.553*** (0.017)	-0.554*** (0.017)	-0.560*** (0.018)	-0.410*** (0.019)
	-0.537*** (0.017)	-0.510*** (0.017)	-0.508*** (0.017)	-0.510*** (0.017)	-0.515*** (0.018)	-0.364*** (0.019)
	-0.510*** (0.017)	-0.483*** (0.017)	-0.482*** (0.017)	-0.483*** (0.017)	-0.488*** (0.018)	-0.335*** (0.019)
	-0.468*** (0.017)	-0.443*** (0.018)	-0.442*** (0.018)	-0.444*** (0.018)	-0.448*** (0.018)	-0.293*** (0.019)
	-0.422*** (0.018)	-0.398*** (0.018)	-0.397*** (0.018)	-0.399*** (0.018)	-0.404*** (0.018)	-0.249*** (0.019)
	-0.345*** (0.018)	-0.323*** (0.018)	-0.322*** (0.018)	-0.324*** (0.018)	-0.328*** (0.019)	-0.176*** (0.020)
	-0.268*** (0.019)	-0.248*** (0.019)	-0.248*** (0.019)	-0.249*** (0.019)	-0.253*** (0.019)	-0.109*** (0.020)
	-0.216*** (0.019)	-0.199*** (0.019)	-0.199*** (0.019)	-0.200*** (0.019)	-0.203*** (0.019)	-0.069*** (0.020)
	-0.129*** (0.019)	-0.114*** (0.019)	-0.114*** (0.019)	-0.115*** (0.019)	-0.118*** (0.019)	-0.015 (0.020)
	-0.088*** (0.020)	-0.080*** (0.020)	-0.080*** (0.020)	-0.081*** (0.020)	-0.082*** (0.020)	-0.030 (0.020)
	0.010 (0.022)	0.010 (0.022)	0.010 (0.022)	0.009 (0.022)	0.008 (0.022)	0.016 (0.022)
	-0.059*** (0.005)	-0.059*** (0.005)	-0.059*** (0.005)	-0.058*** (0.005)	-0.059*** (0.005)	-0.046*** (0.005)

	Marriage – missing		0.013 (0.053)	
Schooling	ISCED 1			
	ISCED 2			
	ISCED 3			
	ISCED 4+			
	ISCED – missing			
Health controls	Access to doctor			
	Access to doctor – missing			
	Assisted birth			
	Assisted birth – missing			
Living environment	Urban			
Poverty	Poverty indicator			
	Poverty indicator – missing			
Housing conditions	Squared meters per capita			
	Rooms per capita			
	Rooms per capita – missing			
	Squared meters per capita – missing			
	Bathroom inside			

	0.015 (0.049)	0.011 (0.048)	0.006 (0.048)	0.013 (0.047)	0.009 (0.047)	0.010 (0.039)
	-0.042*** (0.006)	-0.041*** (0.006)	-0.040*** (0.006)	-0.038*** (0.006)	-0.038*** (0.006)	-0.032*** (0.006)
	-0.065*** (0.006)	-0.064*** (0.006)	-0.063*** (0.006)	-0.060*** (0.006)	-0.058*** (0.007)	-0.053*** (0.007)
	-0.121*** (0.008)	-0.118*** (0.008)	-0.118*** (0.008)	-0.114*** (0.008)	-0.112*** (0.008)	-0.093*** (0.008)
	-0.172*** (0.013)	-0.168*** (0.014)	-0.169*** (0.014)	-0.164*** (0.014)	-0.161*** (0.014)	-0.124*** (0.014)
	0.208*** (0.045)	0.195*** (0.043)	0.195*** (0.043)	0.196*** (0.043)	0.192*** (0.043)	0.187*** (0.042)
		0.030*** (0.006)	0.031*** (0.006)	0.031*** (0.006)	0.032*** (0.006)	0.031*** (0.006)
		0.050** (0.023)	0.052** (0.023)	0.054** (0.023)	0.052** (0.023)	0.054** (0.023)
		-0.042*** (0.008)	-0.045*** (0.008)	-0.045*** (0.008)	-0.044*** (0.008)	-0.045*** (0.008)
		0.117*** (0.024)	0.114*** (0.024)	0.118*** (0.024)	0.116*** (0.024)	0.104*** (0.024)
			0.031*** (0.004)	0.032*** (0.004)	0.031*** (0.004)	0.027*** (0.004)
				0.021*** (0.005)	0.020*** (0.005)	0.016*** (0.005)
				-0.026*** (0.007)	-0.028*** (0.007)	-0.020*** (0.007)
					0.000 (0.000)	0.000 (0.000)
					-0.018*** (0.007)	-0.020*** (0.007)
					0.128*** (0.042)	0.134*** (0.042)
					-0.010 (0.015)	-0.016 (0.015)
					-0.001 (0.005)	0.000 (0.005)

	Bathroom inside – missing			
	Electricity			
	Electricity – missing			
Income	Employed			
	Non-labor income (dummy)			
	Non-labor income – missing			
	Number of observations	43 093	43 093	
	R2	0.017	0.167	

					0.092** (0.037)	0.088** (0.037)
					-0.014* (0.008)	-0.014* (0.008)
					-0.024 (0.027)	-0.025 (0.026)
						-0.069*** (0.005)
						0.187*** (0.009)
						0.052*** (0.009)
	43 093	43 093	43 093	43 093	43 093	43 093
	0.176	0.179	0.180	0.181	0.182	0.201



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