

Sources of Ethnic Inequality in Bulgaria: Evidence of Roma Discrimination

Capstone – Rough Draft

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Abstract

Bulgarian Roma, who constitute roughly 10 percent of Bulgaria's population, unambiguously face some of the most egregious material poverty and discrimination in contemporary Europe. Corollary, income inequality between Roma and non-Roma in contemporary Bulgaria is dramatic. Mean and median monthly net wages of Roma are roughly 60 percent that of non-Roma earnings. In terms of total net monthly household income, Roma households saw average and median incomes half the size of non-Roma households. The aim of this paper is to decompose the factors leading to this inequality by identifying the extent to which differences in endowments – e.g. differences in educational attainment, regional differences, household composition, and demographics – explain inequalities between Roma and non-Roma versus the role of factors specific to Roma – e.g. employer discrimination, structural discrimination, and any other characteristics specific to this ethnic group. By applying the World Bank's 2013 Bulgarian Longitudinal Inclusive Society Survey to a log-linear model, there is clear evidence that belonging to the Roma ethnicity depreciates labor market earnings as well as total household income when controlling for other relevant labor market characteristics. Furthermore, via a Blinder-Oaxaca Decomposition, the contribution of different factors to the gap in economic outcomes between Bulgarian Roma and non-Roma are estimated. The estimates produced by both the Blinder-Oaxaca Decomposition and the log-linear model provide clear evidence that factors like structural and employment discrimination are driving economic inequality between Bulgarian Roma and non-Roma, rather than factors like educational or demographic differences.

Contents

| | | |
|----------|---|-----------|
| 1 | Introduction | 3 |
| 1.1 | Evidence of Systematic Prejudice | 4 |
| 1.2 | Ethnic Inequality and Discrimination in Bulgaria | 6 |
| 2 | Research Questions | 9 |
| 3 | Data | 10 |
| 4 | Blinder-Oaxaca Decomposition | 11 |
| 4.1 | Explicit Form of the Blinder-Oaxaca Decomposition | 12 |
| 4.2 | Difference in Mean Log-Wages between Non-Roma and Roma | 12 |
| 4.3 | Decomposing Explained and Unexplained Differences | 12 |
| 5 | Segregated and non-segregated communities: Is there evidence of systematic differences in segregated and non-segregated communities? | 14 |
| 6 | Distribution of incomes for weighted and unweighted samples | 17 |
| 7 | Education and standarized test results | 20 |
| | References | 22 |

1 Introduction

Bulgarian Roma unambiguously face some of the most egregious social exclusion, material poverty, and discrimination in contemporary Europe. Presently, Bulgarian Roma – often pejoratively termed gypsies or tsigani – constitute roughly 10 percent of the population of Bulgaria (European Commission 2014).¹ The European Union Agency for Fundamental Rights along with other EU agencies, the United Nations Development Program, the World Bank, and the Open Society Foundation have identified the degree of Roma discrimination and ethnic inequality in Bulgaria as abhorrent (*see* Ram 2014; The Economist 2015).²

These organizations and other stakeholders have made efforts to curb discrimination towards and alleviate material poverty among Bulgarian Roma.³ From 2007 to 2013, 3.2 percent (or €37 million) of the funds drawn from the European Social Fund by Bulgaria were dedicated for the explicit purpose of integrating disadvantaged people, namely Roma (European Commission 2014). Despite substantial funding dedicated towards Bulgarian Roma, the European Commission (2014) has argued that funding levels are far from sufficient to deal with the extremity of the inequality of opportunity Bulgarian Roma face. The Commission claims that Bulgaria should allocate 20 percent of the funds it is eligible to withdraw from the European Social Fund for the purpose of reducing poverty and social exclusion among Roma; this would have translated into €231 million for the 2007–2013 period, or roughly half a percent of annual GDP.

Despite calls by civil society and the European Union – alongside abundant evidence of extreme material poverty and lack of opportunity among Bulgarian Roma – the current political make-up of Bulgaria has ensured that efforts to reduce inequal-

¹The analysis for this paper was conducted in R. The Rmarkdown file used to create this PDF can be found at the Github repository for this project: <https://github.com/AsherDvirDjerassi/BLISS---ROMA> .

²According to the Bulgarian national census, Roma make up 5% of the population. However, it is widely agreed that the census dramatically underestimates the true size of the Roma population due to lack of proper registration of Roma, distrust of officials, and intentional obscuration of ethnicity for fear of prejudice (*see* European Commission (2014) and The Economist (2015)).

³One such effort was the Social Inclusion Project, a joint EU, World Bank, and Bulgarian initiative launched in 2008 and concluded in 2015. Funded by a €40 million loan guarantee from the World Bank, €73.43 million in contributions from the European Social Fund, and matched by €23.30 million in funding from local communities, this single initiative guaranteed funding equal to a quarter of a percent of Bulgaria’s 2007 GDP of €48.8 billion (*see* Independent Evaluation Group 2018).

ity and discrimination against Roma are waning. Rather, forces of discrimination have been on the rise since the 2017 Bulgarian elections when a coalition of three ultra-rightwing parties were brought into government by Boyko Borisov, who has held the office of prime minister for a nearly continuously stretch since 2009 (*see* Dnevnik 2018). In order to maintain control of the government after an election that significantly reduced the size of the Citizens for European Development of Bulgaria (GERB), the prime minister’s party went into coalition with the United Patriots, a coalition of three ultra nationalist, anti-Roma parties that was formed in 2016.⁴

As of October 2018, 7 out of 20 ministers and deputies minister in government come from the ultra-rightwing United Patriots. Valeri Simeonov, co-leader of the ultra-right wing coalition, currently holds the position of the Deputy Prime Minister and is tasked with overseeing Bulgaria’s National Council on Co-operation on Ethnic and Integration Issues, which is intended to coordinate policy on minority rights with Bulgarian and European NGOs. Despite holding a position designed to defend minority rights, Simeonov has called the country’s Roma minority “ferocious humanoids” whose women “have the instincts of street dogs”(Katie French 2018).

1.1 Evidence of Systematic Prejudice

Drawing from survey data, Alexey Pamporov, a leading Bulgarian sociologist with the Bulgarian Academy of Sciences, writes that “approximately 30% of Bulgarians do not want Roma people living in the country”(2012). Stereotypes of Roma as “lazy,” “dirty,” “deceitful,” and “thievish” proliferate throughout Bulgarian media, popular culture, and mainstream discourse. Pamporov argues that the prevalence of these deleterious stereotypes reinforces residential and educational segregation and leads to labor market discrimination.

Pamporov, along with researchers from the Open Society Foundation, conducted content analysis on Bulgaria’s leading newspapers in the few months preceding the 2009 parliamentary elections. Of the articles analyzed, 716 were identified as mentioning Roma either directly or indirectly, while “61.5% seemingly attempted to be politically correct.” These articles used “the endonyms Roma, Romani or other derivatives from these terms, [but] in the majority of articles, referring to ethnicity

⁴The following parties constitute the United Patriots: The VMRO (a faction of the Bulgarian National Movement), the National Front for the Salvation of Bulgaria (NFSB), and Ataka.

did not improve the articles' value and informativeness. . . [A quarter of articles] used the exonym Gypsies. In 55.4% of cases the protagonists are referred to as swarthy. . . Ethnic identity is not mentioned at all in only 1% of the articles" (Pamporov 2012, 145). While Bulgarian newspapers vary widely in the share of articles that provide positive, negative, or neutral representations of Roma, typically between 11 and 33 percent of a newspaper's coverage was classified as negative.

In a set of anonymous questionnaires presented in 2011 to ethnic Bulgarians working as doctors, social workers, or teachers, it is clear that while most ethnic minorities in Bulgaria generally have positive associations, Roma do not (Metodieva et al. 2012). Pomaks (ethnic-Bulgarians whose ancestors converted to Islam) and Turks are most strongly associated with being "hardworking" and "religious," while Jews and Armenians are associated with business acumen and cleverness. In sharp contrast, "Roma are depicted as criminals, lazy, dirty, liars, and uneducated both by the national level survey and in the target groups' samples."

A minority of respondents – 11.8 percent of doctors, 26.6 percent of teachers, and 4.6 percent of social workers – agreed with the following eugenical statement: "There should be lower educational standards for Roma children, because they are not able to achieve the result of the others." To further address any eugenical prejudices members of these three professions may have, those surveyed were asked whether Roma children should face a different, 'lightweight' curriculum. Specifically, respondents were asked to agree or disagree with the following statement: "Roma children are able most of all to sing and dance well, it is in their blood. Therefore, the key to their integration is music education and labor training." A large share of respondents claimed to neither agree nor disagree (21.3 percent of doctors, 8.6 percent of teachers, and a small fraction of social workers). While this degree of ambivalence is in and of itself indicative of eugenical prejudice, an additional 31.4 percent of doctors, 39.1 percent of teachers, and 20 percent of social workers agreed with this statement.

Likewise, 63.5 percent of doctors, 67.1 percent of teachers, and 49.1 percent of social workers agreed with the following statement: "Roma women give birth to many children in order to live on social benefits, which they receive for these children." Furthermore, 35.5 percent of doctors, 33.6 percent of teachers, and 35.1 percent of social workers also agreed with this statement: "Roma suffer from many hereditary diseases, because of marriage and sexual relations between very close relatives."

Given such widespread agreement with prejudiced ideas amongst some of the most important stewards of social institutions, it should not come as a surprise that a mere 45.6 percent of ethnic Bulgarians would agree to live in the same neighborhood as Roma Metodieva et al. (2012). Likewise, this same 2012 survey reports that a mere 12 percent of ethnic Bulgarians would be willing to marry a Roma person.

1.2 Ethnic Inequality and Discrimination in Bulgaria

While it is beyond the scope of this article to establish the complete array of possible consequences that such stereotypes engender, the pervasiveness of negative stereotypes gives strong reason to believe that discrimination against Bulgarian Roma is widespread and plays a significant role in shaping the gap between Roma and ethnic Bulgarians. The EU Agency for Fundamental Rights surveyed minorities across Europe to find the relative incidence of hate-motivated harassment. Roma across Europe experienced the highest rate of hate-motivated harassment of any ethnic minority (European Union Agency for Fundamental Rights 2014). Furthermore, of all ethnic minorities in the EU, Bulgarian Roma have the second lowest level of trust in their legal system after Estonian Roma European Union Agency for Fundamental Rights (2014)

Amnesty International (2018) claims that “marginalization and widespread discrimination against Roma persists.” In addition to employment discrimination, Amnesty stresses the obstacles Bulgarian Roma face in accessing public services, particularly education, healthcare, housing, and infrastructure (particularly sewage, trash collection, and clean roads). The most striking and visceral manifestation of ethnic inequality in Bulgaria is the severe inadequacy of infrastructure and housing in Roma communities. According to a 2011 survey conducted by the EU Agency for Fundamental Rights, which surveyed Roma households in primarily Roma neighborhoods and ethnic Bulgarians that lived near to these communities, 39 percent of Roma dwellings had no piped water inside compared with 4 percent of non-Roma dwellings nearby (European Union Agency for Fundamental Rights (2014)). 75 percent of Roma dwellings had no indoor toilet, relative to 31 percent of non-Roma dwellings nearby. Roma versus non-Roma with dwellings connected to sewage was 39 versus 13 percent, while access to electricity was 7 percent versus 1 percent.

The root of this widespread segregation, inadequate housing, and subpar infras-

structure lies partly in the forced settlement of Bulgarian Roma in 1958. After the completion of full land collectivization by the Communist regime, the Bulgarian politburo outlawed the often migratory living patterns of Roma.⁵ Like the Communist Party's policy towards Bulgarian Turks, ethnic self-identification was heavily discouraged and collective advocacy for Roma causes was censured. The combination of sudden urbanization, lack of political representation, and prejudice on the part of the Communist regime created conditions where Roma were segregated into ghettos. After the fall of communism in the early 1990s, the collapse of state structures allowed for Bulgarian Roma to effectively squat in a manner comparable to Brazilian favelas and slums found elsewhere in the Global South (*see* Barany 2000). Such communities lacked and continue to lack *de jure* access to public services, as the state does not recognize a formal responsibility as it does in providing public services to legal dwellings.

Despite clear evidence of discrimination, Bulgarian Roma report feeling discriminated against the least often among European Roma. When asked if a Bulgarian Roma person felt they had been discriminated against in the past 12 months, 30 percent of respondents said yes – markedly lower than the typical response in Europe.⁶ Meanwhile, a mere 19 percent of Bulgarian Roma active in the labor market believed that they had been discriminated against when seeking work in the past 5 years. Two percent of working age Bulgarian Roma respondents claimed that they were not looking for work because “Roma are not hired.” In contrast, the typical response for Roma in other European countries is around 4 to 6 percent. The only other countries with lower responses to this question were Hungary and Spain.

These survey responses are puzzling. Despite widespread inequality, discrimination is not felt, particularly when it comes to the labor market. This begs the question of what relative role labor market discrimination plays in determining economic inequality between ethnic groups in Bulgaria. In terms of labor market outcomes, the gap between Roma and ethnic Bulgarians is very wide. For those of prime working age, 20–64 years old, 68 percent of non-Roma Bulgarians had at least part-time employment compared to 49 percent of Roma.⁷

⁵*See* Ilieva (2012) discussion of the Bulgarian Census

⁶*See* European Union Agency for Fundamental Rights (2017)

⁷The employment rate of ethnic Bulgarians comes from Eurostat, while the employment rate for Roma was collected in the second wave of the European Union Minorities and Discrimination Survey, 2016.

However, it may be the case that discrimination is not as instrumental in explaining this gap as the ubiquity of negative stereotypes and prejudice may suggest. Rather, it may be the case that the gap in labor market outcomes between Roma and the rest can be largely explained by differences in relevant labor market characteristics that are outside of ethnicity, such as how much education one has, the skills one possesses, and the region one lives in. In terms of education, Roma have paltry educational outcomes relative to ethnic Bulgarians. According to the 2011 Fundamental Rights Agency Roma Survey, 67 percent of adult Roma reported leaving school before the age of 16. In contrast, a mere 26 percent of non-Roma living in the same communities as these Roma reported leaving school before 16.

Decomposing the relative impact of factors driving ethnically-based economic inequality is essential to the enterprise of bridging this ethnic divide. With funds dedicated to the plight of Bulgarian Roma withering alongside the rise of ultra-rightwing political parties, ensuring the efficiency of each euro dedicated to ameliorating Roma poverty has even more urgency.

2 Research Questions

This paper seeks to answer the following: What accounts for economic inequalities between ethnic Bulgarians and the predominant ethnic minorities in Bulgaria – Roma and Turks?

What is the impact of differences in relevant economic characteristics, such as educational attainment and family composition, on income inequality, differences in rates of government assistance use, and employment? What is the role of more opaque and unobservable forces, such as labor market discrimination and structural discrimination, on observable inequities?

In order to answer these questions, this paper is organized around questions:

- 1) Are there measurable and statistically significant differences between ethnic minority households sampled from segregated and non-segregated neighborhoods? Answering this question is able to disentangle whether there is a segregation effect. Additionally, by answering these query evidence would be provided on the extent to which the sample of minority households is systematically downwardly biased.
- 2) Independent of relevant observables, is there evidence that ethnic minorities see differences in household income, labor market earnings, government income, and employment rates from ethnic Bulgarians?
- 3) According to a Blinder-Oaxaca decomposition, what are the factors driving inequality between ethnic groups in Bulgaria? What is the role of endowments versus characteristics specific to ethnic minorities? Are the factors that drive inequality between Turks and Bulgarians the same as those that drive inequality between Roma and Bulgarians?

Through answering these three sets of questions, this paper attempts to comment on the forces shaping inequality between ethnic minorities in Bulgaria.

3 Data

This paper uses the Bulgarian Longitudinal Inclusive Society Survey (BLISS). BLISS is part of a larger panel survey collected between February 2010 and April 2013 from a representative sample of Bulgarian households at the behest of the World Bank and the Open Society Institute–Sofia. Information on demographics, education, taxes, transfers, and other relevant labor market information on the household and individual household members were collected.

Distinctive among comparable surveys in Bulgaria, this panel survey can identify a representative sample of those who identify as ethnically Roma and ethnically Bulgarian. To garner sufficient variation among Bulgarian Roma, BLISS surveyed a greater number of Roma households than would be proportionate to their share of the population (i.e. a ‘booster’ sample).

This representative survey was able to follow households and the members of those households across the survey period (February 2010 to April 2013) with quite little attrition. The planned size of the main sample in the first round was 2,384 households, and 99% of this sample was realized. A Bulgarian Roma booster sample of 296 households was planned; 99% of surveyed households responded.

Table 1: Aggregate Household Income by Source and Survey

| | BLISS | EU-SILC | Administrative Data | Ratio BLISS/EU-SILC | Ratio BLISS/Administrative Data |
|------------------------------------|-------|---------|---------------------|---------------------|---------------------------------|
| total monthly heating allowance | 69 | 35 | 75 | 1.97 | 0.92 |
| total net wages | 33326 | 25646 | 27765 | 1.30 | 1.20 |
| total net household income | 20510 | NA | NA | NA | NA |
| household pension income | 12407 | 9469 | 7461 | 1.31 | 1.66 |
| household infant benefits | 199 | 73 | 142 | 2.73 | 1.40 |
| household child benefits | 629 | 236 | 352 | 2.67 | 1.79 |
| household social assistance income | 40 | 23 | 54 | 1.74 | 0.74 |
| unemployment insurance benefits | 279 | 363 | 351 | 0.77 | 0.79 |

Note:

For the administrative data and the EU-SILC, families are the unit of observation for infant and child benefits while social assistance and heating allowance reciprocity is reported on the household level.

Table 2: Total Recipients in Thousands by Source and Survey

| | BLISS | EU-SILC | Administrative Data | Ratio BLISS/EU-SILC | Ratio BLISS/Administrative Data |
|---|-------|---------|---------------------|---------------------|---------------------------------|
| households receiving heating allowances | 233 | 35 | 75 | 6.66 | 3.11 |
| individuals employed | NA | 2930 | 2935 | NA | NA |
| households receiving pensions | NA | 2967 | 2670 | NA | NA |
| households receiving infant benefits | 32 | 38 | 62 | 0.84 | 0.52 |
| households receiving child benefits | 984 | 344 | 537 | 2.86 | 1.83 |
| individuals receiving unemployment insurance benefits | NA | 18 | 50 | NA | NA |
| households receiving social assistance income | 60 | 201 | 117 | 0.30 | 0.51 |

Note:

For the BLISS data, total recipients are restricted to households because this table is only concerned with the BLISS weighted at the household level. Given that the BLISS was designed to be representative at the household level, receipt of income which is accounted for by the survey at the personal level is not reported. For the administrative data and the EU-SILC, families are the unit of observation for infant and child benefits while social assistance and heating allowance reciprocity is reported on the household level.

Table 3: Total household income deciles by survey

| Decile | EU-SILC | Weighted BLISS | Unweighted BLISS | Unweighted BLISS Roma | Unweighted BLISS Bulgarians |
|--------|---------|----------------|------------------|-----------------------|-----------------------------|
| 1 | 361 | 1236 | 777 | 700 | 1500 |
| 2 | 470 | 2034 | 1659 | 960 | 2240 |
| 3 | 647 | 2515 | 2250 | 1380 | 2700 |
| 4 | 826 | 2994 | 2700 | 1800 | 3122 |
| 5 | 1023 | 3436 | 3180 | 2120 | 3600 |
| 6 | 1221 | 3899 | 3634 | 2532 | 4092 |
| 7 | 1407 | 4489 | 4247 | 3000 | 4800 |
| 8 | 1619 | 5383 | 5200 | 3702 | 5600 |
| 9 | 2043 | 6899 | 6600 | 4440 | 7200 |
| 10 | 3411 | 42000 | 42000 | 12000 | 42000 |

Note:

All amounts above are reported as 2013 Bulgarian leva. The EU-SILC data was reported in 2013 Euros and was appropriately converted. The BLISS data reports total household net income. The EU-SILC data reports on total monthly average disposable household income. Source: https://www.euromod.ac.uk/sites/default/files/statistics/WebStatistics_G3.0%2B_HHIncome_v2.xls

Table 4: Household income distribution by survey

| | Bulgarian | Turkish | Turkish Main Sample | Turkish Booster Sample | Roma | Roma Main Sample | Roma Booster Sample |
|------|-----------|---------|---------------------|------------------------|-------|------------------|---------------------|
| 20% | 2240 | 441 | 436 | 454 | 960 | 1058 | 762 |
| 40% | 3122 | 720 | 691 | 750 | 1800 | 1800 | 840 |
| 60% | 4092 | 1398 | 1240 | 1400 | 2532 | 2670 | 2100 |
| 80% | 5600 | 2160 | 1850 | 2396 | 3702 | 3759 | 2400 |
| 100% | 42000 | 5400 | 5040 | 5400 | 12000 | 12000 | 5400 |

Note:

All amounts above are reported as 2013 Bulgarian leva. The EU-SILC data was reported in 2013 Euros and was appropriately converted. The BLISS data reports total household net income. The EU-SILC data reports on total monthly average disposable household income. Source: https://www.euromod.ac.uk/sites/default/files/statistics/WebStatistics_G3.0%2B_HHIncome_v2.xls

4 Blinder-Oaxaca Decomposition

Through a Blinder-Oaxaca decomposition, the relative impact of education, region, family size, and other characteristics on income disparities between Roma and non-Roma can be ascertained. Corollary, a Blinder-Oaxaca decomposition can provide

strong evidence for the extent to which economic inequality between Roma and non-Roma is due to structural and employment discrimination.

In the immediate subsections below, the explicit form of the Blinder-Oaxaca decomposition is presented. For sake of simplicity, the explicit form is presented for only one of the potential dependent variables: mean net monthly wage income.

4.1 Explicit Form of the Blinder-Oaxaca Decomposition

Below is the explicit form of the Blinder-Oaxaca decomposition for log-wages estimates for Roma and non-Roma.

$$\begin{aligned} (1) \quad \ln(\text{wages}_{Roma_i}) &= x_{Roma_i}^T \gamma + \epsilon_{Roma_i} \\ (2) \quad \ln(\text{wages}_{non-Roma_i}) &= x_{non-Roma_i}^T \gamma + \epsilon_{non-Roma_i} \end{aligned}$$

4.2 Difference in Mean Log-Wages between Non-Roma and Roma

Fitted values from the two log-linear models are subtracted from one another as follows.

$$\begin{aligned} (3) \quad \text{mean}(\ln(\text{wages}_{non-Roma})) - \text{mean}(\ln(\text{wages}_{Roma})) \\ = b_{non-Roma} \text{mean}(X_{non-Roma}) - b_{Roma} \text{mean}(X_{Roma}) \end{aligned}$$

4.3 Decomposing Explained and Unexplained Differences

The differences between Roma and non-Roma in terms of wage income are decomposed into a) between-group differences explained by observables and b) differences not explained by observables.

$$= b_{non-Roma}(\text{mean}(X_{non-Roma}) - \text{mean}(X_{Roma})) + \text{mean}(X_{Roma})(b_{non-Roma} - b_{Roma})$$

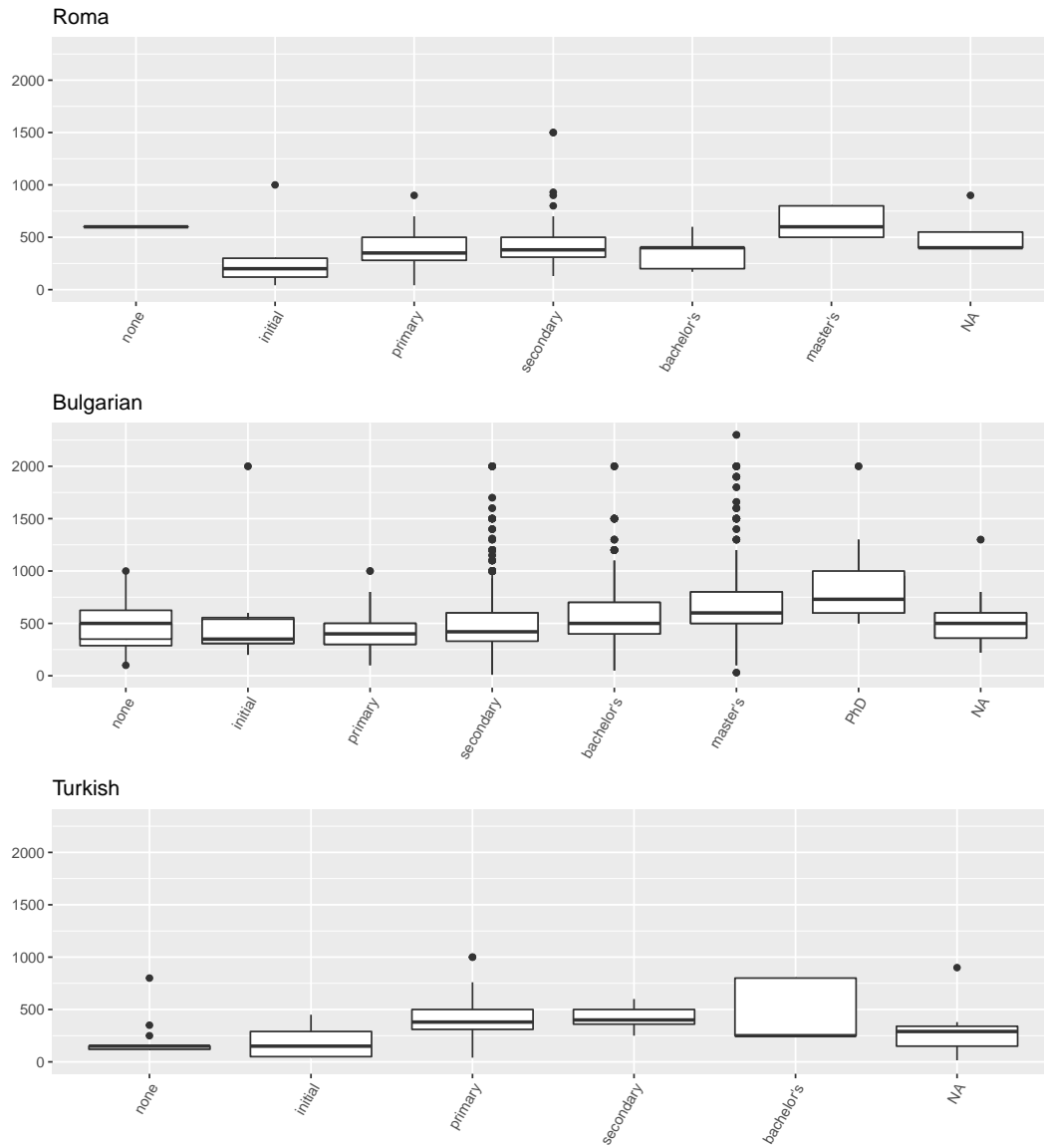
- a) Between-group differences: These are differences in observable and relevant characteristics, like one's level of education, age, and the region in which they live.

$$b_{non-Roma}(\text{mean}(X_{non-Roma}) - \text{mean}(X_{Roma}))$$

- b) Differences not explained by observables: The differences in outcomes that cannot be accounted for by observables are estimated here. Typically in the literature, this portion of the Blinder-Oaxaca decomposition is considered to estimate the role of discrimination.

$$\text{mean}(X_{Roma})(b_{non-Roma} - b_{Roma})$$

- 5 Segregated and non-segregated communities: Is there evidence of systematic differences in segregated and non-segregated communities?



2013 Bulgarian Leva. Unweighted sample. Observations restricted to those with positive incomes. Wage income includes all earned income.

Figure 1: Monthly average net wages by education level for those with positive earnings

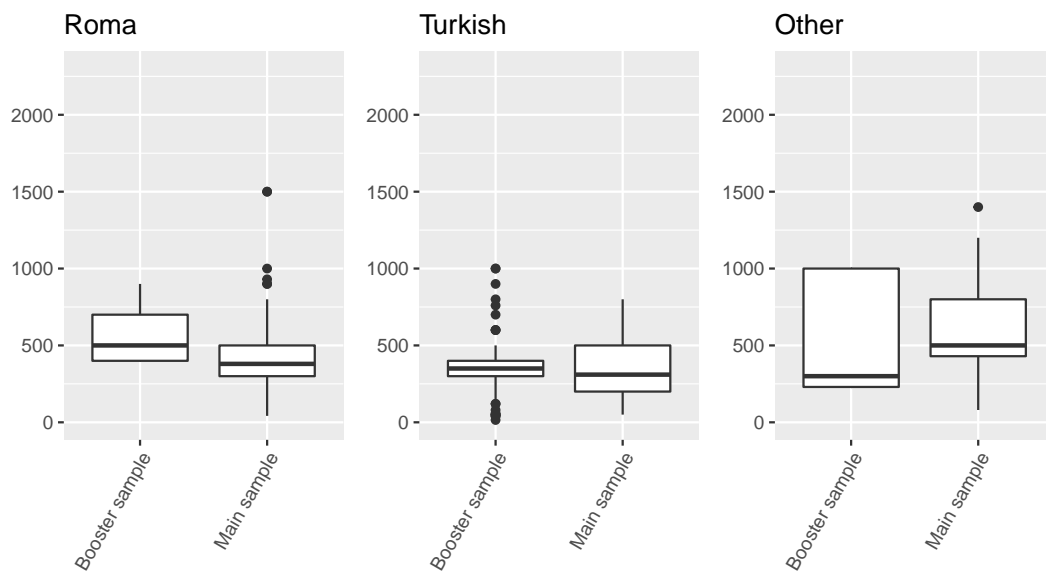


Figure 2: Monthly average net wages by ethnicity and sample type

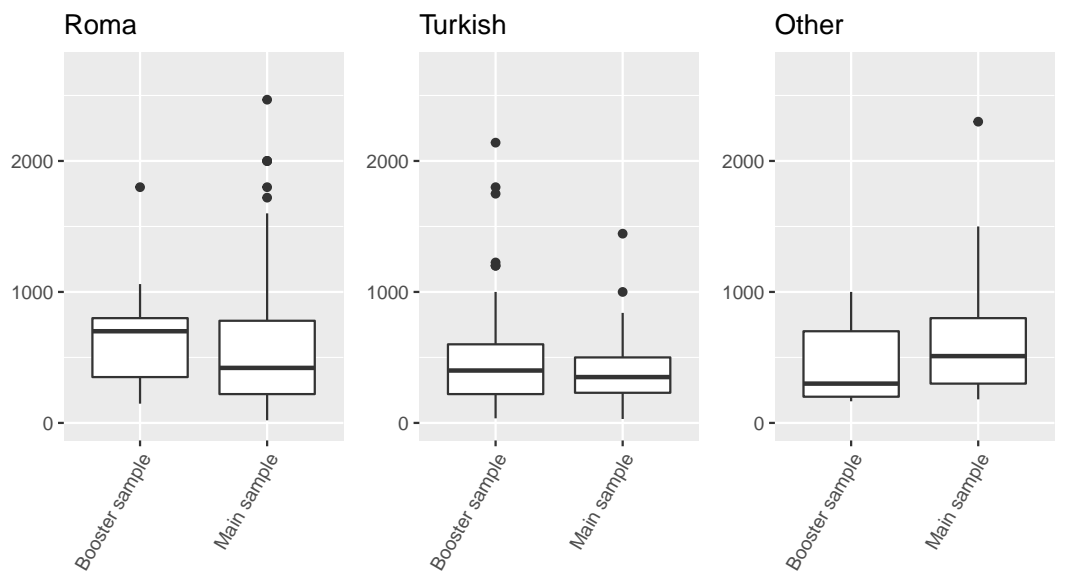
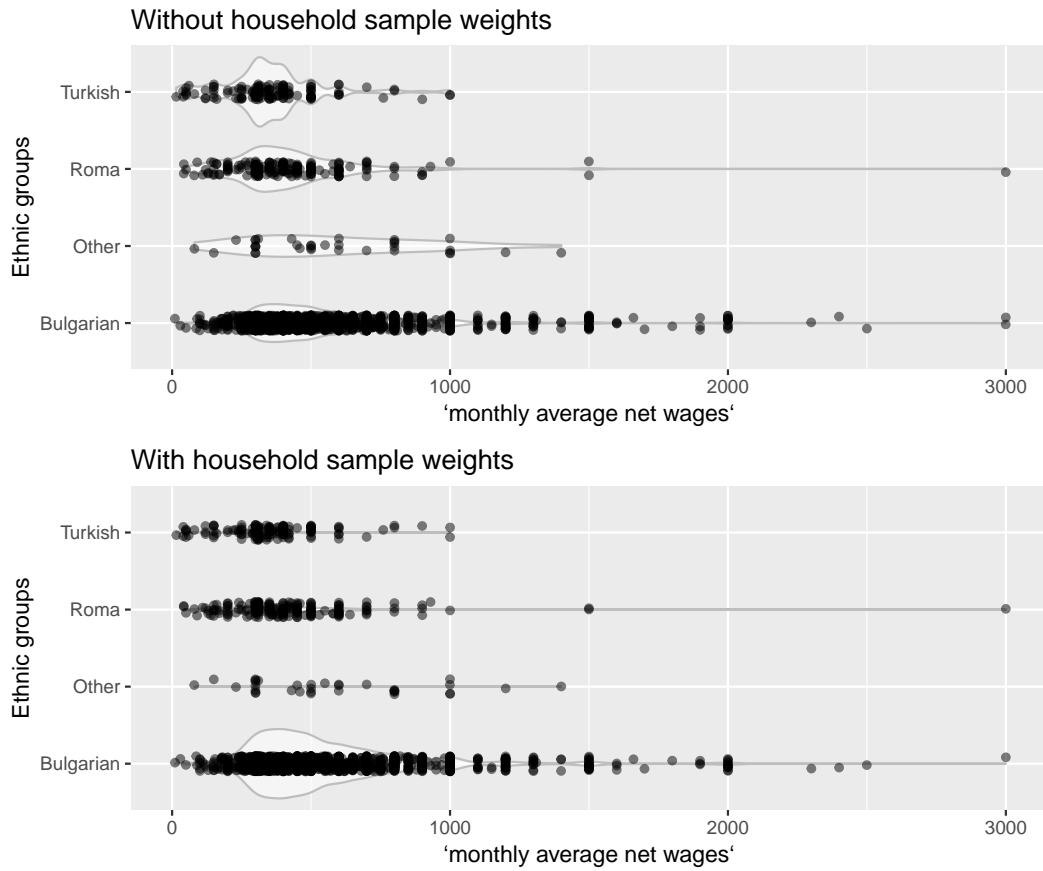


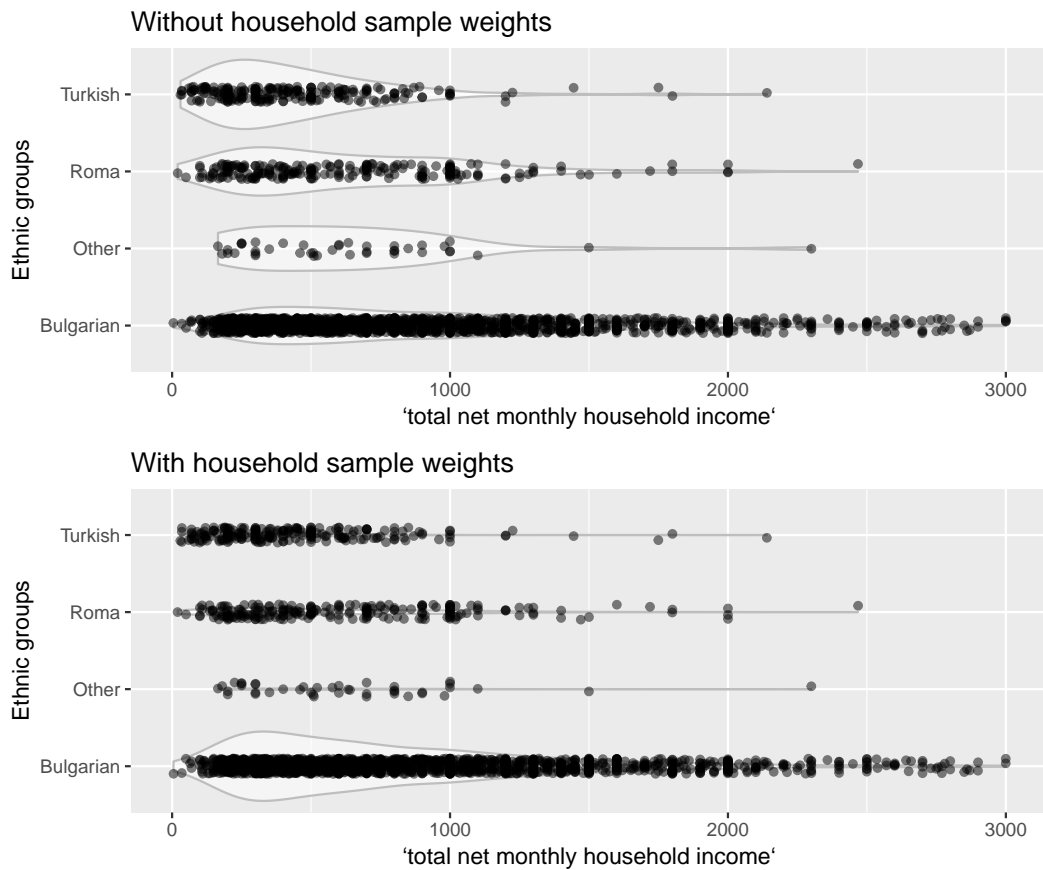
Figure 3: Monthly net household income by ethnicity and sample type



2013 Bulgarian Leva. Observations restricted to those with positive incomes. Wage income includes all earned income.

Figure 4: Distribution of monthly average net wages for households with positive incomes – weighted and unweighted sample

6 Distribution of incomes for weighted and unweighted samples



2013 Bulgarian Leva. Observations restricted to those with positive incomes.

Figure 5: Distribution of monthly total net household income for households with positive incomes – weighted and unweighted sample

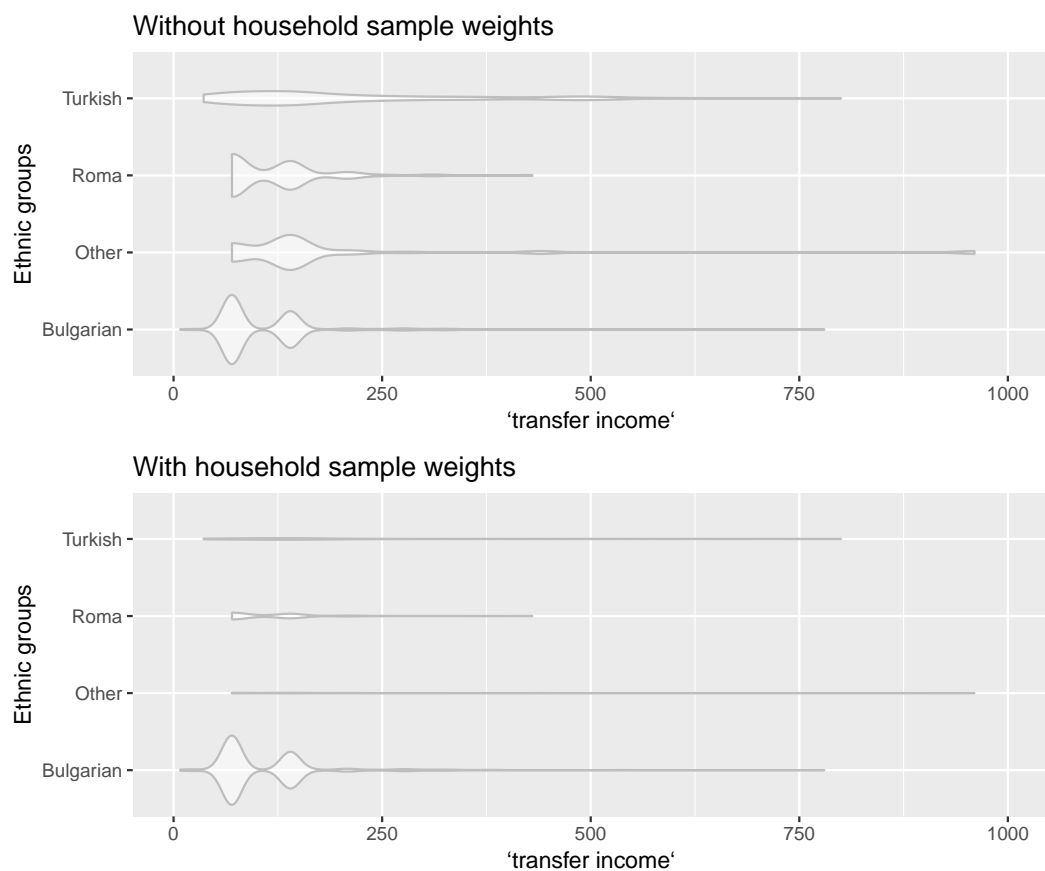


Figure 6: Distribution of monthly total net household income from government benefits households with positive government benefit incomes – weighted and un-weighted sample

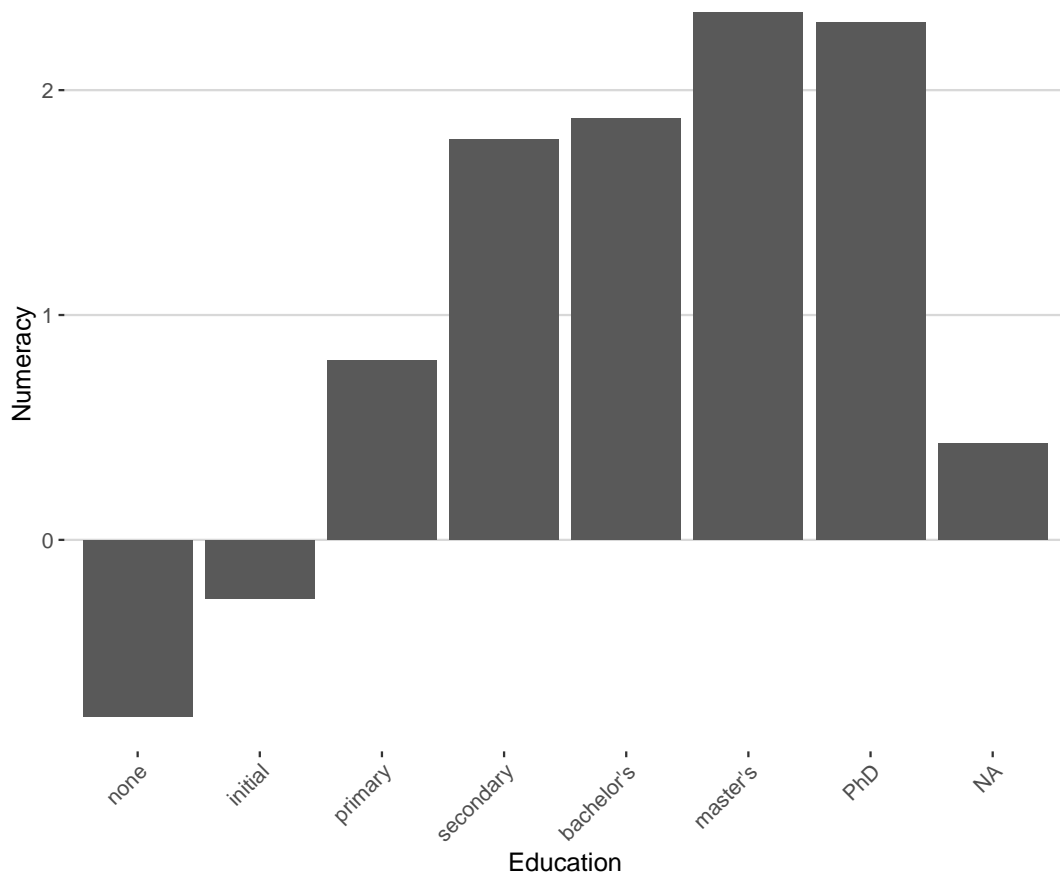


Figure 7: Mean numeracy score by education level

7 Education and standardized test results

Table 5: OLS estimates: Educational attainment on standardized test score

| | <i>Dependent variable:</i> | |
|---------------------------------|-----------------------------|---------------------|
| | Numeracy | Literacy |
| | (1) | (2) |
| initial | 0.525 (0.381) | 0.195 (0.400) |
| primary | 1.580*** (0.334) | 1.480*** (0.351) |
| secondary | 2.565*** (0.323) | 2.220*** (0.339) |
| bachelor's | 2.659*** (0.341) | 2.505*** (0.359) |
| master's | 3.131*** (0.338) | 2.898*** (0.355) |
| PhD | 3.085*** (0.653) | 2.982*** (0.686) |
| Constant | -0.784** (0.318) | -0.502 (0.334) |
| Observations | 1,674 | 1,674 |
| R ² | 0.131 | 0.109 |
| Adjusted R ² | 0.128 | 0.106 |
| Residual Std. Error (df = 1667) | 1.710 | 1.797 |
| F Statistic (df = 6; 1667) | 41.968*** | 34.114*** |
| <i>Note:</i> | *p<0.1; **p<0.05; ***p<0.01 | |

References

- Amnesty International. 2018. “Bulgaria 2017/2018.” *BULGARIA 2017/2018*. <https://www.amnesty.org/en/countries/europe-and-central-asia/bulgaria/report-bulgaria/>.
- Barany, Zoltan. 2000. “Politics and the Roma in State-Socialist Eastern Europe.” *Communist and Post-Communist Studies* 33 (4): 421–37. doi:10.1016/S0967-067X(00)00014-3.
- “Bulgaria - Multitopic Household Survey 2007.” 2018. Accessed December 26. <http://microdata.worldbank.org/index.php/catalog/2273>.
- Dnevnik. 2018. “Volen Siderov Remains the Chairman of the United Patriots’ Group in Parliament.” *Www.dnevnik.bg*, September. https://www.dnevnik.bg/politika/2018/09/11/3309303_volen_siderov_ostava_predsdatel_na_grupata_na/.
- Duval, Laetitia, and François-Charles Wolff. 2016. “Emigration Intentions of Roma: Evidence from Central and South-East Europe.” *Post-Communist Economies* 28 (1): 87–107. doi:10.1080/14631377.2015.1124558.
- European Commission. 2014. “The European Union and Roma – Factsheet Bulgaria.” *Ec.europa.eu*. https://ec.europa.eu/info/sites/info/files/factsheet_0.pdf.
- European Union Agency for Fundamental Rights. 2014. “Survey Data Explorer - Results from the 2011 Roma Survey.” *European Union Agency for Fundamental Rights*. <http://fra.europa.eu/en/publications-and-resources/data-and-maps/survey-data-explorer-results-2011-roma-survey>.
- . 2017. “Second European Union Minorities and Discrimination Survey - Main Results.” *European Union Agency for Fundamental Rights*. <https://fra.europa.eu/en/publication/2017/eumidis-ii-main-results>.
- Ilieva, Nedezhda. 2012. “The Number of Bulgarians in the Roma Ethnic Group from 1878 to the Beginning of the 21st Century.” *Bulgarian Academy of Sciences - Problems of Geography* 3-4. http://geoproblems.eu/wp-content/uploads/2016/01/2012_34/5_ilieva.pdf.
- Independent Evaluation Group. 2018. “Project Performance Assessment Report - Bulgarian Social Inclusion Project.” *Independent Evaluation Group Report No.*

124861 (June).

Katie French. 2018. "Far-Right Views Now Mainstream in European Countries Like Hungary Daily Mail Online." <https://www.dailymail.co.uk/news/article-5575259/Far-right-views-mainstream-Europe.html>.

Kertesi, Gábor, and Gábor Kézdi. 2011. "Roma Employment in Hungary After the Post-Communist Transition1." *Economics of Transition* 19 (3): 563–610. doi:10.1111/j.1468-0351.2011.00410.x.

Kolev, D., T. Krumova, A. Pamporov, D. Radulescu, S. van der Zwaan, and T. Balcik. 2013. "Beyond Anti-Roma Stereotypes: The World Is Not Just White and Black." *Amalipe Center for Interethnic Dialogue and Tolerance*. Beyond anti-Roma Stereotypes: the World is not Just White and Black amalipe.com/files/publications/Stereotipi-eng.pdf.

Levin, Victoria, Silvia Guallar Artal, and Abila Safir. 2016. "Skills for Work in Bulgaria : The Relationship Between Cognitive and Socioemotional Skills and Labor Market Outcomes." *The World Bank* 102627 (January): 1–58.

Marushiakova, Elena, and Vesselin Popov. 2015. "European Policies for Social Inclusion of Roma: Catch 22?" *Social Inclusion* 3 (5): 19–31. doi:10.17645/si.v3i5.241.

Metodieva, Maria, Svetlana Avramova, Dragomira Belcheva, Petya Braynova, Liliya Grigorova, Petya Kabakchieva, and Alexey Pamporov. 2012. "Beyond Myths and Prejudices: Roma in Bulgaria." *Sofia: Open Society Institute/Soros Foundation Romania*.

Milenkova, Valentina, and Svetlana D. Hristova. 2017. "Is There Any Light in the Tunnel? On the Drawbacks of the Roma Educational Integration in Bulgaria." *European Quarterly of Political Attitudes and Mentalities* 6 (1): 1–16.

Pamporov, Alexey. 2007. "Sold Like a Donkey? Bride-Price Among the Bulgarian Roma." *Journal of the Royal Anthropological Institute* 13 (2): 471–76.

———. 2008. "Characteristics of Roma Employment in Bulgaria." *Demographic Processes and Labour Force in Bulgaria*, 144–61.

———. 2011a. "Survey on the Family Attitudes of the Roma Community." *Preventing Early Marriages, Chapter: Part 2. Survey on the Family Attitudes of the Roma Community, Publisher: Astarta, Editors: Deyan Kolev, Teodora Krumova,*

January, pp.73–100.

———. 2011b. *The Employment of Roma, Turks, and Bulgarians: A Comparative Report Based on the Outcome of the Multipurpose Household Survey 2007*. Edited by Michael Stewart and Marton Rovid. Multi-Disciplinary Approaches to Romany Studies. Central European University Press.

———. 2012. “The Drunken Swarthy Offenders: The Image of the Roma in the Bulgarian Press in a Pre-Election Context.” *Population* 3 (4): 141–58.

———. 2013. “From Benefits to Brooms: Case Studies.” *NEUJOBS Working Paper No. 19.3*, December, 26–52.

Ram, Melanie H. 2014. “Europeanized Hypocrisy: Roma Inclusion and Exclusion in Central and Eastern Europe.” *JEMIE* 13: 15.

Scicluna, Henry. 2007. “Anti-Romani Speech in Europe’s Public Space: The Mechanism of Hate Speech.” *Roma Rights: Quarterly Journal of the European Roma Rights Centre* 3: 47–55.

Sigona, Nando, and Nidhi Trehan. 2009. *Introduction to Romani Politics in Neoliberal Europe in "Romani Politics in Contemporary Europe"*. Pp. 1-20, Edition 1. Springer.

Templer, Bill. 2006. “Neoliberal Strategies to Defuse a Powder Keg in Europe; the "Decade of Roma Inclusion" and Its Rationale.” *New Politics* 10 (4): 137.

The Economist. 2015. “Left Behind.” *The Economist*, June. <https://www.economist.com/europe/2015/06/04/left-behind>.