Sources of Ethnic Inequality in Bulgaria: Evidence of Roma Discrimination

December, 2018

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. Namely, the analysis undertaken here seeks to decompose 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

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-

[1] The 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 .

[2] According 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)).

[3] One 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

[4]The 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-

tructure 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)

[7] The 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.

1.3 Research Question

This paper seeks to answer the following: What is the relative impact of differences between non-Roma and Roma in terms of characteristics relevant to the labor market and earnings, such as educational attainment, on income disparities between these ethnic groups? Furthermore, what is the impact of being Roma, independent of such labor market factors? Otherwise stated, are there certain unobservable, Roma-specific characteristics that drive inequality between Roma and non-Roma, such as labor market discrimination or structural inequalities?

1.4 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 for, with 99% of this sample realized as well.

2 Relevant Summary Statistics

Income inequality between Roma and non-Roma is dramatic. Mean and median monthly net wages for Roma with positive earnings were 338 BGN and 320 BGN in 2013, respectively. The analog figures for non-Roma were a mean of 554 BGN and a median of 480 BGN – roughly 60 percent greater than Roma. In terms of total net monthly household income, Roma households saw average total incomes of 426 BGN and median incomes of 350 BGN. Meanwhile, non-Roma saw a mean of 889 BGN and a median of 700 BGN – double the total net income of Roma households.

This section provides graphical and statistical information regarding economic inequality between Bulgarian Roma and non-Roma. In addition to clearly showing the extent to which Roma and non-Roma differ in terms of household and wage income, differences in levels of education, standardized cognitive test scores, and government transfer income are also presented. In short, Roma see lower household income and wage income, have lower levels of education, earn less for the same level of education relative to non-Roma, have lower test results on standardized tests, and receive higher government income transfers than non-Roma.

For the purposes of the research question posed here, the combination of these facts suggest that there is clear economic inequality between Roma and non-Roma in Bulgaria and that these differences may in part be explained by differences in a number of clearly measurable factors.

2.1 Total Net Monthly Household Income

Figures 1 and 2 present the distribution of total net monthly household income by ethnic group. As is strikingly clear, total net monthly household income for Roma is clearly skewed closer to zero than for non-Roma. For Roma, the bulk of the total household income distribution is concentrated between 0 BGN per month and 500 BGN. For non-Roma, the bulk of the distribution extends to 1000 BGN per month. Additionally, Roma household incomes are more concentrated at the mean and median of the distribution, while non-Roma see a greater range of incomes.

Table 1 displays the striking distribution of total monthly household income by Roma and non-Roma. This household income variable includes income from employment, remittances, government benefits, and all other sources. Yet it continues

Figure 1: Distribution of net monthly total household income

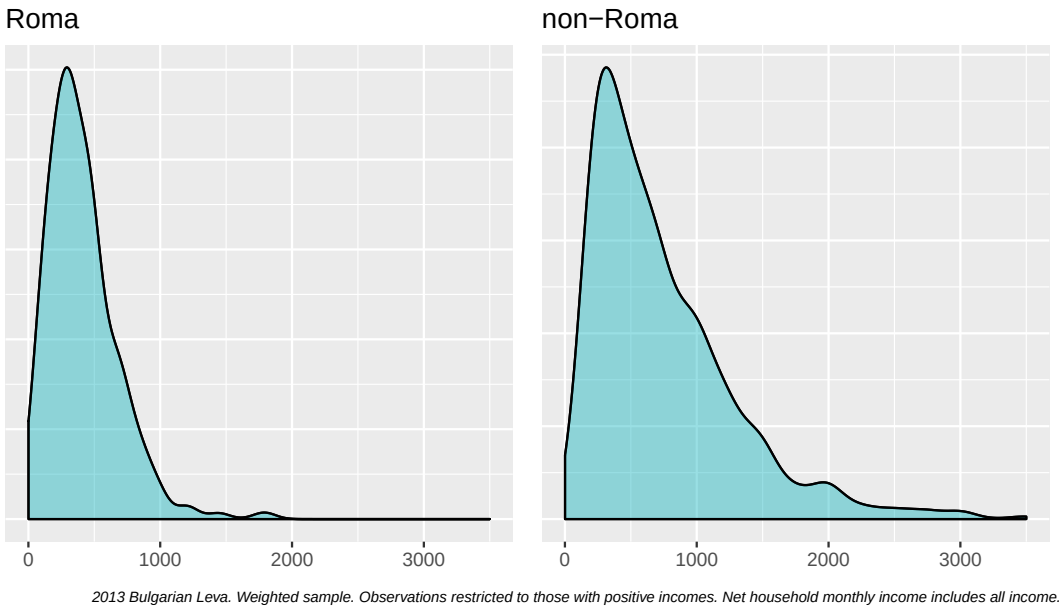

Figure 2: Distribution of net monthly total household income

to be substantially less for Roma than for non-Roma across the distribution. Each quartile sees between a 200 BGN and nearly 7000 BGN spread. The full spread of the Roma household income distribution would fall below the first income quartile of the non-Roma distribution.

Table 1: Total net monthly household income quartiles

	Roma	non-Roma
0%	230	0
25%	333	0
50%	437	0
75%	540	585
100%	644	6,897

2.2 Wage Income and Total Household Income

As seen in Figure 3, the relationship exhibited in Table 1 maintains for wage income in addition to total household income. The spread of incomes and the concentration of income is substantially lower for Roma than for non-Roma. Like distribution of household income, the distribution of wage income is also markedly lower and much more concentrated at the center of distribution than for non-Roma.

2.3 Education and Wages

Levels of education are lower amongst Roma. Additionally, education is strongly associated with higher earnings for both Roma and non-Roma. However, it is also clear that the returns from the same level of education is lower amongst Roma. In the Blinder-Oaxaca decompositions conducted below, both the impact of differences in education level and difference in returns to education by ethnic status are estimated.

2.4 Government Benefit Income

As is widely remarked upon in Bulgaria, Roma see higher net monthly government transfer income than non-Roma. Given the relatively low household and wage incomes among Roma, it is certainly not surprising that government benefit income is

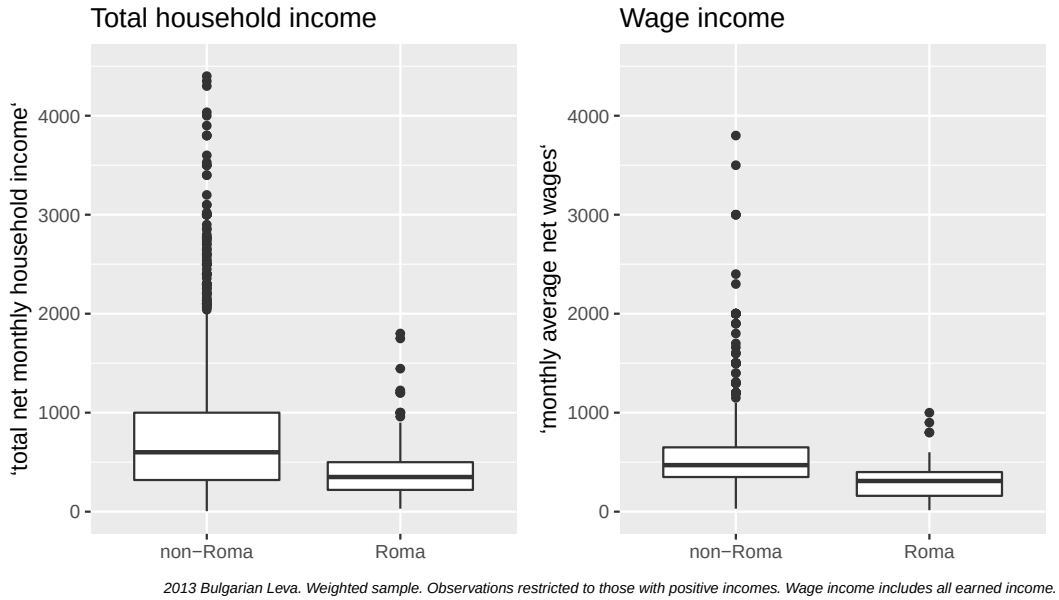

Figure 3: Monthly total household income and individual wage income

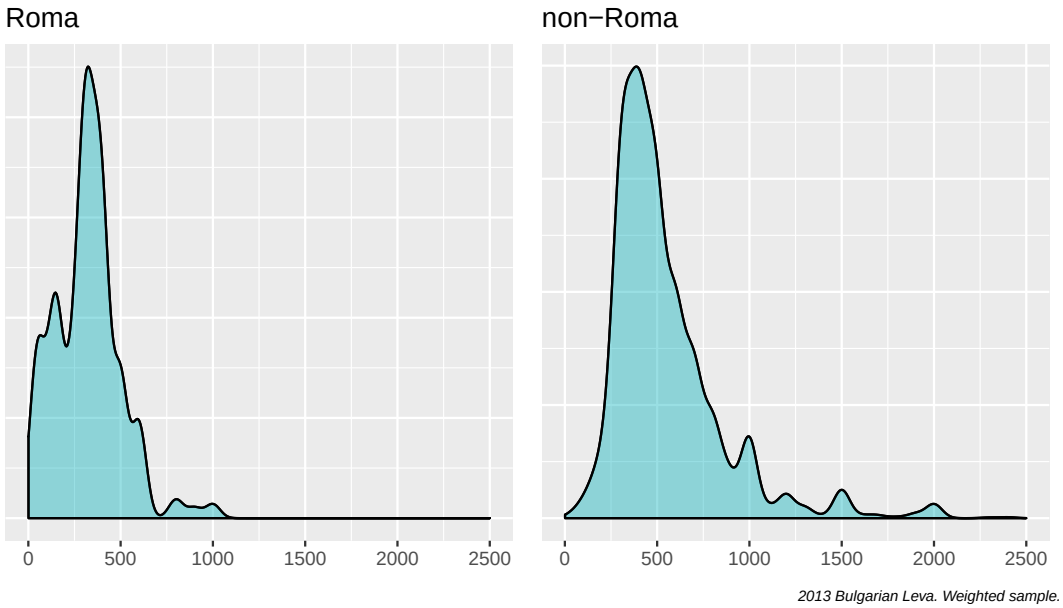

Figure 4: Distribution of monthly average net wages

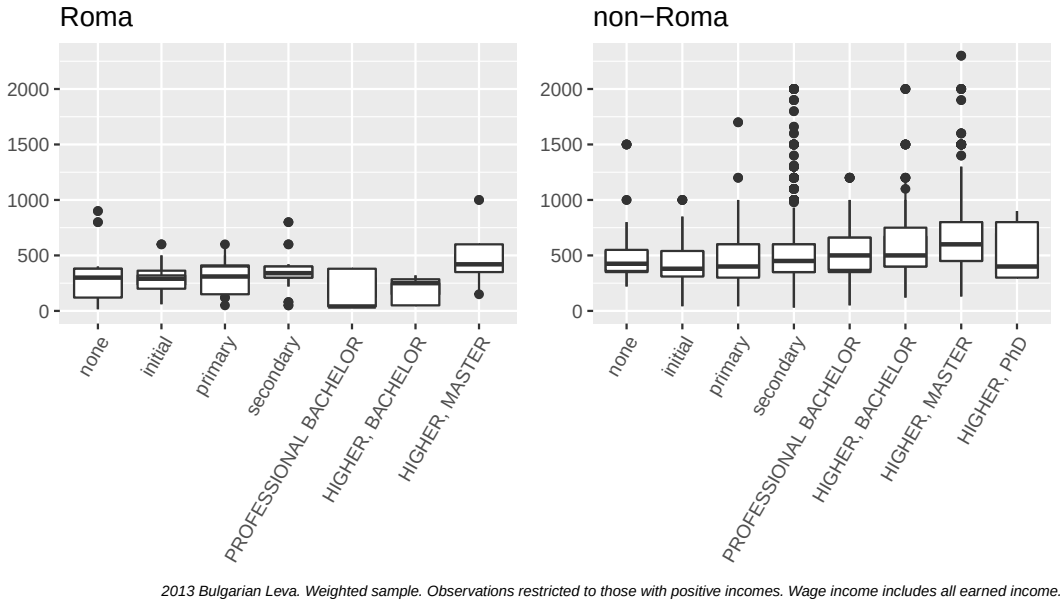

Figure 5: Monthly average net wages by education level

higher amongst Roma. However, government benefits remain paltry. Government benefit income for Roma who receive these benefits is concentrated around 150 BGN and 200 BGN (i.e. a mere 75 and 100 euros).

2.5 Cognitive Test Scores

In addition to questions regarding demographics, education history, and income, the BLISS 2013 survey asked 1732 adult respondents, aged 18–65, to undertake cognitive and interpersonal skills tests. In their analysis of the BLISS survey, Levin, Guallar Artal, and Safir (2016) did not find consistent, significant marginal effects of interpersonal skills and personality traits on labor market outcomes. However, cognitive skills closely follow labor market outcomes and educational outcomes. In contrast to the cognitive skills test which measure literacy and numeracy, the interpersonal skills tests allow for quite a large degree of subjectivity on the part of the respondent and the proctor. In consequence, the measures of cognitive skills used by the BLISS were far less likely to be biased because they lacked subjective categories.

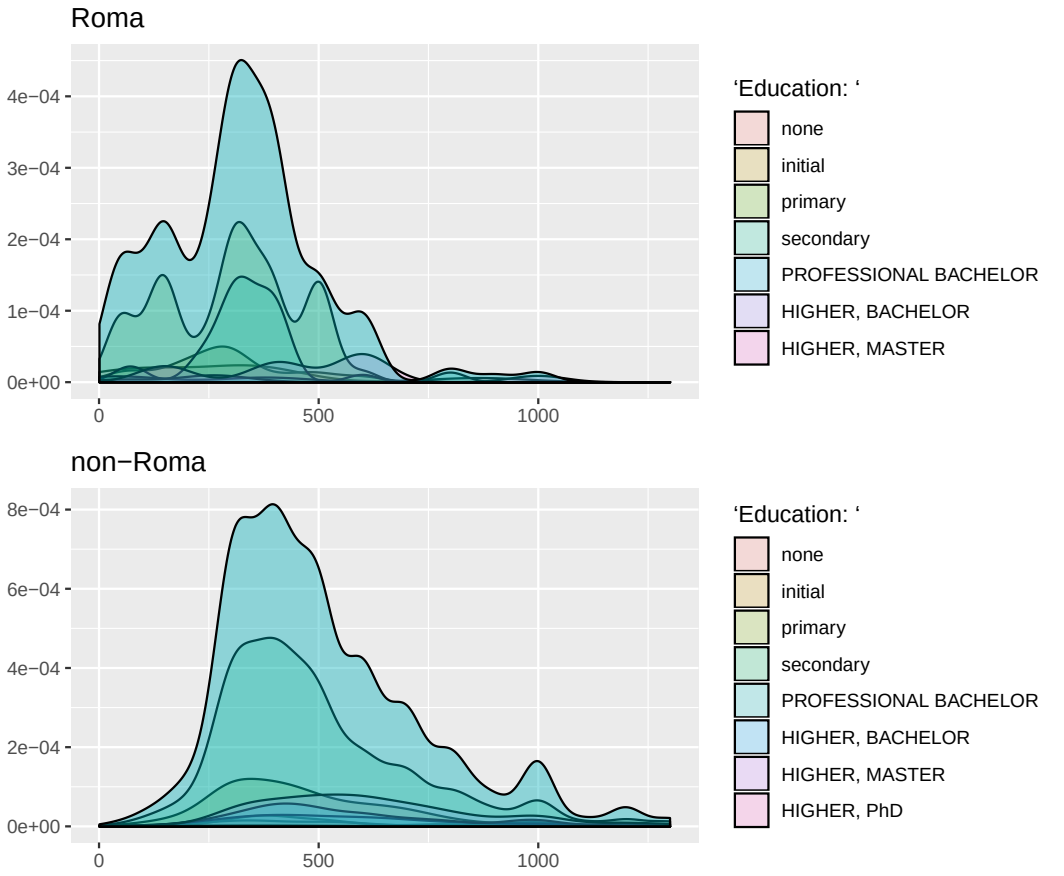

Figure 6: Distribution of monthly average net wages by education level

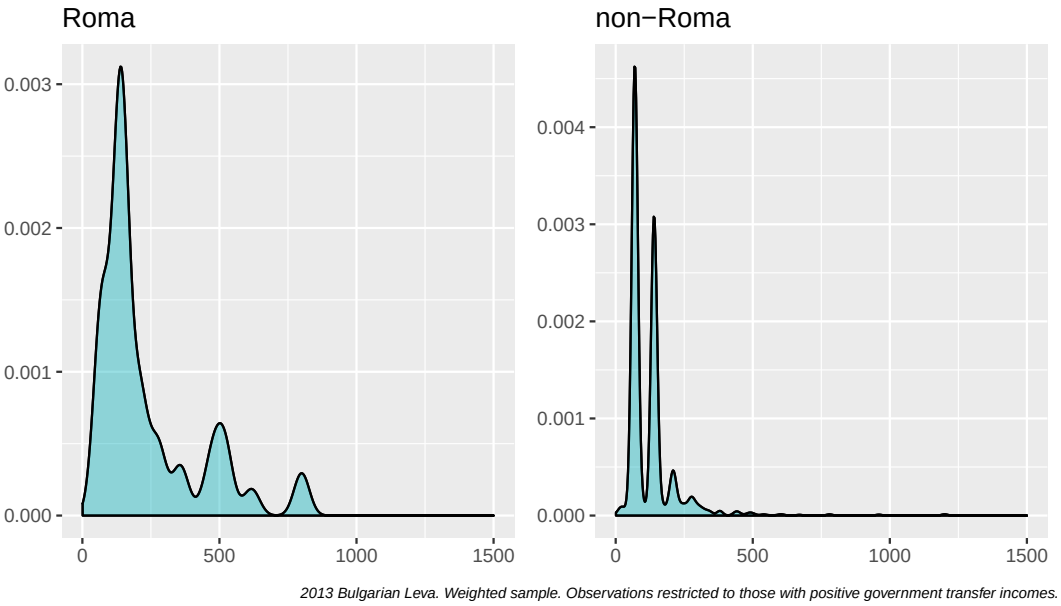

Figure 7: Distribution of net monthly government transfer income, excluding pensions

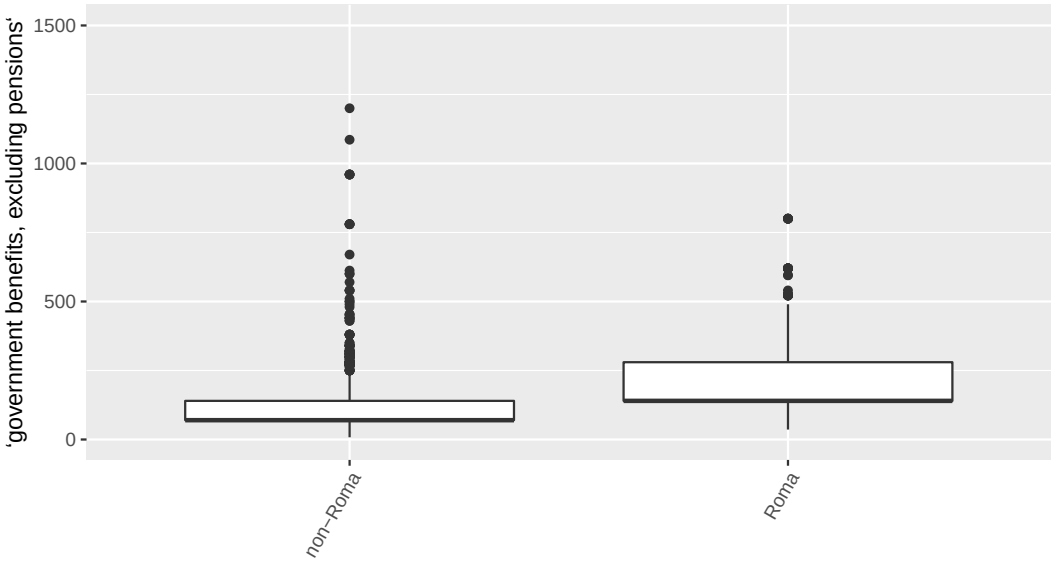

Figure 8: Monthly income from government benefits, excluding pensions

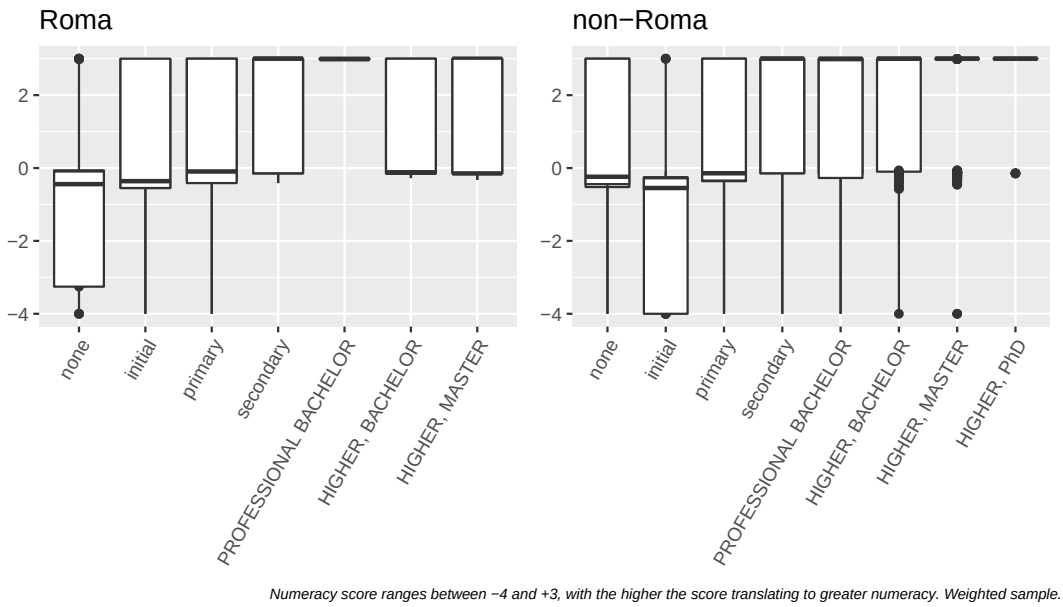

Figure 9: Numeracy Score by Ethnicity and Education

These tests scores may be particularly useful if there are systematic differences in the quality of education between Roma and non-Roma. If it were the case that standards of passing or subject matter taught varied between Roma majority and non-Roma majority schools – and thus that a given degree could mean something different depending on a student's ethnicity – these standardized cognitive test scores could stand in as a more objective measure of educational attainment than degree-level alone.

For this paper, two tests will be considered: numeracy and reading. The distribution of non-Roma scores is higher than that of Roma. For each of these tests, both the mean and median scores of Roma are significantly lower than those of non-Roma. Additionally, when looking within education level, these differences generally hold across ethnic groups. Boxplots of the numeracy scores are presented here by both ethnic status and educational attainment. Generally, non-Roma see higher numeracy scores than Roma within each grouping of educational attainment.

3 Ordinary Least Squares

In this section, a set of log-linear models are estimated. For each model, the dependent variable is either "monthly average net wages" or "total net monthly household income." The set of independent variables are the set of labor market relevant factors (e.g. level of education, sex, and region). Additionally, each model is run with and without including a Roma indicator so as to show the estimated effect of being Roma on household income and wage income.

3.1 Functional form of the estimated models

Below is the functional form of the log-linear models estimated in this section.

$$ln(income_i) = \beta_0 + \beta_1 Roma_i + \gamma X_i^T$$

3.2 Estimated Log-Linear Models

Presented below are four models. Two models use monthly average net wages as the dependent variable, while the other two use total net monthly household income. For both models, the population is restricted to those with positive incomes. This means that for the first two models, the estimated coefficients apply to those who were typically employed in some capacity. In all four models, the dependent variable is log transformed; this step was taken in response to the standard skew that these two income distributions take. For the first and third models, a Roma indicator is not included. For the second and fourth models, an indicator is included. Lastly, all of these models have the appropriate sample weights applied to them.

The regression output displayed in Table 2 shows that despite controlling for a plethora of factors that may be driving ethnic inequality between Roma and ethnic Bulgarians, these factors clearly do not explain away Roma-specific factors. The inclusion of a Roma indicator is both negative in these two models and also highly statistically significant.

In Model 2, there is estimated to be 40.54 percent declines in average net monthly wages if Roma ($(e^{-0.52} - 1) \times 100$). In Model 4, the analogous marginal effect is a 35.59 percent decline in total net monthly household income ($(e^{-0.44} - 1) \times 100$).

While these estimates do not conclusively explain whether this effect is from discrimination or other systematic differences above and beyond "objective" labor market factors, this strong effect clearly provides justifiable cause to further investigate the contribution of factors beyond objective labor market relevant characteristics.

3.3 Gauss-Markov Conditions

This subsection examines whether the ordinary least square (OLS) models estimated meet the following two Gauss-Markov conditions: 1) homoskedastic standard errors and 2) a standard normal distribution of errors. In short, the models estimated nearly conform to these Gauss-Markov conditions; their residuals have a near normal distribution, they are centered at zero, and the bulk of residuals are randomly distributed with constant variances. However, despite these OLS models being estimated with robust standard errors, the distribution of errors for all the models are skewed at the extremes. As is typically the case, the distributions of both wage income and total household income in this sample is right-skewed. Despite the log-transformations of these income variables, this skew remains and has consequence for the distribution of errors. In summary, there is evidence of heteroskedasticity in all four models, particularly the first two models.

If either of these two Gauss-Markov conditions are not met, the estimated standard errors may be upwardly biased, meaning OLS is not the best linear unbiased estimator. However, it should be stressed that if either of these two conditions are violated, there is no implication that the coefficients estimated and presented in the previous section are biased. Greater variance at the extrema merely has the consequence of pushing up standard errors. Therefore, if this heteroskedasticity were able to be properly controlled for, the estimated standard errors would likely be smaller. Additionally, the models estimated were estimated with robust standard errors, which decreases the prevalence or likelihood of a non-constant distribution of errors but also increases standard errors. In turn, the models estimated here likely have upwardly biased standard errors.

3.4 Standard Normal Distribution of Errors

As seen in Figure 10, for every model estimated the residuals are distributed around zero and their distribution is approximately normal. While the distribution of resid-

Table 2: Log-Linear Regression Output

	Dependent variable:			
	log(‘monthly average net wages‘)		log(‘total net monthly household income‘)	
	(1)	(2)	(3)	(4)
RomaRoma		−0.744***		−0.458***
		(0.262)		(0.112)
‘Sex: ‘female	−0.206***	−0.199***	0.015	0.015
	(0.042)	(0.041)	(0.063)	(0.063)
‘Household with children under 20? ‘no	−0.054	−0.043	−0.277***	−0.272***
	(0.046)	(0.042)	(0.071)	(0.071)
‘Education: ‘initial	−0.624*	−0.486	−0.164	−0.121
	(0.323)	(0.342)	(0.223)	(0.217)
‘Education: ‘primary	−0.114	−0.089	0.158	0.156
	(0.118)	(0.107)	(0.172)	(0.171)
‘Education: ‘secondary	−0.027	−0.071	0.429***	0.397***
	(0.087)	(0.090)	(0.147)	(0.146)
‘Education: ‘PROFESSIONAL BACHELOR	0.030	−0.007	0.325	0.291
	(0.113)	(0.113)	(0.198)	(0.198)
‘Education: ‘HIGHER, BACHELOR	0.065	0.024	0.320*	0.282
	(0.118)	(0.120)	(0.192)	(0.192)
‘Education: ‘HIGHER, MASTER	0.308***	0.264**	0.650***	0.614***
	(0.101)	(0.103)	(0.166)	(0.165)
‘Education: ‘HIGHER, PhD	0.054	0.012	0.449***	0.407**
	(0.253)	(0.254)	(0.169)	(0.168)
‘Age: ‘30 - 49	0.008	0.007	−0.149	−0.149
	(0.066)	(0.065)	(0.100)	(0.100)
‘Age: ‘50+	−0.022	−0.034	−0.069	−0.073
	(0.064)	(0.064)	(0.098)	(0.098)
Region	0.001	0.002	0.002	0.003
	(0.003)	(0.003)	(0.004)	(0.004)
‘Numeracy Score ‘	−0.022	−0.020	0.021	0.023
	(0.014)	(0.014)	(0.019)	(0.019)
‘Semantics Score ‘	0.037**	0.035**	0.049**	0.048**
	(0.016)	(0.016)	(0.023)	(0.023)
‘Reading Score ‘	−0.010	−0.010	0.001	−0.001
	(0.014)	(0.014)	(0.018)	(0.018)
Constant	6.265***	6.295***	6.139***	6.170***
	(0.108)	(0.108)	(0.182)	(0.180)
Observations	661	661	693	693
Log Likelihood	-478.715	-466.314	-797.656	-793.756
Akaike Inf. Crit.	989.430	966.629	1,627.312	1,621.512

Note: *p<0.1; **p<0.05; ***p<0.01

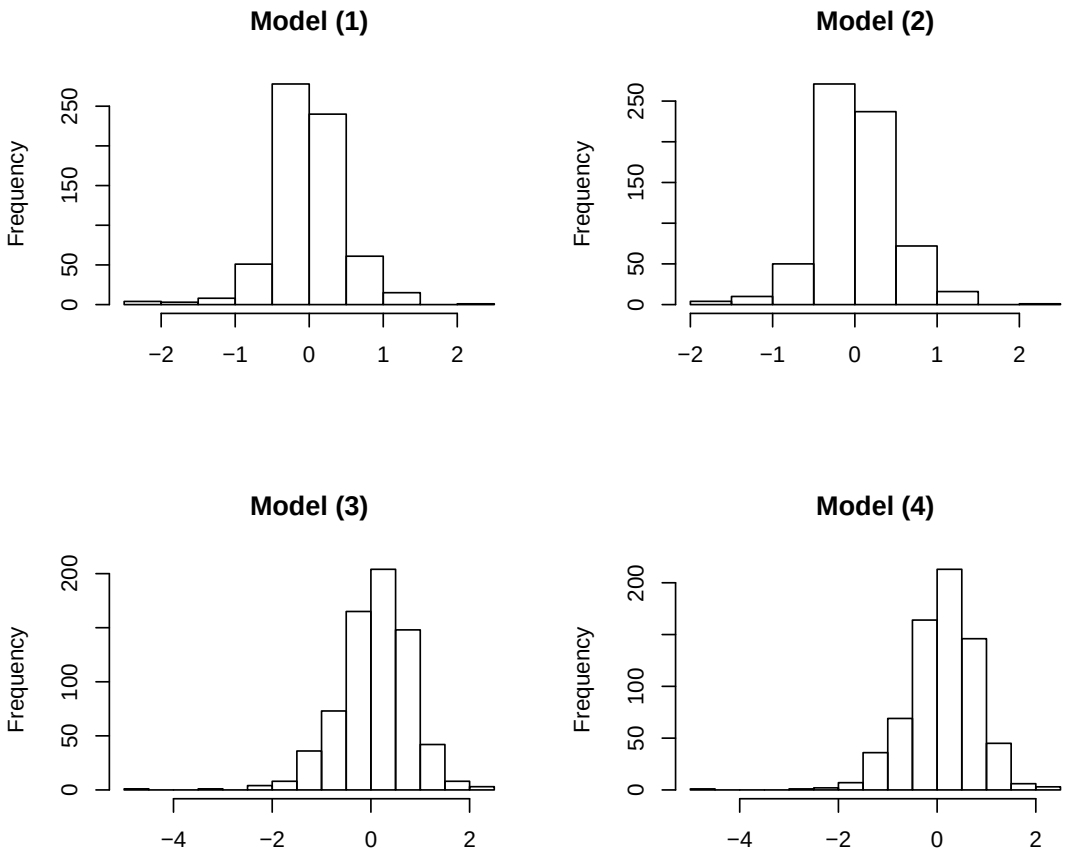

Figure 10: Distribution of residuals of estimated OLS models

uals for all four models have a slight skew, the skew of Models 3 and 4 – those that estimate total net household income – is clearly smaller than in Models 1 and 2. This suggests that Models 3 and 4 may exhibit less heteroskedasticity than Models 1 and 2.

3.5 Homoskedasticity

To further investigate whether these models present evidence of conforming to the standard normal distribution of errors and the homoskedasticity condition, Figure 11 is presented. For each model, two graphs are displayed. On the right is a quantile-quantile plot (Normal Q-Q). On the left, the distributions of estimated residuals are plotted against the fitted values that these models estimate.

To continue the discussion of the distribution of residuals, consider the plot on the left first. Plotting the residuals of a model against its fitted values shows how homogeneous or heterogenous the variance of a model is. If the pattern is one of randomness, then the errors do not have a relationship with the predicted values (i.e. the errors are homogeneously distributed). The same relationship established by the histogram of residuals is seen here: Models 1 and 2 see heavy clustering for the vast majority of observations, but a there is a sizeable group of outliers that may be evidence of heteroskedasticity. Models 3 and 4 are more evenly distributed and present less evidence of heteroskedasticity.

The Normal Q-Q plots on the right of Figure 11 serve as visual aids in determining whether the residuals of the OLS models are normally distributed. If the theoretical distribution of the residuals (i.e. that the residuals are normally distributed) is met by the estimated model, the plotted residuals would lie along the 45-degree line with 95 percent of the residuals within two standard deviations from the mean of zero.

The residuals of the four estimated models, unfortunately, suffer from issues of having heavy tails. The plotted residuals conform accurately to a normal distribution for the bulk of the distribution (90 to 95 percent), particularly away from the extremities. However, at the ends of the distributions, the residuals deviate from the theoretical distribution in that they deviate from the 45-degree line. This is evidence that the data contains extreme values – not a surprising fact, given that the distribution of income and wages typically follows a skewed distribution. Recall, this was an essential consideration in the decision to take the log-transformation of income variables (i.e. the independent variables).

Depending on the severity and prevalence of this deviation from the theoretical distribution, these extreme values may be evidence that the models' error terms are heteroskedastic. Despite non-constant variance only being present at the ends of the distribution, the standard errors may still be biased.

To further determine the magnitude by which standard errors deviate from their theoretical distribution and whether the models estimated should be considered to have heteroskedastic standard errors, studentized Breusch-Pagan tests are run for each OLS model. As is standard for such tests, if the p-value estimated is less than 0.05, the null hypothesis that the variance is constant is rejected in favor of the alternative hypothesis (i.e. that the variance is heteroskedastic). By applying this test statistic, the Breusch-Pagan tests suggest that Models 1 and 2, which estimate

monthly net wages, have heteroskedastic standard errors, but that Models 3 and 4 do not. The p-values for these studentized Breusch-Pagan tests are the following: Model 1 (p-value = 0.0002), Model 2 (p-value = 0.00001), Model 3 (p-value = 0.6376), and Model 4 (p-value = 0.59).

Given the similarity of the two dependent variables, Models 3 and 4 – the models that are unlikely to contain heteroskedastic standard errors – can be treated as something of the standard bearer in terms of estimated standard errors. Several more independent variables are estimated to be statistically significant for Models 3 and 4: "Household with children under 20," "Secondary education," "Master's," and "Ph.D." This can be taken as additional evidence that the standard errors of Models 1 and 2 are upwardly biased.

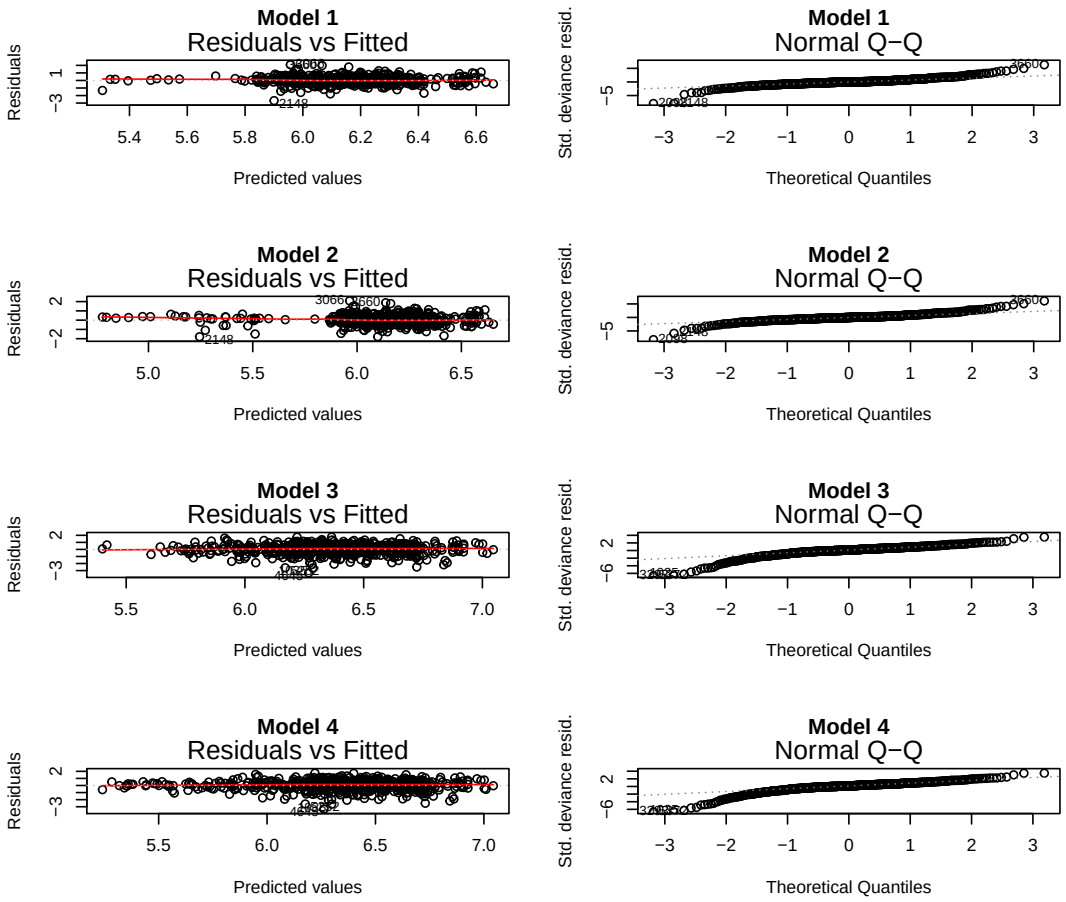

Figure 11: OLS models: Evidence for standard normal and homoskedastic errors

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 two dependent variables: mean net monthly wage income. However, the methodological framework is identical for total net household income, the other dependent variable. As with the OLS models estimated in the previous section, both dependent variables are log-transformed.

Following a discussion of the Blinder-Oaxaca decomposition's methodological framework, the estimated results are presented. For both dependent variables, three tables walk the reader through the extent to which household income and wage inequality between Roma and non-Roma can be explained by relevant and observed labor market characteristics.

Subsequently, the distribution of the Blinder-Oaxaca models' residuals and evidence for heteroskedasticity is discussed. As was found when conducting the same procedure for the log-linear models estimated in the previous section, the Blinder-Oaxaca model estimating wage income was found to exhibit strong evidence of heteroskedasticity. In contrast, the Blinder-Oaxaca model for household income does not exhibit evidence of heteroskedasticity. Consequently, this latter model can be treated as something of the standard-bearer. In contrast, the former model likely contains upwardly biased standard errors.

This section concludes with a discussion informed by two plots that graphically display the decomposition by independent variable of the income and wage gap between Roma and non-Roma. These plots show the extent to which income variation is explained by education, for instance, by decomposing differences in the level at which Roma and non-Roma are formally educated and differences in the returns to education. These plots provide striking evidence that factors specific to the Roma ethnic status, namely employment and structural discrimination, drive the vast majority of income inequality in Bulgaria.

4.1 Explicit Form of the Blinder-Oaxaca Decomposition

The Blinder-Oaxaca decomposition for log-wages estimates log-linear equations of the form estimated in the previous section for Roma and non-Roma.

$$(1) \qquad \ln(\text{wages}_{Roma_i}) = x^T_{Roma_i}\gamma + \epsilon_{Roma_i}$$
$$(2) \qquad \ln(\text{wages}_{non-Roma_i}) = x^T_{non-Roma_i}\gamma + \epsilon_{non-Roma_i}$$

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 in the following form.

$$(3) \qquad \text{mean}(\ln(\text{wages}_{non-Roma})) - \text{mean}(\ln(\text{wages}_{Roma}))$$
$$= b_{non-Roma}\,\text{mean}(X_{non-Roma}) - b_{Roma}\,\text{mean}(X_{Roma})$$

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.

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

4.4 Estimated Blinder-Oaxaca Decomposition: Monthly Average Net Wages

The Blinder-Oaxaca Decomposition is implemented in R using the package `oaxaca`. Two Blinder-Oaxaca Decomposition models are estimated, one for the dependent variable `monthly average net wages` and the other for `total net monthly household income`. As was discussed, the dependent variables here are log-transformed as they were in the linear regression models estimated previously. Tables 5, 6, 7, and 8 should be read as percent changes; for these tables, the coefficients, results, and standard errors have been conveniently multiplied as follows: $100 \times (e^{\beta_j} - 1)$.

The sub-sections below present the estimated results from the Blinder-Oaxaca decomposition for Roma and non-Roma workers' net monthly wages and net total household incomes. As was addressed, the wage and household income gap between Roma and non-Roma may be due to group differences in the level of wage and income determinants such as age, family characteristics, or level of education. Alternatively, the gap could arise from a differential effect of these determinants on Roma and non-Roma wages.

The former causal route would be due to what is referred to as endowments or the effect of observables – i.e. the portion of the gap between Roma and non-Roma that is explained by the observables. The second causal route would be due to differences in coefficients; this is the portion that is unexplained by the model and, therefore, is the result of Roma-specific characteristics. Typically, this portion of the gap is what could be considered as the result of either structural or employment discrimination.

4.5 Threefold Decomposition: Monthly Average Net Wages

As was outlined in the beginning of this section, the Blinder-Oaxaca Decomposition is built from a linear regression framework for which a log-linear model is estimated.

Table 4 presents the regression output of this log-linear model. As expected, it is quite similar to the log-linear models estimated in the previous section.

The mean wages of non-Roma and Roma included in the Blinder-Oaxaca estimates are 472 BGN and 247 BGN, respectively. The wages of non-Roma are 1.9 times larger than Roma. The coefficients presented in the threefold Blinder-Oaxaca Decomposition, which are displayed in Table 5, explain this nearly two-fold mean difference in wages.

The first term on the right in Table 5, `coef (endowments)`, refers to the proportion of this variation explained by differences in the observables. Given that the dependent variable has been log-transformed, the estimates provided in Table 5 imply that roughly 12 percent of the difference between the mean net wages of Roma and non-Roma can be explained by observables, such as education, differences in family structure, and regional differences in where Roma and non-Roma live.

Considering the term `coef (coefficients)`, on the other hand, it is clear that a much larger proportion, 82.43 percent (96.88-14.45), of the gap between the mean wages of the two ethnic groups cannot be explained by differences in endowments (i.e. observables). Rather, the independent variables estimated have different effects for the different ethnic groups. For example, education sees higher returns for non-Roma than for Roma. After taking into account the interaction effects of the independent variables and ethnic status, this term suggests that Roma fixed characteristics may play a sizable role in inequality between Roma and non-Roma.

Given the plethora of evidence presented in the introductory section of widespread discrimination towards Roma in contemporary Bulgaria, there is clearly reason to suspect that this unexplained portion of the gap could be the consequence of discrimination. However, the decomposition presented here cannot be considered as conclusive evidence that this 82.43 percent of the gap is the result of discrimination. Understanding the extent of discrimination's impact requires future research. For now, the evidence presented here can be strongly indicative that discrimination is the dominant factor in wage inequality between Roma and non-Roma.

The subsequent table, Table 6, examines the explained (endowments) and unexplained (coefficients) components of the threefold decomposition by independent variable. Like the results displayed in the previous table, this table presents the coefficients as the percentage change given a marginal change in the independent

Table 3: Blinder-Oaxaca Log-Linear Regression Output: Wage Income

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	6.076	0.077	79.222	0
‘Sex: ‘female	−0.192	0.038	−5.039	0.00000
Region	0.003	0.002	1.497	0.135
‘Household with children under 20? ‘no	−0.036	0.042	−0.864	0.388
‘Age: ‘30 - 49	0.051	0.056	0.915	0.361
‘Age: ‘50+	−0.002	0.057	−0.036	0.971
‘Education: ‘	0.043	0.012	3.655	0.0003
‘Reading Score ‘	0.018	0.012	1.572	0.116
‘Numeracy Score ‘	−0.008	0.012	−0.681	0.496
ethnic	−0.661	0.086	−7.701	0

Table 4: Threefold Blinder-Oaxaca Decomposition: Wage Income

coef(endowments)	se(endowments)	coef(coefficients)	se(coefficients)	coef(interaction)	se(interaction)
13.329	18.049	96.881	13.132	−14.451	18.701

variable (i.e $100 \times (e^{\beta_j} - 1)$).

4.6 Estimated Blinder-Oaxaca Decomposition: Total Net Monthly Household Income

In this subsection, the analysis conducted in the previous subsections is applied to total net monthly household income.

As was the case for the previous regression output, only few independent variables have a statistically significant effect. Ethnic status is amongst those variables that is statistically significant (*see* Table 6). The magnitude of the coefficient on ethnic status is also substantially larger than that of any other independent variable.

4.7 Threefold Decomposition: Total Net Monthly Household Income

Non-Roma and Roma included in the Blinder-Oaxaca estimates see average household incomes of 702 BGN and 291 BGN, respectively. The mean household income of non-Roma is 2.4 times larger than Roma. Table 7 decomposes this gap in terms of endowments and coefficients – the explained and unexplained portions, respectively. In contrast to the gap between Roma and non-Roma in terms of mean net wages, household income can entirely be explained by Roma fixed characteristics. Almost none of the gap between Roma and non-Roma can be explained by endowments (e.g. education, family composition, etc.).

The first column of Table 8, which decomposes the gap into endowment (explained) and coefficient (unexplained) effects by independent variable, shows that there are no independent variables with statistically significant endowment effects. Interestingly, this also holds for the coefficient effects of each independent variable, with the exception of the intercept. This can be interpreted as follows: the gap between Roma and non-Roma cannot be explained by differences in the return to any of the independent variables listed. Rather, the entirety of the gap between the ethnic groups is the result of forces specific to Roma and independent of any of these independent variables. In short, this is strong evidence that forces like discrimination are the most important and, potentially, the only instrumental factors driving the economic gap between Roma and non-Roma.

Table 5: Threefold Blinder-Oaxaca Decomposition of Independent Variables: Wage Income

	coef(endowments)	se(endowments)	coef(coefficients)	se(coefficients)	coef(interaction)	se(interaction)
(Intercept)	0	0	70.091	128.262	0	0
‘Sex: ‘female	2.502	5.013	9.751	25.310	−1.105	4.314
Region	−1.250	7.035	−4.286	54.577	0.623	7.077
‘Household with children under 20? ‘no	−4.571	7.272	18.872	17.227	4.550	7.128
‘Age: ‘30 - 49	0.291	4.636	5.983	26.253	−0.508	5.052
‘Age: ‘50+	3.272	7.985	−10.066	19.518	−3.370	8.235
‘Education: ‘	−1.099	4.151	12.517	19.560	−2.226	4.643
‘Reading Score ‘	13.930	10.814	−10.997	8.790	−11.891	10.611
‘Numeracy Score ‘	0.533	4.862	−2.888	18.335	−0.716	4.875

Table 6: Blinder-Oaxaca Log-Linear Regression Output: Household Income

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	6.514	0.114	56.964	0
‘Sex: ‘female	0.019	0.056	0.330	0.742
Region	0.004	0.003	1.239	0.216
‘Household with children under 20? ‘no	−0.166	0.065	−2.572	0.010
‘Age: ‘30 - 49	−0.087	0.089	−0.978	0.328
‘Age: ‘50+	−0.039	0.091	−0.431	0.666
‘Education: ‘	−0.001	0.015	−0.042	0.967
‘Reading Score ‘	0.030	0.017	1.750	0.081
‘Numeracy Score ‘	0.045	0.017	2.604	0.009
ethnic	−0.830	0.103	−8.030	0

Table 7: Threefold Blinder-Oaxaca Decomposition: Household Income

coef(endowments)	se(endowments)	coef(coefficients)	se(coefficients)	coef(interaction)	se(interaction)
−1.655	13.388	130.471	13.388	6.205	14.023

Table 8: Threefold Blinder-Oaxaca Decomposition of Independent Variables: Household Income

	coef(endowments)	se(endowments)	coef(coefficients)	se(coefficients)	coef(interaction)	se(interaction)
(Intercept)	0	0	267.177	84.113	0	0
‘Sex: ‘female	−0.283	2.225	−5.992	19.042	0.261	2.178
Region	−7.332	8.024	−29.550	40.233	6.796	7.972
‘Household with children under 20? ‘no	0.485	5.451	−9.228	13.944	−3.487	5.621
‘Age: ‘30 - 49	−0.542	5.581	−10.533	29.757	0.929	5.915
‘Age: ‘50+	0.265	3.494	−4.136	23.858	−0.517	3.772
‘Education: ‘	3.868	4.944	20.265	17.907	−4.566	5.441
‘Reading Score ‘	−7.564	10.419	4.347	4.126	13.686	10.635
‘Numeracy Score ‘	10.622	7.009	−2.992	4.424	−5.660	7.075

4.8 Homoskedasticity and Standard Normal Distribution of Errors

This subsection examines whether both of the Blinder-Oaxaca models estimated above meet the homoskedasticity condition and the standard normal distribution of errors condition. As was seen in the analog section for the log-linear models, the models estimated here nearly conform to these Gauss-Markov conditions. However, the decomposition of mean wages exhibits clear evidence of heteroskedasticity.

Figure 12 displays a plot of the residuals vs fitted values and a normal Q-Q plot. The bulk of the residuals for both models are clearly randomly clustered around zero, suggesting that they are centered at zero as their theoretical distribution would imply. However, despite being estimated with robust standard errors, the distribution of errors for the two models are once again skewed at the extremes. As is typically the case, the distributions of both wage income and total household income in this sample are right-skewed. Despite the log-transformations of these income variables, this skew remains and has consequence for the distribution of errors.

While the Blinder-Oaxaca model that estimates household income passes the Breusch-Pagan test, the Blinder-Oaxaca model for wage income does not pass the Breusch-Pagan test. In combination with the graphical evidence provided in Figure 12, it is clear that the Blinder-Oaxaca model for wage income suffers from heteroskedasticity. This has the likely consequence of upwardly biasing this model's standard errors. In contrast, the evidence presented here confirms that the Blinder-Oaxaca model that estimates household income has homoskedastic standard errors.

4.9 Discussion: Explained vs. Unexplained

The gap in earnings explained by observables versus that which is unexplained is outlined in the figures below. As is strikingly clear, the explained portion of the difference between Roma and non-Roma is paltry. Of all the variables present, cognitive test scores and education explains the largest portion of the gap for both household income and wage income. However, the explanatory magnitude of these variables pales in comparison to the unexplained portion. The size of the gap between Roma and non-Roma is striking evidence that unobservable factors are driving inequality between the ethnic groups.

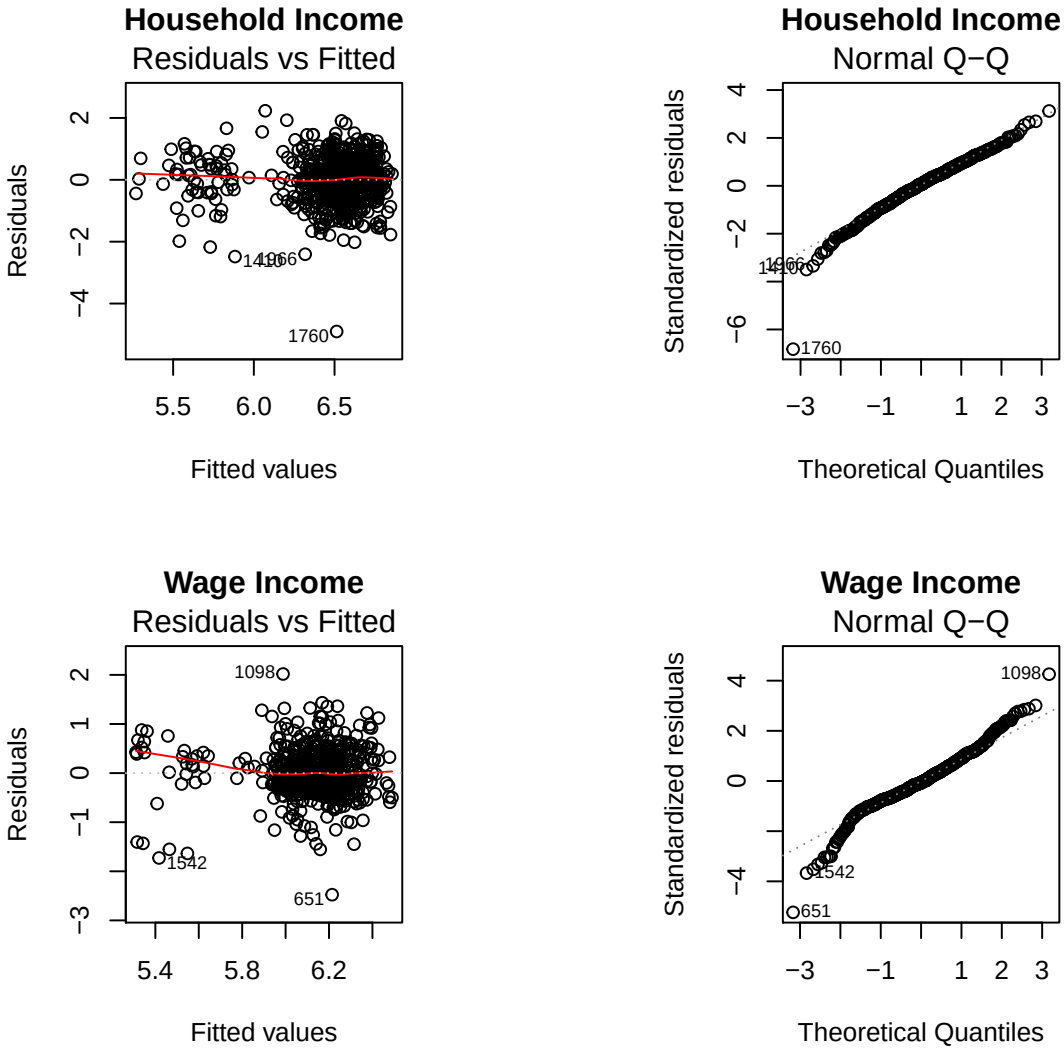

Figure 12: Blinder-Oaxaca: Evidence of standard normal and homoskedastic errors

However, the size of the standard errors should be taken as a strong cautionary note. With the exception of the intercept in the household income decomposition, the confidence intervals in Figures 13 and 14 contain zero for every independent variable in both models. This implies that the estimates presented here do not sufficiently capture variation to conclusively explain the relative impact of any one independent variable. However, these plots do strongly suggest that some third set of factors is likely of more importance than any of the independent variables estimated.

In the literature, differences in outcomes that cannot be accounted for by observables are generally considered to estimate the role of discrimination. While that may be so, this can also account for Roma-specific characteristics that are relevant to labor market outcomes but that are not due to discrimination. Right-wing commentators would typically assign this differential to cultural forces or as evidence of the negative stereotypes discussed in the introductory section. Identifying this dimension of a Blinder-Oaxaca Decomposition is inevitably contentious, as results could be unreasonably misconstrued to argue Roma cultural inferiority or other discriminatory, specious, and ahistorical claims. Such risk of specious misconstrual only raises the urgency of further probing the extent to which ethnically-based discrimination contributes to economic inequality in Bulgaria.

5 Conclusion

Despite the limitations of the estimates presented here, this paper makes a strong case that characteristics and forces specific to ethnic status are driving economic inequality between Roma and non-Roma in contemporary Bulgaria. In short, this paper provides evidence that discrimination – outside of differences in education, regional segregation, or family composition – may be instrumental in driving ethnic inequality in Bulgaria. In the log-linear models estimated in Section 3, it was shown that being Roma has a statistically significant, negative effect on earnings and household income when controlling for factors like education, sex, and age. Likewise, the Blinder-Oaxaca Decomposition estimated in Section 4 presented strong evidence that education, differences in numeracy and literacy, and other relevant labor market characteristics do not have a statistically significant nor a sizeable role in explaining income inequality between Roma and non-Roma in Bulgaria. Rather,

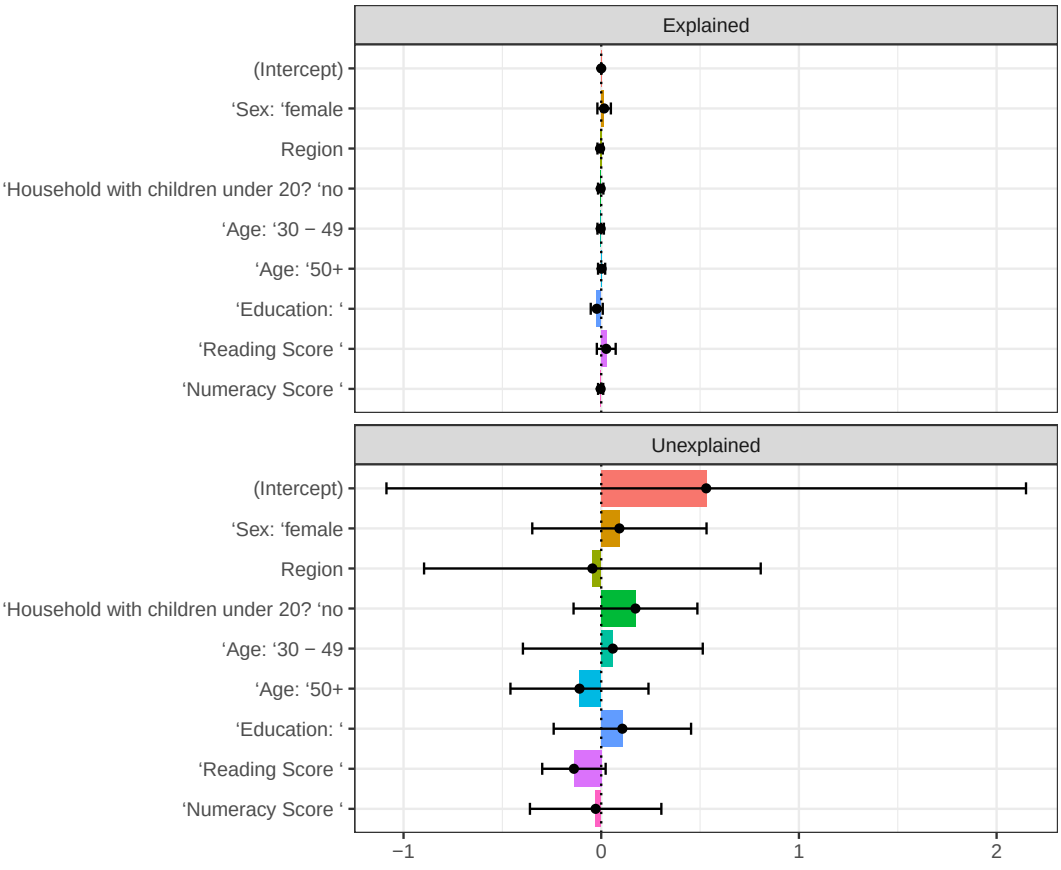

Figure 13: Wage decomposition: Explained and unexplained components

the analysis presented here provides strong evidence that forces like structural discrimination and employment discrimination are central to driving ethnic inequality in Bulgaria.

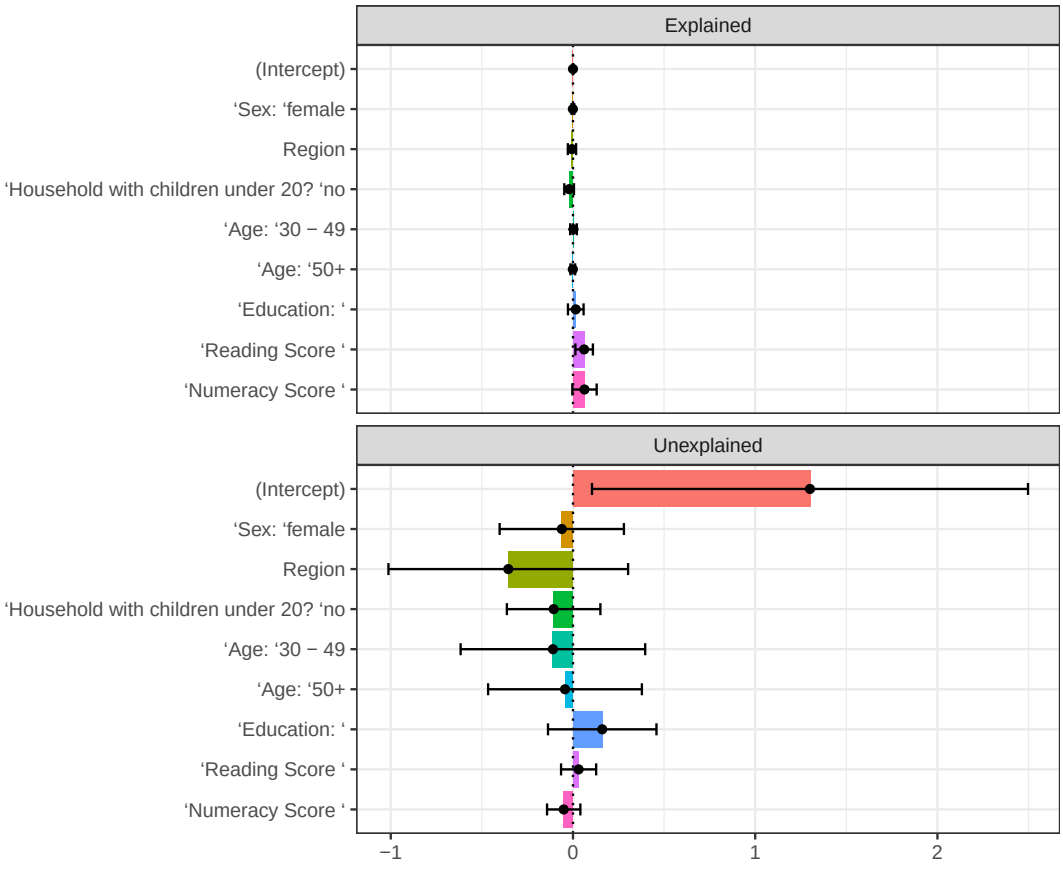

Figure 14: Household income decomposition: Explained and unexplained components

References

Amnesty International. 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_predsedatel_na_grupata_na/.

Duval, Laetitia, and FranĂ§ois-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." 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." 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." 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 Abla 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.