



## WP 10\_14

**Chiara Binelli**

University of Southampton, UK  
The Rimini Centre for Economic Analysis (RCEA), Italy

**Matthew Loveless**

University of Kent, UK

# THE URBAN-RURAL DIVIDE: PERCEPTIONS OF INEQUALITY IN CENTRAL AND EASTERN EUROPE

Copyright belongs to the author. Small sections of the text, not exceeding three paragraphs, can be used provided proper acknowledgement is given.

The *Rimini Centre for Economic Analysis* (RCEA) was established in March 2007. RCEA is a private, nonprofit organization dedicated to independent research in Applied and Theoretical Economics and related fields. RCEA organizes seminars and workshops, sponsors a general interest journal *The Review of Economic Analysis*, and organizes a biennial conference: *The Rimini Conference in Economics and Finance* (RCEF). The RCEA has a Canadian branch: *The Rimini Centre for Economic Analysis in Canada* (RCEA-Canada). Scientific work contributed by the RCEA Scholars is published in the RCEA Working Papers and Professional Report series.

The views expressed in this paper are those of the authors. No responsibility for them should be attributed to the Rimini Centre for Economic Analysis.

# The Urban-Rural Divide: Perceptions of Inequality in Central and Eastern Europe<sup>1</sup>

Chiara Binelli<sup>2</sup> and Matthew Loveless<sup>3</sup>

This draft: March 25 2014

**Abstract:** Several studies have shown that perceptions of inequality vary with individuals' socio-economic location: the higher the level of income, the less inequality is perceived. Here we argue that another type of location, the rural or urban area where an individual lives, is an important determinant of inequality perceptions and affects the impact of income on perceptions. Using survey data from 12 Central and Eastern European countries in 2007, we find that income has a negative effect on inequality perceptions only for those living in urban areas. Therefore, once controlling for urbanity, income ceases to have an independent effect on inequality perceptions. These findings suggest that previous work may have overlooked important sub-national differences, which are crucial to understand individuals' views of inequality.

**Keywords:** Inequality Perceptions, Central and Eastern Europe.

**JEL codes:** D31, O15, P25.

---

<sup>1</sup> We thank Prof. Stephen Whitefield and Prof. Geoff Evans for sharing the EUREUQAL data.

<sup>2</sup> University of Southampton and RCEA.

<sup>3</sup> University of Kent.

## 1. INTRODUCTION

In the inequality literature it is widely assumed that individuals' perceptions of inequality are inversely related to their socio-economic location proxied with the level of individual or household income (Solt 2008; Kaltenhaler *et al.* 2008; Alesina and Glaeser 2004; Kreidl 2000; Bollen and Jackman 1985; Jackman 1975). Here we argue that another type of location, namely the rural or urban area where individuals live, is an important determinant of their views on inequality, and may also affect the impact of income on these perceptions.

In order to test the relative importance of physical and socio-economic location, we develop an individual-level model of perceptions of both income and social inequality where individuals' urban or rural area of residence and level of income are key variables that affect their perceptions of inequality. We estimate the model using survey data in 12 Central and Eastern European (CEE) countries in 2007. Our main results show that *how* inequality is perceived depends on *where* it is perceived. Income ceases to have an independent negative effect on inequality perceptions; rather, the effect of income on perceptions depends on where an individual lives. In particular, we find that income has a negative effect on inequality perceptions only for those living in urban areas. We define this urban/income interaction as the individuals' *perspective* of perceptions, which frames their views of inequality.

This is an important finding for two main reasons. First, it suggests that previous investigations of inequality perceptions have ignored a deeper understanding of the determinants of these perceptions by overlooking salient and interactive sub-national variation. Second, it sheds light on the factors that shape individuals' views of inequality suggesting that inequality perceptions depend not only on who does the perception but also on where inequality is perceived.

Testing our model using a sample of CEE countries - including Russia - provide a unique examination of the issue of inequality. These countries began their transformations toward the consolidation of market economies and political democracy at nearly the same time, arriving at wide ranging levels of success. Of them, two-thirds are members of the European Union, representing successful transition cases toward established institutional arrangements while others, such as Russia and Ukraine, have demonstrated more troubled or partial transitions.

It is because of these varied outcomes that we consider these data and this region as an advantage over existing studies. Inequality in established democracies can be troubling but inequality in Germany, the UK, or even the US, does not threaten the edifice of democratic politics. On the contrary, in non-established democracies inequality is more substantively problematic to regime stability and legitimacy. For these countries, inequality challenges the new 'rules of the game'. Thus, understanding the determinants of inequality perceptions contributes to our knowledge about the *extent*, *stability*, and *quality* of democratic outcomes, and through this researchers gain the improved ability to identify the origins of citizens' social and economic assessments.

## **2. PERCEPTIONS OF INEQUALITY**

### **2.1 PREVIOUS LITERATURE**

The literature on perceptions of inequality has considered two main types of inequality perceptions: income and social inequality. The work on the perceptions of income inequality derives from a coherent literature on measured inequality in personal income (Bartels 2008; Kaltenhaler *et al.* 2008). On the contrary, perceptions of social inequality lack such clear conceptual precision and, as such, suffer in being much less well understood, or are forced into being understood in narrow economic terms. While social inequality is sometimes used to refer

to multiple disparities in material wealth in society, little attention has been given to its character and specificities (Milanovic 2005). In fact, social inequality has been given a very broad definition and empirically treated as an uncomplicated extension of income inequality (Jackman 1975; Bollen and Jackman 1985).

However, recent research has shown that social inequality differs from income inequality because it is perceived differently by individuals, and because it is determined by a different set of variables (Loveless and Whitefield 2011). Binelli *et al* (2012) use the same dataset for CEE countries that we use in this paper and provide a conceptual framework and an empirical measure of social inequality in five dimensions: individuals' level of income, education, health status, access to education, and access to health care. Simply, income and social inequality differ with respect to what is being distributed. Perceptions of *income* inequality refer to how individuals perceive the distribution of disposable income in a given society while perceptions of *social* inequality are an evaluation of how individuals assess disparities in achieved outcomes among which their level of income as well as, and crucially, their access to services such as health and education. We will return to this differentiation in Section 4.

The findings of a growing empirical literature point at the distinctive nature of social and income inequality. For income inequality perceptions, the most consistent finding is that these perceptions vary with the level of individuals' income (Kaltenhaler *et al.* 2008; Alesina and Glaeser 2004; Kreidl 2000; Duke and Grime 1997).<sup>4</sup> The wealthy 'see' less income inequality because they attribute their success to themselves, 'see' an abundance of opportunities and availabilities, and therefore have a difficult time understanding why everyone is not like them (Kaltenhaler *et al.* 2008; Alesina and Glaeser 2004). In contrast, the poorest members of society

---

<sup>4</sup> However, we note that recent evidence suggests that income is an inconsistent predictor of individuals' knowledge about the level of inequality (in the US: Bartels 2008; Norton and Ariely 2011).

often experience a wide variety of inequality – often in concert - and are thus more likely to ‘see’ inequality.<sup>5</sup>

On the contrary, for social inequality perceptions, a growing body of research suggests that the main determinants of these perceptions are normative attitudes of ‘fairness’ (Loveless and Whitefield 2011; Kelley and Zagorski 2004; Kreidl 2000) rather than individuals’ income as some work had previously suggested (Verwiebe and Wegener 2000).

Yet, to our knowledge, no simultaneous test of income and social inequality perceptions exists thus limiting our ability to perform a robust test of the main determinants of inequality perceptions. In this paper we attempt to fill this gap by specifying and estimating a model that allows for the joint test of these inequality perceptions.

## **2.2 MODEL**

While seemingly apparent, the inclusion of physical location as a determinant of inequality perceptions is neither straightforward nor as common as assumed. Traditional arguments suggest that the effect of physical location (or when one lives) does not have an independent effect on individuals’ perceptions of macro-economic performance, including inequality, but it is rather a function of structural employment differences, namely, labor force participation in different industries and markets. However, these ‘locational’ differences relate to preferences for redistribution on how to deal with inequality (Haggard, Kaufman, and Long 2010) rather than to the simple perception of inequality, that is, to how much inequality people see.

In this paper we take physical location from the aggregate to the individual-level and we argue that where one lives exposes an individual to vastly different contexts that will affect his or her perceptions of inequality. We define physical location as the rural or urban area where one

---

<sup>5</sup> This literature is vast. Several of the most important recent citations can be found in Bartels (2008) and Solt (2008).

lives as a particularly relevant distinction for economies in transition. Rural residents see urban areas and capital cities as the disproportionate recipients of the ‘blessings’ of modernization where the provision of high quality public goods, services and job opportunities creates a sense of permanent disadvantage. For new democracies and transition countries this perspective corresponds to the democratization process wherein economic benefits tend to accrue first to the urban middle class (initiating urban-rural inequality) and last to the rural populations (Crenshaw 1992). Perceptions of inequality are shaped by this urban-rural divide. While in rural areas the lack of opportunities map into narrow differences between income and social groups, the urban setting (including capitals) allows residents to see the distance between wealth and poverty widened substantially (top CEO vs beggars in the streets). Those in urban areas are more likely to ‘see’ both a higher ceiling and a lower floor, and perceive both substantial upward and downward mobility, and even more so as urban areas are more likely to be able to provide greater access to broader public goods than rural settings.

There is reason to suggest this. In conjunction with significant differences in the urban/rural distribution of national wealth (Angel and Rands 1996), income inequality has been found to move with urbanity quite distinctly (for CEE, see Förster *et al.* 2005) because of an abundance of highly skilled labor in the capitals and larger urban areas (Milanovic 1998). Therefore, and simply, we expect the rural or urban location where an individual lives to be an important determinant of her views on inequality since it exposes an individual to vastly different contexts, particularly in transition economies such as CEE countries.

In order to distinguish between rural and urban areas we specify a model that assumes that inequality perceptions of individual  $i$  are determined as follows:

$$y_i = \beta_0 + \beta_1 income_i + \beta_2 urban_i + \beta_3 (income_i * urbanity_i) + X_i \gamma + \varepsilon_i \quad (1)$$

where  $y$  denotes individual  $i$ 's perceptions of either income or social inequality,  $income$  is a measure of individual  $i$  socio-economic location, which, following the previous literature, we proxy with the level of household income, and  $urbanity$  is a measure of individual  $i$ 's physical location, which we proxy with a dummy variable that equals one if  $i$  lives in a urban area (including capital cities) and zero otherwise.  $X$  is a vector of individual-level variables following Loveless and Whitefield (2011) that survey the most recent literature on inequality perceptions and arrive at four groups of relevant variables. The first group includes normative commitments to market economies and democratic political institutions. The second group includes variables measuring individuals' positions in the social structure such as gender, income, age, employment, education, and membership in the ethnic majority of the country. The third group includes respondents' self-reported economic and political experiences with both the market and democracy. The fourth group includes individuals' perceptions of the necessary mechanisms of social advancement in society, including structural, personal and networking advantages. Finally, we include a full set of country dummies.<sup>6</sup> The Measurement Appendix provides full details on all these variables.

Equation (1) allows assessing how the two aspects of 'location' affect inequality perceptions and interact between each other. In particular, we can test three hypotheses on the relationship between perceptions of inequality and individuals' income and physical location:

**H<sub>1</sub>:** Income is inversely correlated with perceptions of both income and social inequality.

**H<sub>2</sub>:** Rural residents are more likely to have higher perceptions of both income and social inequality than urban residents.

---

<sup>6</sup> The theory that underpins the choice of these variables can be found in Loveless and Whitefield (2011, 243-4) as well as the measurement strategy (*ibid.*, 259-63). We take no issue with the theoretical choices of what to include but rather with how to think about and thus model these variables' inclusion.

**H<sub>3</sub>:** The negative effect of income on inequality perceptions is more pronounced for residents of urban than for residents of rural areas.

**H<sub>1</sub>** and **H<sub>2</sub>** imply, respectively, that  $\beta_1$  and  $\beta_2$  are negative and statistically significant. **H<sub>3</sub>** implies that  $\beta_3$  is statistically significant and negative.

### 3. DATA AND DESCRIPTIVE STATISTICS

The data for this paper come from mass public surveys conducted in 2007 in 12 CEE countries.<sup>7</sup> One innovative feature of this survey is the inclusion of questions on individuals' perceptions of income and social inequality. To elicit social inequality perceptions the surveys use the following question: 'Some people say that there is too much social inequality in our society. Others say that there is no or almost no social inequality in our society. What is your view?' Respondents were presented with four options: 'too much social inequality', 'about the right amount of social inequality', 'not enough social inequality', and 'there is no or almost no social inequality'. Perceptions of income inequality are elicited with the following question: 'Differences in income in this country are too large.' Each respondent chooses one of the following alternatives: 'strongly agree', 'somewhat agree', 'somewhat disagree', 'strongly disagree', and 'do not know'.

*<<Tables 1a & 1b about here>>*

Tables 1a and 1b show that a majority of people in a majority of CEE countries perceive various levels of both income and social inequality as there are few 'don't know's'.<sup>8</sup> What we

---

<sup>7</sup> The EUREQUAL project 'Social Inequality and Why It Matters for the Economic and Democratic Development of Europe and Its Citizens: Post-Communist Central and Eastern Europe in Comparative Perspective' funded by the European Commission under contract No 028920 (CIT5), Framework 6. Fieldwork was conducted by national survey/polling institutes in each country (face-to-face interviews) using stratified national random probability samples. All details on specific transformations are available from the authors upon request.

<sup>8</sup> The mean percentage of 'don't know's' is 4.0 (median of 2.9), including the extreme value of Moldova. The mean percentage of 'don't know's' for income inequality is 2.19 (median of 1.65).

find for the perceptions of social inequality is a skewed distribution towards ‘seeing’ high inequality. While clear evidence of individuals’ concerns about their societies, we approach this as an opportunity to explain the perceptions of *excessive* social inequality by collapsing the responses in two categories and constructing our social inequality perceptions variable as an indicator variable that equals one for the response category ‘too much social inequality’ and zero otherwise.<sup>9</sup>

We note two important things. First, rather than descriptive-type questions asking individuals to express their views about the distribution of resources or preferences for redistribution as in Rehm (2009), inequality perceptions are elicited using questions that reflect the intrinsically normative nature of inequality preferences (‘too much inequality’). This normative nature is consistent with a substantial body of work showing that individuals’ subjective assessments of inequality often differ from actual data on measured inequality (Bartels 2008), and tend to be driven by value preferences toward more or less egalitarian outcomes and norms of fairness (Loveless and Whitefield 2011; Osberg and Smeeding 2006). This is also the case for many evaluative economic attitudes such as perceptions of good performance/health of the economy, a fair distribution of economic and other goods in society, and the perceived correctness of the economic structure (Solt 2008; Kaltenhaler *et al.* 2008; Alesina and Glaeser 2004; Kreidl 2000; Bollen and Jackman 1985; Jackman 1975). Thus, consistently with the previous literature, we will estimate equation (1) by including several attitudinal variables among the relevant determinants of inequality perceptions.

Second, the most recent literature on social inequality has characterized it as referring to disparities in access to public goods such as health and education (Binelli *et al.* 2012). Therefore,

---

<sup>9</sup> Robustness checks of the empirical analysis conducted by coding the social inequality perceptions variable as a set of dummy variables for each of the four categories (with various reference categories) return similar results. We therefore use the dichotomous variable for the sake of simplicity.

we expect individuals' perceptions of social inequality to be strongly linked with perceptions of individuals' access to these public goods. In order to test for this distinction empirically, we construct an additive index as the sum of three survey questions that ask respondents to rate their access to three important categories of public goods, namely health care, education, and broader social goods (the Measurement Appendix provide full details on these access variables). We find that both perceptions of social and income inequality are negatively correlated with this additive index, which suggests that the higher the level of perceived inequality the lower the access to public goods, but, importantly, to a more substantial degree for perceptions of social inequality.<sup>10</sup>

Together with income and social inequality perceptions, the other key variables for our empirical analysis are individuals' socio-economic and physical location. To measure socio-economic location we construct an income variable using a five category measure of household disposable income that is a cross-nationally consistent measure of absolute income. We use this variable rather than the direct question on household income since the cross-national surveys present a wide diversity in alternative income measures (open-ended and categorical). Therefore, our measure of household income is discrete rather than continuous but has the advantage of being less affected by measurement error and it is cross-country comparable.

For physical location, the difference - between rural and urban location - captures a fundamental difference in the distribution of, availability of, and access to public goods within a society in an empirically straightforward manner. In Central and Eastern Europe capital cities are by far the largest cities often dwarfing other urban centers ('mid-sized' cities) and rural areas. Therefore, the assignment of respondents' physical location to rural, urban, and capital is based on the following. The survey interviewers coded the number of residents in the place where the

---

<sup>10</sup> Regressing perceptions of social and income inequality on this index produces statistically significant results for both, but with substantively different magnitudes: the standardized betas are -0.13 and -0.07, respectively.

interviewee lived. We divided that number by the largest city (in every case the capital) to produce a proportion (between 0 and 1) that relates size as a factor of the largest city (all 1's were assigned to 'capital'). This proportional approach produces a high skew, bi-modal distribution of residences (see Figure 1).

<<Figure 1 about here>>

Given that the capital is *de facto* urban, we used a variable in the dataset that categorized all locations as 'rural' or 'urban' (coded by the respective national survey teams), cross-tabulated the remaining proportions with this urban/rural variable, and assigned 'rural' and 'urban' to the respective cells. However, we found that the empirical results obtained with the trifurcated (rural/urban/capital) and the bifurcated (rural/urban *including capital*) location dummies deliver congruent and substantively similar results. Thus, for simplicity, in the empirical analysis we will use the simple bifurcated urban/rural dummy variable.

<<Table 2 about here>>

Table 2 presents the distribution of respondents by their rural and urban residence. As expected, in most countries the vast majority of the population lives in urban areas. Two exceptions are Hungary and Moldova with, respectively, 51 and 61 per cent of the population living in rural areas.

#### **4. MAIN RESULTS**

In order to rigorously test the central hypothesis of this paper we estimate equation (1). Table 3 reports the results: the first three models estimate a dichotomous Logit regression for the perceptions of social inequality; the last model estimates an OLS regression for the perceptions of income inequality.<sup>11</sup>

<<Table 3 about here>>

---

<sup>11</sup> An ordered logit produced substantively the same output (available from the authors).

For comparison Model 1 replicates the literature's most recent findings from Loveless and Whitefield (2011);<sup>12</sup> Model 2 adds urbanity, Model 3 adds the interaction between income and urbanity, and Model 4 replicates Model 3 for the perceptions of income inequality.

The comparison between these individual-level models shows that both perceptions of income and social inequality are driven by an array of socio-demographic variables (gender, employment status, and age), as well as by normative considerations of the market economy (as an 'ideal'), and the perception of 'connections' as an advancement mechanism that raises both perceptions, while the attitude that the market improves standards of living for everyone is negatively correlated with perceptions of both inequality. Further, both consistently and importantly, experience with democracy, 'democracy is for the rich', and the role of democracy in combating the market distortions - 'government responsible' - affect all inequality perceptions (by lowering, raising, and raising again, respectively).

Central to the research question of this paper is the role of income. We can see that once we control for urbanity income ceases to have an independent negative effect on inequality perceptions, which rejects H<sub>1</sub>. At the same time, there is no independent 'urban' effect, thus a lack of support for H<sub>2</sub>.

The most startling difference with respect to previous work on inequality perceptions is the interactive effect of individuals' 'locations', which is negatively and statistically significant both for perceptions of income and social inequality offering strong support for H<sub>3</sub>. Physical location shapes the effect of individuals' levels of income on their perceptions of inequality. This interaction effect means that in urban areas – and only in urban areas - inequality perceptions

---

<sup>12</sup> Although we use the same data and approach as Loveless and Whitefield (2011), our Model 1 does not perfectly match their final model as they trifurcate income (using dummies for medium and high income) in contrast to our alternative income variable (treated as interval).

differ for high and low income individuals: specifically, the perceptions of inequality increase for low-income residents and decrease for those at high levels of income.

Overall, the main result is that variation in inequality perceptions has little relation to income for rural residents, while in urban areas income is rather important. Thus, at the broadest level the results suggest a clear sub-national disparity in the perception of both social and income inequality that can be explained by individuals' physical location. Congruent to what we have argued above, the perceptions of inequality for rural residents are unaffected by income - even taking into consideration the statistically significant difference in the level of income between urban and rural residents such that urban residents, on average, have more money.<sup>13</sup> In contrast, as we have argued, urban and capital residents' exposure to broader experiences with inequality exacerbates perceptions of inequality at lower levels of income while mitigating perceptions at higher incomes. Simply, urbanity clarifies the effect of income on inequality perceptions.

## **5. DISCUSSION**

The findings in the previous section show that differences in the urban/rural location where individuals live are key and under-investigated determinants of individuals' perceptions of inequalities. The overall negative effect of income on perceptions hides an important distinction that sheds light on the nature of individuals' views of inequality: income shapes inequality perceptions only for urban residents.

What differentiates perceptions of social inequality from perceptions of income inequality for the urban rich is the perception of urban abundance (of access to public goods such as health care and education) and thus the incredulity that the urban poor cannot make more of themselves (Kreidl 2000; Alesina and Glaeser 2004; Kaltenhaler *et al.* 2008). To the rich this perception of

---

<sup>13</sup> Overall, mean income in rural areas (std dev, *N*) is 2.77 (0.013, 5282), and in urban areas (std dev, *N*) is 2.94 (0.010, 9018) producing a t-test statistic (*df*, sig) of 10.77 (14298,  $p < 0.001$ ). This difference is less than 95 percent confidence in Czech Republic, Hungary, Latvia, Lithuania, and Ukraine.

opportunity and abundance of public goods equals availability. Thus, the fact that perceptions of social inequality decrease among those living in cities with high household income comes as little surprise.

In contrast, from the perspective of the poor, this assumption of abundance may be less convincing as the presence of more does not necessarily translate into higher levels of access or availability. For example, if in areas where public goods are ‘abundant’ and high quality opportunities for improved access are a function of income, inequality in access is perceived in the same way that it is in a location where public goods are poorly provided. In the case of a rural setting with both less relative levels of public goods cheaply/freely provided by the state and smaller markets for high quality public goods to be accessed by the rural rich, regardless of the level of wealth, individuals evaluate themselves as ‘less rich’ than those living in the urban and capital settings.

## **6. CONCLUSION**

Using survey data for 12 Central and Eastern European countries we investigate the relationship between perceptions of income and social inequality and individuals’ socio-economic and physical location as determinants of these perceptions. The previous literature on income inequality perceptions finds that those at higher levels of income see much less inequality than those at lower levels of income (Solt 2008; Kaltenhaler *et al.* 2008; Bollen and Jackman 1985; Jackman 1975). Here we show that this effect depends on whether an individual lives in a urban or rather in a rural area: income has a negative effect on inequality perceptions only for urban residents.

In its simplest form, our model suggests that *how* inequality is perceived depends on *where* it is perceived, which we empirically define as the urban or rural area where an individual lives.

We argue that this physical location is important since the availability of services and opportunities differ substantially in urban and rural areas. The empirical findings recommend researchers to be mindful of salient sub-national variation when considering what drives individuals' perceptions of macro-phenomena.

Recent work has shown that in CEE countries individuals' perceptions of macro-economic indicators including income inequality do not move together with changes in the actual indicators (Tverdova 2012; Loveless and Whitefield 2011; Kreidl 2000)<sup>14</sup> and a substantial body of literature has established that perceptions affect individual behavior (Lupia *et al.* 2000; Kunda, 1999; Tversky and Kahneman 1974; Sniderman *et al.* 1991; Lodge and McGraw 1995).

Thus perceptions of the extent of inequality that individuals see are highly salient – and potentially harmful - to the function of democratic politics (see Loveless 2013), and the examination of the concept of location (*where* one is rich or poor) is crucial to understand the formation of these perceptions. Variation in urbanity *activates* socio-economic differences that affect the impact of income on perceptions. Being able to elicit this salient sub-national variation better connects the investigation of inequality to the uneven distribution of inequality within a country (Galbraith 2012) and consequently improves our understanding of individuals' perceptions of inequalities.

---

<sup>14</sup> This same lack of coordination has been found in the US and in Europe (Bartels 2008; Alesina and Glaeser 2004; Norton and Ariely 2011; Hopkins 2012).

**TABLE 1a: Perceptions of Social Inequality – Summary Statistics**

Percent %	N	<i>Too much social inequality</i>	<i>About the right amount of social inequality</i>	<i>Not enough social inequality</i>	<i>There is no or almost no social inequality</i>	<i>Don't know</i>
Bulgaria	998	83.3	13.2	0.9	0.5	2.0
Czech Rep.	990	68.8	28.4	1.9	0.1	0.8
Estonia	1057	61.8	30.0	1.8	1.3	5.1
Hungary	1030	85.2	11.7	1.0	0.4	1.7
Latvia	1001	69.5	25.9	4.3	0.5	1.8
Lithuania	1002	71.9	18.6	2.5	1.1	6.0
Moldova	1042	51.1	21.1	9.9	2.8	15.2
Poland	1498	63.4	26.2	3.7	2.0	4.7
Romania	1483	44.6	44.9	5.7	1.3	3.5
Russia	2000	83.8	8.1	4.8	0.7	2.7
Slovakia	1032	71.1	16.2	8.3	1.3	3.1
Ukraine	1494	87.0	9.8	1.5	0.3	1.3

**TABLE 1b: Perceptions of Income Inequality – Summary Statistics**

Percent %	N	<i>Strongly Agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly Disagree</i>	<i>Don't know</i>
Bulgaria	999	71.7	24.1	3.2	0.3	0.7
Czech Rep.	989	58.9	30.2	7.5	2.0	1.4
Estonia	1,057	62.0	29.0	5.1	0.7	3.3
Hungary	1,030	76.1	18.5	2.5	1.4	1.5
Latvia	1,001	64.4	28.8	3.7	1.5	1.6
Lithuania	1,002	43.6	46.7	4.1	0.5	5.1
Moldova	1,042	32.2	44.4	13.5	4.0	5.9
Poland	1,498	60.1	32.8	4.1	1.3	1.8
Romania	1,492	53.4	38.3	5.0	0.7	2.6
Russia	2,000	63.7	28.3	5.8	1.2	1.1
Slovakia	1,032	71.3	22.8	2.6	1.7	1.7
Ukraine	1,494	65.2	27.4	4.6	2.1	0.7

**TABLE 2: Number and Percentage Share of Urban and Rural Respondents by Country**

	<b>Urban</b>	<b>Rural</b>	<b>TOTAL</b>
<i>Bulgaria</i>	660 (66.0%)	340 (34.0%)	<b>1000</b>
<i>Czech Rep.</i>	743 (74.7%)	251 (25.3%)	<b>994</b>
<i>Estonia</i>	760 (71.0%)	297 (28.1%)	<b>1057</b>
<i>Hungary</i>	502 (48.8%)	528 (51.3%)	<b>1030</b>
<i>Latvia</i>	688 (68.8%)	313 (31.3%)	<b>1001</b>
<i>Lithuania</i>	678 (67.7%)	324 (32.3%)	<b>1002</b>
<i>Moldova</i>	402 (38.8%)	638 (61.4%)	<b>1040</b>
<i>Poland</i>	926 (63.3%)	537 (36.7%)	<b>1463</b>
<i>Romania</i>	815 (54.6%)	677 (45.4%)	<b>1492</b>
<i>Russia</i>	1,494 (74.7%)	506 (25.3%)	<b>2000</b>
<i>Slovakia</i>	540 (52.3%)	492 (47.7%)	<b>1032</b>
<i>Ukraine</i>	1,019 (67.9%)	481 (32.1%)	<b>1500</b>

**TABLE 3: Perceptions of Social and Income Inequality**

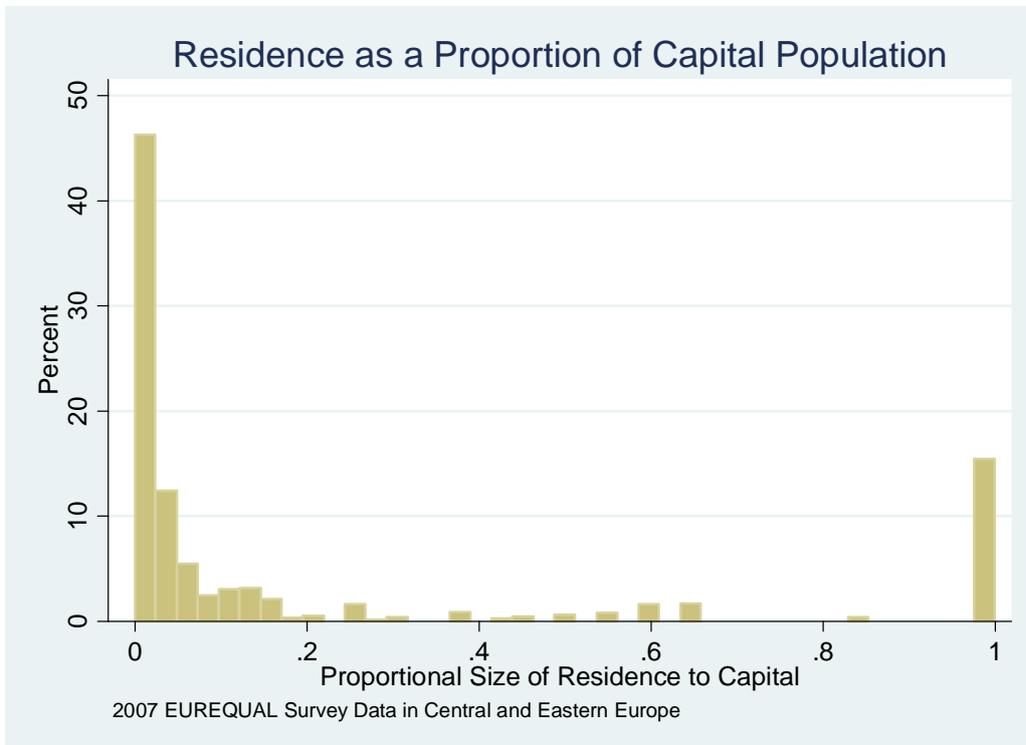
	'Too Much' Social Inequality			Income Inequality
	(1)	(2)	(3)	(4)
Urbanity (Urban=1)		0.01 (0.05)	0.02 (0.05)	-0.03 (0.02)
Income*Urban			<b>-0.18***</b> (0.05)	<b>-0.06***</b> (0.02)
<i>Social-Economic Status</i>				
Income	<b>-0.09**</b> (0.03)	<b>-0.09**</b> (0.03)	0.02 (0.04)	0.01 (0.02)
Gender	<b>-0.14**</b> (0.05)	<b>-0.14**</b> (0.05)	<b>-0.13**</b> (0.05)	<b>-0.06***</b> (0.02)
Employed	<b>0.12*</b> (0.05)	<b>0.12*</b> (0.05)	<b>0.13*</b> (0.05)	<b>0.04*</b> (0.02)
Age	<b>0.01***</b> (0.00)	<b>0.01***</b> (0.00)	<b>0.01***</b> (0.00)	<b>0.00***</b> (0.00)
Education	<b>0.03*</b> (0.01)	0.02 (0.01)	0.02 (0.01)	0.00 (0.00)
Ethnic Majority	0.01 (0.06)	0.01 (0.06)	0.01 (0.06)	<b>0.06*</b> (0.02)
<i>Attitudes and Evaluations</i>				
Market Economy Ideal	<b>0.11***</b> (0.03)	<b>0.11***</b> (0.03)	<b>0.11***</b> (0.03)	<b>0.04***</b> (0.01)
Democracy Ideal	-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)	-0.00 (0.01)
Gov't Responsible	<b>0.10***</b> (0.01)	<b>0.10***</b> (0.01)	<b>0.10***</b> (0.01)	<b>0.05***</b> (0.00)
Retro HH Std Living	<b>-0.07*</b> (0.03)	<b>-0.07*</b> (0.03)	<b>-0.07*</b> (0.03)	-0.02 (0.01)
Prosp HH Std Living	-0.03 (0.04)	-0.03 (0.04)	-0.03 (0.04)	-0.01 (0.01)
Retro Country Std Living	-0.04 (0.03)	-0.04 (0.03)	-0.04 (0.03)	0.00 (0.01)
Prosp Country Std Living	-0.01 (0.04)	-0.01 (0.04)	-0.01 (0.04)	0.01 (0.01)
Experience with Mkt Economy	<b>-0.13***</b> (0.03)	<b>-0.12***</b> (0.03)	<b>-0.12***</b> (0.03)	-0.02 (0.01)
Mkt improves Std Living	<b>-0.29***</b> (0.03)	<b>-0.29***</b> (0.03)	<b>-0.29***</b> (0.03)	<b>-0.07***</b> (0.01)
Experience with Democracy	<b>-0.24***</b> (0.03)	<b>-0.24***</b> (0.03)	<b>-0.24***</b> (0.03)	<b>-0.05***</b> (0.01)
Democracy for rich	<b>0.21***</b> (0.02)	<b>0.21***</b> (0.02)	<b>0.21***</b> (0.02)	<b>0.10***</b> (0.01)
Structural advantage	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.00 (0.00)
Personal abilities	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.00)
Connections	<b>0.08***</b> (0.01)	<b>0.08***</b> (0.01)	<b>0.08***</b> (0.01)	<b>0.02***</b> (0.01)
<i>Country Dummies</i>				
Bulgaria	<b>1.00***</b> (0.13)	<b>1.00***</b> (0.13)	<b>1.01***</b> (0.13)	<b>0.90***</b> (0.05)
Czech Rep	<b>0.79***</b> (0.11)	<b>0.79***</b> (0.11)	<b>0.80***</b> (0.11)	<b>0.88***</b> (0.05)
Estonia	<b>0.64***</b> (0.11)	<b>0.64***</b> (0.11)	<b>0.64***</b> (0.11)	<b>1.04***</b> (0.05)
Hungary	<b>1.16***</b> (0.13)	<b>1.16***</b> (0.13)	<b>1.15***</b> (0.13)	<b>0.96***</b> (0.05)
Latvia	<b>0.63***</b> (0.11)	<b>0.63***</b> (0.11)	<b>0.63***</b> (0.11)	<b>0.94***</b> (0.05)
Lithuania	<b>0.94***</b> (0.12)	<b>0.94***</b> (0.12)	<b>0.93***</b> (0.12)	<b>0.78***</b> (0.05)
Moldova	<b>-0.34**</b> (0.11)	<b>-0.35**</b> (0.11)	<b>-0.31**</b> (0.11)	<b>0.32***</b> (0.06)
Poland	<b>0.37***</b> (0.10)	<b>0.36***</b> (0.11)	<b>0.36***</b> (0.11)	<b>0.87***</b> (0.05)

Romania	-0.84*** (0.10)	-0.84*** (0.10)	-0.83*** (0.10)	0.73*** (0.05)
Russia	1.43*** (0.10)	1.43*** (0.10)	1.43*** (0.10)	0.87*** (0.05)
Slovakia	0.76*** (0.11)	0.76*** (0.11)	0.75*** (0.12)	1.02*** (0.05)
Ukraine	1.46*** (0.12)	1.45*** (0.12)	1.45*** (0.12)	0.83*** (0.05)
Constant	-1.91*** (0.31)	-1.91*** (0.32)	-2.23*** (0.33)	1.83*** (0.13)
-----				
Pseudo R-squared	0.1659	0.1660	0.1669	
Adj. R-squared				0.2138
Number of Observations	12820	12791	12791	12785
-----				

**Notes:** \* p<0.05, \*\* p<0.01, \*\*\* p<0.001. All models are weighted for a national survey size of N=1000. Models 1, 2 and 3 are logit models. Model 4 is an OLS model. All logit models report unadjusted coefficients.

The dependent variable in model 1, 2 and 3 is an indicator variable that equals one for the response category ‘too much social inequality’ and zero otherwise. The dependent variable in model 4 is a discrete variable that can take one value among five alternative answers (‘strongly agree’, ‘somewhat agree’, ‘somewhat disagree’, ‘strongly disagree’, and ‘do not know’) to the question ‘Differences in income in this country are too large.’

**FIGURE 1: Size of Place of Residence as a Proportion of Capital Population**



## **BIBLIOGRAPHY:**

- Alesina, A. and E. Glaeser. (2004). Fighting Poverty in the US and Europe: A World of Difference. Oxford: Oxford University Press.
- Angel, M. C. and T. Rands. (1996). 'The world they have lost: An assessment of change in Eastern Europe', *Social Research* 63: 369–402.
- Bartels, Larry. (2008). Unequal Democracy: The Political Economy of the New Gilded Age. Princeton: Princeton University Press.
- Binelli, Chiara, Matthew Loveless, Stephen Whitefield. (2012). 'What is Social Inequality and Why Does it Matter?', the *American Political Science Association Annual Meeting*. New Orleans, LA: 30 Aug – 2 Sept.
- Bollen, Kenneth A. and Robert W. Jackman. (1985). 'Political Democracy and the Size Distribution of Income', *American Sociological Review*, 50(4): 438-457.
- Crenshaw, E. (1992). 'Cross-National Determinants of Income Inequality: A Replication and Extension Using Ecological-Evolutionary Theory', *Social Forces* 71:339-63.
- Duke, Vic and Keith Grime. (1997). 'Inequality in Post-communism', *Regional Studies* 31(9): 883-890.
- Galbraith, James K. (2012). Inequality and Instability. New York: Oxford University Press.
- Haggard, Stephan M., Robert R. Kaufman, and James D. Long. (2010). 'Inequality and Preferences for Redistribution in the Developing World', APSA 2010 Annual Meeting Paper.
- Hopkins, Daniel J. (2012). 'Whose Economy? Perceptions of National Economic Performance during Unequal Growth', *Political Opinion Quarterly* 76(1): 50-71.
- Jackman, Robert W. (1975). Political and Social Equality: A Comparative Analysis. Comparative Studies in Behavioral Science. A Wiley Series. John Wiley and Sons, Inc.
- Kaltenhaler, Karl, Stephen Ceccoli, and Ronald Gelleny. (2008). 'Attitudes toward Eliminating Income Inequality in Europe', *European Union Politics* 9(2): 217-241.
- Kelley, Jonathon and Krzysztof Zagorski. (2004). 'Economic Change and the Legitimation of Inequality: The Transition From Socialism to the Free Market in Poland and Hungary, 1987-1994', *Research in Social Stratification and Mobility* 22: 319-364.
- Kreidl, Martin. (2000). 'Perceptions of Poverty and Wealth in Western and Post-Communist Countries', *Social Justice Research* 13(2): 151-176.
- Kunda, Ziva. (1999). Social Cognition. Cambridge, MA: MIT Press.
- Lodge, Milton and Kathleen M. McGraw. (1995). Political Judgment: Structure and Process. The University of Michigan Press.
- Loveless, Matthew and Stephen Whitefield. (2011). 'Being Unequal and Seeing Inequality: Explaining the Political Significance of Social Inequality in New Market Democracies', *European Journal of Political Research* 50: 239–266.
- Loveless, Matthew. (2013). 'The Deterioration of Democratic Political Culture: Consequences of the Perception of Inequality', *Social Justice Research* 26(4): 471-491.
- Lupia, Arthur, Mathew D. McCubbins, and Samuel L. Popkin (2000). Elements of Reason: Cognition, Choice, and the Bounds of Rationality. Cambridge University Press

- Milanovic, Branko. (1998). Income, Inequality and Poverty during the Transition from Planned to Market Economy. The World Bank; Washington D.C.
- Milanovic, Branko. (2005). Worlds Apart. Measuring International and Global Inequality. Princeton University Press; Princeton.
- Norton, Michael I. and Dan Ariely. (2011). 'Building a Better America—One Wealth Quintile at a Time', *Perspectives on Psychological Science* 6(1): 9–12. DOI: 10.1177/1745691610393524
- Örkeny, Antal and Maria Székelyi. (2000). 'Views on Social Inequality and the Role of the State: Posttransformation Trends in Eastern and Central Europe', *Social Justice Research* 13(2): 199-218.
- Osberg, Lars and Timothy Smeeding. (2006). 'Fair' Inequality? Attitudes toward Pay Differentials: The United States in Comparative Perspective', *American Sociological Review* 71(3): 450-473.
- Rehm, Philipp. (2009). 'Risks and Redistribution: An Individual-level Analysis', *Comparative Political Studies* 42(7): 855-881.
- Sniderman, Paul M., Richard A. Brody, and Philip E. Tetlock. (1991). Reasoning and Choice: Explorations in Political Psychology. Cambridge University Press.
- Solt, Frederick. (2008). 'Economic Inequality and Democratic Political Engagement', *American Journal of Political Science* 52(1): 48-60.
- Tverdova, Yuliya V. (2012). 'The Formation of Economic Perceptions in Post-Communist Countries of East Central Europe', *Political Behavior* 34: 137-158.
- Tversky, Amos and Daniel Kahneman. (1974). 'Judgment Under Uncertainty: Heuristics and Biases', *Science* 185: 1124-1131.
- Verwiebe, Roland and Bernd Wegener. (2000). 'Social Inequality and the Perceived Income Justice Gap', *Social Justice Research* 13(2): 123-149.

## Measurement Appendix

**Social Inequality:** Some people say that there is too much social inequality in our society.

Others say that there is no or almost no social inequality in our society What is your view?

Do you think that there is ... Too much social inequality; About the right amount of social inequality; Not enough social inequality; There is no or almost no social inequality? Recoded so that 'too much' is 1 and the others are 0. DK coded to missing

**Income Inequality:** 'Differences in income in this country are too large.' Strongly agree, Somewhat agree, Neither, Somewhat disagree, Strongly disagree, DK (recoded to neutral category), reverse coded.

**Urban/Rural:** This variable is based on the coding provided in the dataset (variable 'urbrur').

**Access:** Please compare your household's access to health care (1f7)/education (17g)/cultural goods (books, internet, theatre etc..., 17h) with the average access in the country as a whole? Would you say that your household's health care access is ...

- Well below average, Below average, Somewhat below average, Average, Somewhat above average, Above average, or Well above average
- Additive variable: Cronbach's alpha of 0.885 (range: 3-21, mean: 10.60 and std dev: 3.39)

### Attitudes about the Market Economy and Democracy:

**Democracy as Ideal:** Tell us, please, what do you think about the idea that a democracy, in which multiple parties compete for power, is the best system for governing [country].

- Strong supporter, Supporter, Opponent, Strong opponent, Neither supporter nor opponent
- recoded so that very positively is highest and that the 'neither' and 'DK' categories are a middle, neutral category

**Market Economy as Ideal:** And what do you think about the idea that a market economy, in which there is private property and economic freedom to entrepreneurs, is the best system for [country].

- Strong supporter, Supporter, Opponent, Strong opponent, Neither supporter nor opponent
- Reverse coded; 'neither' and 'DK' categories to middle category

**Experience with Market Economy:** And how would you evaluate the actual experience of the market economy so far?

- Very positively; Positively; Negatively; Very negatively; Neither positively nor negatively
- Reverse coded; 'neither' and 'DK' categories to middle category

**Market improves Standard of Living:** the market economic improves the standard of living of ordinary people in [country].

- Strongly agree; Somewhat agree; Neither; Somewhat disagree; Strongly disagree.
- Reverse coded; 'neither' and 'DK' categories to middle category

**Experience with Democracy:** And how would you evaluate the actual practice of democracy here in [country] so far?

- very positively; Positively; Negatively; Very negatively; Neither positively nor negatively
- Reverse coded; 'neither' and 'DK' categories to middle category

**Democracy for the Rich:** Democracy is better for the rich in society than the poor.

- Strongly agree; Somewhat agree; Neither; Somewhat disagree; Strongly disagree.
- Reverse coded; 'neither' and 'DK' categories to middle category

**Government Responsibility:** The following questions were compiled into an additive variable.

- Government's responsibility to provide a job for everyone who wants one, health care for the sick, a decent standard of living for the old, a decent standard of living for the unemployed, decent housing for those who can't afford it, and decent childcare support for working parents.
  - o 'Definitely should be; probably should be; probably should not be; definitely should not be'
  - o Reverse coded; 'could not chose' to middle category

#### Normative Judgments:

Here are some questions about opportunities for getting ahead. Please choose one of the phrases from this card to show how important you think it is for getting ahead in life {Poland: achieving success} in [country].

- Essential, Very important, fairly important, not very important, not important at all.
- Recoded: 'essential' is high score; 'can't choose' coded to missing.

**Structural Advantages:** additive variable of the following:

- First, how important is coming from a wealthy family?
- Having well-educated parents?
- A person's ethnic group? How important is that for opportunities to get ahead?
- Being born a man or a woman? How important is that for a person's opportunities?
- Age, being young or middle aged?

**Personal Abilities:** additive variable of the following:

- Hard work?
- Ambition?
- Natural ability? How important is that for getting on in life?

**Unfair Advantages:** additive variable of the following:

- Knowing the right people?
- Having political connections?

#### Economic Evaluations:

**Retrospective Household Standard of Living:** Compared with five years ago, has your household's standard of living fallen a great deal, fallen a little, stayed about the same, risen a little, or has it risen a lot?

- DK coded missing

**Prospective Household Standard of Living:** And looking ahead over the next five years, do you think that your household's standard of living will fall a great deal from its current level, fall a little, stay about the same as it is now, rise a little, or rise a lot from its current level?

- DK coded missing

**Retrospective National Standard of Living:** Thinking now of the country as a whole, do you think that compared with five years ago, standards of living have fallen a great deal, fallen a little, stayed about the same, risen a little, or risen a lot?

- DK coded missing

**Prospective National Standard of Living:** And looking ahead over the next five years, do you think that standards of living will fall a great deal from their current level, fall a little, stay about the same as now, rise a little, or rise a lot from their current level?

- DK coded missing

Demographics:

**Education (std\_education):** all countries were adjusted to the ISCED 1997

(0) Pre-primary level of education; (1) Primary level of education; (2) Lower secondary level of education; (3) Upper secondary level of education; (4) Post-secondary, non-tertiary level of education; (5) First stage tertiary education; (6) Second stage of tertiary education (leading to an advanced research qualification) of education.

**Ethnic group (h3a):** To which one do you consider that you belong yourself? (1) Majority ethnic group; (2) Group B; (3) Group C; (4) Group D; etc...Recoded: majority ethnic group is 1 and others are 0.

**Gender (o2):** Male is 1 and female is 0

**Employment (j1):** Is the respondent currently in paid work? Employed is 1; unemployed is 0.

**Age (o1):** open ended response

**Income (I7c):** Which of the following statements best describes your household's financial circumstances: We do not have enough money even to buy food; We have enough money to buy food but we cannot afford to buy clothes and shoes; We have enough money to buy food, clothes and shoes and have some savings but not enough to buy more expensive goods such as a TV set and fridge; We can buy some expensive goods such as a TV set and fridge but we cannot afford all things we would want; We can afford everything that we would want; Do not know. DK coded missing.