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PERCEPTION OF INEQUALITY AND SOCIAL MOBILITY

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PERCEPTION OF INEQUALITY AND SOCIAL MOBILITY[3]

This paper explores the perceptions of inequality and their associations with social mobility exploiting the ISSP and LiTS cross-country data sets. These perceptions vary across countries as well as across individuals within countries. We try to explain this variation by examining the diverse opportunities for vertical social mobility available to individuals. The main research question raised in the paper is whether our perception of income differentiation is driven by experience of past mobility and availability of the upward leading instruments. In other words, is a more socially mobile society more tolerant to income inequality than a less mobile and segmented one? The intuitive answer seems to be an obvious "yes", but empirical evidence is still scarce.

JEL Classification: I31, J62, D31, D63

Keywords: Perception of inequality, redistribution, social mobility, cross country data

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1. Introduction

All societies are unequal, though the level and nature of income inequality vary across countries. Too much inequality is often considered a threat to economic growth, to social cohesion, and to democracy. Everyone agrees that some level of inequality is necessary, though the borderline between "necessary" and "excessive", or "acceptable" and "non-acceptable", inequality is fuzzy. Individuals and social groups may demarcate it quite differently, and these borderlines are not stable over time. What affects where the borderline goes and the likelihood for individuals to be on one or another side of the border? Various factors can matter. The simplest expectation is that the poor may want to redistribute more, while those who are more affluent tend to consider income inequality a norm and an important driver of work motivation.

Many explanations go beyond narrowly understood economic interest. Dominant ideology (Alesina and Fuchs-Schundeln, 2009), consequences of economic shocks experienced by individuals during their formative years (Giuliano and Spilimbergo, 2009), future income prospects (Ravallion and Lokshin, 2002), and fairness of distribution (Alesina and Angeletos, 2005a) are among the factors shaping perceptions of inequality. Better prospects of social mobility – intergenerational as well – help people to tolerate inequality even when they are located at the bottom of the social ladder. As Alesina and Angeletos point out, "the difference in political support for redistribution appears, rather, to reflect a difference in social perceptions regarding the fairness of market outcomes and the underlying sources of income inequality" (Alesina and Angeletos, 2005a, p.960).

The degree of tolerance to inequality can also depend on the dominant views in a given society on how fair the existing inequality is considered. Whether acquired wealth is a meritocratic reward for hard work, the lucky outcome of a happy occasion, or a return to useful family connections and status may shape inequality perceptions as well.

If this sort of hypothesis is valid, then the root of the problems associated with inequality perception is not as much in the absolute level of the inequality. This can be a kind of social "atherosclerosis", the ideological indoctrination and/or the destruction of social lifts leading from the bottom to the middle and upper level positions in the society, etc. Ordinary citizens looking around for themselves can hardly distinguish inequality with the Gini coefficient equaling 0.30 from the inequality with the Gini of 0.40. However, they can have motivated views on how well-being in their country can be earned, whether acquired wealth is a function of hard work, or useful connections, or direct bribes. Then the policy priority should be to revitalize sclerotic institutions to open channels and speed up social and economic mobility, not simply redistribute from those who are richer to those who are poorer. Ultimately, this would mean more reforms towards setting up transparent rules of fair play that equalize opportunities for all members of

society, eradicate corruption, break artificial intergroup barriers and, therefore, make the whole society more dynamic.

In this paper, we analyze what drives the population's perceptions of income inequality. These perceptions, as well as beliefs about what is acceptable in a given society and what is not, vary between and within countries. We try to link this variation to how individuals perceive (evaluate) existing in the given society opportunities and available channels of vertical social mobility. The question we are going to answer is the following: Is our perception of income inequality contingent upon the mobility channels that are at our disposal? In other words, is the society that is socially dynamic (mobile) more tolerant to the given level of inequality than a static (and probably segmented) one? Intuitively, this seems to be quite obvious, but the empirical evidence is scarce.

Our key hypothesis is the following: The subjective perception of inequality by individuals depends on whether or not they have legitimate possibilities to improve their socio-economic standing. Those who have experienced upward mobility are more likely to tolerate the given level of inequality. In the literature, this phenomenon is associated with the so-called "tunnel effect". A.Hirschman used an analogy with car drivers who got stuck in a long tunnel and waited for positive signals (Hirschman, 1973).

We analyzed the "tunnel effect" by exploiting various data sets that cover different countries and use different definitions of social mobility. This variety of methods and measures supports our belief that the findings are robust.

The paper uses three large sets of microdata: these are surveys from the International Social Survey Program (ISSP) for 1999 and for 2009, and the Life in Transition Survey (LiTS) for 2010. In Section 2, we present some stylized facts on associations between actual inequality and subjective perceptions of it, and overview major studies in the field. Section 3 introduces the data and variables used in our study. Section 4 provides descriptive statistics. In Section 5, we analyze the associations between the experiences of mobility and inequality perception. Section 6 discusses how the shapes of social stratification are perceived and how they may affect inequality perception. Section 7 explores cross-country variation in inequality perceptions. The final section concludes and proposes directions for further research.

2. Short Overview

The starting point in the discussion on what shapes the perception of inequality is the hypothesis in the rational choice spirit that "homo oeconomicus" likes a redistribution from rich to poor. According to it, voters having lower than median income tend to vote for those politicians who support redistribution (Meltzer and Richard, 1981). Recipients of such income

expect to benefit from progressive tax-based redistributive policies. If this is true, then in highly unequal countries, individuals are likely to consider the given income differentiation as excessive. In fact, poor more often than non-poor support redistributive policies (Corneo and Gruner, 2002).[4] This can result in pro-redistribution political pressures.

Fig.1 plots countries in the two-dimensional space. The horizontal axis is the Gini-based scale measuring inequality.[5] The vertical axis presents the fractions of populations in their respective countries considering inequality too large (ISSP based measure). There is no visible association between these variables. On the high inequality end, there are countries where people worry much about it as well as in countries where inequality is not considered a serious problem. In the first group, one can see Chile, China, and Russia; in the second group are the US and New Zealand. Likewise, on the low actual inequality end, the perception varies significantly. For example, the Scandinavians tend to consider inequality modest and do not demand redistribution, but the population in the Czech Republic, Slovakia, the Ukraine, and Germany – having similar actual inequality levels – is more prone to favor redistributive policies. The regression of the country fractions of those worrying about inequality (ISSP-2009) on Gini (controlling for log GDP or institutional characteristics) does not show the association as well. (More in Section 7).

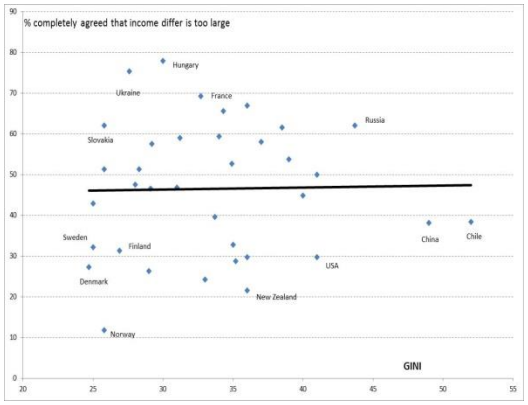

Fig.1a

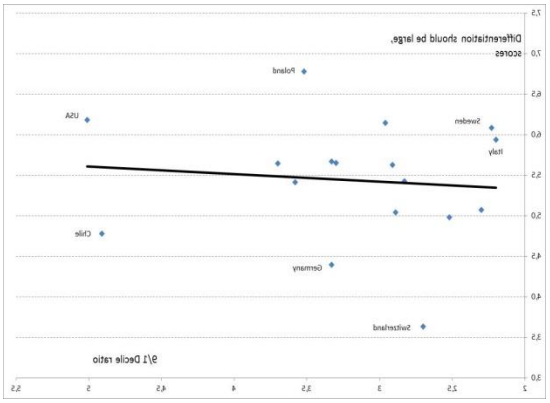

Fig.1b

Fig.1a). Fraction of those who completely agree that income differentiation is too large (Y-axis) and Gini coefficient (X-axis);
Fig.1b). Average score on the 10-score scale where 1 is for "Incomes should be more equal", 10 – "Income differences should be larger in order to motivate people to work harder" (Y-axis), income decile ratio (X-axis).

Does the picture change when we use alternative data sets? Fig 1b is based on the alternative data sets and indicators and also shows no association. In this case, the actual inequality is presented as a 9/1 decile ratio, while the perception is measured with the World

[4] The finding that individuals in low income groups tend to support redistributive policies is confirmed in our study as well (see regression results below).
[5] Human Development Report 2010, P.152-153.

Value Survey (WVS) data.[6] The sets of countries accumulated on the tiles of the joint distribution is similar to that we could see on Fig. 1a.

The hypothesis that the median voter supports redistribution is not unconditionally confirmed with microdata based analysis (Corneo and Gruner, 2002, Alesina and Giuliano, 2011, etc.). Kenworthy and McCall reformulated the hypothesis from the static version into a dynamic one, which would link together not levels of inequality, but rates of its growth. In other words, the increase in inequality (and not its level) can positively affect the pressure for redistribution. Having used data for the eight most developed countries, they do not find support for this hypothesis either. (Kenworthy and McCall, 2008).[7]

There are a few reasons (of economic as well as of ethical origin) why the expected direct link between actual income inequality and its perception may not hold.

The first one is that inequality in wealth (but not in incomes) can matter [Svejnar, 2013]. From this it follows that if reliable cross-country data on wealth inequality were available, we could see a stronger association with inequality perception. Another reason is that income inequality can have both market-driven and structural components that are perceived differently (Easterly, 2007). Under the "fair play" rules and equal opportunities inequality emerges as a joint outcome of the market competition and of the differences in productivity across individuals. The structural inequality is marked by unequal opportunities and by violation of fair play rules due to heavy use of status privileges or corrupt practices by some groups and/or barriers to others. Such selective privileges or barriers (even if they are formally legal) can be considered illegitimate by the society. Incomes/rents brought by illegitimate privileges are also viewed as illegitimate. Then the inequality as an aggregated outcome can be gauged through the prism of acting ethical (formal and informal) norms. As A.Sen points out, "People's attitudes towards, or reactions to, actual income distributions can be significantly influenced by the correspondence – or the lack thereof – between (1) their ideas of what is normatively tolerable, and (2) what they actually see in the society around them" (Sen, 2000, p.60). In other words, what matters is the relationship between widespread social practices and accepted ethical norms. Structural inequality generated by such practices reflects how institutions creating and supporting elite with the help of non-market mechanisms function (Easterly, 2007, p.756). Obviously, this type of structural inequality is hard to isolate and to measure but, if it exists, can have a strong effect on public perceptions of the emerging differentiation.

[6] See: http://stats.oecd.org and http://www.worldvaluessurvey.org, correspondingly.
[7] I.Denisova, using data for the post-socialist countries for 2010, records the direct association between support for redistribution and the level of actual inequality (Denisova 2014). Though we do not observe this association for the whole sample, it may exist within particular country clusters.

One of the most well-known ideas is that individuals in more dynamic society are more prone to tolerate inequality and, as a consequence, are less inclined to request redistribution. According to the Hirschman's "tunnel effect"[8], positive signals that the situation of others who are under comparable conditions are likely to change to the better give hope and reconcile with the current situation that seems hopeless at the first glance. If the expected improvement does not arrive for long time, then the violation of fair play (as deviation from the accepted ethical norms) can be blamed. This can feed into support for redistributive interventions.

Various interpretations of the "tunnel effect" that explain public perceptions of inequality through prospects of upward mobility are discussed in a number of theoretical and empirical studies (Alesina and La Ferrara, 2005; Ravallion and Lokshin, 2000; Piketty, 1995; Benabou and Ok). Their authors advance various arguments in support of the tunnel hypothesis.

Those who believe in the equality of opportunities are less inclined to support redistribution from rich to poor (Alesina and La Ferrara 2005). The poor can expect their incomes to rise; the rich may fear, on the contrary, that redistribution will negatively affect their well-being (Ravallion and Lokshin, 2000). Besides that, under conditions of income stability or loss, individuals may expect that the well-being of their children is likely to improve, especially if parents invest in their children's education. These sorts of inter-temporal expectations can heavily affect inequality-related attitudes (Piketty, 1995; Benabou and Ok, 2001).

Social mobility as a movement of individuals towards individual social and economic success can be achieved by use of different instruments, from mostly meritocratic to largely structural like status privileges and useful connections. Some scholars link perceptions of inequality to public beliefs concerning legitimacy and fairness of acquired well-being that underline inequality. If the well-being is earned by work and efforts, then the acquired wealth is considered legitimate and fair; this situation does not create pro-redistributive pressures (Alesina and Angeletos, 2003). However, if the main source of inequality is pure luck, or is predominantly structural based on gainful connections, high family status or bribes, the society may consider the emerging level of inequality unfair and will, therefore, demand more redistribution. As a result of such pressures, the tax rate can increase and be higher than it would be otherwise. I.Denisova reports similar findings using data on the post-socialist countries. This suggests that the way upward mobility channels function may affect inequality perceptions in the given society (Denisova, 2014). Note that what may matter here is not how individuals themselves achieve economic success, in fact, but how they perceive the success of others.

[8] Hirschman lays out this proposition in the following way: ''Suppose that I drive through a two-lane tunnel, both lanes going in the same direction, and run into a serious traffic jam. No car moves in either lane as far as I can see (which is not very far). I am in the left lane and feel dejected. After a while the cars in the right lane begin to move. Naturally my spirits lift considerably, for I know the jam has been broken and that my lane's turn to move will surely come at any moment now. Even though I still sit still, I feel much better off than before because of the expectation that I shall soon be on the move'' (Hirschman, 1973, p. 545).

Most of the empirical studies mentioned earlier concern one selected country, but our study looks across countries and uses different data sets.

3. Data and Variables

Our main data source is the ISSP module on "Social Inequality". This module was exploited in 1999 (henceforth we refer to it as ISSP-1999) and in 2009 (ISSP-2009). We also use data from the Life in Transition Survey conducted in 2010 (LiTS-2010) in which similar questions were also asked. Below we provide more information on these surveys. Since ISSP-2009 is our baseline data source, we discuss it first and in more details. Table 1 (see Appendix) presents main variables.

ISSP-2009. The total sample included 55238 individual observations in 40 countries.[9] From the further analysis a few countries (Philippines, South Africa, China and Venezuela) are dropped.[10] We also limit respondents' age at 75. With this censoring our sample contains 43899 observations.

Countries polled in the framework of the ISSP program are institutionally different. There is a group of Anglo-Saxon countries with liberal market regimes (US, UK, Australia and New Zealand), countries from continental Europe with a higher degree of coordination (e.g., Austria, Germany, France, Belgium), middle income Latin American countries (Argentina and Chile), the most developed East Asian countries (Japan, South Korea, Taiwan), and the heterogeneous group of post-socialist countries. They differ by design and properties of major institutions as well as by the level of economic development (for example, per capita GDP by PPP varied from $ 7,000 in the Ukraine to $ 58,800 in Norway[11]). The Gini coefficient that measures the actual income inequality varied from 0.25 in Denmark to 0.52 in Chile[12]).

The ISSP questionnaire contains a large set of individual variables including gender, age, and education level, marital status, having children, labor market status, and urban or rural residence.

Family income has a potentially strong impact on the perception of inequality. Incomes of respondents from different countries are hard to compare directly due to different currencies (outside the Euro area), different price levels and costs of living. Besides that, some country questionnaires used ordinal scales which make point estimates problematic. In search of a compromise solution, we divided all respondents within each country by quintiles, where the 1st

[9] http://www.issp.org/documents/issp2009.pdf
[10] However, their inclusion does not change the results
[11] World Development Indicators: http://data worldbank.org/indicator/NY.GDP.PCAP.CD
[12] Human Development Report 2010, p.152-153

quintile relates to the lowest family income.[13] All these variables were then included in the analysis.

Attitude to inequality and redistribution in this module is measured with the help of two statements. The first is: *"Differences in income in <Rs country> are too large"*, the second - *"It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes"*. If the first statement gauges whether actual differences are acceptable or not, the second one measures perceptions of what the government should do given the actual differences. The responses vary from "Strongly agree" to "Strongly disagree" on the 5-score ordinal scale. The correlation between these two statements is 0.48 ($p<0,000$), which makes them largely interchangeable.

One of the key variables in our study relates to *social mobility.* This term refers to the reallocation of individuals and groups across different socio-economic positions. Vertical mobility means movement up or down the socio-economic scale (A.Giddens). In order to measure mobility, we need to know both the initial and the final positions of individuals, or the change in socio-economic position over particular period of time. We apply both approaches.

First, we use two questions that fix the social positions of respondents and their parents. The first is: *"In our society there are groups which tend to be towards the top and groups which tend to be towards the bottom. Below is a scale that runs from top to bottom. Where would you put yourself now on this scale?"* The second is: *"And if you think about the family that you grew up in, where did they fit in then?*" Both questions have a 10-score scale where 10 means the highest position aand 1 – the lowest. The difference between the answers to these questions (mob_1) measures the change in the socio-economic position of a respondent to her parents. The positive value of mob_1 signals upward mobility; if it is negative, the mobility has been downward. The scale of mobility varies from -9 to +9. It is larger when a respondent who grew up in a low status family currently occupies a top level position, or vice-versa.

Second, respondents are asked to answer directly whether their occupational status has changed compared with their father's status (mob_2). They are asked: *"Please think about your present job (or your last one if you don't have one now). If you compare this job to the job your father had when you were <14/15/16>, would you say that the level of status of your job is (or was)… (Please tick one box)"*. This question uses the 5 grade scale from "…much higher than the father had" to "…much lower…"

Unfortunately, both mobility measures we can construct are not immune to endogeneity problems. If there are unobserved factors that simultaneously affect mobility as well as

[13]This way of constructing income variables reduces the sample by one fifth. However, the probit analyzed suggests that the loss of answers to the income question is not associated with major demographic characteristics including education. This allows us to believe that there is no response bias due to non-random selection.

inequality perception, our regression estimates can be biased. If we are to assume that more able individuals are more successful economically and are more tolerant of inequality, the bias will be positive. The same relates to the parents' status with which we compare the respondents in constructing measure mob_1. But since our measure uses the differences in status, these unobservable individual effects may partially offset each other. Assuming that unobserved abilities are translated from parents to children, we reduce the endogeneity problem.

Mobility instruments. Achieving economic success by available means that are considered fair by the society legitimates actual inequality (Alesina and Angeletos, 2005). The ISSP module provides a few questions exploring which of the instruments leading to upward mobility and higher well-being respondents consider the most important in their country (*"Please tick one box for each of these to show how important you think it is for getting ahead in life…*). The menu of available answers includes the following: "coming from a wealthy family", "having well-educated parents", "having a good education for himself", "having ambition", "hard work", "knowing the right people", "having political connections" and "giving bribes". All questions from this set utilize a 5-score ordinal scale starting from "Absolutely essential" to "Not important at all". The tentative answers do not contain explicit ethical appraisals but allow public perceptions of what channels dominate in respected countries to be revealed. We can classify upward mobility instruments as meritocratic (hard work, good education), status-based (rich family, well-educated parents, useful connections) or corruptive (giving bribes).

Prospects for upward mobility depend, among other factors, on the composition of the society. If the middle class is small in size relative to the lower classes, then access into the former from the latter is limited. Rationing and queuing to better socio-economic positions are likely to be associated with the use of various non-meritocratic mechanisms (like status of parents, useful connections and/or various corruptive practices). A large middle class (measured as its fraction in the total population) means there are more open middle class positions, thus increasing the chances for taking them from below. A society where the middle class dominates makes the social structure diamond-like, but if the lower class dominates, the structure is pyramid-like.

In the survey that we exploit, each respondent answered the question based on how she sees the social structure in the country she lives in. An associated question concerned what type of social structure was considered preferable. In both cases, the offered menu set included five diagrams, where each represented a particular structural shape of the society, with different proportions between the low and middle classes. We aggregated them into two larger types. The first one includes three diagrams where low strata dominate, the second contains two with large middle classes. We call them the pyramid-like (PT) and diamond-like (DT) types. Our

expectation is that the DT structure is associated in the public mind with less inequality and better prospects for upward mobility. On the contrary, the PT structure, with a large basement part (and narrowing upward), is associated with larger inequality and limited upward mobility prospects (due to limited positions in the middle strata).

Given what is said above, we interpret the questions concerning the shape of social structure in the following way. First, we expect that the diamond-like shape is likely to be associated with higher tolerance to inequality and lower propensity to redistribution. Second, the discrepancy between the ideal and the reality is likely to strengthen attitudes towards more redistribution. This forms our expectations concerning regression coefficients.

ISSP-1999. In 1999, 26 countries participated in the ISSP (but not all of them participated in the 2009 survey). Most questions from this module were replicated later in the 2009 questionnaire, including our main statement on inequality perception (*"Differences in income in <Rs country> are too large"*).

In 1999, the social mobility variable assumed that the respondent compared her current social position with that of 10 years earlier (in 1989). This formulation can work for individuals in the prime age and older but is not applicable to those who 10 years earlier were under the working age and not in employment. The question is: *"In our society there are groups which tend to be towards the top and groups which tend to be towards the bottom. Below is a scale that runs from top to bottom. Where would you put yourself on this scale?"* It has a 10-score scale where 1 goes for the "top" positions and 10 is for the "bottom". The respondent marks her positions on this scale twice: for 1999 and for 1989. The difference (mob_3) shows what social distance was traveled over 10 years. A positive value means that the mobility was upward, while a negative value means downward mobility.

LiTS-2010. This survey covers 35 countries, including all post-socialist transition economies, Turkey and five developed European countries (UK, Germany, Italy, France and Sweden). The latter may serve as a benchmark in cross-country comparisons.[14]

Perception of inequality in LiTS is measured with the question *"To what extent do you agree with the statement that the gap between the rich and the poor in our country should be reduced?"* The 5-score scale goes from 1 ("absolutely disagree") to 5 ("absolutely agree"). As social mobility variables we use two questions. First, this is the attitude to the statement that *"My household lives better nowadays than around 4 years ago"* that is measured by the same 5-score scale (mob_4). Second, the respondent is asked to compare their current income with that of 4 years earlier. Income levels are measured with the following questions: a) *"Please imagine a ten-step ladder where on the bottom, the first step, stand the poorest 10% of people in our*

[14] For LiTS see: http://www.ebrd.com/pages/research/publications/special/transitionII.shtm

country, and on the highest step, the tenth, stand the richest 10% of people in our country. On which step of the ten is your household today?" and b) "Now, imagine the same ten-step ladder 4 years ago. On which step was your household at that time?" The over-time difference varies from -9 to +9 (mob_5).

The exact wording of all questions used to measure the perception of inequality, size and instruments of social mobility are presented in Tab.1.

In our empirical part we estimate the model:

$$Y^* = \beta X + \varepsilon,$$

where Y* – continuous latent variable measuring public perception of income inequality, observed individual characteristics make the vector X, and ε – is residual term (assuming that it is normally distributed).

In our surveys we do not observe Y* but dispose data on discrete values of Y. Correspondingly, we have to estimate coefficients β, that fit the model. Variable Y* can be presented as the set of censured and ordered values:

$$y = \begin{cases} 1, y^* \le c_1 \\ 2, c_1 < y^* \le c_2 \\ 3, c_2 < y^* \le c_3 \\ \dots \\ q, y^* > c_{q-1} \end{cases}$$

In our case q=5. Since Y is not a continuous variable, we estimate the ordered probit model using maximum likelihood.

4. Perceptions of Inequality: Effect of Socio-demographic Characteristics and Income

Fig.2 ranks all countries participating in ISSP-2009 by the fraction of those who absolutely agree that in their countries "income differences are too large". In Nordic countries (where actual inequality is low) and in Anglo-Saxon countries (where it is sufficiently high) the proportion of those who share this perception is under 30% of all respondents. On the contrary, in most of the post-socialist and South European countries this proportion is close to 60%, or even higher. France is of special interest here, since the actual level of inequality is modest, but almost 70% of respondents believe that it is too high. Ranking of countries by responses to the question "what should be the reaction of the government to the actual level of inequality?" (% of those who strongly agree that *"It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes"*) is similar to Fig.2, though not identical.

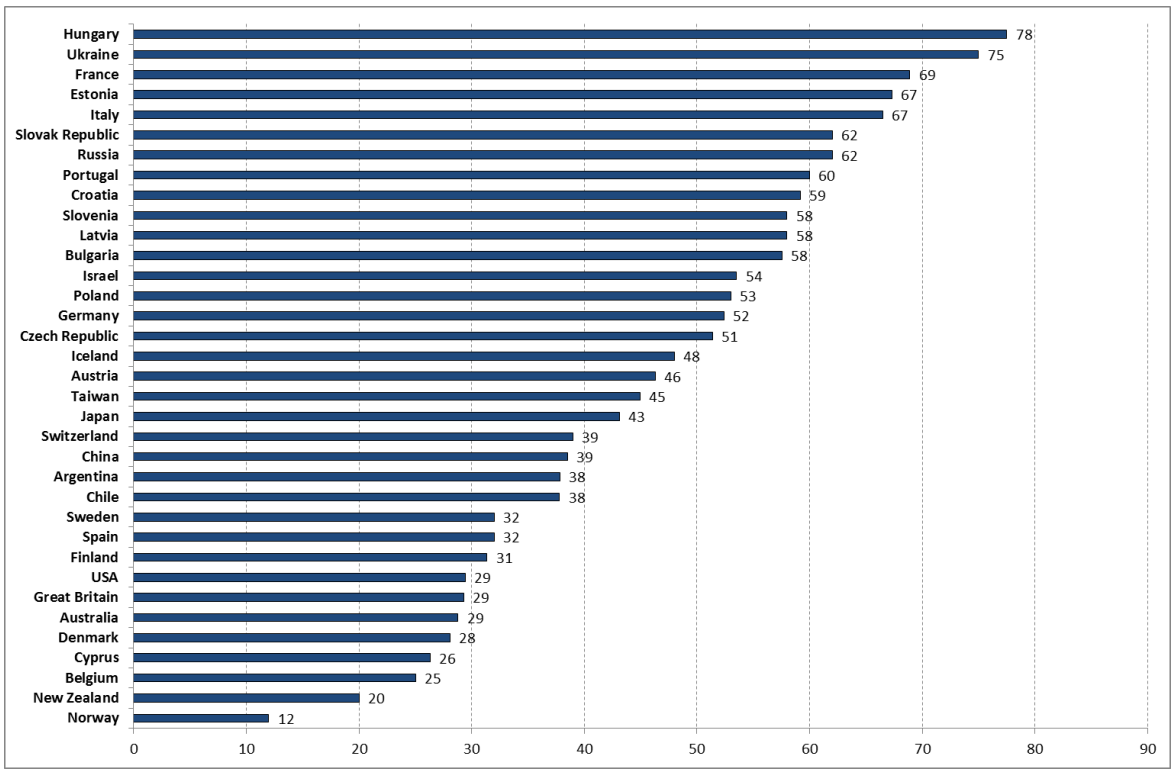

Fig.2. Proportion of those who strongly agree that "differences in income are too large", ISSP-2009, %

The country proportions presented in Fig.2 do not account for the fact that countries differ in composition of population. Men, younger people, the better-educated and those living in cities are more tolerant to inequality than women, older people, the less- educated and rural residents. This tendency is universal.

In order to control for observed heterogeneity in population, we estimate the ordered probit:

$$Y = \beta X + \gamma D + \varepsilon \qquad (1),$$

where Y – perception of inequality, X – individual characteristics, D – country dummies, and ε – iid residual term. We are interested here in coefficients β and γ. Standard errors are estimated (here and later on) as robust and accounting for intra country clustering of observations.

Men, younger age group (up to 25), having tertiary education, urban residents, employed or inactive are more tolerant of inequality than those in alternative categories, all other things being equal. Higher household income (when household size is controlled) acts in the same direction. Similar effects are standard for all studies on that issue.

Replacement of the dependent variable *"income differences are too large"* by the more normative *"It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes"* does not change the outcome. Further we

include in our regressions variables that reflect intensity and instruments of social mobility. We believe they link the perception of inequality with the idea of the "tunnel effect".

5. How the "Tunnel" Works: Mobility Effect

The "tunnel effect" assumes that credible signals about recent or upcoming positive changes help to reconcile rational agents with the current reality that may be not always fully enjoyable in itself. In other words, the recent (or expected) experience of upward mobility may help individuals tolerate the actual inequality. Those who have moved up or are expecting such lifts are more likely to accept income differentiation (other things being equal), while those who have lost (or are expecting a loss in) status or income tend to believe that actual income differences are too large and, therefore, incomes should be redistributed from rich to poor.

Fig. 3 presents the distribution of respondents by three mobility measures (all using similar scales). We can note that the positions of 37-42% respondents (depending on the survey used) have not changed at all. ISSP-2009 shows the highest mobility rate (of these three surveys), then comes ISSP-1999, while the LiTS estimates are the most modest. The results can depend on the country set covered in the particular survey, as well as on the timing of the survey and the exploited mobility measure. The question where the respondent compares her occupational status to that of her father (this is mob_2 in ISSP-2009) gives the largest upward shift, though 20% recognize relative decline even in this case.

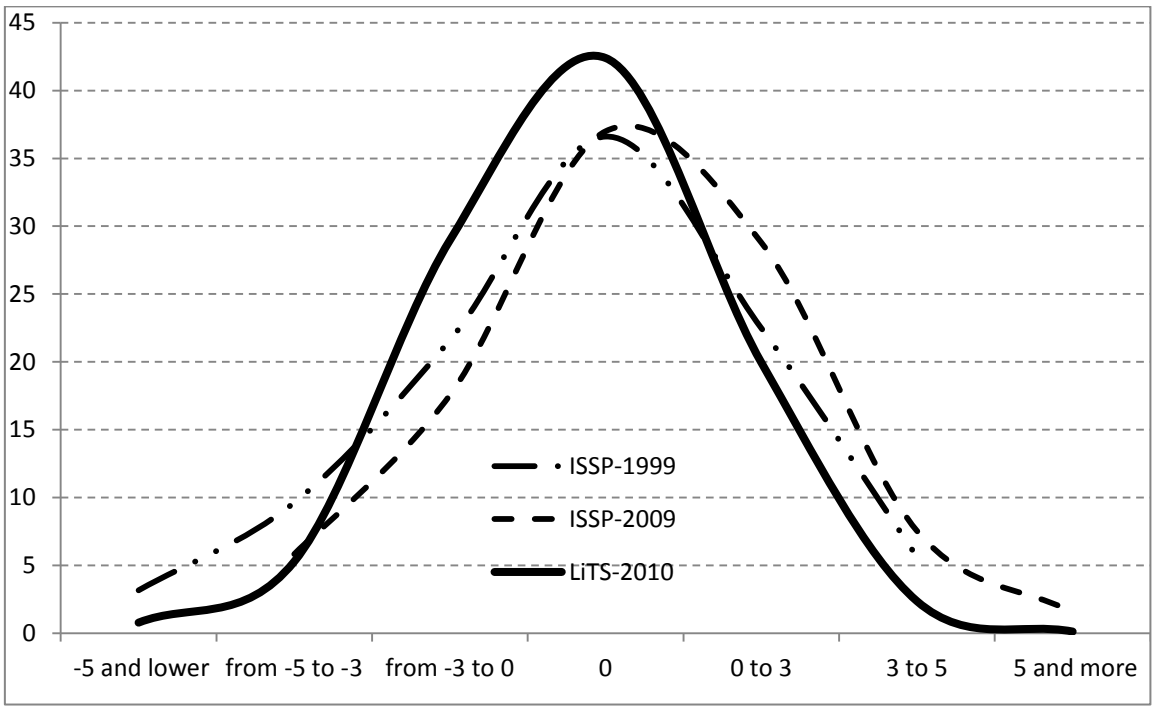

Fig 3. Distribution of respondents by mobility measures (Mob_1, Mob_3, Mob_5)*

*Note: mobility definitions and measures are presented in Tab. 1.

As the next step, we regress inequality perceptions on (various) mobility measures. This brings us to eq (2):

$$Y = \beta X + \nu MOB + \gamma D + \varepsilon \qquad (2),$$

where MOB is mobility measure, and D is country fixed effect. We are interested in coefficients ν.

Estimates based on ISSP-2009 data are presented in columns 3-6 of Tab 3. As we could expect, more upward mobility is associated with more tolerance to inequality ($\nu<0$, $p<0.01$), while all other coefficients change little, which means that this association appears robust to adding other controls. The table presents estimations with two versions of our mobility measures (mob_1 in col 3 and 4 and mob_2 in col 5 and 6). The signs are as expected, though the statistical significance in the second case is lower. This can be caused by the sample reduction due to missing values in the question that mob_2 is based on.

How robust are these findings and are they confirmed if alternative data sources are used? In Tab 4, we present estimates of eq (2) using ISSP-1999 and LiTS-2010 for three specifications. Remember, these surveys cover different country sets and use alternative questions measuring inequality and mobility. This neutralizes the possible effects that might be caused by country biases in samples and checks our results for robustness.

It is easy to note that the coefficients for controls in all specifications are quite close to those we get in regressions based on ISSP-2009 and that they stay stable if additional variables are added. The mobility measures are statistically significant (in 2 cases at 1% level and in one case at 10%). The coefficients for mobility are also close to those based on ISSP-2009 data. This adds confidence that this is not just a statistical artifact driven by nonrandom sample of countries or by idiosyncratic design of key variables but a real behavioral phenomenon.

However, even upward mobility may cause negative emotions and induce disappointment. First, an individual can consider it not sufficient and believe that she deserves more than that in her life. Second, mobility that is large enough in absolute terms can be considered small relative to the reference group. Various emotions can affect this perception, including simple envy, moral condemnation of the methods which led other more successful individuals to their success (like using political or family connections, simple luck, bribes, etc.). In both cases, individuals who are unhappy with the promotions they have achieved can find reasons why such promotions are insufficient in structural factors unconnected with individual efforts. As a result, they do not consider such mobility just or fair. Especially strong moral rejection can be caused by the "success" of others if it is perceived as being associated with corruption.

This brings us back to the question of whether any success is perceived as legitimate and whether all means that may be leading upward are justifiable. As Alesina and Angeletos point out, "The poor are always likely to demand redistributive policies, but have a much stronger moral justification for doing so when inequality stems from corruption and rent seeking" (Alesina and Angeletos, 2005b, p.1227-1228).

On the other hand, a temporary lack of upward mobility ("getting stuck in a traffic jam") may have little if any negative impact on perceptions if there are signals (others like us are moving up) that "our tunnel lane" is going to start moving. This signal becomes stronger if the ways leading upward are perceived as legitimate, fair and fit into commonly accepted moral norms.

We add consequently to the basic regression additional variables that reflect the most widespread (as seen by respondents in different countries) ways leading to success in life. Our augmented equation is the following:

$$Y = \beta X + \nu MOB + \mu INST + \gamma D + \varepsilon \qquad (3),$$

where INST is for ways leading to success ("keys" to the upward mobility). As we have already noted (in the data section), the ISSP-2009 questionnaire offers 8 instruments of this sort. They include meritocratic (hard work and having a good education) as well as structural or status based (rich family, well-educated parents, having useful connections) and even direct corruption and bribes. We add to this set the response to the more radical statement that "To get all the way to the top in <country> today, you have to be corrupt". The ISSP-1999 questionnaire uses the reduced (to five instruments) set of responses, but their interpretation is similar.

Our expectation is that if respondents recognize that in order to get ahead in life in their country one has to work hard, they are more likely to perceive inequality as legitimate. As a result, they tend to tolerate it and are less likely to support redistributive policies. On the contrary, the dominant opinion about prevailing structural reasons and barriers to getting ahead reflects the fact that "if you are honest you cannot succeed in life". Accordingly, the success of those who have become rich is perceived as undeserved, unfair and dishonest. Therefore, it is to be corrected (at least partially) by redistribution in favor of the poor. This motivates support for redistributive policies.

Unfortunately, we do not know how (using what instruments/ways) our respondents have achieved their personal promotion (and if not, then why). Assume that someone has worked hard and has achieved a good socio-economic position. In this case, she can mark meritocratic and socially approved ways/instruments (like hard work) as helping her to move upward. However, if anyone else (around this person) has achieved a higher position but by using connections or bribes, the respondent answering the question may chose non-meritocratic instruments as

dominating in her reference group. The same uncertainty can arise with other combinations of mobility and its instruments. As a result, the coefficients can have any (positive as well as negative) sign. Nevertheless, we expect that if respondents consider corruption as a major vertical lift in their country, they are less likely to tolerate inequality. This case is associated with sclerosis and necrosis of the most important social institutions, and coefficients in the specification (3) are expected to be positive and statistically significant.

Estimates based on ISSP-2009 are shown in Tab3 in the Supplement. The main conclusion from them is that the widespread use of any non-meritocratic mobility channels leads ultimately to stronger support for redistributive policies. This is especially true in relation to such drivers of success as "rich family", "useful connections", "political ties" and "corruption" (the coefficients are from 0.07 to 0.18). Then individual work efforts play a minor role being ousted by "more efficient" non-meritocratic means. Recognition of "hard work" as the leading way to socio-economic success increases tolerance to inequality, though the corresponding coefficient is insignificant. Therefore, morally condemned instruments have significant effects, while morally approved ones do not.

In Tab. 6 we check the effects of the instruments using ISSP-1999 data. "Hard work" and "good skills" increase tolerance to inequality (the coefficients are negative and significant), while status based instruments or corruption increase intolerance. These results support those that have been presented earlier, but provide stronger effects for meritocratic instruments.

6. Middle Class Effect: "Diamond" versus "Pyramid"

The alternative way to explore the association between mobility and the perception of inequality uses questions on how respondents see their societies and what kind of society seems closer to what they consider ideal. As we have already said, we have one variable that explores the actual shape of society where respondents live (as seen by the respondents themselves) and another one that looks at how the society should ideally look (according to respondents). We assume that the society with a large middle class can be presented as diamond-shaped (having the wide middle part with narrower both base and top). A large middle class is likely to be more open for entry from below as it provides better opportunities (more room) to move upward than a pyramid-shaped society. The combination of a narrow middle and a wide base in the pyramid-like shape can create bottlenecks effects for those who want move upward from below. This bottleneck restricts and rations potential promotions. Social status of family, useful connections, bribing officials etc. can emerge as intuitively obvious explanatory options for those unlucky people who make up the majority of the population. Thus, seeing the society that we live in as diamond-shaped is likely to make us more tolerant to the social groups above us and to

strengthen our tolerance to inequality. The interaction between what we have and what we wish we had shows how the reality relates to the ideal.

We estimate the following equations:

$$Y = \beta X + \nu MOB + \lambda_1 IT + \lambda_2 AT + \gamma D + \varepsilon \quad (4)$$

$$Y = \beta X + \nu MOB + \lambda_1 IT + \lambda_2 AT + \lambda_3 AT*IT + \gamma D + \varepsilon \quad (5)$$

Variables IT and AT are dummies, correspondingly, for the ideal and actual shapes of the society. Their interaction in (5) captures the simultaneous presence of the diamond-like shape in the answers to both questions.

If a respondent believes that the society she lives in is diamond- shaped she is more likely to tolerate inequality (the coefficient for AT is expected to be negative). If, for all that, the ideal society (IT) is similar to the actual (the interaction IT*AT=1), it amplifies the tolerating effect. In the opposite case (when fact and ideal are contrasting), the coefficients are expected to be positive and significant.

Our expectations have empirical support. Tab 7 presents estimates based on ISSP-2009. The actual diamond-like shape is associated with stronger tolerance (coefficient is -0.31). The ideal diamond shape works in the opposite direction (col 3 and 4 in Tab. 7): the coefficients are significant and positive (0.11-0.12). The interaction between what we have (as the structural shape of the society) and what we would wish for is analyzed by the specification (5) presented in columns 5 and 6. The effect is quite strong (the coefficients are -0.33-0.35). In other words, any diversion from the combination pyramid-pyramid erodes tolerance and gives more support to redistributive attitudes.

Estimates of the middle class effects based on ISSP-1999 (Tab. 8) confirm the findings presented above.

7. Cross-Country Differences and Actual Inequality

As have already been noted, there are large cross-country differences in the perception of inequality. Almost 80% of Hungarians absolutely agree that "income differences (in our country) are too large", but only 12% of Norwegians. The sample mean is about 47%. A large disparity in responses persists if the country averages are composed of major demographic groups.

We divided all 36 countries included in the ISSP-2009 sample into 8 relatively homogeneous country types. These are: 1) liberal (Australia, UK, USA, and New Zealand); 2) corporatist or West European continental (Austria, Belgium, Germany, France, and Switzerland); 3) Scandinavian (Denmark, Iceland, Norway, Sweden and Finland); 4) Mediterranean (Italy, Spain, Portugal, Cyprus, Israel and Turkey); 5) East Asian (Taiwan, South Korea, and Japan); 6)

Latin American (Argentina and Chile); 7) East European post-socialist (Bulgaria, Hungary, Poland, Slovakia, Slovenia, Croatia, the Czech Republic and Estonia) and 8) post-Soviet (Russia and Ukraine). This typology accounts for the institutional and historical proximity of the countries surveyed. It coincides partially but is more disaggregated than those of the variety of capitalism (P.Hall and D.Soskice, 2001) or the legal origin (La Porta et al, 1999).

Our typology captures inter-type differences in relation to the inequality perception as well as to vertical mobility (mob_1). This can be seen in Fig. 4 which plots one against the other.

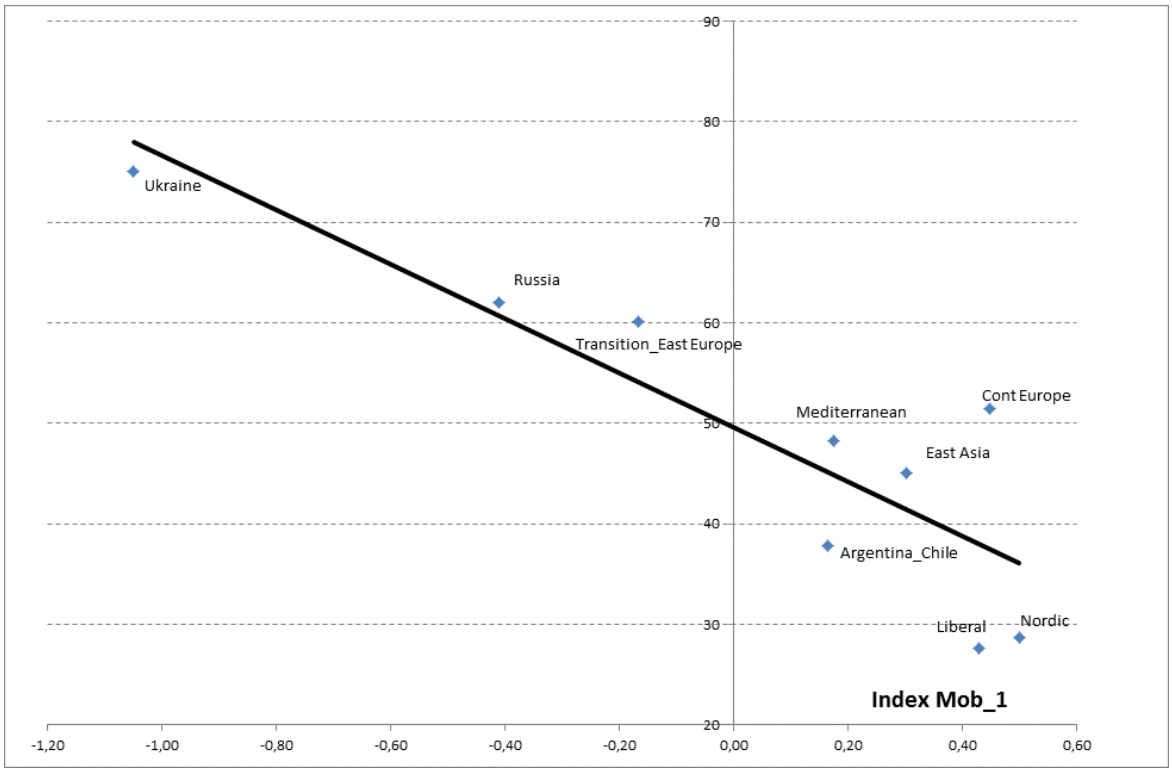

Fig.4. Mobility and perception by groups of countries

The plot shows the negative association (the line goes from NW to SE): the higher the mobility index, the lower the proportion of those supporting redistribution. Russia and Ukraine are leaders on the both the low mobile and pro-redistributive poles of the axis, while the Scandinavian and European corporatist countries lead in both mobility and inequality tolerance. The group of post-socialist European countries is located somewhere in the middle, while the Mediterranean countries are one step closer to the SE quadrant.

Pooling all countries together, we implicitly assume that individual variables affect the inequality perception in all countries identically, and only country fixed-effects differ. This can be a strong assumption. It is more likely that cross-country differences are generated by differences in the effects of individual characteristics within countries as well as by the differences in composition of population.

We estimate the eq (2) for each country type. Tab.9 illustrates significant cross-type variation in coefficients for almost all controls.

Men are less prone to support redistribution in the Scandinavian and European continental countries as well as in the liberal economies. In countries that belong to other types the gender effect is insignificant, but in Russia and Ukraine it also has the opposite sign. Tertiary education makes its holders more tolerant in the Scandinavian countries, continental Western European countries and the transition countries of Eastern Europe. However, its impact is significant and positive in Russia and Ukraine and insignificant elsewhere. Over age the tolerance weakens, but this effect is statistically insignificant in the Mediterranean, East Asian and Latin American countries. Labor market status has no effect and the income level affects as expected. The latter emerges across country types in different quintiles and remains insignificant in Latin America. In general, we can note that in three country types (Mediterranean, Latin American and East Asian) the impact of demographic characteristics on the perception of inequality is relatively mild. Meanwhile, a significant tolerating effect of upward social mobility is reproduced everywhere with similar impacts. This is an additional test that our findings concerning mobility are robust.

Our analysis in the previous Sections was based on individual data and we controlled for the income quintile the respondent belonged to in her country. However, we could not control for actual inequality in the country, though it (along with other country-specific properties) was partially captured by country fixed-effects. In order to explore the association between the perception of inequality and social mobility, controlling for actual inequality, we estimate eq (6) using aggregate country level data. This brings us to the eq (6).

$$Ineq = \beta * Gini + \delta * MOB + \sum_{i=1}^{7} \mu_i * CT_i + \varepsilon \qquad (6),$$

where the dependent variable *Ineq* is the fraction of those who "absolutely agree" that "Differences in income in <Rs country> are too large", *Gini* – Gini coefficient, *MOB* – the mobility measure (mob_1) aggregated at the country level, and CT_i goes for country type (i=1,…,7). We expect that δ<0 can be interpreted as the evidence of the inverse relationship between social mobility and propensity to redistribute and $\beta=0$ means that the actual inequality has no impact on its subjective perception. We also estimate two specifications of eq (6) without controlling for country type but control for per capita GDP (lnGDPcap) in one of these specifications.

The results of the estimation of (6) are presented in columns 1-3 of Tab 10 (see Supplement), while our baseline specification is shown in col. 3. The main conclusion from this part of the table is that as upward social mobility intensifies, individuals become more tolerant to the inequality, other things being equal. One point increase in mobility decreases the fraction of

those who believe that "income differences are too large" by almost 11 pp. This effect is significant at a 10% level. As to actual inequality, its effect is statistically insignificant. All countries, if compared to Russia and Ukraine, are more tolerant. The highest relative level of tolerance to inequality is typical for the liberal economies, Scandinavians and Latin Americans.

Columns 1 and 2 present estimates from the modified specifications of eq (6). In the specification presented in col. 1 only Gini is controlled, in the col. 2 log of per capita GDP accounting for the economic development is added. In all specifications the effect of mobility is negative and significant while the effect of Gini remains negligent.

This set of estimates confirms our hypothesis that under intensive social mobility inequality as a social problem is perceived less acutely. Nevertheless, other factors (like the biased set of sampled countries participating in ISSP, measurement design, etc.) can affect estimates. If we expect that the association between social mobility and perception of inequality is a general behavioral phenomenon, it should be reproduced regardless of the specific features of a particular survey. Therefore, we estimate eq (6) further using ISSP-1999 and LiTS-2010 data. The results are presented in col 4-6 and 7-9 in Tab. 10. In all specifications that we estimated the coefficient for the social mobility variable gets expected sign and conventional significance level.

As an additional test, we add the variable for control of corruption.[15] This variable correlates strongly with the mobility measures we are using. More corruption is associated with lower social mobility and this corresponds well with the role various instruments leading to success can play (see Section 5). We replace mobility measure in various specifications of (6) by the control of corruption variable (but still controlling for actual inequality). The main finding stays robust: the population in more corrupted countries is less prone to tolerate the given inequality level.

The reproduction of findings in multiple specifications and various data sets strengthens our confidence that we are dealing with a real behavioral phenomenon and not with an occasional statistical artifact. The important dimension of this phenomenon is that blocking or destroying legitimate escalators of social promotion strengthens distrust in those who ultimately emerge on the upper stairs of the socioeconomic scale. Among the implications of this distrust is the further support for redistributive policy as a way to recover "destroyed fairness". On the contrary, smooth and honest (with open access to) operation of the upward moving social lift

[15] As a measure for quality of governance and institutional environment we use the Control of Corruption (CC) variable from the World Governance Indicators (WGI). This measure is discussed in detail in (Kaufmann et al, 2010) and captures "perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests". Its values are in the range from -2.5 to +2.5. See: http://info.worldbank.org/governance/wgi/

opens equal opportunities to all, and partially eases tensions that may arise due to the fact that some individuals manage to achieve more than others.

8. Conclusions

In this paper we address the question of what makes income inequality a hotter social issue. If people in a country perceive the given level of income inequality as too high and unacceptable, they may support various redistribution policies. Our main finding is that the public attitude towards inequality depends little on the actual level of inequality. What is more important is whether the society provides enough opportunities for all to achieve more in socio-economic terms and move up the socio-economic ladder. What also matters is whether this mobility is driven by instruments that are widely considered fair and legitimate (meritocratic but not structural).

Previous studies looking at inequality perceptions offered a wide menu of answers. Among these were the impact of low incomes, the left-wing ideology, shocks experienced during impressionable years, fairness in distribution, and others. In this study, we followed the research line that was opened by Hirschman's idea of the "tunnel effect" and then received theoretical and empirical confirmation in a number of influential studies (Ravallion, Lokshin; Alesina and La Ferrara; Piketty; Benabou and Ok). Most of them are either theoretical, or based on one country's empirical research..

One of the specific features of our study is that it uses three large cross-national empirical surveys (ISSP-1999, ISSP-2009, and LiTS-2010) which contain questions concerning inequality perceptions as well as personal experiences of social mobility. Estimating various specifications of the equation that links the inequality perception to social mobility measures, we conclude that the "tunnel effect" takes place. However, the "tunnel effect" signals not just upward movements along the socio-economic ladder, but also the fact that those moving up deserve to, and achieve their success fairly.

In the final section of the paper we exploit estimates based on cross-country regressions. In this set of exercises, we use different data sets and country samples and control for the actual Gini, per capita GDP, and major institutional properties. Again, mobility emerges as an important predictor of inequality perception.

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Appendix

Table 1. Main Variables

	ISSP-1999	ISSP-2009	LiTS-2010
Perception of Inequality	*"Differences in income in <Rs country> are too large"*, 5-score scale, 5 = "absolutely agree"	1. *"Differences in income in <Rs country> are too large"*, 5-score scale, 5 = "absolutely agree" 2. *"It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes"* 5-score scale, 5 = "absolutely agree"	*"The gap between the rich and the poor in our country should be reduced",* 5-score scale, 5 = "absolutely agree"
Social Mobility	"*In our society there are groups which tend to be towards the top and groups which tend to be towards the bottom. Below is a scale that runs from top to bottom. Where would you put yourself now on this scale?"*. 10-score scale, 10= highest position. Comparison with the position occupied by the respondent 10 years earlier. The respondent provides her position at the time of interview (in 1999) and that she occupied in 1989. The difference (from -9 to +9) indicates the social distance that was passed over last 10 years.	A. *"In our society there are groups which tend to be towards the top and groups which tend to be towards the bottom. Below is a scale that runs from top to bottom. Where would you put yourself now on this scale?"* B. *"And if you think about the family that you grew up in, where did they fit in then?"* 10-score scale, 10= highest position. The difference (from -9 to +9) indicates the social distance in positions occupied by the respondent and her parents.	1. *"My household lives better nowadays than around 4 years ago"* 5-score scale, 5="absolutely agree" 2. *"Please, imagine a ten-step ladder where on the bottom, the first step, stand the poorest 10% of people in our country, and on the highest step, the tenth, stand the richest 10% of people in our country. On which step of the ten is your household today and on which was it 4 years ago?"* The current income decile is compared to that was 4 years earlier. The difference in the responses (from -9 to +9) shows the perception of the respondent how her income changed.
Instruments of Mobility/"Ways to Success"	1. *"How important you think it is for getting ahead in life…"* 1.1. coming from a wealthy family	*"How important you think it is for getting ahead in life …"* - coming from a wealthy family	

	1.2. knowing the right people 5-score scale, 5="Essential", 1= "Not important at all". 2. "*Do you agree or disagree in [COUNTRY] people get rewarded for their effort"* 5-score scale, 5 = "absolutely agree". 3. *Do you agree or disagree in [COUNTRY] people get rewarded for their intelligence and skills?* 5-score scale, 5 = "absolutely agree". 4. *To get all the way to the top in [COUNTRY] today, you have to be corrupt* 5-score scale, 5 = "absolutely agree"	-having well-educated parents - having a good education yourself - having ambition - hard work - knowing the right people - having political connections - giving bribes. 5-score scale, 5="Essential", 1= "Not important at all".

Table 2. Proportions (%) of absolutely agreed and agreed that "differences in income in <Rs country> are too large", ISSP-2009

	Gender		Age				Tertiary education		Type of community		Married		Labor force status			Pension		Income quintile	
	male	female	15-25	26-40	41-60	60+	yes	no	urban	rural	yes	no	employed	unempl	inactive	yes	no	1	5
Argentina	38	38	23	44	39	37	41	37	39	36	43	34	40	40	34	37	38	35	38
Australia	26	31	18	26	29	33	28	31	25	34	26	29	26	33	32	32	27	40	14
Austria	46	46	39	42	49	54	36	48	45	47	50	47	46	43	48	58	45	60	49
Belgium	24	27	20	21	27	25	15	29	24	25	25	24	24	36	26	29	23	25	18
Bulgaria	59	56	48	54	63	56	56	60	54	61	60	52	57	67	56	56	57	57	50
Chile	36	39	41	40	40	31	42	36	37	38	37	40	40	39	35	38	38	35	37
Taiwan	44	46	42	49	44	41	46	44	48	41	44	46	45	45	44	44	45	39	44
Japan	41	45	36	39	45	46	36	48	37	45	44	41	40	50	46	51	42	50	34
Croatia	59	59	51	60	62	60	65	58	59	59	63	55	62	59	56	60	59	58	57
Cyprus	27	26	26	26	28	25	25	27	28	24	27	26	27	5	27	28	26	24	27
Czech Republic	47	55	40	49	57	53	41	53	48	54	56	50	49	66	52	60	50	64	51
Denmark	22	34	17	22	27	36	23	34	26	30	26	28	23	21	36	43	23	38	13
Estonia	63	69	47	55	72	78	66	68	63	72	67	63	67	62	69	75	62	72	53
Finland	29	33	13	28	31	43	22	41	25	37	33	26	29	39	34	43	27	36	15
France	67	70	69	64	69	73	62	73	65	70	70	68	68	73	70	73	68	72	50
Germany	52	53	39	47	54	58	36	56	46	55	53	49	49	67	55	59	49	59	35
Hungary	78	77	74	77	80	75	72	79	78	77	78	77	78	79	76	78	78	82	74
Iceland	43	52	31	45	54	52	40	53	47	48	48	47	49	29	48	59	46	53	38
Israel	52	55	47	48	62	56	51	55	65	58	55	51	54	60	51	58	53	54	48
Italy	67	66	57	66	69	64	62	68	65	67	68	64	66	68	67	71	65	68	49
S.Korea	41	45	36	39	45	46	36	48	44	45	50	41	40	50	47	56	46	55	38
Latvia	57	59	56	55	60	59	54	59	22	61	63	53	57	60	60	59	58	55	42
New Zealand	20	22	19	18	23	23	20	22	9	21	21	20	21	30	20	23	20	24	11
Norway	9	15	4	14	13	10	9	15	22	14	11	13	12	19	11	11	12	15	4
Poland	54	53	37	52	56	60	44	57	61	55	57	48	51	46	58	63	50	54	46
Portugal	62	59	55	62	63	62	61	60	54	60	64	63	61	66	58	65	63	64	68
Russia	63	62	51	62	65	65	63	62	56	64	65	60	61	59	64	70	60	66	65
Slovak Republic	60	64	50	59	65	69	51	64	46	64	62	61	62	65	62	70	60	74	51

Slovenia	57	59	47	60	63	58	50	61	30	59	64	51	61	59	54	60	59	60	51
Spain	32	32	30	34	33	32	34	32	29	33	35	30	30	38	32	32	32	39	26
Sweden	29	35	23	30	32	38	24	37	50	35	30	35	32	27	32	38	31	39	16
Switzerland	36	42	41	38	39	43	35	41	72	42	41	43	39	27	40	49	41	50	32
Ukraine	74	76	70	76	76	77	77	74	29	78	75	75	74	75	76	78	74	78	74
Turkey	54	47	51	51	51	40	53	49	50	50	50	49	51	54	48	52	50	47	48
Great Britain	34	26	18	30	28	36	27	31	31	29	30	28	27	36	31	35	28	25	20
United States	30	29	22	24	32	36	31	28	43	31	27	29	28	33	31	37	27	30	24
Total	44	47	40	44	48	49	42	48	43	48	46	45	44	49	48	54	44	50	38

Table 3. Regression coefficients, dependent variable *"Differences in income are too large?"*, ordered probit, (5-score scale, 5 = "absolutely agree"), ISSP-2009

	1	2	3	4	5	6
male	-0,097***	-0,086***	-0,09***	-0,09***	-0,08***	-0,08***
tertiary education	-0,156***	-0,107***	-0,14***	-0,15***	-0,10***	-0,10***
urban	-0,084***	-0,06**	-0,08***	-0,08***	-0,06**	-0,06**
married	-0,024	0,013	-0,012	-0,02	0,02	0,01
children	-0,029*	-0,06***	-0,03**	-0,03**	-0,06***	-0,06***
number of persons in household	0,000	0,002	0,00	0,00	0,02	0,02
_25 years and lower (base group)						
_26-40	0,186***	0,16***	0,18***	0,19***	0,16***	0,16***
_41-60	0,242***	0,21***	0,24***	0,24***	0,21***	0,21***
_60+	0,255***	0,20***	0,26***	0,26***	0,22***	0,21***
employed (base group)						
unemployed	0,045*	-0,02	0,03	0,04*	-0,03	-0,02
inactive	0,000	-0,03*	-0,00	-0,00	-0,03*	-0,03*
1 income quintile (base group)	-		-	-		
2	-	-0,01	-	-	-0,01	-0,01
3	-	-0,02	-	-	-0,02	-0,02
4	-	-0,12***	-	-	-0,12***	-0,12***
5	-	-0,34***	-	-	-0,32***	-0,34***
mob_1	-	-	-0,03***	-	-0,025***	-
mob_2	-	-	-	-0,03**	-	-0,02
Countries are controlled	yes	yes	yes	yes	yes	Yes
Constant						
R2	0,07	0,07	0,07	0,07	0,07	0,07
Log pseudolikelihood	-45640.634	-37702.933	-44408.70	-45287.53	-37199,56	-37701,834
N	42647	35300	41858	42647	34876	35300

Robust SE; *, ** and *** - 10%, 5% and 1% significance levels

Table 4. Regression coefficients, ordered probit, (5-score scale, 5 = “absolutely agree”)

	ISSP-1999	LITS -2010	
	“Income differentiation is too large”	“Income differentiation between rich and poor should be reduced”	
Mob_3	-0,05***		
Mob_4		-0,03*	
Mob_5			-0,03***
R2	0,10	0,02	0,02
Log pseudolikelihood	-24511,078	-46133,358	-45624,51
N	23662	36820	36477

Robust SE; *, ** and *** - 10%, 5% and 1% significance levels. Gender, age, education, marital status, labor force status, income, household size, type of community, country dummies are controlled.

Table 5. Regression coefficients, dependent variable *"Differences in income are too large?"*, ordered probit, (5-score scale, 5 = "absolutely agree"), added "Ways to success", ISSP-2009

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Mobility (mob_1)	-0,03***	-0,03***	-0,03***	-0,03***	-0,03***	-0,03***	-0,03***	-0,03***	-0,02***
Ways to success:									
- Wealthy family	0,18***								
- Educated parents		0,07***							
- Hard work			0,01						
- Own education				0,08***					
- Having ambitions					0,08***				
- Useful connections						0,16***			
- Political connections							0,14***		
- Giving bribes								0,15**	
- Corruption									0,36***
R2	0,08	0,08	0,08	0,08	0,08	0,08	0,08	0,08	0,08
N	34342	34499	34544	34654	34412	34394	33295	31828	33552
Log pseudolikelihood	-36572.94	-36780.078	-36876.527	-36938.41	-36768.207	-36618.20	-35569.90	-34116.93	-35588.33

Robust SE; *, ** and *** - 10%, 5% and 1% sign levels. Gender, age, education, marital status, labor force status, income, household size, type of community, country dummies are controlled. Column numbers correspond to numbers of variables from the list "ways to success".

Table 6. Regression coefficients, ordered probit, dependent variable *"Differences in income are too large?"*, (5-score scale, 5 – "absolutely agree"), added "Ways to success", ISSP - 1999

	1	**2**	**3**	**4**	**5**
Mobility(mob_3)	-0,04***	-0,04***	-0,05***	-0,05***	-0,04***
Ways to success:					
- Wealthy family	0,06***				
- Hard work		-0,16***			
- Skills			-0,13***		
- Useful connections				0,09***	
- Corruption					0,13***
R2	0,10	0,11	0,11	0,10	0,11
N	22817	22708	22598	22874	22134
Log pseudolikelihood	-24010.06	-36876.527	-23686.37	-24064.345	-23280.9

Robust SE; *, ** and *** - 10%, 5% and 1% significance levels. Gender, age, education, marital status, labor force status, income, household size, type of community, country dummies are controlled.

Table 7. Regression coefficients, dependent variable *"Differences in income in <Rs country> are too large?"*, ordered probit, added "type of society"

	1	2	3	4	5	6
Mobility (mob_1)	-0,02***	-0,03***	-0,03***	-0,03***	-0,02***	-0,03***
Existing "diamond type" (AT)	**-0,31*** **	**-0,31*** **			**-0,05**	**-0,04**
Ideal "diamond type" (IT)			**0,12*** **	**0,11*** **	**0,19*** **	**0,18*** **
AT*IT (diamond*diamond=1)					**-0,33*** **	**-0,35*** **
R2	0,08	0,07	0,08	0,07	0,08	0,07
Log pseudolikelihood	-35259,41	-41795.87	-34919,08	-41390.8	-34358,24	-40668.71
N	33280	39627	32891	39172	32578	38725

Robust SE; *, ** and *** - 10%, 5% and 1% significance levels. Gender, age, education, marital status, labor force status, income, household size, type of community, country dummies are controlled.

Table 8. Regression coefficients, dependent variable *"Differences in income in <Rs country> are too large?"*, ordered probit, (5-score scale, 5 – "absolutely agree"), added "type of society", ISSP - 1999

	1	2	3
Mobility (mob_3)	-0,04***	-0,05***	-0,04***
Existing type of society (diamond =1) AT	**-0,33*** **		**-0,14** **
Ideal type of society (diamond=1) IT		**0,12*** **	**0,23*** **
AT*IT (diamond*diamond=1)			**-0,22*** **
R2	0,11	0,10	0,11
Log pseudolikelihood	-22577.5	-22311.0	-21915.5
N	21581	21224	21025

Robust SE; *, ** and *** - 10%, 5% and 1% significance levels. Gender, age, education, marital status, labor force status, income, household size, type of community, country dummies are controlled.

Table 9. Regression coefficients, dependent variable *"Differences in income in <Rs country> are too large?"*, ordered probit, (5-score scale, 5 – "absolutely agree"), ISSP-2009

	Nordic	Continental Europe	Liberal	Mediterranean	Transition East Europe	Russia and Ukraine	East Asia	Latino
gender (male=1)	-0,33***	-0,10***	-0,09**	-0,01	-0,02	0,08	-0,03	-0,04
tertiary education	-0,31***	-0,27***	0,07**	-0,05	-0,18***	0,11**	-0,02	0,08
Urban	-0,12***	-0,09**	0,01	-0,09**	-0,10***	-0,00	0,00	0,11**
married (yes=1)	-0,03	0,02	-0,03	0,03	0,09**	-0,01	0,05	0,03
children (yes=1)	-0,15***	-0,09**	-0,07*	-0,05	-0,10***	0,00	-0,05	0,17***
Number persons in household	0,04**	0,05***	0,01	0,00	0,06***	0,10***	0,02	0,01
_25 years and lower (base group)								
_26-40	0,40***	0,10	0,22***	0,08	0,19***	0,23**	0,10	0,16*
_41-60	0,55***	0,22***	0,31***	0,11*	0,29***	0,30***	0,06	0,14
_60+	0,55***	0,27***	0,33***	0,05	0,32***	0,31***	0,04	0,02
employed (base group)								
unemployed	-0,14	0,05	0,06	0,04	-0,10*	-0,04	-0,04	-0,12
inactive	-0,05	-0,05	-0,05	-0,00	-0,07*	-0,09	0,02	-0,03
1 income quintile (base group)								
2	-0,11**	-0,03	0,02	0,00	-0,05	-0,02	0,01	0,03
3	-0,17***	-0,02	-0,05	-0,05	-0,06	-0,05	0,01	0,05
4	-0,37***	-0,17***	-0,26***	0,04	-0,10*	-0,10	-0,10*	-0,01
5	-0,78***	-0,43***	-0,54***	-0,09*	-0,30***	-0,23**	-0,15**	-0,04
mobility (mob_1)	-0,04***	-0,00	-0,02**	-0,02**	-0,04***	-0,05***	-0,02**	-0,03*
R2	0,08	0,06	0,02	0,06	0,03	0,03	0,01	0,01
Lpseudolikelihood	--6574.06	-5673.27	-5138.02	-4934.80	-6156.30	-1677,83	-4739.9	-1991.1
N	5019	5629	3911	4809	6883	2358	4362	1905

Robust SE; *, ** and *** - 10%, 5% and 1% significance levels

Table 10. Regression coefficients, cross-country regressions, OLS

Dep. variable	% of absolutely agreed that "differences in income in <Rs country> are too large"						% of absolutely agreed that "wage differentiation should be reduced" (LiTS)		
	ISSP 2009			ISSP 1999			LITS 2010		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GINI	-0,07	0,29	0,2	0,25	0,21	0,68	0,13	0,23	0,09
Mob_1	-24,8***	-18,4***	-10,8*						
Ln GDPcap		-9,23			-5,4			3,31	
Mob_4							-0,40***	-0,35***	-0,30**
Mob_3				-18,9***	-15,6*	-15,6***			
ISSP country types	no	no	yes	no	no	yes			
LITS country types							no	no	Yes
const	52,34	151,6	53,5	-30,4	84,5	2,79	41,8	5,55	41,8
R2	0,38	0,40	0,65	0,56	0,56	0,70	0,28	0,30	0,40
N	36	36	36	26	26	26	35	35	35

Robust SE; *, ** and *** - 10%, 5% and 1% significance levels

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