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The Effects of the Intensity, Timing, and Persistence of Personal History of Mobility on Support for Redistribution

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Abstract

This paper examines the association between the intensity, timing, and persistence of personal history of mobility on individual support for redistribution. Using both rounds of the Life in Transition Survey, the paper builds measures of downward mobility for about 57,000 individuals from 27 countries in Eastern Europe and Central Asia. The analysis finds that more intensive, recent, and persistent downward mobility increases support for redistribution more. A number of extensions and checks are done by, among others, taking into account systematic bias in perceived mobility experience, considering an alternative definition of redistributive preferences, and exploring the severity of omitted variable bias problems. Overall, the results are robust.

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I. Introduction

Whether we support income redistribution depends on not only how well off our parents were or how egalitarian the society we grew up in (predetermined factors of income), but also the bad luck and the successes and the hardships that have shaped our lives (mobility experiences).[1] As Piketty (1995) suggests, and the empirical literature confirms, our past mobility experiences refine our beliefs in the relative importance of hard work and luck, which affects our expectations of future income and, in turn, determines our support for redistribution.[2]

The literature is scant, however, on how we learn from these mobility experiences—how the particulars of fortunes and hardships affect our support for redistribution. The timing of hardships, for example, is likely to matter: Being unemployed ten years ago possibly nudges us to support redistribution, but not as much as being unemployed last year does. The intensity of hardships matters too (going through hardships in which we had to cut down on food consumption to survive matters more than being unemployed with benefits), so does its persistence (ten-year unemployment in the past ten years increases support for redistribution more than one-year unemployment does).

In this paper, we examine how these particulars of mobility experiences affect support for redistribution in Eastern Europe and Central Asia. We use the Life in Transition Surveys (LITS): The first wave (LITS I) interviews more than 29,000 individuals in 29 countries and records their labor-market and life histories over a period of 18 years from 1989 to 2006; the second wave (LITS II) records the life history of 39,000 individuals during the recent global crises in 2007-08. Using these labor-market and life histories, we construct measures of

[1] Upward- or downward mobility as part of society-wide (Piketty, 1995) or own (Benabou and Ok, 2001) future income prospects has been discussed with support from empirical studies. Factors that explain variation in support for redistribution include cultural differences (Alesina and Glaeser, 2004), parents' influence (Benabou and Tirole, 2005), perception of fairness (Alesina and Angeletos, 2005), and status of social standing (Corneo and Gruner, 2002).

[2] In general, theories of fairness judgments (Adams, 1965; Piketty, 1995) suggest that gainers from reforms who believe in hard work and effort are likely to oppose redistribution.

intensity, timing, and persistence of personal history of mobility and we examine how these particulars of mobility affect support for redistribution.

Countries in Eastern Europe and Central Asia offer an interesting case to study how personal mobility affects support for redistribution: These countries were command economies that enjoyed strong support for redistribution but had to go through structural reforms, exposing their citizens to economic shocks that are, to some extent, beyond the control of any individual.[3] The states provided education, housing, and healthcare services; citizens enjoyed heavily subsidized basic- and consumer goods; and most people worked for the governments or state-owned enterprises (Szelenyi and Kostello, 1998; Mikhalev, 2003). Then, in the early 1990s, most of these countries embarked on structural reforms (they liberalized, among others, price regulation, labor markets, exchange rate regimes, and trade policies), which increased income inequality and unemployment rates. Some skilled workers enjoyed higher salaries and more secured jobs (Gimpelson and Lippoldt, 1996, 1997), but many people not only lost their jobs, but also lost welfare benefits as the states trimmed social safety nets (Kapstein and Mandelbaum, 1997). A new pattern of social stratification emerged: a new elite class (mostly new capitalists), a middle class (people in the managerial and professional jobs), a lower class (mostly blue-collar workers), and a socially deprived marginal class (Mikhalev, 2003). Haphazard redistribution of the states' assets and rising income inequality polarized societies as the losers in this transition outnumbered the few, but wealthy and powerful, elite, which exposed people in Eastern Europe and Central Asia to diverse personal mobility experiences (Mikhalev, 2003).

These mobility experiences varied across time and space. Earlier in the transition period from 1989 until 1995, most of these countries had fallen into recession. Some

[3] Some studies show support for redistribution in socialist countries is high, which may be caused by socialist cultural heritage (Corneo, 2001), behavioral norms (Ockenfels and Weimann, 1999), and the direct effect of communism (Alesina and Fuchs-Schundeln, 2006). Corneo and Gruner (2002) also find, in 1992, Eastern Europeans have stronger support for redistribution than people from Western countries do.

economies, mostly European Union member states, improved later, but in 1998 a financial crisis hit the Russian Federation and affected most of the Commonwealth of Independent States. However, since the early 2000s, these economies have grown, improving their citizens' living standards and reducing poverty rates: Their average real per capita income rose from US$5,903 in 1998 to US$8,411 in 2005, moving 50 million people out of poverty (World Bank, 2008).[4] Earlier, and partial, reforms, created some early winners and losers in some countries; later and more comprehensive reforms even more gainers and losers (Mikhalev et al., 2003)—people in these countries have diverse personal mobility experiences, which we examine in this paper to learn how these mobility experiences affect support for redistribution.

We define support for redistribution, the dependent variable, as an that indicator equals one if an individual thinks that the state should be strongly involved in "reducing the gap between the rich and the poor". As measures of downward mobility, we use a section on labor market and life histories in LITS I, which includes a set of questions on mobility experiences such as whether an individual had to accept wage cuts in a particular year from 1989 to 2005, whether she had to sell some of her household assets, and whether she had to respond to shocks by cutting down food consumption.[5] First, we construct three measures of mobility by intensity for each individual and each of the years: (1) whether an individual experienced any type of shocks, (2) whether an individual experienced labor market related shocks only, and (3) whether an individual responded to shocks by taking extreme measures. Then, we summarize each of the measures by adding up the number of years an individual had experienced downward mobility during the seventeen-year period.[6] (The measures are, therefore, the number of years an individual experienced downward mobility by intensity.)

[4] The figures are in constant US$ equivalent of purchasing power parity.
[5] See LITS (2006) for more details of this survey. We exclude Mongolia and Turkey to focus on the 27 former socialist countries in Eastern Europe and Central Asia; we also exclude mobility experiences in 2006 to make sure we examine the effects of past mobility experiences only.
[6] See Appendix 1 for the details on how we construct all variables.

For the timing of downward mobility, we divide the seventeen-year period into several sub-periods and create measures of mobility for each (a larger estimate of downward mobility for later periods, for example, indicates more recent downward mobility affects support for redistribution more than downward mobility a long time ago does). For the persistence of downward mobility, we create measures of mobility by the number of years an individual experienced shocks (a larger estimate for more frequent shocks indicate the more persistent shocks an individual experienced, the stronger her support for redistribution will be).

Because the lack of natural experiments we can exploit and the fact that, to some extent, downward mobility experiences in Eastern Europe and Central Asia in the 1990s and early 2000s are beyond the control of any individual, we use regression-control strategies to estimate the effects of downward mobility on support for redistribution. We include all available individual- and household characteristics in LITS I as well as primary sampling unit (PSU) fixed effects in the regressions, the latter to control for time-invariant, both observed and unobserved, determinants of support for redistribution that may correlate with downward mobility. To the extent that downward mobility is exogenous conditional on these individual- and household characteristics and the PSU fixed effects, a regression of support for redistribution on downward mobility and the control variables provides an unbiased estimate of the effects of downward mobility.

We find downward mobility increases support for redistribution, but only the more intensive one: Downward mobility experience in which an average individual had to respond by taking extreme measures increases support for redistribution by about three percent. We also find the timing and persistence of downward mobility matter: Recent bad years matter more than earlier bad years do; more persistence bad years matters more too. (One bad-year in the last four years during the period of analysis increases support for redistribution about three times as large as the average effect; experiencing nine bad-years or more increases support for

redistribution by about 12-17 times larger than the average effect.) Our extensions and robustness checks (among others, by using alternative measure of support for redistribution; analyzing another source of downward mobility, the recent global crisis; considering systematic biases in evaluating individual preferences; and assessing the severity of omitted variable bias problems) show these basic results are robust.

The paper proceeds as follows. Section II describes the empirical strategy and data. Section III discusses the basic results; Section IV extensions and robustness checks. Section V concludes.

II. Empirical Strategy and Data

We use the regression-control strategy and estimate the following model:

$$y_{ij} = \alpha + \beta D_{ij} + X\gamma + Z\eta + \xi_j + \varepsilon_{ij} \quad (1)$$

where y_{ij} is a measure of support for redistribution of individual *i* who lives in PSU *j*; *D* is a measure of downward mobility of individual *i*, *X* and Z are vectors of individual- and household characteristics, respectively; and ξ_j and ε_{ij} are PSU fixed effects and error terms, respectively.

We include all observed individual- and household past characteristics such as individual's age, gender, education, and household's size, which may correlate with downward mobility and support for redistribution, to make sure downward mobility is as random as possible. We also include PSU fixed effects to control for PSU time-invariant, both observed and unobserved, determinants of support for redistribution that may correlate with downward mobility such as cultural-specific determinants of support for redistribution and region-specific inclination towards economic reform. To the extent that downward mobility is

random conditional on their individual- and household characteristics as well as PSU fixed effects, the coefficient of *D* in Equation (1) is the effect of downward mobility on support for redistribution.

We use the first wave of the Life in Transition Survey (LITS I), a joint initiative of the European Bank for Reconstruction and Development and the World Bank. LITS I, which is done in 2006, covers 29 countries in Eastern Europe and Central Asia, and surveys a nationally representative sample of 1,000 individuals within each country.[7] The data set includes household level data such as households' roster, assets, and expenses. It also has information on the attitude and values, current activities, labor supply, and life history of 29,000 individuals who are chosen at random among adults within each household. We exclude Mongolia and Turkey to focus on the 27 former socialist countries in Eastern Europe and Central Asia; we also exclude mobility experiences in 2006 to make sure we examine the effects of past mobility experiences only.[8] We have, therefore, the labor-market and life histories of about 27,000 individuals for seventeen years from 1989 to 2005.

We use individuals' life history to construct measures of *downward mobility*. In the survey, individuals are asked whether they experienced some types of hardships, or whether they responded to these hardships by taking extreme measures, in each year from 1989 to 2005. The questions are, among others, whether they received unemployment benefits, had to accept wage cuts, had to sell some of their household assets, and had to cut down on basic food consumption.

We construct three measures of the intensity of *downward mobility* as follows. First, we create three dummies: one, a dummy of whether an individual experienced any types of shocks; two, a dummy of labor-market-related shocks only; and, three, a dummy of shocks that individuals responded to with extreme measures such as cutting down on food

[7] See LITS (2006) for more details of this survey.
[8] We exclude shocks in 2006 to avoid complications from possible endogeneity problems (our outcome variables are for the year 2006).

consumption or selling household assets to survive—all for each of the years from 1989 to 2005. Then, we summarize each of these three set of dummies by adding them up across all years from 1989 to 2005. Therefore, the three measures of *downward mobility* intensity are: (1) the number of years an individual experienced any types of shocks during the 17-year period, (2) the number of years of labor market related shocks only, and (3) the number of years responded to hardships by taking extreme measures.[9]

To explore how timing and persistence of *downward mobility* affect support for redistribution, we also use other functions of the above measures of downward mobility. They are as follows: (1) the timing—the number of years and indicators of shocks in two eight-or-nine-year periods or four four-or-five-year period , and (2) the persistence—indicators of shocks by the number of shocks experienced. Larger estimates of *downward mobility* for later periods, for example, would indicate that recent downward mobility affects support for redistribution more than downward mobility a long time in the past does. Larger estimates of more frequent *downward mobility* in a sub-period would indicate persistent downward mobility affects support for redistribution more than occasional mobility does.

We define the dependent variable, *supports redistribution*—an indicator equals one if an individual supports redistribution or zero otherwise—from a question on whether an individual thinks the state should strongly involve in "reducing the gap between the rich and the poor". As part of robustness checks, we also use alternative measures: whether an individual think the state should strongly involve in "guaranteeing employment" or "guaranteeing low prices for basic goods and food", and whether an individual agrees with the statement that "a market economy is preferable to any other form of economic system".

The individual and household characteristics we use as control variables are the number of adults in the household, the number of children in the household, gender, age,

[9] See Appendix 1 for the details on how we construct all variables.

whether the individual lives in urban areas, whether the individual has college degree, and whether the individual a member of ethnic minority. In some specifications, we also include individual characteristics in 1989, i.e., whether an individual worked, was rich, trusted people, and believed in efforts in 1989, as well as the father's and the mother's characteristics in 1989, e.g., whether the father has college degree, a member of communist party, and worked in 1989. To test the robustness of the basic results, we also include current individual and household characteristics in some specifications, i.e., whether an individual worked in 2006, his or her job characteristics, and household's spending in 2006.[10] Each of the control variables enters the regression as a full set of dummies, which makes the model very flexible. (For example, age enters as a set of dummies, one for each age cohort.)

Figure 1 illustrates the relationship between support for redistribution and downward mobility. Each dot represents a country's average support for redistribution and the proportion of individuals in the country that experienced downward mobility defined by responded to shocks by taking extreme measures. The relationship is noisy, which suggests that other factors affect support for redistribution, but we still see a positive relationship between downward mobility and support for redistribution. That is the relationship that we want to examine after we make downward mobility as random as possible.

Table 1 shows the summary statistics of the key variables for individuals who experienced downward mobility and those who did not seem to be quite similar in terms of individual and household characteristics (Panel A). A typical household has about three members on average, most of these are adults. About 40 percent of the individuals are males, 47 years old on average, 37 percent lives in urban areas, 20 percent has college degrees, and 10 percent are members of minority groups. Their characteristics in 1989 do not seem to differ either (Panel B), neither do the father's characteristics (Panel C). If anything, those who

[10] We do not include these variables in most of our specifications because these variables can be also outcomes.

experienced downward mobility were more likely to work, trust people, and believe in efforts in 1989. There are some evidence that individuals who experienced downward mobility are more likely to support redistribution, though the differences may be insignificant statistically (Panel D). About 38 percent of respondents experienced shocks and responded by taking extreme measures; on average they had about six bad years (Panel E).

III. Empirical Results

We now discuss the results. Section A presents the basic results; Sections B and C include PSU-fixed effects as well as other control variables; Section D explores the effects of the timing and persistence of downward mobility on support for redistribution.

A. Basic Results

Table 2 presents the basic results. Each column is a regression of *supports redistribution* on *downward mobility* with or without individual- and household characteristics as control variables, which include gender; age; education; religion; ethnic minority; relationship with household head; whether the household lives in a rural area, urban area or metropolitan city; the number of adults in the household; and the number of children.

Columns 1-2 show the estimates of *downward mobility*, which we define as the number of years an individual experienced any types of shocks, without and with the control variables, respectively. (All estimates are multiplied by 100 for legibility.) Both estimates are significant statistically (robust standard errors, clustered by PSU, are in parentheses) and large economically: One-year experience of shocks increases support for redistribution by 0.3-0.4 percentage point or about 0.4-0.6 percent. (About 68 percent of individuals in the sample support redistribution.) Considering that people who experienced hardships had six bad-years

on average, a typical individual who experienced hardships is 2-4 percent more likely to support redistribution —possibly a large swing in close elections.

In columns 3-8 we use two other measures of *downward mobility* intensity. Using labor market related shocks only as a measure of *downward mobility* in columns 3-4, the estimates are small and insignificant statistically; but, using responded to shocks by taking extreme measures in columns 5-6, the estimates are larger than those in columns 1-2 and significant statistically. The estimate in column 6 shows having a bad-year increases the likelihood of supporting redistribution by 0.6 percentage point or about five percent. In the last two columns we include both responded-to-shocks-by-taking-extreme-measures and experienced-labor-market-shocks-only. The estimates of the first remain significant statistically, while those of the second do not. The magnitude of estimates of the first is also similar to that in columns 5-6.

B. Controlling for PSU Fixed Effects

Support for redistribution varies by country, which suggests that PSU- or country-specific factors affect how people think about redistribution. Grosjean (2011), for example, shows that cultural characteristics such as social trust in European countries evolves very slowly over time and vary across countries by the history of their imperial rule since centuries ago. Moreover, individuals in different countries experienced different economic reforms, which depend on country-specific politics. Therefore, models we estimate in the previous sections, which ignore country-specific determinants of downward mobility and support for redistribution, may suffer from omitted variable bias problems.

In Table 3, to control for these time-invariant factors, we include PSU-fixed effects in addition to the individual- and household characteristics. Overall, the estimates are similar to those in Table 2. The estimate of responded to shocks by taking extreme measures is

significant statistically; that of experienced labor market shocks only is not, both as the only measure of downward mobility in column 2 and with responded to shocks by taking extreme measures in column 4. The magnitude of the estimates is slightly smaller: The estimates in columns 3 and 4 suggest that, after controlling for PSU-fixed effects, a bad year increases support for redistribution by about 0.4 percentage point. These estimates mean a typical individual who responded to shocks by taking extreme measures is 3-4 percent more likely to support redistribution.

The results in Tables 2-3 suggest labor-market-related shocks, such as becoming unemployed or having a wage cut, do not necessarily increase support for redistribution. However, if the shocks are severe so that people have to respond by taking extreme measures such as cutting down on food consumption or selling household assets, experiencing these shocks does increase support for redistribution.

In the rest of the analyses, for brevity, we will present the estimates of *downward mobility* defined as responded to shocks by taking extreme measures only.

C. Controlling for Other Characteristics

The results are robust even after controlling for the PSU-fixed effects, but because we use control strategy as a method of identification, there are always a possibilities that the models suffer from omitted variable bias. Therefore, in Table 4, we include other past individual and parental characteristics as additional controls. In some specifications, we also include current individual characteristics such as current job characteristics and household spending to see whether the direct effects of downward mobility on support for redistribution are large.

In column 2 we include individual characteristics in 1989 as additional controls, i.e., job status in 1989, the position along a ten-step economic ladder, the degree of trust in people, and the belief on whether effort and hard work as well as intelligence and skills are the most

important to succeed in life. In column 3 we add father characteristics (education level of the father, job status, and whether he is a member of a communist party) further, in column 4 the same set of characteristics of the mother as well. The estimates are 0.4-0.5, similar to that in column 1, which is from a regression without the additional controls. They also remain significant statistically.

We then include current individual characteristics in columns 5-7. In column 5 we include an indicator of whether an individual worked in 2006, in column 6 we add job characteristics (a full set of dummies for types of occupations, industry, and whether self-employed) and the logarithm of household spending in 2006—the estimates do not change much. In column 7 we include a set of individual characteristics in 2006 (i.e., the position along a ten-step economic ladder, the degree of trust in people, and the belief on whether effort and hard work as well as intelligence and skills are the most important to succeed in life). The estimate falls to 0.3 though remain large and significant statistically. Even after we include individual characteristics in 2006 in the regression, which muddle the estimation of total effects of downward mobility, we still find that downward mobility experiences increase support for redistribution.

Table 4 shows that overall the basic results are robust: One bad year increases support for redistribution by 0.4-0.5 percentage point. Even after controlling for current individual characteristics in 2006, the estimates remain large economically and significant statistically, which indicate that downward mobility also directly affects support for redistribution, not only through its effects on current employment status and current beliefs in efforts, hard work, and luck.

In the rest of the analyses, to get the total effects of downward mobility on support for redistribution, we exclude these current individual characteristics as additional independent

variables.[11] To keep most individuals in the sample, we do not include the additional individual characteristics in 1989 either.[12] We, therefore, will regress a measure of support for redistribution on a measure of downward mobility and a set of basic control variables, i.e., gender; age; education; religion; ethnic minority; relationship with household head; whether the household lives in a rural area, urban area or metropolitan city; the number of adults in the household; the number of children; and PSU fixed effects.[13]

D. Timing and Persistence of Downward Mobility

In Tables 2-4 we assume a bad year has the same effects regardless of whether it happened a long time ago and whether they happened consecutively—we ignore the timing and persistence of hardships. In Table 5 we relax this assumption in four ways: (1) we use the number of years an individual responded to shocks by taking extreme measures in two eight-year periods or four four-year periods, (2) we use indicators of shocks by periods, (3) we use indicators of shocks by number of shocks experienced, and (4) we control for the number of changes of downward mobility from one year to another.[14]

In Panel A we use the number of shocks by sub-period to allow downward mobility early and later in the period of analysis to have different effects. Panel A.1 shows the estimates in which we use the number of bad years by two eight-year periods as the measures of downward mobility. The estimate of the 1989-1997 period is small and insignificant statistically, but that of 1998-2005 is significant. The magnitude of the latter is also large, about 0.9, which equals four percent increase in the likelihood of supporting redistribution of those experienced hardships in 1998-2005 on average. (Those who experienced shocks in the

[11] These current characteristics are bad controls because they can be also outcomes (Angrist and Piscke, 2009).
[12] In column 2, after controlling for additional individual characteristics in 1989, the number of observations falls from 27 thousands to about 19 thousands. After controlling for parental characteristics in column 4, it falls further to 17 thousand observations.
[13] Including the additional past characteristics does not change the results. They are available from the authors upon request.
[14] We actually use two eight-or-nine-year periods and four four-or-five-year periods, but we will call these two eight-year periods or four four-year periods for brevity.

last eight year period had 4.3 bad years on average.) In Panel A.2 we use four four-year periods. Again similar picture appears: Experiencing shocks early in the period does not seem to matter, while later bad years do. The magnitude of the estimate of the last four year period, 2002-2005, is large, 1.2, which means individuals who experienced shocks in the last four years are four percent more likely to support redistribution. (Those who experienced shocks in the last four year period had three bad years on average.)

In Panel B we use a set of indicators instead of the number of shocks as the measures of downward mobility. We see similar results: Experiencing shocks recently increases support for redistribution. The estimate of the last four year period in Panel B.2 in particular is large: Having at least one bad year in 2002-2005 increases support for redistribution by 3.9 percentage points.

In Panel C we use indicators of shocks by number of shocks to allow occasional- and persistent shocks to have different effects on support for redistribution. The estimate in Panel C.1 shows that having at least one bad year increases support for redistribution by three percentage points, which is similar to the results in Tables 2-3. In Panel C.2 we introduce three dummies, no shock, 1-8 shocks and 9-17 shocks (the excluded category is no shock). Experiencing eight bad years or less increases support for redistribution by 2.3 percentage points, while experiencing nine bad years or more increases support for redistribution by about 5.6 percentage points. In Panel C.3 we include five dummies: no shock, 1-4 shocks, 5-8 shocks, 9-12 shocks, and 13-17 shocks. Similar results appear: Having less than five bad years increases support for redistribution by 1.7 percentage points, while having 9-12 shocks or 13-17 shocks increases support for redistribution by about 5-7 percentage points, which is equivalent to about 7-8 percent increase in support for redistribution.

In Panel D we examine whether experiencing mobility changes from one year to another, the ebb and flow of hardships, affect support for redistribution. Including the number

of changes of downward mobility from one year to another during the seventeen year period seems to increase support for redistribution, but it is significant statistically at ten percent only (Panel D.1). Once we control for the number of shocks in Panel D.2, however, the number of changes of downward mobility becomes insignificant statistically as indicated by its large standard error.

These results show that: (1) Experiencing at least one-year shocks (defined as responded to shocks by taking extreme measures) in the previous seventeen years increases support for redistribution by three percentage points on average; (2) Shocks experienced a long time ago do not seem to matter, while recent shocks do—one bad year in the last four year period increases support for redistribution by 1.2 percentage points; (3) Persistent shocks matters more than occasional ones—having at least nine bad years in the 16 year period of analysis increases support for redistribution by more than five percentage points; (4) The ebbs and flow of downward mobility does not seem to matter once we take into account the intensity of the shocks.

IV. Extensions and Robustness Checks

In this section we show some extensions and robustness checks. Table 6 explores the interactions between downward mobility and individual characteristics; Tables 7 and 8 analyze the effects by group of individuals and group of countries; Tables 9 and 10 use alternative measures of support for redistribution and downward mobility; Table 11 examines another source of shocks, the recent economic crisis; Tables 12 consider biased perception of individual's relative position in income distribution; and Table 13 examines whether unobservable factors undermine the OLS estimations.

A. Interactions between Downward Mobility and Individual Characteristics

Table 6 presents the interactions between individual characteristics and downward mobility. The estimates of downward mobility are positive and significant statistically; they are also quite stable across all specifications. We find that females and non-college graduates are more likely to support redistribution, which are in line with papers in this line of literature. We also find that individuals who are 50 years old or older, those who believed in efforts in 1989, and those who trusted people in 1989 are more likely to support redistribution, which seem to be in contrast with the findings in the literature.[15] Considering that these are individual characteristics in the past, the results are perhaps unsurprising because some people had experienced downward mobility since then and may have changed their beliefs in efforts and people in 2006 when the survey was done, which in turn affect their support for redistribution. None of the interaction terms is significant statistically, however, except the interaction between college graduates and downward mobility.

B. Analyses by Groups of Individuals and Groups of Countries

In previous analyses, we implicitly assume the control variables affect different groups of individuals similarly. In Table 7 we relax this assumption by estimating the effects of downward mobility by group of individuals, i.e., gender, older than 50 years, has college degrees, high on the ten-step economic ladder in 1989, a member of ethnic minority, believed in efforts in 1989, trusted people in 1989, and father was a member of communist party.

Overall, the results are robust. All estimates are positive: They vary from 0.2 to 0.6 percentage point. They are also significant statistically except for individuals who were high on the ten-step economic ladder in 1989 and those whose fathers are members of communist

[15] See, for examples, Fong (2001), Corneo and Gruner (2002), Alesina and Glaeser (2004), Alesina and La Ferrera (2005), and Alesina and Fuchs-Schundeln (2007).

parties. There seems to be similar effects across groups, though some groups (i.e., individuals who were older than 50 years, college graduates, low on the ten-step economic ladder in 1989, members of ethnic minorities, and not believers in efforts in 1989 as well as those whose fathers were members of communist parties) are more likely to support redistribution.

In Table 8 we estimate the effects of downward mobility by group of countries. The effect is the largest in EU countries (0.8 percentage point); it is the lowest in non CIS and EU countries (column 3). The latter, though it remains positive, is insignificant statistically.[16]

C. Use of Alternative Measures of Support for Redistribution and Downward Mobility

So far, we have been using the question on whether state should reduce income gap as measure of support for redistribution. In Table 9, we consider alternative dependent variables: whether state should guarantee employment, whether state should guarantee low prices of basic goods, whether poverty is caused by injustice in society, and whether market economy is not preferable. All estimates are positive and significant statistically; they vary from 0.2 to 0.8 percentage point.

Table 10 shows the results using alternatives measures of downward mobility: whether an individual's household has moved down the ten-step economic ladder since 1989, one's life is worse than most high school classmates', life is worse than parents', and children are expected to have worse future. All estimates are positive and significant statistically. Economically they are also large. The estimate in column 1, for example, shows having moved down the economic ladder since 1989 increases support for redistribution by four percentage points. Moreover, not only that past downward mobility increases support for redistribution, expectation of future downward mobility experienced by children does too as column 5 shows: Being pessimistic on ones' children future increases support for

[16] The sample size in column 3 decreases to less than six thousands, which suggests the estimate is insignificant because of the lack of power to reject the null hypothesis.

redistribution by five percentage points. When we include past and future downward mobility in column 6, the estimates remain similar.

D. Analysis of Downward Mobility Experienced During the Recent Economic Crisis

We now look at the effects of downward mobility caused by other sources of shocks, i.e., the recent economic crisis in 2007-08, using LITS II. Table 11 presents the results. We use three measures of *supports distribution* (i.e., income should be more equal, poverty is caused by injustice in society, and market economy is not preferable) and three measures of *downward mobility* (i.e., affected much by the crisis, responded to shocks by taking extreme measures, and responding to crisis by taking some measures). We find all estimates are positive and significant statistically. The estimates are economically large, in particular when we use whether poverty is caused by injustice in society as the measure of support for redistribution in columns 4-6: Affected much by the economic crisis in column 4, for example, increases support for redistribution by eight percentage points; responded to crisis by taking some extreme measures, which is similar to the measure we use in the basic results, in column 5 increases support for redistribution by ten percentage points.

E. Analyses of Individuals Whose Actual and Perceived Incomes Are Matched

Cruces, Perez-Trugliain and Tetaz (2013) show that people have biased perception of their relative position in income distribution: Some people say they are poor when in fact their incomes are higher than average; some say they are richer than average when their incomes are actually low.[17] In Table 12 we check whether these biased perceptions of incomes may compromise our results. In column 1, we include only individuals whose perceived position in a ten-step economic ladder and actual decile-group of household spending are matched. In

[17] They also find that people who are told that they overestimate their relative position are more likely to support redistribution.

columns 2-4 we also include individuals whose biases are at most one-, two, and three decile-groups, respectively. Overall, the results are robust. The estimates are all positive, about 0.4-0.5 percentage point, and significant statistically.

F. Testing for the Effect of Unobserved Factors

Finally, we check how severe omitted bias problems affect our main results. We use a statistic Altonji, Elder, and Taber (2005) develop using selection on observables to estimate the potential bias from unobservables, the ratio R= $\frac{\widehat{\beta_{Full}}}{\widehat{\beta_{Restricted}} - \widehat{\beta_{Full}}}$, which indicates how much stronger the selection on unobservables, relative to selection on observables, needs to be to explain away the estimated effect of the past events on redistributive preferences.

Table 13 provides the ratios, which we calculate using the baseline estimates in Table 2. We define full model as regressions with the individual- and household characteristics and restricted model as those without the control variables. For estimates in Table 2, the ratios of all models are over three except column 2, with an average value of R to be around three. This implies, on average the selection on unobservables has to be at least three times stronger than the selection of observables to explain away the estimated regression coefficients of the past events on attitudes towards redistribution. Thus, it is plausible to assume that it is unlikely the estimates are affected by the omitted variable bias.

V. Conclusion

Downward mobility increases support for redistribution, but only if it is severe: There is no evidence that being unemployed increases support for redistribution; being unemployed and responding to the shocks by taking extreme measures does—one year of the latter type

increases support for redistribution by about 3 percent. The timing of downward mobility matters too (recent bad years matter more than earlier bad years do), so does its persistence (more persistent shocks matter more than occasional ones.) For example, one bad year in the most recent four years increases support for redistribution about three times as large as the average effect; experiencing nine bad years or more increases support for redistribution by about 12-17 times larger than the average effect.

These basic results are robust to systematic biases that people may have when they evaluate their preferences for redistribution (Cruces, Perez-Trugliain and Tetaz, 2013); measurement errors in people's subjective responses toward redistribution (Alesina and La Ferrara, 2004; Fong, 2006); and the possibility that our specifications suffer from large omitted variable bias problems, which may compromise our OLS estimates (Altonji, Elder, and Taber, 2005). The results are also robust to alternative measures of support for redistribution, alternative measures of downward mobility, and other sources of economic shocks.

Many papers, such as Alesina and La Ferrara (2001) and Ravallion and Lokshin (2000), have provided the empirical evidence for Piketty's (1995) learning model, but we believe this paper still contributes to the literature. One, we provide a richer picture of how mobility experiences shape individual preferences towards redistributive policies. Two, we show that support for redistribution is not static or sluggish; rather it responds to severe, recent, and persistent mobility experiences. Three, we highlight the importance of the particulars of downward mobility experiences, their intensity, timing, and persistence as determinants of support for redistribution, which calls for a refinement of Piketty's (1995) learning model.

A limitation of this paper is that our measures of downward mobility are not exogenous. If there is an unobserved factor that positively correlates with both downward

mobility and support for redistribution (for example, if people who are more likely to be unemployed are also more likely to support redistribution), our OLS estimates will be too big. The Altonji, Elder, and Taber's (2005) statistic, however, indicates these problems probably are modest, if there are any. Besides, downward mobility caused by a global crisis or structural reforms is, to some extent, beyond the control of any individual in our sample. And people may have systematic biases when they evaluate their relative income, but we address this concern by analyzing downward mobility using sub-samples of people whose biases are small. Downward mobility, which we define using retrospective information, may be unreliable—a concern that we have no answer to. But, perhaps, recalling the years when we experienced economic shocks is less likely to be unreliable, especially if the shocks are severe.

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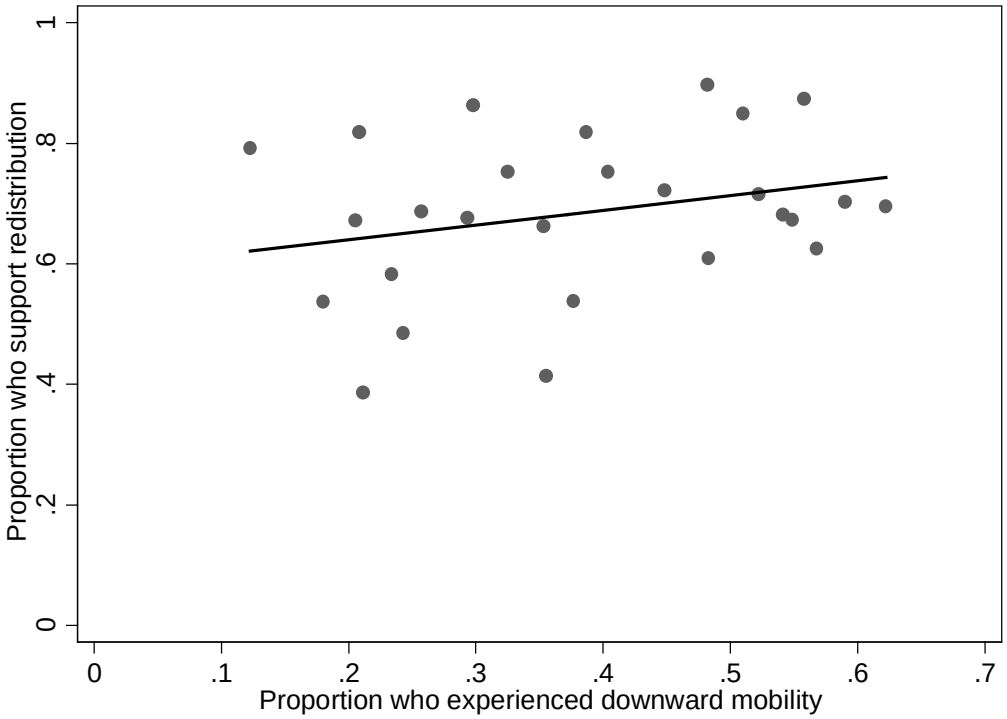
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Figure 1 The Relationship between Support for Redistribution and Downward Mobility



Notes: Each dot represents a country's average support for redistribution and proportion of individuals in the country that experienced *downward mobility*; the line is a regression line of the first on the second. *Downward mobility* is an indicator of whether an individual had experienced shocks and responded by taking extreme measures the 1989-2005 period; *supports redistribution* equals one if an individual supports income redistribution in 2006 or zero otherwise.

Table 1 Summary Statistics

	No experience of downward mobility	Experienced downward mobility
	(1)	(2)
A. Individual- and household characteristics		
Number of adults in the household	2.69	2.71
	(1.38)	(1.42)
Number of children in the household	0.45	0.61
	(0.86)	(1.01)
Male	0.43	0.38
	(0.50)	(0.49)
Age	47.01	46.71
	(18.58)	(16.62)
Lives in urban areas	0.37	0.37
	(0.48)	(0.48)
Has college degree	0.20	0.18
	(0.40)	(0.39)
A member of ethnic minority	0.10	0.11
	(0.30)	(0.31)
B. Individual characteristics in 1989		
Worked in 1989	0.52	0.54
	(0.50)	(0.50)
Rich in 1989	0.34	0.37
	(0.47)	(0.48)
Trusted people in 1989	0.60	0.69
	(0.49)	(0.46)
Believed in efforts in 1989	0.78	0.80
	(0.41)	(0.40)
C. Father's characteristics		
Has college degree	0.13	0.12
	(0.34)	(0.33)
A member of communist party	0.13	0.17
	(0.34)	(0.37)
Worked in 1989	0.95	0.95
	(0.22)	(0.21)

Notes: The number in each cell is the mean. The figures in parentheses are standard deviations.

Table 1 Summary Statistics (continued)

	No experience of downward mobility	Experienced downward mobility
	(1)	(2)
D. Preferences towards redistribution		
Supports redistribution	0.67	0.71
	(0.47)	(0.45)
Agrees that state should guarantee employment	0.77	0.83
	(0.42)	(0.38)
Agrees that state should guarantee low prices	0.72	0.78
	(0.45)	(0.42)
Agrees that poverty is because of injustice in society	0.44	0.51
	(0.50)	(0.50)
Does not prefer market economy	0.56	0.62
	(0.50)	(0.49)
E. Downward mobility		
Number of years experienced shocks and responded	0	5.88
by taking extreme measures	0	(5.13)
Household is worse now than in 1989	0.55	0.66
	(0.50)	(0.47)

Notes: The number in each cell is the mean. The figures in parentheses are standard deviations.

Table 2 Basic Results

Dependent variable: Supports redistribution								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Downward mobility								
Responded to shocks by taking extreme measures					0.73**	0.56**	0.76**	0.58**
(number of years)					(0.10)	(0.10)	(0.10)	(0.10)
Experienced labor market shocks (number of years)			-0.16	-0.10			-0.31*	-0.22
			(0.13)	(0.13)			(0.13)	(0.13)
Both the above (number of years)	0.44**	0.34**						
	(0.09)	(0.09)						
Individual- and household characteristics		✓		✓		✓		✓
Adjusted R^2	0.004	0.03	0.0001	0.02	0.002	0.03	0.005	0.03
Number of obs.	26,991	26,925	26,991	26,925	26,991	26,925	26,991	26,925

Notes: The numbers in each column are the estimates of measures of *downward mobility* from a separate regression of *supports redistribution* on measures of *downward mobility* with or without a set of individual- and household characteristics . All estimates are multiplied by 100 for legibility. *Downward mobility* is the number of years an individual had experienced economic shocks (defined in the left column) in the 1989-2005 period; *supports redistribution* equals one if an individual supports income redistribution in 2006 or zero otherwise. The figures in parentheses are robust standard errors clustered by PSU. One and two stars indicate statistical significance at a level of five and one percent, respectively.

Table 3 Controlling for PSU Fixed Effects

Dependent variable: Supports redistribution				
	(1)	(2)	(3)	(4)
Downward mobility				
Responded to shocks by taking extreme measures			0.43**	0.43**
(number of years)			(0.07)	(0.07)
Experienced labor market shocks (number of years)		0.03		-0.03
		(0.09)		(0.09)
Both the above (number of years)	0.27**			
	(0.07)			
Individual- and household characteristics	✓	✓	✓	✓
PSU fixed effects	✓	✓	✓	✓
Adjusted R^2	0.27	0.27	0.27	0.27
Number of obs.	26,925	26,925	26,925	26,925

Notes: The numbers in each column are the estimates of measures of *downward mobility* from a separate regression of *supports redistribution* on measures of *downward mobility*, PSU fixed effects, and a set of individual- and household characteristics. All estimates are multiplied by 100 for legibility. *Downward mobility* is the number of years an individual had experienced economic shocks (defined in the left column) in the 1989-2005 period; *supports redistribution* equals one if an individual supports income redistribution in 2006 or zero otherwise. The figures in parentheses are robust standard errors clustered by PSU. One and two stars indicate statistical significance at a level of five and one percent, respectively.

Table 4 Controlling for Other Covariates

Dependent variable: Supports redistribution							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Downward mobility							
Responded to shocks by taking extreme measures	0.43**	0.44**	0.45**	0.44**	0.43**	0.40**	0.25*
(number of years)	(0.07)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.10)
Individual- and household characteristics	✓	✓	✓	✓	✓	✓	✓
Additional individual characteristics in 1989		✓	✓	✓	✓	✓	✓
Individual characteristics in 2006							
Worked in 2006					✓	✓	✓
Job characteristics in 2006						✓	✓
Spending in 2006						✓	✓
Income, belief in trust, and belief in efforts in 2006							✓
Father characteristics			✓	✓	✓	✓	✓
Mother characteristics				✓	✓	✓	✓
PSU fixed effects	✓	✓	✓	✓	✓	✓	✓
Adjusted R^2	0.27	0.27	0.26	0.26	0.26	0.26	0.27
Number of obs.	26,925	19,291	17,331	17,014	17,014	17,005	16,522

Notes: The number in each column is the estimate of a measure of *downward mobility* from a separate regression of *supports redistribution* on *downward mobility*, PSU fixed effects, a set of individual- and household characteristics, a set of additional individual characteristics in 1989, a set of individual characteristics in 2006, a set of father characteristics, and a set of mother characteristics. All estimates are multiplied by 100 for legibility. *Downward mobility* is the number of years an individual had responded to shocks by taking extreme measures in the 1989-2005 period; *supports redistribution* equals one if an individual supports income redistribution in 2006 or zero otherwise. The figures in parentheses are robust standard errors clustered by PSU. One and two stars indicate statistical significance at a level of five and one percent, respectively.

Table 5 Allowing for More Flexible Effects of Downward Mobility

Dependent variable: Supports redistribution	
A. Number of shocks by periods	
A.1. Two eight-or-five-year periods	
1989-1997	-0.07
	(0.16)
1998-2005	0.87**
	(0.14)
A.2. Four four-or-five-year periods	
1989-1993	0.21
	(0.32)
1994-1997	-0.26
	(0.40)
1998-2001	0.47
	(0.39)
2002-2005	1.23**
	(0.31)
B. Indicators of shocks by periods	
B.1. Two eight-or-five-year periods	
1989-1997	0.50
	(0.77)
1998-2005	3.49**
	(0.69)
B.2. Four four-or-five-year periods	
1989-1993	1.77
	(0.95)
1994-1997	-0.88
	(0.99)
1998-2001	1.16
	(0.89)
2002-2005	3.85**
	(0.81)

Notes: The numbers in each sub-panel is the estimates of measures of *downward mobility* from a separate regression of *supports redistribution* on a set of measures of *downward mobility*, PSU fixed effects, and a set of individual- and household characteristics. All estimates are multiplied by 100 for legibility. *Downward mobility* is a function of *responded to shocks by taking extreme measures* for the 1989-2005 period; *supports redistribution* equals one if an individual supports income redistribution in 2006 or zero otherwise. The figures in parentheses are robust standard errors clustered by PSU. One and two stars indicate statistical significance at a level of five and one percent, respectively.

Table 5 Allowing for More Flexible Effects of Downward Mobility (continued)

Dependent variable: Supports redistribution	
C. Indicators of shocks by number of shocks	
C.1. Two dummies	
One shock or more	2.96**
	(0.68)
C.2. Three dummies	
1-8 shocks	2.32**
	(0.71)
9-17 shocks	5.60**
	(1.10)
C.3. Five dummies	
1-4 shocks	1.67*
	(0.77)
5-8 shocks	4.27**
	(1.07)
9-12 shocks	6.19**
	(1.59)
13-17 shocks	5.54**
	(1.24)
D. Control for the ebb and flow of downward mobility	
D.1.Number of changes in downward mobility only	
Number of changes in downward mobility	0.56
	(0.29)
D.2. Number of shocks and number of changes in mobility	
Number of changes in downward mobility	0.21
	(0.29)
Responded to shocks by taking extreme measures (number of years)	0.41**
	(0.08)

Notes: The numbers in each sub-panel are the estimates of measures of *downward mobility* from a separate regression of *supports redistribution* on measures of *downward mobility*, PSU fixed effects, and a set of individual- and household characteristics. All estimates are multiplied by 100 for legibility. *Downward mobility* is a function of *responded to shocks by taking extreme measures* for the 1989-2005 period; *supports redistribution* equals one if an individual supports income redistribution in 2006 or zero otherwise. The figures in parentheses are robust standard errors clustered by PSU. One and two stars indicate statistical significance at a level of five and one percent, respectively.

Table 6 The Effects of Downward Mobility by Individual Characteristics

Dependent variable: Supports redistribution								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Downward mobility								
Responded to shocks by taking extreme measures	0.37**	0.48**	0.36**	0.42**	0.42**	0.52**	0.31**	0.44**
(number of years)	(0.09)	(0.10)	(0.08)	(0.09)	(0.08)	(0.17)	(0.12)	(0.08)
Factors and interactions with downward mobility								
Male	-2.60**							
	(0.73)							
… * *shocks*	0.14							
	(0.12)							
Older than 49 years		6.39**						
		(0.76)						
… * *shocks*		-0.03						
		(0.12)						
Has college degree			-5.66**					
			(0.84)					
… * *shocks*			0.44**					
			(0.17)					
Rich in 1989				0.58				
				(0.77)				
… * *shocks*				-0.09				
				(0.13)				

Notes: The numbers in each column are the estimates of a measure of *downward mobility* and its interaction term with an individual characteristics from a separate regression of *supports redistribution* on *downward mobility*, its interaction, PSU fixed effects, and a set of individual- and household characteristics. All estimates are multiplied by 100 for legibility. *Downward mobility* is a function of *responded to shocks by taking extreme measures* for the 1989-2005 period; *supports redistribution* equals one if an individual supports income redistribution in 2006 or zero otherwise. The figures in parentheses are robust standard errors clustered by PSU. One and two stars indicate statistical significance at a level of five and one percent, respectively.

Table 6 The Effects of Downward Mobility by Individual Characteristics (continued)

Dependent variable: Supports redistribution								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A member of ethnic minority					2.37			
					(1.35)			
… * *shocks*					0.02			
					(0.19)			
Believed in efforts in 1989						2.83**		
						(0.88)		
… * *shocks*						-0.14		
						(0.18)		
Trusted people in 1989							1.83*	
							(0.77)	
… * *shocks*							0.15	
							(0.13)	
Father was a member of communist party								-0.35
								(0.95)
… * *shocks*								-0.06
								(0.18)
Adjusted R^2	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.26
Number of obs.	26,925	26,925	26,925	24,365	26,925	25,868	23,162	25,883

Notes: The numbers in each column are the estimates of a measure of *downward mobility* and its interaction term with an individual characteristics from a separate regression of *supports redistribution* on *downward mobility*, its interaction, PSU fixed effects, and a set of individual- and household characteristics. All estimates are multiplied by 100 for legibility. *Downward mobility* is a function of *responded to shocks by taking extreme measures* for the 1989-2005 period; *supports redistribution* equals one if an individual supports income redistribution in 2006 or zero otherwise. The figures in parentheses are robust standard errors clustered by PSU. One and two stars indicate statistical significance at a level of five and one percent, respectively.

Table 7 Allowing Different Groups to be Affected Differently by the Covariates

Dependent variable: Supports redistribution	Yes	No
	(1)	(2)
A. Male		
Downward mobility	0.44**	0.41**
	(0.13)	(0.10)
B. Older than 50 years		
Downward mobility	0.54**	0.37**
	(0.10)	(0.11)
C. Has college degree		
Downward mobility	0.60**	0.39**
	(0.23)	(0.08)
D. Rich in 1989		
Downward mobility	0.21	0.47**
	(0.14)	(0.10)
E. A member of ethnic minority		
Downward mobility	0.74*	0.41**
	(0.30)	(0.08)
F. Believe in efforts in 1989		
Downward mobility	0.35**	0.53*
	(0.08)	(0.22)
G. Trust people in 1989		
Downward mobility	0.40**	0.37*
	(0.10)	(0.15)
H. Father was a member of communist party		
Downward mobility	0.16	0.45**
	(0.24)	(0.08)

Notes: The number in each cell is the estimate of a measure of *downward mobility* from a separate regression of *supports redistribution* on *downward mobility*, PSU fixed effects, and a set of individual- and household characteristics on a group of individuals defined in the left column and the header. (The top-right cell, for example, is for females only.) All estimates are multiplied by 100 for legibility. *Downward mobility* is the number of years an individual had responded to shocks by taking extreme measures in the 1989-2005 period; *supports redistribution* equals one if an individual supports income redistribution in 2006 or zero otherwise. The figures in parentheses are robust standard errors clustered by PSU. One and two stars indicate statistical significance at a level of five and one percent, respectively.

Table 8 The Effects of Downward Mobility by Groups of Countries

Dependent variable: Supports redistribution	CIS	EU	Others
	(1)	(2)	(3)
Downward mobility			
Responded to shocks by taking extreme measures	0.33**	0.83**	0.22
(number of years)	(0.11)	(0.15)	(0.13)
Adjusted R^2	0.31	0.22	0.21
Number of obs.	10,980	9,977	5,968

Notes: The number in each column is the estimate of a measure of *downward mobility* from a separate regression of *supports redistribution* on *downward mobility*, PSU fixed effects, and a set of individual- and household characteristics on a group of individuals lived in the group of countries defined in the header. All estimates are multiplied by 100 for legibility. *Downward mobility* is the number of years an individual had responded to shocks by taking extreme measures in the 1989-2005 period; *supports redistribution* equals one if an individual supports income redistribution in 2006 or zero otherwise. The figures in parentheses are robust standard errors clustered by PSU. One and two stars indicate statistical significance at a level of five and one percent, respectively.

Table 9 Using Alternative Measures of Support for Redistribution

Dependent variable: Agrees with the following	State should guarantee employment	State should guarantee low prices	Poverty is because injustice in society	Market economy is not preferable
	(1)	(2)	(3)	(4)
Downward mobility				
Responded to shocks by taking extreme measures	0.22**	0.26**	0.75**	0.55**
(number of years)	(0.06)	(0.07)	(0.08)	(0.08)
Adjusted R^2	0.23	0.23	0.22	0.20
Number of obs.	26,925	26,915	25429	26,900

Notes: The number in each column is the estimate of a measure of *downward mobility* from a separate regression of a measure of *supports redistribution* on *downward mobility*, PSU fixed effects, and a set of individual- and household characteristics. All estimates are multiplied by 100 for legibility. *Downward mobility* is the number of years an individual had responded to shocks by taking extreme measures in the 1989-2005 period; *supports redistribution* is an indicator defined in the header. The figures in parentheses are robust standard errors clustered by PSU. One and two stars indicate statistical significance at a level of five and one percent, respectively.

Table 10 Using Alternative Measures of Downward Mobility

Dependent variable: Supports redistribution						
	(1)	(2)	(3)	(4)	(5)	(6)
Downward mobility						
Move down the economic ladder	3.66**					3.38**
	(0.70)					(0.75)
Worse in life than most high school classmates		5.25**				
		(0.82)				
Worse in life than parents			2.98**			
			(0.66)			
Household is worse now than in 1989				7.05**		
				(0.76)		
Children will have worse future					4.51**	4.35**
					(0.72)	(0.75)
Adjusted R^2	0.27	0.27	0.27	0.27	0.27	0.27
Number of obs.	24,292	18,161	24,841	23,296	23,445	21,266

Notes: The numbers in each column are the estimates of measures of *downward mobility* from a separate regression of s*upports redistribution* on measures of *downward mobility*, PSU fixed effects, and a set of individual- and household characteristics. All estimates are multiplied by 100 for legibility. Measures of *downward mobility* are indicators defined in the left column; *supports redistribution* equals one if an individual supports income redistribution in 2006 or zero otherwise. The figures in parentheses are robust standard errors clustered by PSU. One and two stars indicate statistical significance at a level of five and one percent, respectively.

Table 11 Using the Recent Global Crisis as a Measure of Downward Mobility

Dependent variable: Agrees with the followings	Income should be more equal			Poverty is because injustice in society			Market economy is not preferable		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Downward mobility									
Affected much by the economic crisis	2.16**			8.24**			3.40**		
	(0.79)			(0.89)			(0.89)		
Responded to crisis by taking extreme measures		4.27**			9.78**			6.31**	
		(0.68)			(0.77)			(0.78)	
Responded to crisis by taking some measures			2.63**			9.56**			5.79**
			(0.82)			(0.88)			(0.92)
Adjusted R^2	0.33	0.33	0.33	0.22	0.23	0.23	0.23	0.24	0.24
Number of obs.	27,441	29,329	29329	26,114	27,826	27,826	24,208	25,651	25,651

Notes: The number in each column is the estimate of a measure of *downward mobility* from a separate regression of a measure of s*upports redistribution* on a measure of *downward mobility*, PSU fixed effects, and a set of individual- and household characteristics. All estimates are multiplied by 100 for legibility. Measures of *downward mobility* are indicators defined in the left column; *supports redistribution* equals one if an individual agrees with the statement in the header. The figures in parentheses are robust standard errors clustered by PSU. One and two stars indicate statistical significance at a level of five and one percent, respectively.

Table 12 Using Samples with Matched Perceived- and Actual Incomes

Dependent variable: Supports redistribution	Matched	The difference is one or less	The difference is two or less	The difference is three or less
	(1)	(2)	(3)	(4)
Downward mobility				
Responded to shocks by taking extreme measures	0.50*	0.50**	0.43**	0.41**
(number of years)	(0.25)	(0.12)	(0.10)	(0.09)
Adjusted R^2	0.26	0.28	0.28	0.28
Number of obs.	3,195	8,844	14131	18,600

Notes: The number in each column is the estimate of *downward mobility* from a separate regression of s*upports redistribution* on *downward mobility*, PSU fixed effects, and a set of individual- and household characteristics on a group of individuals defined in the header. All estimates are multiplied by 100 for legibility. *Downward mobility* is the number of years an individual had responded to shocks by taking extreme measures in the 1989-2005 period; *supports redistribution* equals one if an individual supports income redistribution in 2006 or zero otherwise. The figures in parentheses are robust standard errors clustered by PSU. One and two stars indicate statistical significance at a level of five and one percent, respectively.

Table 13 Comparing the Strength of Unobservable Factors in Regression Models

	(1)	(2)	(3)	(4)
Downward mobility				
Responded to shocks by taking extreme measures			0.73	0.76
(number of years)			0.56	0.58
Experienced labor market shocks (number of years)		-0.16		-0.31
		-0.10		-0.22
Both the above (number of years)	0.44			
	0.34			
R ratios	3.40	1.98	3.35	3.24
				2.28

Notes: The number in each cell is the estimate of measures of *downward mobility* from a separate regression of *supports redistribution* on measures of *downward mobility* using the restricted (the first number) or full model (the second). All estimates are multiplied by 100 for legibility. The numbers in the last row are the R-ratios; in column 4 the first number is the R-ratio for responded to shocks by taking extreme measures, the second experienced labor market shocks. They are calculated as $\widehat{\beta_{Full}}/(\widehat{\beta_{Restricted}} - \widehat{\beta_{Full}})$.