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Social Preferences, Public Good Provision, Social Capital and Positional Concerns: Empirical Evidence from the South Caucasus

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Abstract

This paper aims to study the impact of positional concerns on an understudied set of policy-relevant variables: social preferences, public good provision, and social capital. We utilize data from the "Caucasus Barometer" survey administered in three post-Soviet transition economies: Armenia, Azerbaijan, and Georgia. Controlling for absolute income and other individual and household characteristics, we find that the relative deprivation of a household has negative impacts on its members' social preferences, public good provision, and social capital. In contrast, relative advantage has only positive influences on the variables of interest (if any).

JEL Classifications: D60; D63; P30; Z13.
Keywords: Positional Concern; Social Capital; Social Preferences; Public Good; Reference Group.

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1. Introduction

Individuals are concerned with their relative position in society and tend to compare themselves with relevant others (Luttmer, 2005). In the literature, such positional concerns are dubbed the 'comparison effect' (e.g., Senik, 2004) or 'keeping up with the Joneses effect' (e.g., Aronsson and Johansson-Stenman, 2008) and can have a detrimental impact on human behavior and feelings. In particular, the 'comparison effect' can increase consumption of redundant goods and services (e.g., Corneo and Jeanne, 1997; Duesenberry, 1949; Frank, 1985; Alpizar et al., 2005; Solnick and Hemenway, 2005), intensify temporary emigration (Antinyan and Corazzini, 2017; Stark and Yitzhaki, 1988; Stark and Taylor, 1991; Bhandari, 2004: Quinn, 2006), shrink life satisfaction (Luttmer, 2005; Clark and Oswald, 1996; Ferrer-i-Carbonell, 2005; Antinyan, 2016; Cojocaru, 2016), promote risk-taking (Hill and Buss, 2010; Müller and Rau, 2016), intensify social protests (van Stekelenburg and Klandermans, 2013), and destroy social capital (Fischer and Torgler, 2013).

Nonetheless, despite its importance, research on the effects of positional concerns on individuals' attitudes and behavior in certain policy-relevant areas is lacking. To the best of our knowledge, there is no empirical evidence of the impact of relative position on social preferences and public good provision. This paper closes the gap by studying the influence of relative positional advantage and deprivation on social preferences (particularly, altruism)–measured by the willingness to help disadvantaged others–and public good provision–measured by the willingness to volunteer–in the three republics of the South Caucasus: Armenia, Azerbaijan, and Georgia. In addition, the paper investigates the relationship between relative position and social capital in the South Caucasus, measured by trust toward others and trust toward secular institutions. For our purposes, we utilize a nationwide (cross-sectional) survey administered in Armenia, Azerbaijan, and Georgia and regress the variables of interest on dummies that indicate the relative position of the respondents' households in the

neighborhood (i.e., relatively deprived or relatively advantaged), controlling for households' absolute income and other relevant socio-demographic dimensions.

The contribution of our work is fewfold.

First, we add to the literature on positional concerns, providing evidence of the impact of relative standing on a novel set of policy-related variables (social preferences and public good provision). Social preferences play a vital role in the modern welfare state, in which a substantial fraction of total income is transferred from the better off to the less well off (Fong et al., 2005). As stated by Bowles and Hwang (2008, p.1811): "*Social preferences such as altruism, reciprocity, intrinsic motivation and a desire to uphold ethical norms are essential to good government, often facilitating socially desirable allocations that would be unattainable by incentives that appeal solely to self-interest.*" Similarly, the provision of public goods is essential for the well-being and proper functioning of any society (Hauert et al., 2002). Consequently, some of the most fundamental questions about the organization of society center around issues raised by the presence of public goods (Ledyard, 1997). Volunteering can be considered an important source of public good provision, as volunteers can be seen to be driven by the motive to dedicate time, effort, and money to produce and increase the total supply of public goods and services (Duncan, 1999; Ziemek, 2006). In addition to contributing to the literature on positional concerns, our findings also enrich the literature on social preferences and public goods. Despite the immense body of research, the influence of positional concerns on public good provision (see Ledyard, 1997; Chaudhuri, 2011, for excellent reviews) and social preferences (i.e., an individual's willingness to help the less well-off inside or outside the reference group) has been largely neglected (see Fehr and Schmidt, 2006; Cooper and Kagel, 2014, for excellent reviews).[4] We find a negative relationship between relative

[4] We are also aware of the experimental literature that studies the impact of relative position on bargaining behavior in ultimatum games (e.g., Bohnet and Zeckhauser, 2004; Kagel and Wolfe, 2001; McDonald et al., 2013, among others) and the effect of endowment inequality on cooperation in public good games (e.g., Cherry et al., 2005; Buckley and Croson, 2006, and the references therein).

deprivation and willingness to help others and to volunteer. We interpret this finding as evidence that the relative disadvantage may diminish the social preferences of individuals as well as their willingness to contribute to public goods. Meanwhile, the positive relationship between relative advantage, willingness to help others and to volunteer in (some of) our regressions, indicates that relative advantage may have the opposite effect.

Our third contribution is to extend the paper of Fischer and Torgler (2013) to lower middle-income and upper middle-income post-Soviet countries in transition. The authors illustrate the social capital-lowering effect of positional concerns in 26 (mostly) institutionally and economically well-developed countries and justifiably posit that their findings can have important implications for Third World economies, though a direct test of this claim seems missing in the literature. Given the importance of social capital for macroeconomic and government performance (Guiso, Sapienza and Zingales, 2004; Knack and Keefer, 1997; Bjørnskov and Méon, 2015) it is vital to understand whether positional concerns can serve as a possible factor limiting development of social capital in the region. In line with the seminal paper of Fischer and Torgler (2013), we manifest a negative relationship between relative deprivation and trust toward other members of society and secular institutions. Differently from Fischer and Torgler (2013), our findings indicate a positive correlation between relative advantage and trust toward others and secular institutions in society. Thus, it seems that a positional disadvantage reduces one's trust toward society members and state institutions, while a positional advantage has the opposite effect. We will explain these findings in more detail later in the text.

It can be argued that our estimates may be biased by possible endogeneity, which can arise either because of omitted variable bias or reverse causality between some of the dependent variables and the covariates of interest that capture the relative well-being of individuals. We try to minimize the omitted variable bias by deliberately screening the literature and including

those independent variables in the regression models that are proven to influence social capital, social preferences and public good provision, and which are widely used in the research on positional concerns. Nevertheless, we still cannot account for individual personal traits that may drive respondents' perceptions, feelings and behavior.[5] As for the problem of reverse causality, Fischer and Torgler (2013) discuss the causal impact of positional concerns on social capital utilizing an instrumental variable approach (IV from here onward). Given this evidence, we have strong reasons to believe that in our estimations causality runs from positional concerns to social capital and not the other way around. Regarding potential reverse causality between social preferences, public good provision and positional concerns, we are not aware of any research illustrating a causal negative impact of social preferences and public good provision on relative disadvantage (i.e., higher social preferences or willingness to provide public goods is linked to a higher likelihood that a person either is or feels materially disadvantaged relative to her reference group). Thus, this understudied link cannot be fully excluded, nevertheless, in our understanding, this link is contrary to the bulk of theoretical and empirical evidence on positional concerns, which has generally found that an individual strives to outperform the members of her reference group (e.g., Frank 1985, 2008) and suffers utility losses whenever she lags behind (e.g., Ferrer-i-Carbonnel, 2005, Antinyan, 2016).

To fully rule out the potential endogeneity problem, we cannot utilize a conventional IV approach as the survey does not contain appropriate variables to determine respondent-level instruments. Under these circumstances, we estimate an IV model that uses heteroskedasticity-based instruments generated through Lewbel's method (Lewbel, 2012). Our findings are robust to different estimation approaches. We will detail this point further in the text.

[5] Life satisfaction research illustrates the impact of positional concerns on life satisfaction both with panel data estimators, that allows one to control for individual personal traits, as well as with cross-sectional data estimators, that omit individual personal traits (e.g., Clark and Oswald 1996; Ferrer-i-Carbonell, 2005; McBride, 2001; Senik, 2004). Stemming from this evidence, we have reason to think that utilizing cross-sectional data and omitting individual personal traits may not substantially bias our results.

The rest of the paper is structured as follows. Section 2 briefly discusses the region and the dataset. Section 3 describes the empirical strategy. Section 4 illustrates the results. Section 5 provides the robustness checks and section 6 concludes the paper.

2. The Region and the Dataset

In this study, we focus our attention on the three former Soviet republics in the South Caucasus, Armenia, Azerbaijan, and Georgia. The three republics share many common problems with other post-Soviet states, as even after 25 years of independence, the transition processes have not concluded. One can still find evidence of relatively low levels of development of democratic institutions (e.g., *Freedom in the World Index*), high corruption (Transparency International, 2015), as well as high poverty (World Bank, 2016) and inequality rates (EBRD, 2016). Table 1 summarizes the economic performance and macroeconomic conditions of these countries from 2010 to 2015.

-Table 1 here-

As can be inferred from Table 1, growth rates after the economic crisis of 2008 remain shallow in the region. Since the mid-2000s, different development patterns have emerged in the republics. In particular, relative to Armenia and Azerbaijan, Georgia has had considerable success in implanting rule of law, fighting corruption, and improving the business climate. Due to favorable hydrocarbon resources, Azerbaijan evidenced impressive growth rates in the first decade of the 2000s, enabling it to combat poverty and unemployment, though civil and political rights remain severely suppressed. There were no major macro shocks in the period under scrutiny, as witnessed by low and stable inflation rates in all three countries. See Antinyan (2016) for a complementary description of the region.

For the purposes of our paper, we utilize cross-sectional data from the nationwide "Caucasus Barometer" survey, developed by the Caucasus Research Resource Centers (CRRC from here onward). To the best of our knowledge, the "Caucasus Barometer" is the only survey that

collects comparable data in Armenia, Azerbaijan, and Georgia, and contains a rich set of variables assessing the socio-demographic and economic conditions of the respondents at both individual and household levels. In the following analysis, we use information from the 2010–2013 waves.[6]

3. Empirical Strategy

3.1.The Regression Equation and the Description of the Variables

The main purpose of the current study is to empirically test the effect of positional concerns on social preferences, social capital, and the willingness to provide public goods. Thus, we estimate a regression equation of the following form:

$$Y_{ijt} = \beta_o + \beta_1 \times RelInc_{ijt} + \beta_3 \times X_{ijt} + \beta_3 \times T_t + \beta_4 \times C_j + \beta_5 \times REG_j + \varepsilon_{ijt}. \qquad (1)$$

$RelInc_{ijt}$ indicates the relative position of individual i in country j at time t; X_{ijt} includes the absolute income of individual i in country j at time t as well as additional individual and household socio-demographic control variables, including age, gender, number of household members, education, marital and employment status.[7] These independent variables are specified based on data availability and are in line with previous studies on happiness, migration and social capital (e.g., Fischer and Torgler, 2013; Antinyan, 2016; Antinyan and Corazzini, 2017; Ferrer-i-Carbonell, 2005). Furthermore, most of the specified variables are important drivers of social preferences, trust and public good provision.[8] T_t, C_j and REG_j dummy variables control for (other unobserved) temporal, national, and regional differences.

[6] The full sample consists of 24,813 (missing and non-missing) observations, distributed as follows: Armenia–8503, Azerbaijan–7299, and Georgia–9011. Observations coded as "Interviewer Error," "Refuse to Answer," "Break Off," "Don't Know," are excluded from the analysis. We use individual weights provided by CRRC in order to assure representativeness of the sample. Because of bureaucratic difficulties, the survey did not take place in 2014, and includes Armenia and Georgia from 2015.

[7] Please refer to Table A1 in the appendix for the descriptive statistics.

[8] For instance, social preferences, public good provision and trust vary by gender (e.g., Croson and Gneezy, 2009; Nowell and Tinkler, 1994, Buchan et al., 2008), absolute income (Smeets et al., 2015; Erkal et al., 2011; Johansson-Stenman et al., 2005), regional differences within a country (e.g., Bigoni et al., 2016; Bigoni et al., 2018) and education (Huang et al., 2009).

The dependent variable Y_{ijt} is either the self-reported social preferences (altruism) of individual i in country j at time t, or the self-reported willingness to provide public goods, or self-reported social capital.

To proxy the altruism of the individuals, we utilize the following question measured on a scale from "1" (not important at all) to "5" (extremely important): *"Please tell me, in your opinion, how important is it for a good citizen to support people who are worse off than themselves?"* One of the caveats to our approach could be the problem of hypothetical bias, since the question eliciting altruism is hypothetical and might not reveal the real preferences of respondents. Nevertheless, there is (experimental) evidence in the literature that social preferences may be stable across hypothetical and incentivized scenarios (e.g., Kogut and Ritov, 2005a; Kogut and Ritov, 2005b; Ben-Ner et al., 2008).

Respondents' opinion of the importance of volunteering is used to assess their willingness to provide public goods. Specifically, the question states *"Using this CARD, where '1' means 'Not important at all' and '10' means 'Extremely important,' please tell me, in your opinion, how important or unimportant is it for a good citizen to do volunteer work meeting the needs of the community without expecting any compensation?"* As in the previous case, concerns of hypothetical bias may flaw the conclusions reached using this question. However, some (experimental) studies illustrate no difference between the hypothetical and incentivized provision of public goods (e.g., Carlsson and Martinsson, 2001).

In line with Fischer and Torgler (2013), we distinguish between three facets of social capital: horizontal trust, vertical trust, and norm compliance. However, the survey does not contain questions to measure the norm compliance of respondents, so we do not discuss this facet in the paper. We proxy horizontal (generalized) trust with the following question measured on a scale from "1" (you can't be too careful) to "10" (most people can be trusted): *"Generally*

speaking, would you say that most people in /country/ can be trusted, or that you can't be too careful in dealing with people?" The second facet of social capital is captured by questions that assess respondents' trust in state institutions: *"I will read out a list of social institutions and political unions. Please indicate your level of trust toward each of them on a 5-point scale, where '1' means 'Fully distrust,' and '5' means 'Fully trust'"* The institutions were shuffled for each respondent to exclude potential order effects. We concentrated our attention on the three principal decision-making institutions in the region: the parliament, the president, and the executive government (prime minister and the ministers). We constructed a combined index by averaging the trust toward the seminal institutions and treating it as our variable of interest. One may argue that the questions eliciting social preferences and public good provision refer to a good citizen, rather than to the specific respondent.[9] Helping others and providing public goods can be perceived as sensitive issues and a respondent may not report her true preferences when answering these questions in order not to harm her identity because of concerns about social approval.[10] For instance, experiments illustrate that revealing the identities of individuals either to the experimenters or to their group members can cause individuals to be more cooperative and other-regarding (e.g., Burnham, 2003; Hoffman et al., 1996; Rege and Telle, 2004). The questions used in this study project the attitudes and feelings onto a hypothetical third person. Thus, we assume that the respondent will use her own preferences while choosing on behalf of a good citizen.[11]

In order to identify the respondents' relative position vis-à-vis the reference group, the literature suggests two approaches. First, one can utilize the objective measure of welfare, which compares an individual's absolute income (or consumption) with the average income

[9] We thank an anonymous referee for this comment.
[10] Please note that the survey is interactive: an interviewer records the answers of the interviewee.
[11] In unrelated studies, Alpizar et al. (2005), Carlsson et al. (2007) and Johanson-Stenman et al. (2002) administer a survey experiment in which respondents make decisions on behalf of their future grandchildren. This is done to liberate the decision maker from her own circumstances and assumes that respondents will apply their own preferences when making choices on their grandchild's behalf.

(or consumption) of her reference group (e.g., Ferrer-i-Carbonell, 2005). Second, one can opt for the subjective measure of welfare, which serves as a viable source of additional information, however, it is largely neglected by scholars (see the excellent discussion in Ravallion and Lokshin, 2010). In a subjective measure, survey respondents are asked to compare their well-being with that of their comparison group. Both approaches yield qualitatively similar results, when assessing the impact of relative concerns on subjective well-being (e.g., Ravallion and Lokshin, 2010). In this paper, we adopt the second approach and utilize self-reported information on a respondent's perception of the relative standing of her household in comparison to that of her neighbors. The survey participants answered the following question on a scale from "1" (Very Poor) to "5" (Very Good) *"Relative to most of the households around you, would you describe the current economic condition of your household as ...."* We implicitly assume that the reference group of the respondent contains the households in the same neighborhood, and it is left to the respondent to judge her economic status compared to that of her comparison group.[12] Based on the responses, we construct the dummy variable *Above Reference Group* if the individual perceives the conditions of her household as either 'Very Good' or 'Good' vis-à-vis the reference group. Similarly, we create the dummy variable *Below Reference Group* if the respondent's answer is either 'Poor' or 'Very Poor.' Individuals who perceive themselves to be neither disadvantaged nor advantaged compared with surrounding households constitute the reference group.

In addition to the relative income measures, we need to evaluate the absolute income of the household of the respondent. The inclusion of absolute income variables ensures separate identification of relative and absolute income effects. We use respondents' answers to the question *"Which of the following statements best describes the current economic situation of*

[12] At the moment, there is no consensus on the definition of the reference group in the literature, and it can include the entire population of the country (e.g., Easterlin 1995), professional peers (Senik, 2004, 2008) or neighbors living in the same community (e.g., Bhandari, 2004; Luttmer, 2005; Quinn, 2006).

your household?" to categorize their households into different income groups. Specifically, we construct a *Low-Income Group* dummy when respondents report *'Not enough money for food'* or *'Enough money for food only, but not for clothes,'* and *High-Income Group* dummy, when respondents report *'Enough money for everything necessary.'* Individuals who respond, *"Enough money for food and clothes but not for expensive durables"* and *"Enough money for some durables (fridge, etc.)"* form the reference category we call the *Average-Income Group.*[13]

3.2.The Estimation Approach

All our dependent variables are measured on a scale from '1' to '10' or from '1' to '5.' First, we treat the outcome variables as interval variables and estimate OLS models. Second, to check the robustness of our results, we preserve the ordinal nature of the scale and estimate ordered probit models. Stemming from research on life satisfaction, there should be (qualitatively) very little difference between the results of OLS and ordered probit (or logit) models (Ferrer-i-Carbonell and Frijters, 2004). Throughout the text, we only interpret those coefficients that are robust across OLS and ordered probit models. Further, we account for the potential heteroskedasticity of residuals by introducing robust standard errors. For each outcome variable we run pooled sample and country-specific regressions. In the tables below, we report only the coefficients of relative and absolute income variables for the sake of brevity and clarity of the text.[14]

[13] There is a direct question assessing household income in the survey, though it may not be a reliable measure for the average yearly household income for a few reasons. The question is: "*Household income is a sum of monetary income of all household members. Speaking about monetary income of all your household members last month, to which of the following groups does your household belong?"* First, for many families in the South Caucasus, remittances have significant weight in the household budget. Given that residents of the region often migrate for short-term seasonal work (e.g., see Roberts and Banaian, 2004, for the case of Armenia), household income for the last month may not reflect the average monthly household income over the entire year. Second, given micro- and macro-economic uncertainties faced by economies in transition (Senik, 2004), the income of self-employed respondents can be quite volatile from month to month. The proxy used in the study allows us to avoid PPP adjustment of income, given that the purchasing power of money differs in the three republics.

[14] An interested reader can refer to appendix A for the complete results.

4. Results

4.1.Social Preferences, Public Good Provision and Positional Concerns

Tables 2 and 3 illustrate the effect of positional concerns on social preferences and public good provision.

-Table 2 here-

-Table 3 here-

The highly negative and significant coefficient of *Below Average Dummy* in the pooled and country-specific regressions in Tables 2 and 3 suggests a negative correlation between relative deprivation and social preferences, as well as between relative deprivation and public good provision. Stemming from the literature on positional concerns, we believe that relative deprivation may diminish the social preferences of individuals as well as their willingness to provide public goods. Thus, compared to the reference category, relatively deprived individuals seem to be less willing to help those who are worse off than they are. Moreover, relatively deprived individuals may perceive volunteering for the community as being less important. Some studies have found that relative deprivation generates feelings of envy, hostility, grievance, frustration, and social injustice (Hill and Buss, 2006; Klandermans, 2015; Moscatelli et al., 2014; Kawachia et al., 1999). These negative feelings may trigger a relatively deprived individual to exhibit an unfavorable attitude toward doing something good for the community (which may be perceived as being responsible for her misery) as well as exhibiting other-regarding behavior.[15]

Interestingly, as indicated by the coefficient of the *Above Average Dummy*, we also document

[15] A careful reader may argue about potential reverse causality between social preferences, public good provision and relative advantage. For instance, the higher one's social preferences, the more the person may donate to a charity or devote time to help others, which can result in lower personal or household income and cause her to be materially disadvantaged relative to her reference group. Our argument is threefold. First, to the best of our knowledge we are not aware of research that illustrates a causal link between social preferences and relative disadvantage. Second, this argument seems to oppose a sizeable literature on positional concerns, which argues that individuals strive to materially outperform the members of their reference groups and suffer utility losses whenever they lag behind. Third, we try to address the potential endogeneity problem in the robustness section of the paper.

a positive relationship between relative advantage and social preferences, as well as between relative advantage and public good provision. Nevertheless, this relationship is heterogeneous across countries. While in Armenia and Azerbaijan, relative advantage is positively correlated with the social preferences of individuals compared to the reference category, in Georgia there is no effect. Similarly, relative advantage is positively related to the willingness to exhibit volunteering behavior only in Azerbaijan. Based on the extant research on positional concerns, we interpret this relationship as a positive impact of positional advantage on social preferences and willingness to provide public goods.[16] However, we should note that we do not have a meaningful explanation for the heterogeneous impact of the positional advantage across countries. So how do we rationalize the finding that relative advantage can make individuals more benevolent and more cooperative? Presumably, being better off than the reference group enhances the social status of the individual. The experimental literature illustrates a positive link between social status and altruism: the higher the status of the decision-maker, the more she donates in a dictator game experiment (e.g., Liebe and Tutic, 2010). A similar link exists between social status and pro-environmental behavior: activating status motives enhances concerns for the environment in an experiment (Griskevicius et al., 2010).

As for absolute income, our findings are in line with the mixed evidence observed in the relevant literature. We document no (robust) difference in attitude toward helping and volunteering across high-, low-, and average-income individuals in Armenia and Azerbaijan. Meanwhile, in Georgia, low-income individuals are more inclined to help the poor and volunteer compared to the reference category. Despite the large literature, there is still no clear understanding of the link between income and social preferences (Erkal et al., 2011). One prevailing finding seems to be the absence of a positive relationship between income and social

[16] Again, one can argue about a potential reverse causality, i.e., the higher one's social preferences or willingness to provide public goods, the higher the likelihood that she becomes relatively advantaged in financial terms. Unfortunately, we do not have a compelling and logical explanation for such a relationship, nor we are aware of any empirical evidence or a theoretical framework to back up such a claim.

preferences (Erkal et al., 2011), which is also documented by our regressions (i.e., high income individuals are not more other-regarding relative to the reference category). We also conducted a Wald test to check for the equality of the high- and low-income coefficients and failed to reject the equality hypothesis in Armenia (F(1, 5988)=0.43, p=0.511) and Azerbaijan (F(1, 4422)=0.32, p=0.569), but Georgia (F(1, 6165=3.30, p=0.07).[17] Similarly, to our knowledge, public good experiments do not provide conclusive evidence regarding absolute income and public good contributions. Again, there seems to be (some) consensus that less wealthy subjects can contribute at least as much as wealthy ones (e.g., Buckley and Croson, 2006; Chan et al., 1996; Cherry et al., 2005), which is again supported by our data. First, there is no difference between the low-income (high-income) group and the reference category. Second, the Wald test cannot reject the equality of high- and low-income coefficients in Armenia (F(1; 5720)=0.08, p=0.784) or in Azerbaijan (F(1; 4145)=0.32, p=0.572) or in Georgia (F(1; 5669)=0.75, p=0.387).

4.2. Social Capital and Positional Concerns

4.2.1. Trust toward Others

First, we fix our attention on the first facet of social capital and analyze the relation between positional concerns and horizontal (generalized) trust. Table 4 illustrates the estimation results.

-Table 4 here-

The negative and significant coefficient of *Below Average Dummy* in pooled and country-specific regressions demonstrates a negative relationship between trust toward others and relative deprivation. Stemming from Fischer and Torgler (2013), we can conclude that relative deprivation has a trust-lowering effect toward others in the South Caucasus. As already discussed, disadvantages in the relative income position can trigger feelings of unhappiness,

[17] The tests of the ordered probit coefficients yield similar results and are available upon request. Moreover. throughout the text we will report the results of the Wald tests based on OLS coefficients only.

envy, hostility, grievance, frustration, and social injustice. *"Possibly, feelings of frustration might be caused by the impression of being economically exploited by those who are better-off in the society, particularly, when individuals believe that the income distribution was the outcome of an unequal distribution of power between economic agents, rather than the result of market forces under perfect competition"* (Fischer and Torgler, 2013, page 1545).

Regarding the relationship between positional advantage and generalized trust, unlike the extant literature (i.e., Fischer and Torgler, 2013) we do not demonstrate a trust-lowering effect of relative advantage in the countries under scrutiny. On the contrary, we even detect that positional advantage exerts a positive effect on trust, as in the case of Azerbaijan. As discussed in section 3.1, positional advantage of individuals may enhance their social status in the reference group/neighborhood. Possessing high status may lead one to trust others (relatively) more (e.g., Lount and Pettit, 2012), since a high-status individual may perceive others as having positive intentions toward her. In traditional societies, the expectations of a high-status individual may well be met, as status has more expositional features than in more contemporary settings, in the sense that a high-status individual is often treated better than the rest.

Turning to absolute income, we find evidence of a negative association between low-income and trust in Georgia and Azerbaijan and no association in Armenia (though the sign of the coefficient is negative). Meanwhile, the generalized trust of high-income individuals can be the same as that of the reference category (as in Armenia and Georgia) or even lower (as in Azerbaijan). The finding that trust does not increase with absolute income may be worth discussing, since other influential studies document a positive relationship between the variables under scrutiny, i.e., the higher the income, the higher the trust in others (e.g., Alesina and La Ferrara, 2002). In countries with significant levels of corruption, high-income individuals may not have accumulated their wealth fairly. Alternatively, though they may have accumulated their wealth in a fair way, society may have an incorrect perception of the origin

of their wealth because of the elevated levels of corruption and inequality of opportunities. Furthermore, given the small economies and limited opportunities for upward mobility, high-income individuals may be afraid of losing their jobs or businesses to similar others with more powerful connections. Given these considerations, the trust of high-income individuals may not be higher than that of average-income individuals, as in the case of Armenia and Georgia, or may even be lower as in the case of Azerbaijan, since the latter is the most corrupt among the three countries.[18] Moreover, the Wald test rejects the equality of high- and low-income coefficients in Azerbaijan on a 5% significance level ($F(1; 4789)= 5.26$, $p=0.022$), implying that the negative effect of high income on trust is even larger than the effect of low income.

4.2.2. Trust toward Secular Institutions

Second, we analyze the impact of positional concerns on trust toward secular institutions (i.e., president, parliament, and government). As mentioned, we construct a combined index by averaging trust toward state institutions and treat it as our dependent variable. Table 5 reports the results of the estimations.

-Table 5 here-

According to the table, we document a negative association between relative deprivation and trust toward state institutions. Furthermore, the negative and significant coefficient of the *Low-Income dummy* presumably implies a trust-lowering effect of absolute poverty. Indeed, individuals may hold the state and its institutions responsible for unfair distribution of societal wealth, which implies that both absolute and relative poverty can be (widely) perceived as consequences of the poor functioning of the state. This problem can be proliferated in post-Soviet republics, because for a period of around 70 years the communist government made virtually all vital socio-economic and political decisions on behalf of its citizens. That said, citizens may hold unusually high expectations for the role of the state on their well-being. In

[18] According to the Transparency International Corruption Perception Index, 2015, Azerbaijan ranks 119/167, while Armenia and Georgia are at 95/167 and 48/167 respectively.

this regard, the citizens of the South Caucasus seem to treat the government much like a parent, expecting it to take care of them as if they were its children.[19]

As indicated by the coefficient of *Above Average* dummy, again we do not observe social capital-destroying effects of positional income advantages, which is distinct from Fischer and Torgler (2013), who manifest that people's trust in secular institutions is lowered as their advantageous relative income position increases. We also find that, compared to the reference group, high absolute income has a positive effect (if any).

5. Robustness Checks

One can argue that, in most cases, the relative and absolute income variables may identify the same, rather than different, effects. First, the low value of the mean square contingency coefficient (or the Phi coefficient) between *Low Income* and *Below Average* dummies (0.344) seems to exclude such a possibility. Likewise, there is also a low association between *High Income* and *Above Average* dummies (0.196), indicating that not all relatively advantaged individuals have high income (or the other way around). Furthermore, we estimate equation (1) dropping $RelInc_{ijt}$. In most of the models, the previously detected relationship between the absolute income and the outcome variables prevails, suggesting that the given relationship is largely not confounded by the inclusion of relative income dummies.

It may also be argued that the estimates can be biased by possible endogeneity which can arise either because of omitted variables or possible reverse causality between the dependent variables and our two main covariates of interest, *Below Reference Group* and *Above Reference Group*.[20]

[19] In the Caucasus Barometer respondents were asked the following question: "Please tell me which of the following statements you agree with? Statement 1: people are like children; the government should take care of them like a parent. Statement 2: government is like an employee; the people should be the bosses who control the government. The majority of the respondents systematically opt for Statement 1 across different waves (2010–2013) of the study. See more at http://caucasusbarometer.org/en/ (retrieved 14.11.2016).

[20] As for the omitted variable bias, personal traits of individuals that are absent from the dataset may have the potential to influence both the relative position of the individuals and the outcome variables. In case of reverse causality, people with lower social capital may be less successful and thus have lower income.

As discussed in the introduction, we tackle the endogeneity problem by estimating an IV model that uses heteroskedasticity-based instruments generated through Lewbel's approach (Lewbel, 2012).[21] Recently, this method has been successfully applied by several authors, including Rashad and Markowits (2007), Emran and Hou (2013), Fortin and Ragued (2016), Denny and Oppedisano, (2013) and Millimet and Roy (2016). Below, we detail the approach to enhance the clarity of the text.

The generic model can be expressed in the following form:

$$Y_1 = X'\beta_1 + Y_2\gamma_1 + \varepsilon_1 \qquad (1)$$

$$Y_2 = X'\beta_2 + \varepsilon_2 \qquad (2)$$

where Y_2 is an endogenous variable ($Corr(Y_2, \varepsilon_1) \neq 0$), Y_1 is an outcome variable, X is a vector of exogenous variables, ε_1 and ε_2 are potentially correlated error terms. In the system of equations above, (1) is the structural equation while (2) is the first-stage equation. In a standard two-stage model, some of elements in X are not part of the structural equation (1) but have the power to explain the endogenous variable Y_2 and enter as instruments in equation (2). In our case, such instruments are missing. To overcome the problem, Lewbel (2012) provides a solution to the identification of the parameters, which requires the following conditions to be held:

1. $E(X'\varepsilon_1) = 0$. This is the standard exogeneity condition for X.
2. $Cov(Z, \varepsilon_2^2) \neq 0$. In other words, heteroskedasticity should be present in the first stage model (testable by a standard Breusch – Pagan test).
3. $Cov(Z, \varepsilon_1\varepsilon_2) = 0$. This condition can be somewhat analogous to the excludability condition of instruments from the structural equation.[22]

[21] Since the early 2000-s, there have been several econometric methods achieving model identification without exclusion restrictions, including Rigobon (2003) and Klein and Vella (2009, 2010), among others. Lewbel (2012) provides an excellent review of this literature.

[22] An interested reader can also refer to the excellent discussion by Denny and Oppedisano (2013).

Z may be either a subset of exogenous variables *X* or equal to *X*.[23]

First, we run the estimations with one endogenous variable, in line with the original Lewbel (2012) method. For this purpose, we use the variable capturing the perception of the relative standing of the respondent's household in its original form measured on a scale from "1" (Very Poor) to "5" (Very Good). The shortcoming is that we cannot disentangle the impact of relative advantage from that of relative disadvantage. Nonetheless, we can clearly illustrate the robust impact of positional concerns on the variables of interest.[24]

Tables B1–B4 in Appendix B illustrate the results of the OLS and the corresponding Lewbel specifications. The significance of the OLS coefficients of *Relative Condition* in the regressions confirms the impact of positional concerns on the dependent variables under scrutiny. Overall, the regression coefficients obtained using Lewbel's approach are largely consistent with those from OLS models. In the case of social preference (Table B1), coefficients of the relative condition are positive and significant for the region and Armenia. Regarding volunteering (Table B2), both OLS and Lewbel estimates are positive and significant in the pooled and country-level models. As for horizontal and vertical trust, (Tables B3 and B4, respectively), the results are robust in all regressions, excepting for Armenia.[25]

In sum, we conclude that positional concerns seem to be important for social preferences, public good provision, and social capital, even if we control for the potential endogeneity in the estimations. While Lewbel's approach addresses the endogeneity problem at least partially, it mainly preserves the impact of positional concerns, allowing us to believe in the validity of the conclusions reached in the baseline specifications in Section 4.

[23] In line with Rashad and Markowits (2007) and Fortin and Ragued (2016), we take *Z* equal to *X*.

[24] To be able to disentangle the impact of relative advantage from that of relative disadvantage, we also estimate the model with two endogenous variables, *Above Average* and *Below Average* dummies (the results are available upon request). Lewbel (2017) discusses the method for binary endogenous variables. Estimations were performed using ivreg2h STATA module (Baum and Schaffer, 2012).

[25] Breush-Pagan tests indicates strong heteroscedasticity in the first-stage model. The test for weak identification, captured by the Kleibergen-Paap F statistic, rejects the null hypothesis (weak correlation between tested instruments and the endogenous regressors), implying that the instruments being tested are not weak.

6. Conclusion

In this paper, we study the impact of positional concerns on social preferences, public good provision and social capital. The variables under scrutiny are crucial for redistributive policies (Fong et al., 2005), the proper functioning of society (Ledyard, 1997), and macroeconomic development (Guiso, Sapienza and Zingalies, 2004) and can be of great relevance for policymakers not only in the region, but also worldwide.

In our view, our study provides a number of noteworthy and novel results. First, we illustrate that relative economic disadvantage of individuals can have detrimental consequences for social preferences as well as for public good provision. Second, we display the social capital-destroying impact of relative economic disadvantage for a novel set of less developed countries. Third, we illustrate that relative economic advantage can have a positive impact on the variables of interest (if any), which differs from the findings in the extant literature.

Since positional concerns (mainly relative economic deprivation) seem to exert a negative effect on social preferences, social capital, and the willingness to provide public goods, this may serve as an additional convincing argument to undertake measures to equalize income distribution in the countries under consideration. For example, in such cases, Duesenberry (1949) suggests that progressive income taxation enhances allocational efficiency. In a similar vein, Frank (1997) proposes a progressive consumption tax, to "…mould the frame of reference in mutually beneficial ways" (p.1844).

Future research may try to extend our analysis to developed Western economies to check the robustness of the negative impact of positional concerns on public good provision and social preferences.

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Appendices

Appendix 1. Tables and Figures which appear in the main body of the text

Table 1: Snapshot of the Countries under Consideration

	Note	Armenia	Azerbaijan	Georgia
GDP growth, %	2010-2015 average	4.4	2.8	5.8
GDP per capita	PPP, current USD, 2015	8419	17776	9699
Gini index[26]	Latest available year, 2015*	32.4	31.8	38.5
Unemployment rate, %	ILO estimates, 2014	17.1	5.2	13.4
Inflation, %	2010-2015 average	5.8	4.1	3.8
Poverty headcount ratio	At national line, 2012	32.4	6.0	14.8
Export (% of GDP)	Goods and services, 2015	29.8	37.8	45.0
Corruption perception index	2016 Rank (Score in parenthesis)	113 (33)	123 (30)	44 (57)

Note. Source for all data except Corruption perception index (CPI), - World Development Indicators database. Source for CPI - Transparency International.

(*) The most recent available data for the Gini index for Azerbaijan dates back to 2008.

[26] It is worth noting that the estimates provided by individual researchers may be much higher than those of the World Bank. For instance, utilizing the Caucasus Barometer data, Habibov (2012) reports the following numbers for 2006: Armenia – 54.4, Azerbaijan – 41.7, Georgia – 61.1. In contrast, the World Bank estimates for the same year are: Armenia – 32.5, Azerbaijan –NA, Georgia – 39.7.

Table 2: Positional Concerns and Social Preferences

	Pooled		Armenia		Georgia		Azerbaijan	
	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit
Above Average	0.434***	0.215***	0.247**	0.122**	0.002	0.004	0.666***	0.318***
	(0.084)	(0.041)	(0.100)	(0.056)	(0.116)	(0.079)	(0.144)	(0.063)
Below Average	-0.270***	-0.121***	-0.210**	-0.083*	-0.266***	-0.173***	-0.259**	-0.101**
	(0.062)	(0.029)	(0.096)	(0.049)	(0.067)	(0.045)	(0.108)	(0.044)
High-Income gr.	-0.225	-0.059	-0.132	-0.032	-0.313	-0.178	-0.246	-0.008
	(0.234)	(0.113)	(0.267)	(0.144)	(0.231)	(0.143)	(0.425)	(0.191)
Low-Income gr.	0.066	0.058**	0.047	0.030	0.108*	0.104**	-0.002	0.032
	(0.054)	(0.026)	(0.079)	(0.042)	(0.063)	(0.044)	(0.101)	(0.041)
F statistics	47.207		13.680		11.905		18.548	
Adjusted R-squared	0.158		0.058		0.064		0.100	
Observations	16,652	16,652	6,014	6,014	6,191	6,191	4,447	4,447
Wald Chi-squared		1,912.146		311.988		286.557		349.683
Pseudo R-squared		0.051		0.023		0.028		0.024

Note. This table reports results from OLS and Ordered Probit Models (with robust standard errors) estimated on the pooled dataset as well as for each country separately. All the regressions include year, regional, and country dummies. Dependent variable: Altruism of Individuals measured on a scale "1" (not important at all) to "5" (extremely important). Independent variables. Low-Income Group=1 if the income is either not enough for food or is enough for food, but not for clothes, 0 otherwise; High-Income Group=1 if income is enough for everything necessary, 0 otherwise; Below Reference Group=1 if the respondent is poorer than her reference group, 0 otherwise; Above Reference Group=1 if the respondent is richer than her reference group, 0 otherwise. Significance Levels: * $p<0.1$; ** $p<0.05$; *** $p<0.01$. For the extended table, please refer to Table A2 in the appendix.

Table 3: Positional Concerns and Public Good

	Pooled		**Armenia**		**Georgia**		**Azerbaijan**	
	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit
Above Average	0.417***	0.167***	0.186	0.077	-0.048	0.004	0.670***	0.263***
	(0.099)	(0.038)	(0.144)	(0.056)	(0.175)	(0.074)	(0.155)	(0.060)
Below Average	-0.350***	-0.131***	-0.385***	-0.143***	-0.198**	-0.091**	-0.420***	-0.160***
	(0.074)	(0.028)	(0.125)	(0.046)	(0.099)	(0.043)	(0.119)	(0.044)
High-Income gr.	0.232	0.133	-0.053	-0.018	0.465	0.193	0.079	0.140
	(0.263)	(0.108)	(0.340)	(0.128)	(0.290)	(0.130)	(0.479)	(0.208)
Low-Income gr.	0.026	0.033	0.041	0.025	0.210**	0.113***	-0.196*	-0.047
	(0.066)	(0.025)	(0.104)	(0.040)	(0.098)	(0.041)	(0.112)	(0.042)
F statistics	25.165		8.459		23.542		18.966	
Adjusted R-squared	0.090		0.039		0.141		0.106	
Observations	15,611	15,611	5,746	5,746	5,695	5,695	4,170	4,170
Wald Chi-squared		1,068.854		209.939		523.681		370.617
Pseudo R-squared		0.025		0.013		0.042		0.026

Note. This table reports results from OLS and Ordered Probit Models (with robust standard errors) estimated on the pooled dataset as well as for each country separately. All the regressions include year, regional, and country dummies. Dependent variable: Willingness to volunteer measured on a scale "1" (not important at all) to "10" (extremely important). Independent variables. Low-Income Group=1 if the income is either not enough for food or is enough for food, but not for clothes, 0 otherwise; High-Income Group=1 if income is enough for everything necessary, 0 otherwise; Below Reference Group=1 if the respondent is poorer than her reference group, 0 otherwise; Above Reference Group=1 if the respondent is richer than her reference group, 0 otherwise. Significance Levels: * $p<0.1$; ** $p<0.05$; *** $p<0.01$. For the extended table, please refer to Table A3 in the appendix.

Table 4: Positional Concerns and Trust toward Others

	Pooled		**Armenia**		**Georgia**		**Azerbaijan**	
	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit
Above Average	0.340***	0.148***	0.169	0.065	0.124	0.053	0.508***	0.233***
	(0.079)	(0.035)	(0.121)	(0.054)	(0.156)	(0.069)	(0.123)	(0.055)
Below Average	-0.392***	-0.173***	-0.240**	-0.096**	-0.234***	-0.108***	-0.517***	-0.240***
	(0.057)	(0.025)	(0.098)	(0.043)	(0.090)	(0.040)	(0.092)	(0.042)
High-Income gr.	-0.776***	-0.373***	-0.149	-0.079	-0.046	-0.015	-1.165***	-0.603***
	(0.213)	(0.102)	(0.325)	(0.144)	(0.320)	(0.142)	(0.301)	(0.157)
Low-Income gr.	-0.369***	-0.162***	-0.015	-0.014	-0.437***	-0.193***	-0.466***	-0.208***
	(0.054)	(0.024)	(0.089)	(0.040)	(0.089)	(0.039)	(0.089)	(0.040)
F statistics	25.700		14.956		6.725		14.908	
Adjusted R-squared	0.086		0.080		0.043		0.086	
Observations	16,306	16,306	5,712	5,712	5,780	5,780	4,814	4,814
Wald Chi-squared		1,077.850		366.358		165.364		332.590
Pseudo R-squared		0.022		0.023		0.011		0.022

Note. This table reports results from OLS and Ordered Probit Models (with robust standard errors) estimated on the pooled dataset as well as for each country separately. All the regressions include year, regional, and country dummies. Dependent variable: Trust toward others measured on a scale "1" (you can't be too careful) to "10" (most people can be trusted). Independent variables. Low-Income Group=1 if the income is either not enough for food or is enough for food, but not for clothes, 0 otherwise; High-Income Group=1 if income is enough for everything necessary, 0 otherwise; Below Reference Group=1 if the respondent is poorer than her reference group, 0 otherwise; Above Reference Group=1 if the respondent is richer than her reference group, 0 otherwise. Significance Levels: * $p<0.1$; ** $p<0.05$; *** $p<0.01$. For the extended table, please refer to Table A4 in the appendix.

Table 5: Positional Concerns and Combined Vertical Trust (Parliament, President, Executive Government)

	Pooled		**Armenia**		**Georgia**		**Azerbaijan**	
	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit
Above Average	0.187***	0.222***	0.056	0.052	0.208***	0.253***	0.229***	0.283***
	(0.027)	(0.031)	(0.051)	(0.048)	(0.049)	(0.062)	(0.038)	(0.048)
Below Average	-0.255***	-0.268***	-0.206***	-0.189***	-0.123***	-0.142***	-0.342***	-0.356***
	(0.022)	(0.024)	(0.040)	(0.038)	(0.034)	(0.040)	(0.035)	(0.039)
High-Income gr.	0.196***	0.273***	0.157	0.153	0.119	0.151	0.256***	0.400***
	(0.061)	(0.079)	(0.151)	(0.141)	(0.096)	(0.120)	(0.082)	(0.120)
Low-Income gr.	-0.087***	-0.085***	-0.081**	-0.073**	-0.065**	-0.066*	-0.075**	-0.079**
	(0.020)	(0.022)	(0.037)	(0.035)	(0.032)	(0.038)	(0.032)	(0.037)
F statistics	129.607		21.647		24.857		52.706	
Adjusted R-squared	0.308		0.087		0.110		0.238	
Number of Observations	20,327	20,327	7,440	7,440	6,855	6,855	6,032	6,032
Wald Chi-squared		4,087.683		488.292		616.053		1,074.415
Pseudo R-squared		0.075		0.022		0.028		0.054

Note. This table reports results from OLS and Ordered Probit Models (with robust standard errors) estimated on the pooled dataset as well as for each country separately. All the regressions include year, regional, and country dummies. Dependent variable: Combined Trust toward state institutions measured on a scale "1" (fully distrust) to "5" (fully trust). Independent variables. Low-Income Group=1 if the income is either not enough for food or is enough for food, but not for clothes, 0 otherwise; High-Income Group=1 if income is enough for everything necessary, 0 otherwise; Below Reference Group=1 if the respondent is poorer than her reference group, 0 otherwise; Above Reference Group=1 if the respondent is richer than her reference group, 0 otherwise. Significance Levels: * $p<0.1$; ** $p<0.05$; *** $p<0.01$. For the extended table, please refer to Table A5 in the appendix.

Appendix A. Descriptive Statistics and Complete Regression Tables

Table A1: The Descriptive Statistics of the Sample

Variable	Pooled Sample	Missing Values for each variable (including Do not Know, Refuse to Answer and the like)
Gender		
Male	10662 (42.969%)	
Female	14110 (56.865%)	
Missing		41 (0.166%)
Relationship Status		
Single	8618 (34.732%)	
Non-Single	16019 (64.559%)	
Missing		176 (0.709%)
Age		
Mean	46.912	
St. Dev.	17.669	
Missing		4 (0.016%)
Number of Household Members		
Mean	3.145	
St. Dev.	1.550	
Missing		2 (0.008%)
Education		
University (higher education, incomplete higher education, postgraduate degree)	6966 (28.074%)	
Below University	17784 (71.672%)	
Missing		63 (0.254%)
Employment Status		
Working (has a job or is self-employed)	9017 (36.340%)	
Not Working	15600 (62.870%)	
Missing values (including Do not Know, Refuse to Answer and similar responses)		196 (0.79%)

Note: The descriptive statistics of the full sample

Table A2: Positional Concerns and Social Preferences

	Pooled		Armenia		Georgia		Azerbaijan	
	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit
Above Average	0.434***	0.215***	0.247**	0.122**	0.002	0.004	0.666***	0.318***
	(0.084)	(0.041)	(0.100)	(0.056)	(0.116)	(0.079)	(0.144)	(0.063)
Below Average	-0.270***	-0.121***	-0.210**	-0.083*	-0.266***	-0.173***	-0.259**	-0.101**
	(0.062)	(0.029)	(0.096)	(0.049)	(0.067)	(0.045)	(0.108)	(0.044)
Capital	-0.828***	-0.299***	1.038***	0.562***	-0.790***	-0.675***	-0.862***	-0.314***
	(0.136)	(0.067)	(0.207)	(0.082)	(0.141)	(0.187)	(0.139)	(0.069)
HH size	0.004	0.002	0.019	0.006	-0.014	-0.008	0.004	0.003
	(0.019)	(0.009)	(0.026)	(0.014)	(0.022)	(0.015)	(0.035)	(0.014)
High-Income gr.	-0.225	-0.059	-0.132	-0.032	-0.313	-0.178	-0.246	-0.008
	(0.234)	(0.113)	(0.267)	(0.144)	(0.231)	(0.143)	(0.425)	(0.191)
Low-Income gr.	0.066	0.058**	0.047	0.030	0.108*	0.104**	-0.002	0.032
	(0.054)	(0.026)	(0.079)	(0.042)	(0.063)	(0.044)	(0.101)	(0.041)
Male	-0.096*	-0.046*	-0.138**	-0.078**	-0.026	-0.030	-0.158	-0.053
	(0.051)	(0.025)	(0.068)	(0.037)	(0.057)	(0.039)	(0.100)	(0.041)
Single	0.092	0.045	-0.041	-0.027	0.042	0.041	0.184*	0.073
	(0.058)	(0.028)	(0.077)	(0.042)	(0.062)	(0.043)	(0.112)	(0.046)
University	0.066	0.041	-0.024	-0.034	0.225***	0.157***	-0.004	0.004
	(0.054)	(0.027)	(0.078)	(0.042)	(0.058)	(0.041)	(0.115)	(0.049)
Working	0.077	0.031	-0.079	-0.040	0.003	-0.006	0.199*	0.075*
	(0.054)	(0.026)	(0.076)	(0.040)	(0.060)	(0.042)	(0.106)	(0.043)
Age1827	-0.225***	-0.112***	0.053	0.030	-0.101	-0.087	-0.442***	-0.173***
	(0.078)	(0.037)	(0.103)	(0.056)	(0.085)	(0.059)	(0.153)	(0.063)
Age2837	-0.113	-0.056	0.031	0.008	-0.068	-0.053	-0.214	-0.082
	(0.073)	(0.036)	(0.102)	(0.054)	(0.081)	(0.057)	(0.148)	(0.061)
Age3847	-0.103	-0.058	0.086	0.029	-0.100	-0.071	-0.204	-0.082
	(0.074)	(0.036)	(0.106)	(0.056)	(0.084)	(0.058)	(0.151)	(0.062)
Age4857	-0.155**	-0.083**	0.029	0.026	-0.177**	-0.132**	-0.237	-0.101
	(0.074)	(0.036)	(0.100)	(0.053)	(0.081)	(0.056)	(0.155)	(0.064)
Country	Yes							

Dummies								
Regional Dummies	Yes		Yes		Yes		Yes	
Year Dummies	Yes		Yes		Yes		Yes	
F statistics	47.207		13.680		11.905		18.548	
Adjusted R-squared	0.158		0.058		0.064		0.100	
Number of Observations	16,652	16,652	6,014	6,014	6,191	6,191	4,447	4,447
Wald Chi-squared		1,912.146		311.988		286.557		349.683
Pseudo R-squared		0.051		0.023		0.028		0.024

Note. This table reports results from OLS and Ordered Probit Models (with robust standard errors) estimated on the pooled dataset as well as for each country separately. All the regressions include year, regional, and country dummies. Dependent variable: Altruism of Individuals measured on a scale "1" (not important at all) to "5" (extremely important). Independent variables. Low-Income Group=1 if the income is either not enough for food or is enough for food, but not for clothes, 0 otherwise; High-Income Group=1 if income is enough for everything necessary, 0 otherwise; Below Reference Group=1 if the respondent is poorer than her reference group, 0 otherwise; Above Reference Group=1 if the respondent is richer than her reference group, 0 otherwise; Capital=1 if the household of the respondent is in the capital, 0 otherwise; Urban=1 if the household of the respondent is in an urban area, but not the capital, 0 otherwise; Male=1 if the respondent is male, 0 otherwise; Single=1 if the respondent is never married, divorced, separated, widow/widower, 0 otherwise; Working=1 if the respondent has a job or is self-employed, 0 otherwise; University Education=1 if the respondent has a higher education, incomplete higher education or a postgraduate degree, 0 otherwise; Number of Household Members- integer number indicating the number of members of the respondent's household; Age 18–27=1 if the respondent is aged between 18 and 27, 0 otherwise; Age 28–37=1 if the respondent is aged between 28 and 37, 0 otherwise; Age 38–47=1 if the respondent is aged between 38 and 47, 0 otherwise; Age 48–57=1 if the respondent is aged between 48 and 57, 0 otherwise. Significance Levels: * $p<0.1$; ** $p<0.05$; *** $p<0.01$.

Table A3: Positional Concerns and Public Good

	Pooled		Armenia		Georgia		Azerbaijan	
	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit
Above Average	0.417***	0.167***	0.186	0.077	-0.048	0.004	0.670***	0.263***
	(0.099)	(0.038)	(0.144)	(0.056)	(0.175)	(0.074)	(0.155)	(0.060)
Below Average	-0.350***	-0.131***	-0.385***	-0.143***	-0.198**	-0.091**	-0.420***	-0.160***
	(0.074)	(0.028)	(0.125)	(0.046)	(0.099)	(0.043)	(0.119)	(0.044)
Capital	-0.942***	-0.336***	0.427**	0.213***	-1.555***	-0.865***	-1.011***	-0.384***
	(0.187)	(0.073)	(0.212)	(0.070)	(0.205)	(0.171)	(0.186)	(0.076)
HH size	0.023	0.008	0.019	0.004	0.017	0.007	0.012	0.004
	(0.023)	(0.009)	(0.033)	(0.013)	(0.034)	(0.014)	(0.038)	(0.014)
High-Income gr.	0.232	0.133	-0.053	-0.018	0.465	0.193	0.079	0.140
	(0.263)	(0.108)	(0.340)	(0.128)	(0.290)	(0.130)	(0.479)	(0.208)
Low-Income gr.	0.026	0.033	0.041	0.025	0.210**	0.113***	-0.196*	-0.047
	(0.066)	(0.025)	(0.104)	(0.040)	(0.098)	(0.041)	(0.112)	(0.042)
Male	-0.090	-0.032	-0.034	-0.016	0.005	0.005	-0.229**	-0.082**
	(0.062)	(0.023)	(0.095)	(0.037)	(0.087)	(0.037)	(0.109)	(0.041)
Single	0.181***	0.062**	0.096	0.030	-0.064	-0.036	0.388***	0.146***
	(0.069)	(0.026)	(0.106)	(0.041)	(0.092)	(0.039)	(0.123)	(0.046)
University	0.050	0.017	-0.024	-0.016	0.133	0.044	0.077	0.030
	(0.066)	(0.025)	(0.103)	(0.039)	(0.092)	(0.038)	(0.125)	(0.048)
Working	0.068	0.021	0.149	0.053	0.016	-0.011	0.067	0.026
	(0.066)	(0.025)	(0.101)	(0.039)	(0.093)	(0.039)	(0.118)	(0.044)
Age1827	-0.437***	-0.166***	-0.158	-0.062	-0.377***	-0.158***	-0.663***	-0.246***
	(0.093)	(0.035)	(0.141)	(0.054)	(0.135)	(0.057)	(0.168)	(0.064)
Age2837	-0.249***	-0.101***	-0.094	-0.048	-0.271**	-0.121**	-0.269	-0.101
	(0.090)	(0.035)	(0.139)	(0.053)	(0.127)	(0.054)	(0.167)	(0.064)
Age3847	-0.055	-0.016	0.115	0.046	0.034	0.025	-0.179	-0.060
	(0.092)	(0.036)	(0.144)	(0.056)	(0.128)	(0.055)	(0.174)	(0.066)
Age4857	-0.185**	-0.073**	0.105	0.039	-0.186	-0.087	-0.315*	-0.117*
	(0.091)	(0.035)	(0.130)	(0.050)	(0.126)	(0.054)	(0.175)	(0.066)
Country Dummies	Yes							

Regional Dummies	Yes		Yes		Yes		Yes	
Year Dummies	Yes		Yes		Yes		Yes	
F statistics	25.165		8.459		23.542		18.966	
Adjusted R-squared	0.090		0.039		0.141		0.106	
Number of Observations	15,611	15,611	5,746	5,746	5,695	5,695	4,170	4,170
Wald Chi-squared		1,068.854		209.939		523.681		370.617
Pseudo R-squared		0.025		0.013		0.042		0.026

Note. This table reports results from OLS and Ordered Probit Models (with robust standard errors) estimated on the pooled dataset as well as for each country separately. All the regressions include year, regional, and country dummies. Dependent variable: Willingness to volunteer measured on a scale "1" (not important at all) to "10" (extremely important). Independent variables. Low-Income Group=1 if the income is either not enough for food or is enough for food, but not for clothes, 0 otherwise; High-Income Group=1 if income is enough for everything necessary, 0 otherwise; Below Reference Group=1 if the respondent is poorer than her reference group, 0 otherwise; Above Reference Group=1 if the respondent is richer than her reference group, 0 otherwise; Capital=1 if the household of the respondent is in the capital, 0 otherwise; Urban=1 if the household of the respondent is in an urban area, but not the capital, 0 otherwise; Male=1 if the respondent is male, 0 otherwise; Single=1 if the respondent is never married, divorced, separated, widow/widower, 0 otherwise; Working=1 if the respondent has a job or is self-employed, 0 otherwise; University Education=1 if the respondent has a higher education, incomplete higher education or a postgraduate degree, 0 otherwise; Number of Household Members- integer number indicating the number of members of the respondent's household; Age 18–27=1 if the respondent is aged between 18 and 27, 0 otherwise; Age 28–37=1 if the respondent is aged between 28 and 37, 0 otherwise; Age 38–47=1 if the respondent is aged between 38 and 47, 0 otherwise; Age 48–57=1 if the respondent is between 48 and 57, 0 otherwise. Significance Levels: * $p<0.1$; ** $p<0.05$; *** $p<0.01$.

Table A4: Positional Concerns and Trust toward Others

	Pooled		Armenia		Georgia		Azerbaijan	
	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit
Above Average	0.340***	0.148***	0.169	0.065	0.124	0.053	0.508***	0.233***
	(0.079)	(0.035)	(0.121)	(0.054)	(0.156)	(0.069)	(0.123)	(0.055)
Below Average	-0.392***	-0.173***	-0.240**	-0.096**	-0.234***	-0.108***	-0.517***	-0.240***
	(0.057)	(0.025)	(0.098)	(0.043)	(0.090)	(0.040)	(0.092)	(0.042)
Capital	-0.899***	-0.391***	0.004	-0.014	0.485	0.232	-0.886***	-0.406***
	(0.149)	(0.064)	(0.168)	(0.070)	(0.422)	(0.192)	(0.151)	(0.066)
HH size	-0.004	-0.002	0.013	0.007	0.014	0.006	-0.015	-0.007
	(0.017)	(0.007)	(0.025)	(0.011)	(0.026)	(0.012)	(0.028)	(0.013)
High-Income gr.	-0.776***	-0.373***	-0.149	-0.079	-0.046	-0.015	-1.165***	-0.603***
	(0.213)	(0.102)	(0.325)	(0.144)	(0.320)	(0.142)	(0.301)	(0.157)
Low-Income gr.	-0.369***	-0.162***	-0.015	-0.014	-0.437***	-0.193***	-0.466***	-0.208***
	(0.054)	(0.024)	(0.089)	(0.040)	(0.089)	(0.039)	(0.089)	(0.040)
Male	-0.004	0.000	0.003	0.005	0.145*	0.068**	-0.136	-0.060
	(0.049)	(0.022)	(0.082)	(0.036)	(0.078)	(0.034)	(0.083)	(0.038)
Single	-0.044	-0.022	-0.146*	-0.072*	0.065	0.028	-0.076	-0.038
	(0.054)	(0.024)	(0.087)	(0.039)	(0.085)	(0.038)	(0.095)	(0.043)
University	0.010	0.001	0.044	0.015	-0.028	-0.014	0.032	0.017
	(0.055)	(0.025)	(0.091)	(0.040)	(0.087)	(0.038)	(0.100)	(0.046)
Working	0.065	0.030	0.037	0.027	0.105	0.045	0.091	0.038
	(0.054)	(0.024)	(0.086)	(0.038)	(0.088)	(0.039)	(0.094)	(0.043)
Age1827	-0.008	-0.000	-0.068	-0.021	0.255**	0.115**	-0.198	-0.084
	(0.075)	(0.033)	(0.122)	(0.053)	(0.119)	(0.052)	(0.133)	(0.060)
Age2837	-0.243***	-0.106***	-0.298**	-0.132**	-0.059	-0.028	-0.397***	-0.173***
	(0.074)	(0.033)	(0.129)	(0.057)	(0.112)	(0.050)	(0.135)	(0.061)
Age3847	-0.243***	-0.108***	-0.331**	-0.147**	-0.065	-0.029	-0.404***	-0.179***
	(0.076)	(0.034)	(0.133)	(0.058)	(0.117)	(0.052)	(0.137)	(0.062)
Age4857	-0.119	-0.054	-0.108	-0.051	-0.140	-0.066	-0.178	-0.077
	(0.076)	(0.033)	(0.125)	(0.055)	(0.114)	(0.051)	(0.140)	(0.064)
Country	Yes							

Dummies								
Year Dummies	Yes		Yes		Yes		Yes	
Regional Dummies	Yes		Yes		Yes		Yes	
F statistics	25.700		14.956		6.725		14.908	
Adjusted R-squared	0.086		0.080		0.043		0.086	
Number of Observations	16,306	16,306	5,712	5,712	5,780	5,780	4,814	4,814
Wald Chi-squared		1,077.850		366.358		165.364		332.590
Pseudo R-squared		0.022		0.023		0.011		0.022

Note. This table reports results from OLS and Ordered Probit Models (with robust standard errors) estimated on the pooled dataset as well as for each country separately. All the regressions include year, regional, and country dummies. Dependent variable: Trust toward others measured on a scale "1" (you can't be too careful) to "10" (most people can be trusted). Independent variables. Low-Income Group=1 if the income is either not enough for food or is enough for food, but not for clothes, 0 otherwise; High-Income Group=1 if income is enough for everything necessary, 0 otherwise; Below Reference Group=1 if the respondent is poorer than her reference group, 0 otherwise; Above Reference Group=1 if the respondent is richer than her reference group, 0 otherwise; Capital=1 if the household of the respondent is in the capital, 0 otherwise; Urban=1 if the household of the respondent is in an urban area, but not the capital, 0 otherwise; Male=1 if the respondent is male, 0 otherwise; Single=1 if the respondent is never married, divorced, separated, widow/widower, 0 otherwise; Working=1 if the respondent has a job or is self-employed, 0 otherwise; University Education=1 if the respondent has a higher education, incomplete higher education or a postgraduate degree, 0 otherwise; Number of Household Members- integer number indicating the number of members of the respondent's household; Age 18–27=1 if the respondent is aged between 18 and 27 years old, 0 otherwise; Age 28–37=1 if the respondent is aged between 28 and 37, 0 otherwise; Age 38–47=1 if the respondent is aged between 38 and 47, 0 otherwise; Age 48–57=1 if the respondent is aged between 48 and 57, 0 otherwise. Significance Levels: * $p<0.1$; ** $p<0.05$; *** $p<0.01$.

Table A5: Positional Concerns and Combined Vertical Trust (Parliament, President, Executive Government)

	Pooled		**Armenia**		**Georgia**		**Azerbaijan**	
	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit	OLS	Ordered Probit
Above Average	0.187***	0.222***	0.056	0.052	0.208***	0.253***	0.229***	0.283***
	(0.027)	(0.031)	(0.051)	(0.048)	(0.049)	(0.062)	(0.038)	(0.048)
Below Average	-0.255***	-0.268***	-0.206***	-0.189***	-0.123***	-0.142***	-0.342***	-0.356***
	(0.022)	(0.024)	(0.040)	(0.038)	(0.034)	(0.040)	(0.035)	(0.039)
Capital	-0.204***	-0.276***	-0.426***	-0.388***	-0.237**	-0.266**	-0.202***	-0.293***
	(0.063)	(0.076)	(0.069)	(0.062)	(0.100)	(0.115)	(0.065)	(0.079)
HH size	0.000	0.000	0.000	-0.001	0.003	0.004	0.003	0.004
	(0.006)	(0.007)	(0.012)	(0.011)	(0.010)	(0.012)	(0.010)	(0.011)
High-Income gr.	0.196***	0.273***	0.157	0.153	0.119	0.151	0.256***	0.400***
	(0.061)	(0.079)	(0.151)	(0.141)	(0.096)	(0.120)	(0.082)	(0.120)
Low-Income gr.	-0.087***	-0.085***	-0.081**	-0.073**	-0.065**	-0.066*	-0.075**	-0.079**
	(0.020)	(0.022)	(0.037)	(0.035)	(0.032)	(0.038)	(0.032)	(0.037)
Male	-0.101***	-0.105***	-0.049	-0.048	-0.026	-0.027	-0.188***	-0.205***
	(0.018)	(0.020)	(0.034)	(0.032)	(0.027)	(0.032)	(0.029)	(0.034)
Single	-0.007	-0.003	0.007	0.010	-0.022	-0.019	0.007	0.011
	(0.021)	(0.023)	(0.038)	(0.035)	(0.034)	(0.039)	(0.033)	(0.038)
University	-0.095***	-0.102***	-0.050	-0.047	-0.094***	-0.111***	-0.128***	-0.140***
	(0.021)	(0.022)	(0.038)	(0.036)	(0.031)	(0.036)	(0.036)	(0.041)
Working	0.052***	0.061***	-0.022	-0.020	0.027	0.032	0.134***	0.158***
	(0.019)	(0.021)	(0.036)	(0.034)	(0.030)	(0.035)	(0.032)	(0.037)
Age1827	0.017	0.014	0.095*	0.091*	0.043	0.048	-0.017	-0.020
	(0.027)	(0.030)	(0.051)	(0.047)	(0.041)	(0.049)	(0.045)	(0.052)
Age2837	0.005	0.004	0.022	0.026	-0.007	-0.008	-0.003	-0.003
	(0.028)	(0.030)	(0.050)	(0.047)	(0.047)	(0.054)	(0.046)	(0.053)
Age3847	-0.032	-0.034	-0.080	-0.074	-0.053	-0.066	-0.009	-0.008
	(0.027)	(0.030)	(0.052)	(0.050)	(0.039)	(0.046)	(0.047)	(0.054)
Age4857	-0.065**	-0.070**	-0.089*	-0.077*	-0.077**	-0.097**	-0.047	-0.056
	(0.026)	(0.029)	(0.048)	(0.046)	(0.038)	(0.044)	(0.046)	(0.053)
Country	Yes							

Dummies								
Year Dummies	Yes		Yes		Yes		Yes	
Regional Dummies	Yes		Yes		Yes		Yes	
F statistics	129.607		21.647		24.857		52.706	
Adjusted R-squared	0.308		0.087		0.110		0.238	
Number of Observations	20,327	20,327	7,440	7,440	6,855	6,855	6,032	6,032
Wald Chi-squared		4,087.683		488.292		616.053		1,074.415
Pseudo R-squared		0.075		0.022		0.028		0.054

Note. This table reports results from OLS and Ordered Probit Models (with robust standard errors) estimated on the pooled dataset as well as for each country separately. All the regressions include year, regional, and country dummies. Dependent variable: Combined Trust toward state institutions measured on a scale "1" (fully distrust) to "5" (fully trust). Independent variables. Low-Income Group=1 if the income is either not enough for food or is enough for food, but not for clothes, 0 otherwise; High-Income Group=1 if the income is enough for everything necessary, 0 otherwise; Below Reference Group=1 if the respondent is poorer than her reference group, 0 otherwise; Above Reference Group=1 if the respondent is richer than her reference group, 0 otherwise; Capital=1 if the household of the respondent is in the capital, 0 otherwise; Urban=1 if the household of the respondent is in an urban area, but not the capital, 0 otherwise; Male=1 if the respondent is male, 0 otherwise; Single=1 if the respondent is never married, divorced, separated, widow/widower, 0 otherwise; Working=1 if the respondent has a job or is self-employed, 0 otherwise; University Education=1 if the respondent has a higher education, incomplete higher education or a postgraduate degree, 0 otherwise; Number of Household Members- integer number indicating the number of members of the respondent's household; Age 18–27=1 if the respondent is aged between 18 and 27, 0 otherwise; Age 28–37=1 if the respondent is aged between 28 and 37, 0 otherwise; Age 38–47=1 if the respondent is aged between 38 and 47, 0 otherwise; Age 48–57=1 if the respondent is aged between 48 and 57, 0 otherwise. Significance Levels: * $p<0.1$; ** $p<0.05$; *** $p<0.01$.

Appendix B. Regression tables for robustness analysis

Table B1: Positional Concerns and Social Preferences

	Pooled		Armenia		Georgia		Azerbaijan	
	OLS	Lewbel	OLS	Lewbel	OLS	Lewbel	OLS	Lewbel
Relative Condition	0.295***	0.322***	0.207***	0.501***	0.153***	0.177	0.373***	-0.095
	(0.041)	(0.071)	(0.058)	(0.150)	(0.046)	(0.123)	(0.069)	(0.178)
Capital	-0.845***	-0.821***	1.039***	-0.032	-0.781***	-0.204**	-0.889***	-0.941***
	(0.136)	(0.134)	(0.207)	(0.184)	(0.140)	(0.099)	(0.139)	(0.137)
HH size	0.002	0.010	0.018	0.013	-0.012	0.002	0.000	0.008
	(0.019)	(0.019)	(0.026)	(0.025)	(0.022)	(0.022)	(0.035)	(0.034)
High-Income gr.	-0.198	-0.058	-0.139	-0.254	-0.370	-0.248	-0.184	0.343
	(0.233)	(0.228)	(0.264)	(0.267)	(0.233)	(0.224)	(0.427)	(0.435)
Low-Income gr.	0.071	0.126**	0.048	0.149	0.101	0.123	0.014	-0.199
	(0.055)	(0.062)	(0.079)	(0.093)	(0.063)	(0.079)	(0.102)	(0.141)
Male	-0.093*	-0.086*	-0.138**	-0.122*	-0.025	0.003	-0.154	-0.157
	(0.051)	(0.051)	(0.068)	(0.067)	(0.057)	(0.057)	(0.100)	(0.100)
Single	0.098*	0.104*	-0.040	-0.001	0.042	0.027	0.196*	0.144
	(0.058)	(0.058)	(0.077)	(0.078)	(0.062)	(0.061)	(0.112)	(0.111)
University	0.069	0.074	-0.023	-0.079	0.224***	0.193***	0.005	0.159
	(0.053)	(0.054)	(0.078)	(0.080)	(0.058)	(0.060)	(0.115)	(0.120)
Working	0.071	0.051	-0.081	-0.093	0.009	-0.008	0.190*	0.258**
	(0.054)	(0.054)	(0.076)	(0.075)	(0.060)	(0.061)	(0.105)	(0.110)
Age1827	-0.227***	-0.211***	0.052	-0.005	-0.099	-0.082	-0.442***	-0.411***
	(0.078)	(0.077)	(0.103)	(0.105)	(0.085)	(0.083)	(0.153)	(0.151)
Age2837	-0.108	-0.095	0.030	0.011	-0.068	-0.057	-0.192	-0.217
	(0.073)	(0.072)	(0.102)	(0.102)	(0.081)	(0.080)	(0.148)	(0.147)
Age3847	-0.099	-0.102	0.087	0.085	-0.103	-0.122	-0.193	-0.241
	(0.074)	(0.073)	(0.106)	(0.104)	(0.084)	(0.082)	(0.151)	(0.151)

Age4857	-0.152**	-0.124*	0.029	0.010	-0.174**	-0.181**	-0.229	-0.253
	(0.074)	(0.073)	(0.100)	(0.100)	(0.081)	(0.081)	(0.156)	(0.155)
Kleibergen-Paap Wald stat.	.	155.026***	.	22.944***	.	21.608***	.	21.312***
F statistics	48.608***	48.568***	14.182***	14.712***	12.417***	12.265***	19.698***	18.207***
Breusch–Pagan test		375.20***		201.24***		271.86***		38.33***
Adjusted R-squared	0.158	0.157	0.059	0.053	0.063	0.062	0.100	0.086
Observations	16,652	16,652	6,014	6,014	6,191	6,191	4,447	4,447

Note. This table reports results from OLS and Lewbel specifications (with robust standard errors) estimated on the pooled dataset as well as for each country separately. All the regressions include year, regional, and country dummies. Dependent variable: Altruism of Individuals measured on a scale "1" (not important at all) to "5" (extremely important). Independent variables: Low-Income Group=1 if the income is either not enough for food or is enough for food, but not for clothes, 0 otherwise; High-Income Group=1 if the income is enough for everything necessary, 0 otherwise; Relative Condition indicates the relative standing of the individual measured on a scale from "1" (Very poor) to "5" (Very good); Capital=1 if the household of the respondent is in the capital, 0 otherwise; Urban=1 if the household of the respondent is in an urban area, but not the capital, 0 otherwise; Male=1 if the respondent is male, 0 otherwise; Single=1 if the respondent is never married, divorced, separated, widow/widower, 0 otherwise; Working=1 if the respondent has a job or is self-employed, 0 otherwise; University Education=1 if the respondent has a higher education, incomplete higher education or a postgraduate degree, 0 otherwise; Number of Household Members- integer number indicating the number of members of the respondent's household; Age 18–27=1 if the respondent is aged between 18 and 27, 0 otherwise; Age 28–37=1 if the respondent is between 28 and 37, 0 otherwise; Age 38–47=1 if the respondent is aged between 38 and 47, 0 otherwise; Age 48–57=1 if the respondent is aged between 48 and 57, 0 otherwise. Significance Levels: * $p<0.1$; ** $p<0.05$; *** $p<0.01$.

Table B2: Positional Concerns and Public Good

	Pooled		Armenia		Georgia		Azerbaijan	
	OLS	Lewbel	OLS	Lewbel	OLS	Lewbel	OLS	Lewbel
Relative Condition	0.361***	0.507***	0.258***	0.347*	0.157**	0.521***	0.488***	0.560***
	(0.048)	(0.087)	(0.081)	(0.188)	(0.069)	(0.180)	(0.074)	(0.204)
Capital	-0.953***	-0.885***	0.432**	-0.820***	-1.533***	-0.242	-1.033***	-0.992***
	(0.187)	(0.187)	(0.211)	(0.247)	(0.204)	(0.168)	(0.187)	(0.187)
HH size	0.021	0.023	0.018	0.015	0.018	0.020	0.009	0.013
	(0.023)	(0.023)	(0.033)	(0.033)	(0.034)	(0.034)	(0.038)	(0.037)
High-Income gr.	0.218	0.310	-0.120	-0.167	0.388	0.207	0.088	0.507
	(0.258)	(0.241)	(0.336)	(0.352)	(0.284)	(0.287)	(0.476)	(0.432)
Low-Income gr.	0.044	0.122	0.040	0.055	0.231**	0.402***	-0.168	-0.124
	(0.066)	(0.075)	(0.104)	(0.121)	(0.097)	(0.121)	(0.113)	(0.158)
Male	-0.087	-0.097	-0.035	-0.021	0.009	0.013	-0.225**	-0.250**
	(0.062)	(0.061)	(0.095)	(0.095)	(0.087)	(0.088)	(0.109)	(0.108)
Single	0.188***	0.195***	0.094	0.126	-0.059	-0.040	0.398***	0.363***
	(0.069)	(0.069)	(0.106)	(0.106)	(0.092)	(0.093)	(0.123)	(0.122)
University	0.046	0.024	-0.029	-0.043	0.122	0.072	0.077	0.086
	(0.066)	(0.067)	(0.103)	(0.106)	(0.092)	(0.095)	(0.125)	(0.131)
Working	0.059	0.007	0.151	0.142	0.012	-0.047	0.054	0.013
	(0.066)	(0.067)	(0.102)	(0.100)	(0.093)	(0.096)	(0.117)	(0.123)
Age1827	-0.440***	-0.439***	-0.154	-0.199	-0.381***	-0.436***	-0.664***	-0.643***
	(0.093)	(0.093)	(0.141)	(0.142)	(0.135)	(0.135)	(0.168)	(0.166)
Age2837	-0.244***	-0.222**	-0.091	-0.118	-0.270**	-0.280**	-0.252	-0.218
	(0.090)	(0.090)	(0.139)	(0.137)	(0.127)	(0.127)	(0.167)	(0.166)
Age3847	-0.048	-0.028	0.121	0.115	0.035	0.056	-0.167	-0.153
	(0.092)	(0.092)	(0.145)	(0.143)	(0.128)	(0.128)	(0.174)	(0.174)
Age4857	-0.181**	-0.172*	0.111	0.071	-0.181	-0.169	-0.309*	-0.287*
	(0.091)	(0.091)	(0.130)	(0.129)	(0.126)	(0.125)	(0.175)	(0.174)
Kleibergen-Paap Wald stat.	.	147.250***	.	22.637***	.	20.780***	.	18.786***

F statistics	25.991***	26.790***	8.682***	8.942***	24.609***	26.450***	20.239***	19.797***
Breusch–Pagan test		375.20***		201.24***		271.86***		38.33***
Adjusted R-squared	0.092	0.090	0.039	0.039	0.141	0.136	0.108	0.107
Observations	15,611	15,611	5,746	5,746	5,695	5,695	4,170	4,170

Note. This table reports results from OLS and Lewbel specifications (with robust standard errors) estimated on the pooled dataset as well as for each country separately. All the regressions include year, regional, and country dummies. Dependent variable: Willingness to volunteer measured on a scale "1" (not important at all) to "10" (extremely important). Independent variables: Low-Income Group=1 if the income is either not enough for food or is enough for food, but not for clothes, 0 otherwise; High-Income Group=1 if the income is enough for everything necessary, 0 otherwise; Relative Condition indicates the relative standing of the individual measured on a scale from "1" (Very poor) to "5" (Very good); Capital=1 if the household of the respondent is in the capital, 0 otherwise; Urban=1 if the household of the respondent is in the urban area, but not the capital, 0 otherwise; Male=1 if the respondent is male, 0 otherwise; Single=1 if the respondent is never married, divorced, separated, widow/widower, 0 otherwise; Working=1 if the respondent has a job or is self-employed, 0 otherwise; University Education=1 if the respondent has a higher education, incomplete higher education or a postgraduate degree, 0 otherwise; Number of Household Members- integer number indicating the number of members of the respondent's household; Age 18–27=1 if the respondent is aged between 18 and 27, 0 otherwise; Age 28–37=1 if the respondent is between 28 and 37, 0 otherwise; Age 38–47=1 if the respondent is aged between 38 and 47, 0 otherwise; Age 48–57=1 if the respondent is aged between 48 and 57, 0 otherwise. Significance Levels: * $p<0.1$; ** $p<0.05$; *** $p<0.01$.

Table B3: Positional Concerns and Trust toward Others

	Pooled		Armenia		Georgia		Azerbaijan	
	OLS	Lewbel	OLS	Lewbel	OLS	Lewbel	OLS	Lewbel
Relative Condition	0.342***	0.518***	0.154**	-0.013	0.202***	0.308**	0.472***	0.636***
	(0.037)	(0.073)	(0.063)	(0.157)	(0.062)	(0.137)	(0.058)	(0.147)
Capital	-0.911***	-0.838***	0.020	-0.139	0.478	0.218	-0.885***	-0.827***
	(0.149)	(0.149)	(0.258)	(0.254)	(0.420)	(0.149)	(0.152)	(0.153)
HH size	0.006	0.007	0.084***	0.089***	0.022	0.019	-0.038	-0.033
	(0.015)	(0.015)	(0.024)	(0.023)	(0.026)	(0.025)	(0.026)	(0.026)
High-Income gr.	-0.790***	-0.822***	-0.172	0.001	-0.086	-0.044	-1.244***	-1.258***
	(0.209)	(0.205)	(0.335)	(0.333)	(0.316)	(0.312)	(0.300)	(0.299)
Low-Income gr.	-0.361***	-0.274***	-0.017	-0.108	-0.425***	-0.389***	-0.449***	-0.346***
	(0.054)	(0.062)	(0.090)	(0.107)	(0.089)	(0.108)	(0.089)	(0.118)
Male	-0.001	-0.001	0.010	-0.047	0.150*	0.148*	-0.128	-0.139*
	(0.049)	(0.048)	(0.084)	(0.082)	(0.078)	(0.077)	(0.083)	(0.082)
Single	-0.035	-0.017	-0.096	-0.086	0.074	0.091	-0.069	-0.072
	(0.054)	(0.054)	(0.088)	(0.087)	(0.085)	(0.084)	(0.095)	(0.096)
University	0.007	-0.023	0.077	0.124	-0.037	-0.056	0.026	-0.025
	(0.055)	(0.056)	(0.092)	(0.092)	(0.087)	(0.088)	(0.100)	(0.104)
Working	0.058	0.035	0.030	0.040	0.094	0.084	0.082	0.063
	(0.054)	(0.054)	(0.087)	(0.086)	(0.088)	(0.089)	(0.094)	(0.095)
Age1827	-0.015	-0.043	-0.065	-0.003	0.249**	0.233**	-0.193	-0.250*
	(0.075)	(0.075)	(0.125)	(0.119)	(0.119)	(0.118)	(0.133)	(0.132)
Age2837	-0.241***	-0.250***	-0.311**	-0.183	-0.054	-0.054	-0.389***	-0.463***
	(0.074)	(0.073)	(0.132)	(0.122)	(0.111)	(0.110)	(0.134)	(0.133)
Age3847	-0.235***	-0.221***	-0.295**	-0.212*	-0.059	-0.045	-0.405***	-0.435***
	(0.076)	(0.076)	(0.134)	(0.127)	(0.117)	(0.117)	(0.137)	(0.137)
Age4857	-0.116	-0.109	-0.094	-0.013	-0.135	-0.143	-0.178	-0.197
	(0.076)	(0.075)	(0.128)	(0.120)	(0.114)	(0.115)	(0.140)	(0.138)
Kleibergen-Paap Wald stat.	.	94.411***	.	28.574***	.	29.132***	.	23.056***

F statistics	26.522***	25.873***	11.603***	11.767***	7.304***	7.188***	16.309***	14.147***
Breusch–Pagan test		375.20***		201.24***		271.86***		38.33***
Adjusted R-squared	0.086	0.084	0.058	0.055	0.043	0.042	0.087	0.085
Observations	16,306	16,306	5,712	5,712	5,780	5,780	4,814	4,814

Note. This table reports results from OLS and Lewbel specifications (with robust standard errors) estimated on the pooled dataset as well as for each country separately. All the regressions include year, regional, and country dummies. Dependent variable: Trust toward others measured on a scale "1" (you can't be too careful) to "10" (most people can be trusted). Independent variables: Low-Income Group=1 if the money is either not enough for food or is enough for food, but not for clothes, 0 otherwise; High-Income Group=1 if money is enough for everything necessary, 0 otherwise; Relative Condition indicates the relative standing of the individual measured on a scale from "1" (Very poor) to "5" (Very good); Capital=1 if the household of the respondent is in the capital, 0 otherwise; Urban=1 if the household of the respondent is in the urban area, but the capital, 0 otherwise; Male=1 if the respondent is male, 0 otherwise; Single=1 if the respondent is never married, divorced, separated, widow/widower, 0 otherwise; Working=1 if the respondent has a job or is self-employed, 0 otherwise; University Education=1 if the respondent has a higher education, incomplete higher education or a postgraduate degree, 0 otherwise; Number of Household Members- integer number indicating the number of members of the respondent's household; Age 18–27=1 if the respondent is aged between 18 and 27, 0 otherwise; Age 28–37=1 if the respondent is between 28 and 37, 0 otherwise; Age 38–47=1 if the respondent is aged between 38 and 47, 0 otherwise; Age 48–57=1 if the respondent is aged between 48 and 57, 0 otherwise. Significance Levels: * $p<0.1$; ** $p<0.05$; *** $p<0.01$.

Table B4: Positional Concerns and Combined Vertical Trust (Parliament, President and Executive Government)

	Pooled		Armenia		Georgia		Azerbaijan	
	OLS	Lewbel	OLS	Lewbel	OLS	Lewbel	OLS	Lewbel
Relative Condition	0.195***	0.250***	0.115***	0.089	0.130***	0.164***	0.256***	0.216***
	(0.014)	(0.027)	(0.026)	(0.069)	(0.024)	(0.055)	(0.021)	(0.058)
Capital	-0.209***	-0.174***	-0.383***	-0.427***	-0.233**	-0.177***	-0.207***	-0.198***
	(0.063)	(0.063)	(0.102)	(0.102)	(0.100)	(0.058)	(0.065)	(0.065)
HH size	0.001	-0.001	-0.002	-0.002	0.002	0.003	0.004	0.003
	(0.006)	(0.006)	(0.011)	(0.011)	(0.010)	(0.010)	(0.009)	(0.009)
High-Income gr.	0.185***	0.147**	0.124	0.108	0.141	0.119	0.243***	0.259***
	(0.061)	(0.062)	(0.150)	(0.152)	(0.095)	(0.097)	(0.082)	(0.084)
Low-Income gr.	-0.091***	-0.061***	-0.084**	-0.102**	-0.063**	-0.034	-0.079**	-0.103**
	(0.020)	(0.023)	(0.037)	(0.045)	(0.032)	(0.039)	(0.032)	(0.046)
Male	-0.101***	-0.093***	-0.050	-0.062*	-0.025	-0.033	-0.190***	-0.187***
	(0.018)	(0.018)	(0.034)	(0.034)	(0.027)	(0.026)	(0.029)	(0.029)
Single	-0.006	0.006	0.004	-0.008	-0.020	-0.002	0.008	0.005
	(0.021)	(0.020)	(0.037)	(0.037)	(0.034)	(0.032)	(0.033)	(0.032)
University	-0.095***	-0.104***	-0.054	-0.048	-0.093***	-0.118***	-0.128***	-0.107***
	(0.021)	(0.021)	(0.038)	(0.039)	(0.031)	(0.030)	(0.036)	(0.037)
Working	0.052***	0.045**	-0.020	-0.006	0.022	0.023	0.137***	0.155***
	(0.019)	(0.020)	(0.036)	(0.036)	(0.030)	(0.031)	(0.032)	(0.033)
Age1827	0.016	0.004	0.097*	0.118**	0.040	0.037	-0.017	-0.042
	(0.027)	(0.027)	(0.051)	(0.050)	(0.041)	(0.041)	(0.045)	(0.045)
Age2837	0.006	0.001	0.025	0.030	-0.006	0.016	-0.003	-0.043
	(0.028)	(0.027)	(0.050)	(0.049)	(0.048)	(0.043)	(0.046)	(0.045)
Age3847	-0.030	-0.032	-0.079	-0.074	-0.053	-0.053	-0.005	-0.032
	(0.027)	(0.027)	(0.052)	(0.051)	(0.039)	(0.039)	(0.046)	(0.046)
Age4857	-0.063**	-0.059**	-0.086*	-0.080*	-0.078**	-0.070*	-0.046	-0.061
	(0.026)	(0.026)	(0.048)	(0.047)	(0.038)	(0.038)	(0.046)	(0.046)
Kleibergen-Paap Wald stat.	.	120.807***	.	33.795***	.	31.038***	.	22.608***

F statistics	134.878***	130.750***	23.083***	22.590***	26.733***	25.526***	57.748***	51.500***
Breusch–Pagan test		375.20***		201.24***		271.86***		38.33***
Adjusted R-squared	0.308	0.306	0.086	0.086	0.110	0.109	0.237	0.236
Observations	20,327	20,327	7,440	7,440	6,855	6,855	6,032	6,032

Note. This table reports results from OLS and Lewbel specifications (with robust standard errors) estimated on the pooled dataset as well as for each country separately. All the regressions include year, regional, and country dummies. Dependent variable: Combined Trust toward state institutions measured on a scale "1" (fully distrust) to "5" (fully trust). Independent variables: Low-Income Group=1 if the income is either not enough for food or is enough for food, but not for clothes, 0 otherwise; High-Income Group=1 if the income is enough for everything necessary, 0 otherwise; Relative Condition indicates the relative standing of the individual measured on a scale from "1" (Very poor) to "5" (Very good); Capital=1 if the household of the respondent is in the capital, 0 otherwise; Urban=1 if the household of the respondent is in the urban area, but not the capital, 0 otherwise; Male=1 if the respondent is male, 0 otherwise; Single=1 if the respondent is never married, divorced, separated, widow/widower, 0 otherwise; Working=1 if the respondent has a job or is self-employed, 0 otherwise; University Education=1 if the respondent has a higher education, incomplete higher education or a postgraduate degree, 0 otherwise; Number of Household Members- integer number indicating the number of members of the respondent's household; Age 18–27=1 if the respondent is aged between 18 and 27, 0 otherwise; Age 28–37=1 if the respondent is between 28 and 37, 0 otherwise; Age 38–47=1 if the respondent is aged between 38 and 47, 0 otherwise; Age 48–57=1 if the respondent is aged between 48 and 57, 0 otherwise. Significance Levels: * $p<0.1$; ** $p<0.05$; *** $p<0.01$.

Abstrakt

Tento článek studuje vliv zájmu o společenské postavení jednotlivců na jejich sociální preference, poskytování veřejných statků a sociální kapitál. Využíváme data z šetření „Caucasus Barometer“ provedeném v Arménii, Ázerbájdžánu a Gruzii. Zjišťujeme, že relativní deprivace domácností má negativní dopad na zkoumané proměnné a že relativní převaha domácností má pozitivní, byť malý, dopad na zkoumané proměnné.

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