

**Inequality and Democratization:
Individual-Level Evidence of Preferences for Redistribution under Autocracy**

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While some research has explored the relationship between individual income and demand for redistribution under democracy--finding little support for median-voter theories of redistribution--no research has explored this relationship under autocracy, even though this connection is a crucial assumption of redistributivist theories of democratization (Boix 2003; Acemoglu and Robinson 2006). We explore the relationship between individual income and support for redistributive government policies in autocratic societies using micro-level data from the World Values Surveys, finding no empirical support for the core assumption of median-voter models that regime change is a function of elites' fear of the redistributive demands of the poor.

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1. Introduction

The gospel of political economy preaches that extending the franchise leads to greater government redistribution. Faith in this tenet is rooted in the intuitive contrast between autocracies, which restrict effective participation to the wealthy few, and democracies, which allow the poor greater voice. Because there are always more poor people than rich people franchise expansion should lower the income of the average voter. And if we assume that voters support policies that maximize their welfare, then universal suffrage should raise demand for redistribution of wealth. Moreover, such demand should increase with the level of societal inequality—as the rich grow richer and the poor grow poorer, pressures for redistributive policies should grow more intense.

The syllogism between political and economic equality has dominated the fears and the hopes attached to democracy ever since in the inception of representative government. Those on the right have long worried that political equality would threaten property—and likewise, those on the left remained skeptical that acquisition of *political* rights alone would satisfy those on the bottom of the *economic* ladder--by Marx's time, the idea had spread that “democracy in the political realm must naturally lead to social and economic equality” (Przeworski 2010, 303).

Vast socioeconomic inequalities persist in democracies around the world. Indeed, in developed democracies the gap between rich and poor has grown wider in recent decades. Still, the belief that democracy and property are in tension remains rock-solid, and the seductiveness of the median-voter model of political economy has helped cement this faith. Meltzer and Richard's (1981) formalization of the redistributive model of electoral politics sparked an avalanche of research seeking to explain cross-national variation in patterns of social-welfare spending. Surprisingly, given the intuitive nature of the model, results have consistently called into question the gospel truth that pressures for redistribution increase with inequality (see e.g.

Bartels 2008; Roemer 2001; Moene and Wallerstein 2003; Iversen and Soskice 2006; Kenworthy and McCall 2007). Scholars have repeatedly found that democracies redistribute far less than they “should”—yet have proven unwilling to abandon the Meltzer-Richard (MR) model, leading Adam Przeworski (2010, 85) to sardonically call it “political economists’ favorite toy.”

The shaky empirical results in support of the median-voter model call into question its theoretical utility. Yet despite weak results, faith in the syllogism equating democracy and redistribution remains so strong that even though MR did not devise their model to apply in non-democratic contexts, Acemoglu and Robinson (2000, 2006) and Boix (2003) have developed “redistributivist” models of regime change, applying the MR rational expectations logic to explain transitions to democracy. Simplifying greatly, the logic of these models is as follows: “Everyone—from the incumbent dictator down to the lowliest of peasants—knows that under democracy the poor will soak the rich. So, incumbent elites will be reluctant to democratize to begin with, but their reluctance depends fundamentally on what kind of assets there are (fixed or mobile) and how those assets are distributed within society. All else equal, the distribution of wealth impacts the likelihood of regime change.”

The utility of redistributivist models of regime change depends crucially on the descriptive and predictive accuracy of this underlying theoretical assumption about actors’ preferences—that the median voter prefers a political arrangement that will maximize redistribution, and that such preferences intensify as societal inequality increases. To the extent that the MR model holds up to empirical scrutiny, we gain confidence that the underlying assumption is useful for thinking about actors’ preferences in cases of regime transition. To the extent that it does not, then we have good reason to question the assumption that fear of the poor

drives elites' strategies in cases of regime change—and better reason to accept an alternative understanding of regime change.

Elsewhere, we test the implication of redistributivist models of regime change that transitions to democracy are at least partly a function of economic inequality, advancing a “contractarian” theoretical model (Ansell and Samuels 2010a) and showing that neither Boix’s (2003) nor Acemoglu and Robinson’s (2006) “redistributivist” arguments accurately predict regime transitions. In a separate paper (Ansell and Samuels 2010b) we show, using data from 1880 to 1930 that in the late nineteenth and early twentieth centuries there is little evidence that democracies did indeed redistribute more than did autocracies.

In this paper we add another layer to our theoretical and empirical critique of redistributivist models of regime change, by assessing the predictions of the MR median-voter hypothesis that demand for redistribution should decline with individual income but rise with societal inequality. A few papers have explored this question using micro-level data: Finseraas (2008) claims to find evidence supporting the MR conjecture, but others find no relationship between inequality, income, and the median voter’s preferences over redistribution (Kenworthy and McCall 2007; Lübker 2007; Huber and Stanig 2009).

What is novel about this paper is that we consider the impact of income and inequality on demand for redistributive spending *in autocracies*. Although the rational-expectations logic of the MR model was designed to apply under universal suffrage, Boix and Acemoglu and Robinson assume that the mechanisms of the model do not differ where elections do not exist, or are non-competitive. Given this, using data from autocratic societies is the appropriate way to test the strength of redistributivist models of regime change.

Our results offer further reason for skepticism about the theoretical and empirical utility of the Meltzer-Richard model and its extensions as applied to the study of democratization. Were the MR model correct--and were Boix's and Acemoglu and Robinson's extensions of that model correct--we would expect to see a positive relationship between inequality and demand for redistribution under autocracy. However, our findings completely confound the MR model: we find a significant *negative* relationship between inequality and demand for redistribution in cross-national perspective. This result helps solve the puzzle of why empirical support for the MR model is so weak: quite simply, *the median voter does not demand greater redistribution as inequality increases*. The next section discusses competing hypotheses; empirics follow.

2. Theoretical Discussion

The starting point for many explorations of the relationship between politics and economics is the assumption that voters' preferences depend heavily on their income. Do citizens' attitudes fit with this simple assumption? Relatively little research explores the median-voter model at the individual level. Instead, most research uses aggregate-level data—for example, societal-level inequality and aggregate government spending levels—taking as given the underlying micro-level hypothesis that voters' preferences about redistribution are a function of their income and of overall societal inequality.

More pertinently, the central assumption of the MR model--that elites' and masses' preferences over redistribution shape their political behavior --has never been tested in non-democratic regimes. In their adaptations of the MR model, both Boix (2003) and Acemoglu and Robinson (2006) assume that (a) the poor prefer more income redistribution than prevails under autocracy and that the rich prefer the distribution of income under autocracy to that under

democracy (all else equal); and (b) that the difference in preferences between rich and poor over redistribution widens with societal inequality.

The distinction between Boix's linear model of democratization and Acemoglu and Robinson's 'inverse-U' hypothesis depends on political mechanisms--such as the possibility of revolution by the poor or repression by the rich--that are causally exogenous to individual-level preferences. Such mechanisms are irrelevant when we examine only individual-level preferences over the distribution of income. Accordingly, if the MR hypotheses as applied in autocracies were true, we should expect poorer people to be more desirous of income redistribution and less tolerant of income inequalities than rich citizens. We should also expect the intensity of such preferences to increase where inequality is higher. Let us elaborate the redistributivist hypotheses more specifically:

- H₁: Holding societal inequality constant, as an individual's income goes up, his or her demand for redistribution should go down.
- H₂: Holding individual income constant, the 'democratic median voter' (i.e. the person with median income among all those who would be eligible to vote in democracy) will desire higher redistribution as societal inequality goes up.
- H₃: H₁ and H₂ are interactive: The negative relationship between individual income and demand for redistribution should intensify as societal inequality increases – that is, the poor's preference for redistribution will intensify, as will opposition by the rich.

The first hypothesis is an essential underlying assumption of the Meltzer-Richard model – that demand for redistribution is decreasing in income. A basic test of this hypothesis can be done on individual-level data without reference to any national context. The second hypothesis is a core implication of the Meltzer-Richard model – that as the gap between mean and median

income rises, the person with median income will desire higher levels of redistribution. In the model, this could occur either through a mean-preserving spread of income – in which case, the median citizen would become poorer – or through a median-preserving spread of income – in which case the rich become richer and/or the poor become poorer but the middle stays the same. To test this hypothesis we would need to examine the preferences over redistribution of citizens with median income at different levels of societal inequality.

H3 is an extension of the Meltzer-Richard model and the redistributive models in Boix (2003) and Acemoglu and Robinson (2006). These models all presume there is a continuous and monotonic relationship between personal income and the preferred rate of taxation/redistribution. That is, moving from the 10th down to the 5th percentile of income produces an incrementally higher preferred rate of redistribution, and moving from the 90th to 95th percentile of income produces an incrementally lower preferred rate of redistribution.¹

However, *H3* supposes that *H1* and *H2* are interactive. Suppose there are two people at the 95th percentile of income, one in an equal society and one in an unequal society. Both oppose redistribution, but the latter should oppose redistribution more, because she loses more in absolute terms from a fixed proportional tax rate. Cross-nationally, *H3* produces the expectation that *individual* income should have a stronger effect on redistributive preferences as *societal* income inequality rises: higher income inequality should intensify the anti-redistributive preferences of the rich, and the pro-redistributive preferences of the poor. *H3* assesses the extent

¹ This contrasts with versions of the Meltzer-Richard model where ‘corner solutions’ exist for some members of the income distribution who would prefer a tax rate of zero or one. The corner solution problem exists if, for example, everyone with income below the 30th percentile prefers a tax rate of one (complete redistribution). In this case it is meaningless to talk about the different preferences of people at the 5th percentile of income across different levels of societal inequality since under almost all levels of inequality they will have an unchanged preference for a tax rate of one – hence their preferences cannot become *more* intense.

to which national-level inequality affects how individual-level income matters for preference formation.

It is also possible that *no* relationship between income, economic inequality and demand for redistribution exists. Were statistical results to generate no pattern, the primary culprit would likely be individuals' poor information about existing levels of inequality. The MR model implies one necessary condition: people must be aware of the true level of (pre-existing) market inequality. Yet individuals may lack such information, because they may only perceive post-transfer levels of inequality. Such perceptions are likely shaped by the amount of redistribution taking place.

- H_0 : We should observe neither opposition nor support for redistribution as a function of individual income, regardless of the cross-national level of societal inequality.

This paper represents a preliminary empirical analysis. At this stage, as will become evident below, our empirical findings cast considerable doubt on the core assumption of Boix's and Acemoglu and Robinson's extensions of the MR model. However, we have not yet developed the theoretical extension of our own model to account for the results we generate. Accordingly, we leave our discussion of potential explanations for our results to the final section.

3.1 Data and Variables

In this section we put the redistributivist account of preference-formation under autocracy to the test. To our knowledge, there is only one source of cross-national public opinion data in autocracies that asks respondents about their preferences over redistribution: the World Values Surveys (WVS). Our core dependent variable is an eleven-point scale where citizens are asked to choose a position between one - "We need larger income differences as incentives" and ten -

“Incomes should be made more equal”. We use this question (variable E035 on the WVS) since unlike most other WVS questions pertaining to redistribution or inequality it is available across a wide range of autocracies.²

The question has a number of other strengths. First, it suggests a trade-off – that is, that equalizing incomes means potentially reducing effort incentives. Second, it connects inequality directly to redistribution in that the prompt ‘incomes should be made more equal’ implies an actor – presumably the state – that will redistribute incomes.

There are of course disadvantages to this question. For one, people might not believe that a relationship exists between income differentials and incentives to work hard, but they still might oppose redistributive taxation. Moreover, though the prompt suggests that incomes should be made more equal, it does not specify that this be done through the tax and transfer system as the MR model requires. Respondents might, for example, suppose that organized labor or enlightened employers, rather than the government, should be responsible for equalizing incomes. Third, even if a person agrees that incomes should be made more equal as a matter of principle, the question wording cannot tell us whether that person also believes that the government should *spend more* to accomplish that goal. Finally, responses might vary depending on the wording of the question. For example, responses might differ if the question had asked whether the respondent agreed that, “Incomes should be made more equal *through a tax increase*.” Despite potential problems with the question, these data are the best available for examining this key element of the MR hypothesis.

We gathered data for the autocracies where the World Values Survey has been implemented—those that failed to score a “6” or higher on the POLITY IV scale (Marshall and

² Question E133 (Do you think that what the government is doing for people in poverty in this country is about the right amount, too much, or too little? 1 = "Too much," 2 = "About the Right Amount," 3 = "Too little") might be useful as well, but it is not asked in sufficient number of autocracies to pursue analysis.

Jagers 2010), a standard cutoff point distinguishing democracies from non-democracies on the 21-point POLITY scale (Epstein et al 2006). This generates an initial sample of 29 countries and 43 surveys, as in the first column of Table One. Unfortunately, the WVS did not ask question E035 in all of these countries, and other data necessary to test our argument also proved missing from some surveys—particularly contemporaneous *gini* coefficients of income inequality. This left us with a maximum N of 46,339 from 23 countries and 31 surveys implemented between 1990 and 2007, as indicated in the last two columns of Table One.

Because we are analyzing individuals in several countries, multi-level modeling techniques are necessary. We employ the ‘two-step’ approach as our estimation technique, whereby we conduct a series of analyses on individuals within countries – the first stage, where individual-level preferences about redistribution are the dependent variable – and use the estimated coefficients from these regressions as dependent variables in a cross-sectional regression *between* countries – the second stage. This technique has an array of statistical advantages including consistency and efficiency of estimates (Leoni, 2008) but has a second advantage in that it allows easy substantive interpretation and graphical presentation (what Gelman and Hill (2005) refer to as ‘the secret weapon’). Since the technique has two ‘stages’, each at a different level of analysis, we require control variables at both the individual level (first stage) and at the national level (second stage).

As independent variables at the first stage (the individual level), our chief independent variables are individual income and education; we shall explore the impact of each separately. The former is self-reported on a ten-point scale in that country’s currency, then normalized across countries to create a ten ‘step’ scale that is cross-nationally comparable. We employ education as a proxy for income. Individuals’ current annual income might not reflect their

lifetime expectation of earnings and therefore might only weakly reflect their preferences over redistribution. However, education is correlated with lifelong earnings potential, and is largely fixed for adult citizens. This makes it a useful proxy for income, which also avoids some of the measurement issues related to self-reported income data in surveys, such as non-reporting and under/over-estimation. It is worth noting that Boix (2003) uses education as a proxy for income inequality in his statistical work. Education is measured as a six-point index from incomplete elementary education through to university graduates.

We also use several individual-level control variables considered important predictors of preferences for redistribution. We control for employment status using a series of dummy variables (employed, unemployed, non-employed, retired, student); age; age squared; gender; number of children; and, following Scheve and Stasavage (2006), religiosity.³

At the macro level, for the second-stage regressions, recall that the dependent variable is the coefficient for each country (on income or education) derived from the first-stage regressions. We use four national-level variables to pick up contextual effects: GDP per capita, from the 2010 World Development Indicators; the Polity score from Marshall and Jaggers (2010), and a measure of Ethno-Linguistic Fractionalization, which comes from Alesina *et al.* (2003). Our key independent variable for the second-stage analysis is income inequality; our measure comes from the 2010 World Bank World Development Indicators. Because this measure does not distinguish between pre- and post-tax transfers, we acknowledge that—like nearly every other study—our analysis only imperfectly tests the MR conjecture.

³ Ideally we would also code for ethnic minority status to pick up group-related preferences (as in Shayo, 2009) but the World Values Survey does not provide a consistent framework for doing this nor does it provide the kind of occupational data one would need to construct measures for another factor often cited in the literature – skill specificity (as in Iversen and Soskice, 2001).

However, our approach has a distinct advantage. As noted, the MR model requires that individuals know the true level of market inequality. The absence of information about pre-fisc inequality is particularly problematic for studies that tested the median-voter model in wealthy democracies where welfare-state spending is comparatively high, such as Finseraas (2008) and Kenworthy and McCall (2008). The higher the level of redistributive spending, the less likely will individuals possess accurate information about pre-fisc inequality. Moreover, average age in wealthy democracies is higher than average, and an aging population (rather than the median voter's income) tends to drive spending on pensions and healthcare (Lindert 2004). Finally and most importantly, studies of the sources of redistribution in wealthy democracies cannot eliminate the possibility that preferences today (i.e., those that scholars analyze from public-opinion surveys) have been shaped by the fact that welfare-state spending has been relatively high for decades. Individuals' preferences under democracy today are a function in part of electoral battles fought long ago, also under democracy.

The theoretical advantages of our test of the MR conjecture are many: our sample of cases exhibits considerable variation in country-wealth; the average age is younger than in wealthier societies;⁴ social-welfare spending levels tend to be lower;⁵ and, most importantly for our theoretical purposes, preferences today about inequality and spending cannot be a function of the policy consequences of repeated democratic elections. These facts make our sample especially useful for testing the MR conjecture, because they reduce--even if they cannot fully

⁴ According to the World Development Indicators, 18.8% of the population in OECD economies is 14 years old or younger; the proportion in our sample of autocracies is 33.5%. (South Korea was included in our sample of autocracies, although it is now an OECD member.) (Source: Quality of Government database, <http://www.qog.pol.gu.se>, accessed August 19, 2011.)

⁵ Outside of OECD economies, data on welfare-state spending levels is scant. The World Development Indicators does provide information on government spending on health for nearly every country in the world; for 2002, OECD economies spent 6.45% of GDP, while the countries in our sample spent 2.82% (Source: Quality of Government database, <http://www.qog.pol.gu.se>, accessed August 19, 2011). This indicator is a decent proxy for overall levels of social-welfare spending.

eliminate--the potential problem of “endogeneity” that necessarily bedevils research on the question that has explored wealthy democracies.

3.2 Estimation Technique

As the three hypotheses laid out in Section 2 suggest, our interest is not solely in how individual-level variables such as income or education impact preferences for redistribution, but rather in how the national-level variables *condition* the way individual-level attributes determine redistributive preferences. Put differently, we wish to explain cross-country variation in the effects of individual-level variables on redistributive preferences. To test Hypothesis 2, we seek to answer the question of whether the median voter’s preference for redistribution increases—as all redistributivist models suggest it should—as one moves from a relatively equal society to a relatively unequal society. To test Hypothesis 3, we wish to discover whether the individual effects of income and education on redistributive preferences are *accentuated* in high inequality countries.

Accordingly, we need to employ statistical techniques that take into account how variation at the individual level is shaped by variation at the national level. In the following analyses we use the “two-step” framework developed by Huber, Kernell, and Leoni (2005) and Jusko and Shively (2005). In the first stage we generate estimates of individual-level preferences (in this case, for “making incomes more equal”) for each country-year survey in the WVS, and then save the coefficients for relevant individual-level variables (for example, individual income) and the constant term for each country-year. In the second stage, we use these country-level estimates as dependent variables in a regression analysis with between 26 and 31 cases, with national-level variables such as the Gini coefficient as independent variables.

The two-step process produces more consistent and precise estimates of conditional effects than simple pooled models; it is also relatively efficient as compared to MLE and Bayesian random effects models--but considerably less computationally intensive, particularly when using large clusters and ordered probit models (as we are here) (Leoni 2008). A further advantage comes from the ability to graphically represent first-stage estimations and their confidence intervals against second-stage variables like inequality. We will employ this method on multiple occasions in the coming pages.

We implement the two-step regression by firstly generating survey-by-survey estimates of the effects of individual-level variables: these are the *first-stage* regressions. Since some countries have multiple surveys we should clarify that the second level of our analysis is ‘country-year’. For each country-year, indexed j , we estimate the following model:

$Y_{ij}^* = \nu_j + \beta_{1j}X_{1ij} + \beta_{2j}X_{2ij} + \dots + \beta_{Nj}X_{Nij} + \varepsilon_{ij}$, where Y_{ij}^* is the unobserved (latent) support for redistribution for individual i , ν_j is a country-year specific effect, X_{1ij} through X_{Nij} are N individual level observations on the N independent variables for person i in country-year j , β_{1j} through β_{Nj} are the N coefficient estimates for country-year j , and ε_{ij} is an independently drawn error term. We then estimate these parameters predicting unobserved Y_{ij}^* using our observed ten-point ordered scale Y_{ij} and an ordered logit estimation procedure that produces estimates of nine country-year cut-points τ_{1j} through τ_{9j} but drops the country-year constant ν_j . Since these cut-points are difficult to interpret in the cross-national context, we also run a linear model directly

on the WVS scale (i.e. we assume $Y_{ij}^* = Y_{ij}$) and directly extract the country-year constant terms v_j .⁶

In the *second stage* of the analysis we regress these estimated quantities from the first stage on national level variables. As an example, assume that X_{lij} is individual i 's income in country-year j . Accordingly, β_{1j} is the coefficient estimate for the impact of individual income on preferences over redistribution in country-year j . The second stage regression can then be written out as $\beta_{1j} = \alpha_0 + \gamma_1 z_{1j} + \gamma_2 z_{2j} + \dots + \gamma_M z_{Mj} + u_j$, where the coefficients from the first-stage for each country-year survey j are regressed on M country-level independent variables z_{1j} through z_{Mj} , with a single intercept α_0 and error term u_j . The coefficients γ_1 through γ_M demonstrate the effects of national variables, such as inequality or democracy, in the second stage on the estimated coefficient for individual income β_{1j} , from the first stage.

As our second-stage estimation procedure we use both an OLS, with country-clustered standard errors, and the sampled dependent variable (SDV) technique developed in Lewis and Linzer (2005), and adapted by Leoni (2008), which adjusts standard errors to reflect the fact that the dependent variables are themselves produced by an estimation procedure. We cluster the standard errors of this regression by country (since six countries have multiple samples) and use the weighting scheme developed by Borjas and Sueyoshi (1994) to adjust for the precision of our estimates by country-year.

⁶ To be precise, we use the coefficients from ordered logit analysis for the estimates pertaining to the effects of education and income. For the constant term analysis, discussed below, we use a linear regression since the ordered logit estimation technique does not produce a conventional constant term but nine *cut-points* that are less interpretable in the cross-country context (since the position of all nine cutpoints changes across countries). Since the dependent variable has eleven points, the move to a linear model does not produce dramatically different estimates of coefficients' statistical significance.

To recap, for each country-year survey our two-step procedure first conducts an ordered logit (or linear) regression of individual preferences over redistribution on individual-level characteristics such as income and education, and then uses the coefficient estimates from the first stage as dependent variables in a second-stage linear regression

3.3 Income, Education, and Redistributive Preferences Across Countries

We begin by examining variation in the relationship between income and redistributive preferences across autocracies. *Hypothesis 1*, an underlying assumption of the Meltzer-Richard model, asserted that individual income should be a strong negative predictor of individual favorability towards redistribution. *Hypothesis 3* further suggested that income should have a more strongly negative impact on views about redistribution as national-level income inequality increased, since in such situations the rich have more to lose and the poor have more to gain.

Hypothesis 1 receives strong support in our first-stage analyses, since in the majority of surveys analyzed, individual income is negatively related to preferences over redistribution, and statistically significant at the five percent level. However, once we examine the second stage results, *Hypothesis 3* finds no support. Indeed, instead of inequality working as the MR model expects and intensifying the distaste of the rich for redistribution, the second-stage coefficient on the Gini index is *positive* and statistically significant at between the four and ten percent level, depending on the estimation model used. That is, the results suggest that as inequality increases the rich tend to *favor* redistribution; a counterintuitive finding that confounds the MR logic.

To explore these findings we use both tabular and graphical presentation. The second-stage regression results are displayed in Table Two. Models 1 and 2 use a basic first-stage specification predicting individual redistribution preferences solely from individual income. We

do not report the thirty-one separate first-stage regressions.⁷ Rather, we display the second-stage regressions where the survey estimates for the coefficient on individual income are used as the dependent variable and regressed on country-level independent variables. Here we see that the income coefficients across countries are positively related to income inequality at just over the ten percent statistical significance level and positively related to GDP per capita at around the five percent level. Models 3 and 4 add the remaining individual control variables in the first stage regression, which reduces the number of country-years under analysis from thirty-one to twenty-seven (and from twenty-three to twenty-one countries). Models 5 and 6 further apply sample population weights taken from the WVS to the first stage regression. In these second-stage models we see that we see that income inequality is positively related to the first-stage coefficient on income at around the five percent level, whereas GDP per capita is no longer a significant predictor. Regime type and ethno-linguistic variation do not appear to have any relationship to the size of the income coefficient.

How should we interpret the positive effect of national-level income inequality on the estimated individual effect of income on preferences over redistribution? Figures One (a) and One (b) ease interpretation by displaying, against national income inequality, the point estimates for the coefficient on income for each country and the ninety-five percent confidence interval for those estimates.⁸

Figure One (a) shows a clear upward slope--the estimated effect of income moves from negative to positive (in at least a few cases) as income inequality rises. Pakistan and Morocco are strong outliers but even with these cases removed there is an upward trend overall, albeit weaker.

⁷ However, the first-stage coefficient estimates and their ninety-five percent confidence intervals are displayed graphically in Figures One (a) and One (b).

⁸ Note, since Models 3 through 6 are multivariate regressions, Figure One (b) does not fit onto a regression line and does not demonstrate the effect of inequality on the coefficient for income once *controlling* for confounds. Figure One (a), however, corresponds cleanly to Models 1 and 2 in Table Two since they are simple bivariate regressions.

Substantively, the most striking pattern is that countries with below median levels of inequality all have negative effects of income on support for redistribution whereas countries with above-median inequality, on average, have zero effects for income on support for redistribution.

For example, when it is placed in a pooled regression with other countries, the impact of individual-level income on preferences for redistribution in Croatia—where income inequality is comparatively very low—is negative. As income rises, support for redistribution falls. This finding by itself is unexpected given the MR logic and is supportive of *Hypothesis 1*. However, when we place Croatia in perspective with the other countries, the counterintuitive result emerges. Were *Hypothesis 3* correct, the trend line should slope *downward* – that is, the negative relationship between income and preferences for redistribution should intensify as inequality increases. Yet at the other end of the spectrum, in Zimbabwe for example, the opposite is true: preferences for redistribution even *increase* slightly with income. This finding is sharply at odds with the redistributivist prediction.

Figure 1b shows the estimated effects of income on redistribution preferences and confidence intervals for the fully specified model used in Models 5 and 6 in Table Two. Again we see a similar pattern, where only below median income countries consistently have the “expected” negative relationship between individual income and support for redistribution, as per the MR model. Yet again, as inequality increases, individuals with relatively higher incomes tend to oppose redistribution less and less.

We now replace individual income in the 1st-stage regression with education, to see if the results change any when we use this proxy variable. Table Three performs the same analysis as in Table Two. Models 1 and 2 are basic specifications with just education included as an independent variable in the 1st stage. Here we see strong effects at the national level of both

income inequality and income per capita on the relationship between education and redistribution preferences. These results mimic those shown in Table Two, in that the positive effect means that the estimated effect of education on preferences for redistribution moves from negative to positive as cross-national inequality increases. This effect persists when we move to the full specifications in Models 3 through 6, although the estimated effect for GDP per capita declines.

Figures Two (a) and Two (b) demonstrate the relationship between national income inequality and the estimated effects of education on redistributive preferences. Again we see that for below median inequality countries the estimated effects are negative (albeit less so in Figure Two (b)), whereas they are spread around zero for higher levels of income inequality. Accordingly, even if one thinks that educational status is a better proxy for long-run income than transitory reported income in a sample, there remains no supportive evidence for *Hypothesis 3*; indeed, the converse appears to be true.

3.4 ‘Typical’ Redistributive Preferences and the National Level of Inequality

We now examine the effect of inequality on average preferences for redistribution across countries. This directly tests *Hypothesis 2* – that the median voter is more support of redistribution in high-inequality countries. The extension of the Meltzer-Richard framework to democratization focuses on *the preferences of the would-be median voter under autocracy*—typically operationalized as the person with median income. By comparing that person’s preferences over redistribution in countries with different levels of inequality (and controlling for national income) we gain insight on median “voter” preferences at different ratios of median to mean income. Since redistributivist models use this ratio as their core exogenous variable, we can directly examine their underlying mechanism. For purposes of comparison, we examine the

preferences of the median-income individual as well as the preferences of individuals at the 5th, 25th, 75th, and 95th percentiles of income, in order to see whether the redistributive preferences of the poor and of the rich vary across different contexts of inequality.

How can we estimate the median voter's preferences? To do so we estimate the constant term for the first-stage regressions, re-specifying independent variables such that zero is a meaningful quantity.⁹ We then regress these first-stage estimates on country-level characteristics in a second stage regression. We do so five times, creating different estimates of the constant term, by centering the individual income variable at the 5th, 25th, 50th, 75th, and 95th percentiles respectively. We also mean-center all continuous independent variables in the first stage regression, leaving dummy variables as they are.

Putting this together, this means that the constant term in each first-stage regression reflects the expected support for redistribution for a citizen with mean religiosity, education, number of children, and age, who is male and employed, and who has an income at either the 5th, 25th, 50th, 75th, or 95th percentile, depending on the model. The second stage regressions then examine the effects of macro-level variables such as inequality on the preferences for redistribution of this "typical" person at each of those percentiles. *Hypothesis 2* asserts that the median voter's demand for redistribution should intensify as country-level inequality increases. Furthermore, *Hypothesis 3* implies that poorer citizens should also be even more pro-redistribution in high inequality countries, and richer citizens should be even less pro-redistribution in high inequality countries.

⁹ As noted above, to obtain estimates of the constant term for each country-year we must replace the ordered logit specification with a linear one – thus what we gain in insight here may be compromised somewhat by a potentially inappropriate specification. For the most part first-stage country-year linear regressions produce coefficients with similar substantive magnitude and statistical significance to the first-stage ordered logit specification, so in practice this does not appear to be a crucial distinction.

Tables Four (a) and (b) show OLS and SDV 2nd-stage regressions on the constant term at different levels of respondent income. The core patterns are similar across both: Income inequality is not related positively to the constant term in *any* of the models, contrary to the expectations of both *Hypotheses 2* and *3*. Moreover, in the models for the 5th, 25th, and median income citizen there is a *negative* relationship between income inequality and preferences for redistribution. The Meltzer-Richard model expects a positive coefficient—as inequality increases, demand for redistribution by the poor should also increase. Our results thus completely reverse the redistributivist expectation—what we see is that poorer citizens in relatively *equal* countries demand redistribution, but this preference weakens as national-level inequality increases.

Hypothesis 3 also implies that opposition to redistribution among wealthy citizens will intensify as country-level inequality increases. However, what we find is that as individual-level incomes rise the coefficient on national income inequality becomes ever smaller in magnitude, eventually becoming statistically insignificant. This means that among richer citizens, there is no connection between national-level inequality and their “typical” redistribution preferences, whereas among poorer citizens—including the median “voter,” rising inequality reduces support for redistribution. Figure 3 shows estimates for all five of the income levels and makes clear the gradual weakening of any relationship between inequality and redistributive preferences as income rises. From both the perspective of the Meltzer-Richard model and the redistributivist approach to democratization, all of these results are puzzling—to say the least.

4. In Conclusion: Interpreting our Results

So what does explain our results? When examining a set of autocratic countries, why, in cross-national perspective, do preferences against redistribution increase with income only in fairly equal countries? Our results provide no support for the Meltzer-Richard model or redistributivist models of democratization. They are less troubling for own model of democratization (Ansell and Samuels, 2010a), which presumes that different sets of economic elites might hold substantially different preferences over taxation and redistribution. But, our results do not directly corroborate our approach. In this concluding section, we explore some possible explanations.

Our findings raise the question of why low-inequality countries appear to have more strongly pro-redistributive poor citizens. A quick scan of Figures One through Three shows that many, though far from all, of these states had Communist governments through much of the postwar era. Conversely, many of the high-inequality states fit into the classic model of a ‘predatory state’. We argued that testing theories of individual redistributive preference formation in autocracies avoids some of the endogeneity problems associated with doing so in democracies where potential feedback effects from existing redistribution muddy the connection between pre-fisc inequality and views about redistribution. While redistributive public spending is generally lower in autocracies (at least cross-sectionally) much redistribution certainly took place in Communist countries. Accordingly, such countries may produce feedback effects whereby preexisting redistributive policies generates support among the poor for further redistribution.

Tables Five (a) and Five (b) examine this contention by (a) controlling for past Communist status or (b) excluding former Communist countries, and running 2nd-stage regressions for the coefficients on income and education and for the constant term, centering

income at the 5th, 50th, and 95th percentiles.¹⁰ Doing so has a strong impact on the estimated effects of inequality on these quantities of interest. In only Model 1 of Table Five (b) is the coefficient significant at the ten percent level. However, there is no evidence in either of these tables that *Hypotheses 2* or *3* find any more support--even “controlling for communism,” we find no support for the Meltzer-Richard model. We suggest that communist states acted rationally to deliberately *endogenize* equality, in order to consolidate their political authority by quelling the demands of rising economic groups that might challenge the political elite’s control of the regime (as in Ansell and Samuels, 2010a). Creating support from the poor for the existence of high levels of public spending might be a key tactic of autocratic regime consolidation.

A different explanation derives from Moene and Wallerstein (2001, 2003): individuals may think of public pensions, unemployment compensation and health care as *insurance* programs rather than redistributive policies. To the extent that citizens see government programs as “risk-pooling” and believe that they are likely to benefit from those programs, rather than as “downward” redistribution to people very much unlike them, a different relationship between inequality and demand for government intervention in the market may arise. More specifically, since economists commonly assume that demand for insurance rises with income, the higher the inequality, the less the median voter will favor these sorts of programs, *and the more the wealthy will favor them*. The tricky thing here is to ascertain whether insurance programs are likely to emerge in the kinds of countries under our analysis. While many social welfare programs in developing post-authoritarian countries do bias towards wealthier citizens (Haggard and Kaufman, 2008) it is not obvious that this effect is powerful enough to actually flip the poor’s preferences to being anti-redistribution. Still, if public spending is targeted towards wealthier

¹⁰ We code Bosnia-Herzegovina, Croatia, Russia, China, Kyrgystan, and Vietnam as having Communist legacies.

citizens this provides further intuition as to why the rich are more ambivalent in high inequality countries, where insurance style programs are more favorable toward them.

The empirical results presented in this paper cast considerable doubt on the value of the median-voter assumption that underlies redistributivist models of democratization. Quite simply, there is no micro-level evidence that as cross-national inequality increases in autocratic societies, relatively poor voters will increasingly demand redistribution. Our next step is to detail how the results here support our contractarian alternative approach.

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Table One: World Values Surveys - Autocracies Eligible for Inclusion in Analysis

Qualifying Countries	Polity Score	Survey Year	Used in Table 2, Models 1 and 2	Used in Table 2, Models 3-6
Bosnia and Herzegovina	-10	1998	Yes	Yes
Bosnia and Herzegovina	-10	2001	Yes	Yes
Burkina Faso	0	2007	Yes	Yes
China	-7	1990		
China	-7	1995		
China	-7	2001		
China	-7	2007	Yes	Yes
Croatia	-5	1996	Yes	
Egypt	-6	2000	Yes	Yes
Egypt	-3	2008	Yes	Yes
Ethiopia	1	2007	Yes	Yes
Hungary	-7	1982		
Iran	3	2000	Yes	Yes
Iran	-6	2007	Yes	Yes
Iraq	-10	2004		
Iraq	-10	2006		
Jordan	-2	2001	Yes	Yes
Jordan	-3	2007		
Kyrgyzstan	-3	2003	Yes	Yes
Malaysia	3	2006	Yes	
Morocco	-6	2001	Yes	Yes
Morocco	-6	2007	Yes	
Nigeria	-5	1990	Yes	Yes
Nigeria	-6	1995	Yes	Yes
Nigeria	4	2000	Yes	Yes
Pakistan	-6	2001	Yes	Yes
Peru	1	1996	Yes	Yes
Russian Federation	0	1990	Yes	Yes
Russian Federation	3	1995	Yes	
Rwanda	-3	2007	Yes	Yes
Saudi Arabia	-10	2003		
Serbia and Montenegro	-7	1996		
Singapore	-2	2002	Yes	Yes
South Africa	4	1982		
South Africa	5	1990		
South Korea	-5	1982		
Tanzania	-1	2001	Yes	Yes
Thailand	-1	2007	Yes	Yes
Uganda	-4	2001	Yes	Yes
Vietnam	-7	2001	Yes	Yes
Vietnam	-7	2006	Yes	Yes
Zambia	5	2007	Yes	Yes
Zimbabwe	-4	2001	Yes	Yes

Table Two: Income Effects - Second Stage Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
	BASIC	BASIC	FULL	FULL	FULL	FULL
	OLS	SDV	OLS	SDV	OLS	SDV
Gini Coefficient	0.484 (0.100)	0.475 (0.103)	0.417* (0.056)	0.408** (0.048)	0.461** (0.042)	0.442** (0.038)
GDP per cap	0.003* (0.057)	0.003* (0.050)	0.002 (0.150)	0.002 (0.133)	0.001 (0.301)	0.001 (0.285)
Polity Score	0.001 (0.855)	0.001 (0.863)	0.001 (0.724)	0.001 (0.765)	0.001 (0.853)	0.001 (0.871)
Ethno-Ling Frag.	0.054 (0.408)	0.051 (0.431)	0.037 (0.504)	0.028 (0.603)	0.048 (0.398)	0.035 (0.513)
Constant	-0.312** (0.014)	-0.307** (0.014)	-0.244** (0.014)	-0.234** (0.013)	-0.265*** (0.010)	-0.250*** (0.009)
Sampling weights	N	N	N	N	Y	Y
Observations	31	31	27	27	27	27

p-values in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table Three: Education Effects: Second Stage Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
	BASIC	BASIC	FULL	FULL	FULL	FULL
	OLS	SDV	OLS	SDV	OLS	SDV
Gini Coefficient	0.596**	0.571**	0.543**	0.514**	0.483**	0.468*
	(0.020)	(0.025)	(0.022)	(0.041)	(0.039)	(0.068)
GDP per cap	0.005**	0.005**	0.002	0.002	0.003*	0.003
	(0.023)	(0.022)	(0.194)	(0.186)	(0.075)	(0.112)
Polity Score	-0.001	-0.001	0.001	0.000	0.001	0.001
	(0.849)	(0.855)	(0.878)	(0.972)	(0.776)	(0.887)
Ethno-Ling Frag.	0.048	0.045	0.026	0.027	0.023	0.023
	(0.580)	(0.616)	(0.735)	(0.748)	(0.774)	(0.797)
Constant	-0.390***	-0.377***	-0.309***	-0.297***	-0.285***	-0.276**
	(0.001)	(0.002)	(0.002)	(0.004)	(0.006)	(0.012)
Sampling weights	N	N	N	N	Y	Y
N	31	31	27	27	27	27

p-values in parentheses* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table Four (a): Constant Term Analysis: OLS Second Stage Regression

	(1)	(2)	(3)	(4)	(5)
	5 th percentile	25 th percentile	Median	75 th percentile	95 th percentile
Gini Coefficient	-7.053*	-6.516*	-5.999*	-5.075	-3.920
	(0.087)	(0.087)	(0.089)	(0.105)	(0.126)
GDP per cap	-0.006	-0.003	-0.001	-0.000	-0.004
	(0.749)	(0.865)	(0.922)	(0.986)	(0.747)
Polity Score	-0.023	-0.020	-0.029	-0.032	-0.030
	(0.687)	(0.690)	(0.544)	(0.471)	(0.460)
Ethno-Ling Frag.	1.017	1.115	1.262	1.333	1.434*
	(0.364)	(0.271)	(0.191)	(0.132)	(0.067)
Constant	6.912***	6.513***	6.117***	5.586***	4.920***
	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)
Observations	26	26	26	26	26

p-values in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table Four (b): Constant Term Analysis: SDV Second Stage Regression

	(1)	(2)	(3)	(4)	(5)
	5 th	25 th	Median	75 th	95 th
Gini Coefficient	-6.972*	-6.450*	-5.960*	-5.016	-3.808
	(0.092)	(0.092)	(0.094)	(0.112)	(0.149)
GDP per cap	-0.005	-0.003	-0.001	0.000	-0.003
	(0.758)	(0.876)	(0.941)	(0.992)	(0.787)
Polity Score	-0.025	-0.021	-0.030	-0.033	-0.031
	(0.657)	(0.669)	(0.531)	(0.460)	(0.450)
Ethno-Ling Frag.	1.095	1.166	1.310	1.385	1.498*
	(0.328)	(0.252)	(0.177)	(0.119)	(0.059)
Constant	6.828***	6.454***	6.070***	5.529***	4.834***
	(0.003)	(0.002)	(0.002)	(0.002)	(0.001)
Observations	26	26	26	26	26

p-values in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table Five (a) – Communism as a Control

	(1)	(2)	(3)	(4)	(5)
	Income	Education	Constant 5 th	Constant 50 th	Constant 95 th
Gini Coefficient	0.499 (0.129)	0.291 (0.241)	-6.316 (0.187)	-5.328 (0.188)	-3.144 (0.248)
GDP per cap	0.001 (0.346)	0.002* (0.053)	-0.002 (0.932)	0.002 (0.904)	0.000 (0.994)
Polity Score	0.001 (0.744)	-0.002 (0.654)	-0.003 (0.970)	-0.011 (0.840)	-0.010 (0.823)
Ethno-Ling Frag.	0.038 (0.550)	0.010 (0.859)	1.132 (0.271)	1.370 (0.128)	1.536** (0.035)
Communism	0.024 (0.688)	-0.085* (0.088)	0.467 (0.583)	0.401 (0.570)	0.448 (0.365)
Constant	-0.278* (0.078)	-0.189* (0.060)	6.510*** (0.008)	5.750*** (0.006)	4.515*** (0.001)
Observations	27	27	26	26	26

Table Five (b) – Non-Communist Countries Only

	(1)	(2)	(3)	(4)	(5)
	Income	Education	Constant 5 th	Constant 50 th	Constant 95 th
Gini Coefficient	0.672* (0.092)	0.298 (0.385)	-9.217 (0.119)	-7.885 (0.128)	-5.192 (0.165)
GDP per cap	0.001 (0.512)	0.003* (0.064)	0.008 (0.736)	0.012 (0.559)	0.010 (0.533)
Polity Score	0.002 (0.783)	-0.005 (0.393)	-0.016 (0.850)	-0.023 (0.738)	-0.023 (0.662)
Ethno-Ling Frag.	0.009 (0.913)	0.018 (0.802)	1.910 (0.156)	2.041* (0.089)	2.111** (0.032)
Constant	-0.330* (0.058)	-0.201 (0.114)	7.188*** (0.006)	6.351*** (0.005)	4.960*** (0.003)
Observations	20	20	20	20	20

p-values in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure One (a): Basic Income Effect

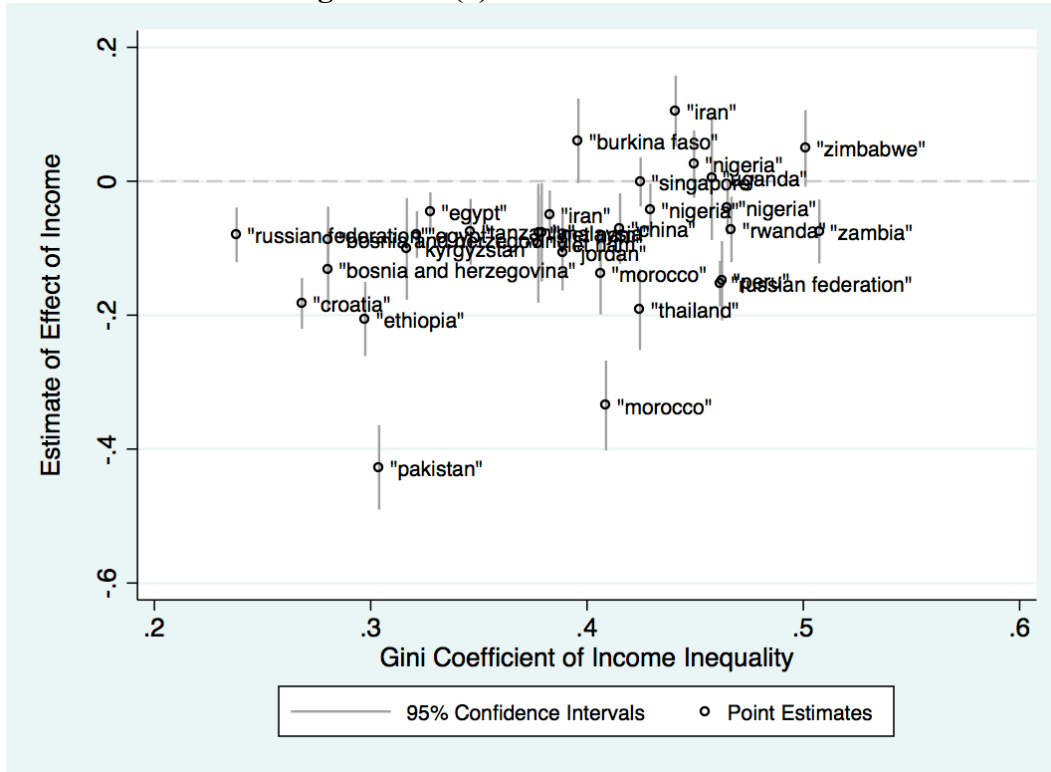


Figure One (b): Full Specification Income Effect

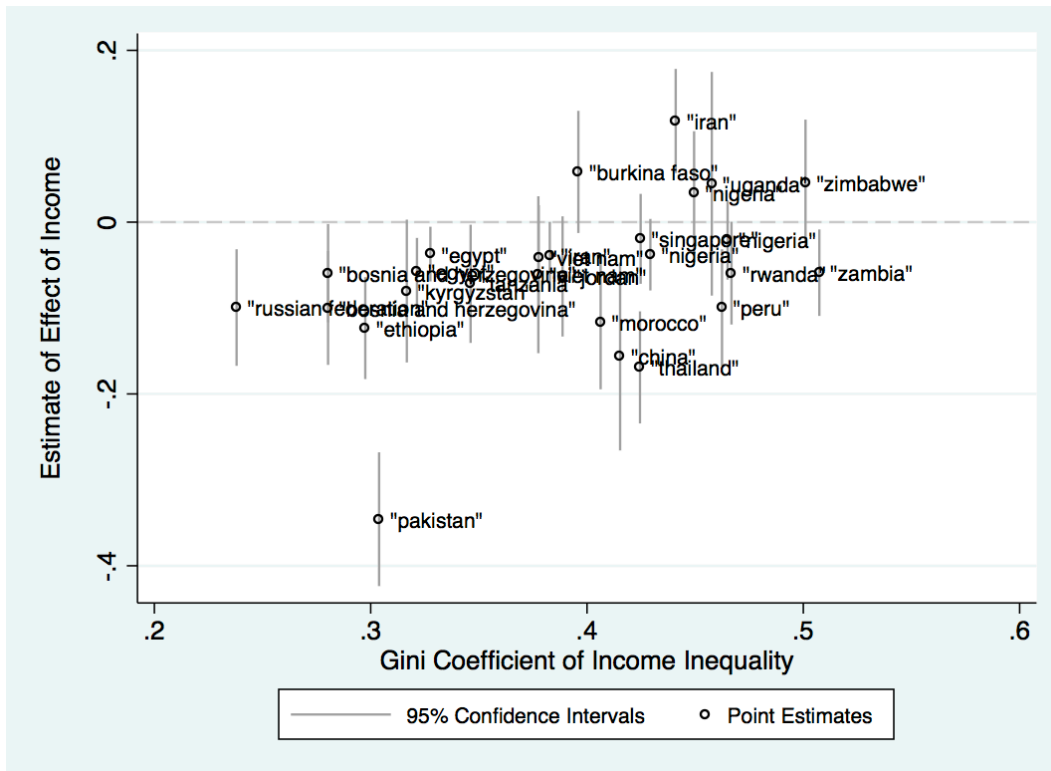


Figure Two (a): Basic Effect of Education

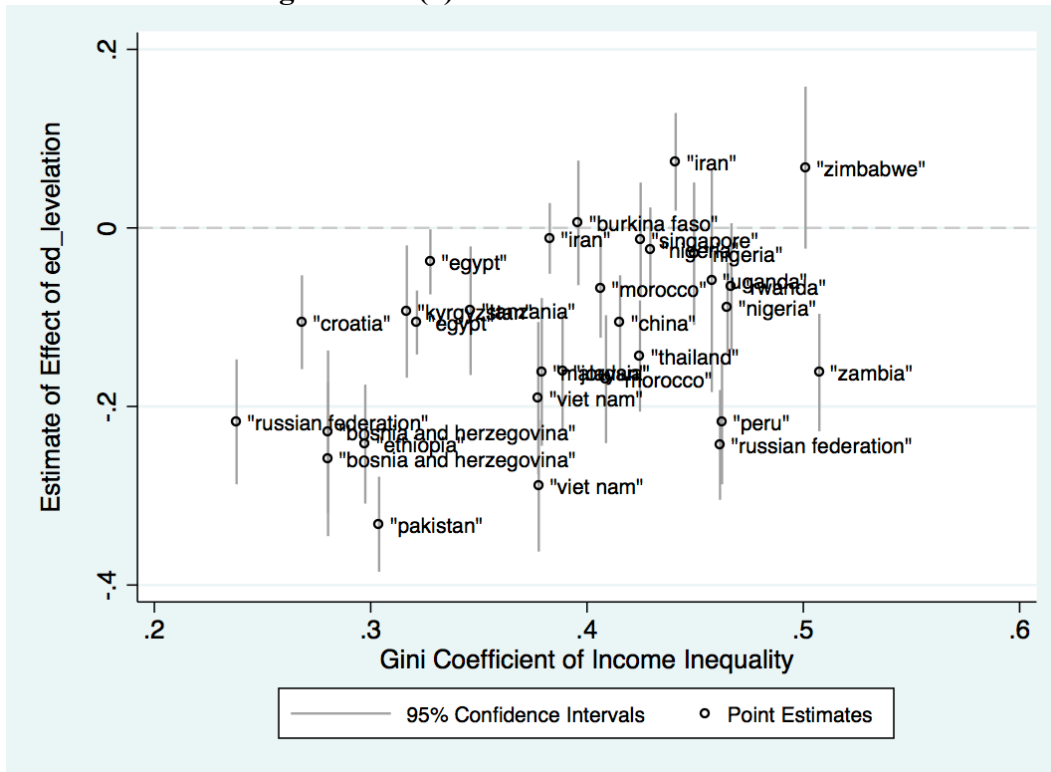


Figure Two (b): Full Specification Effect of Education

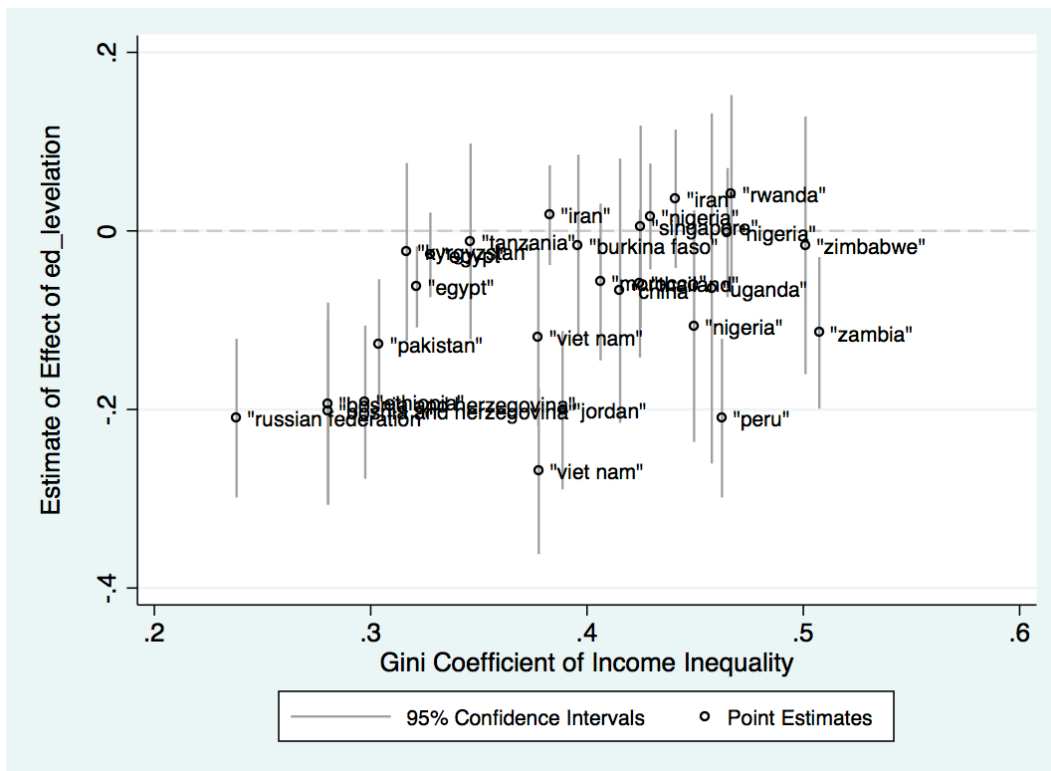
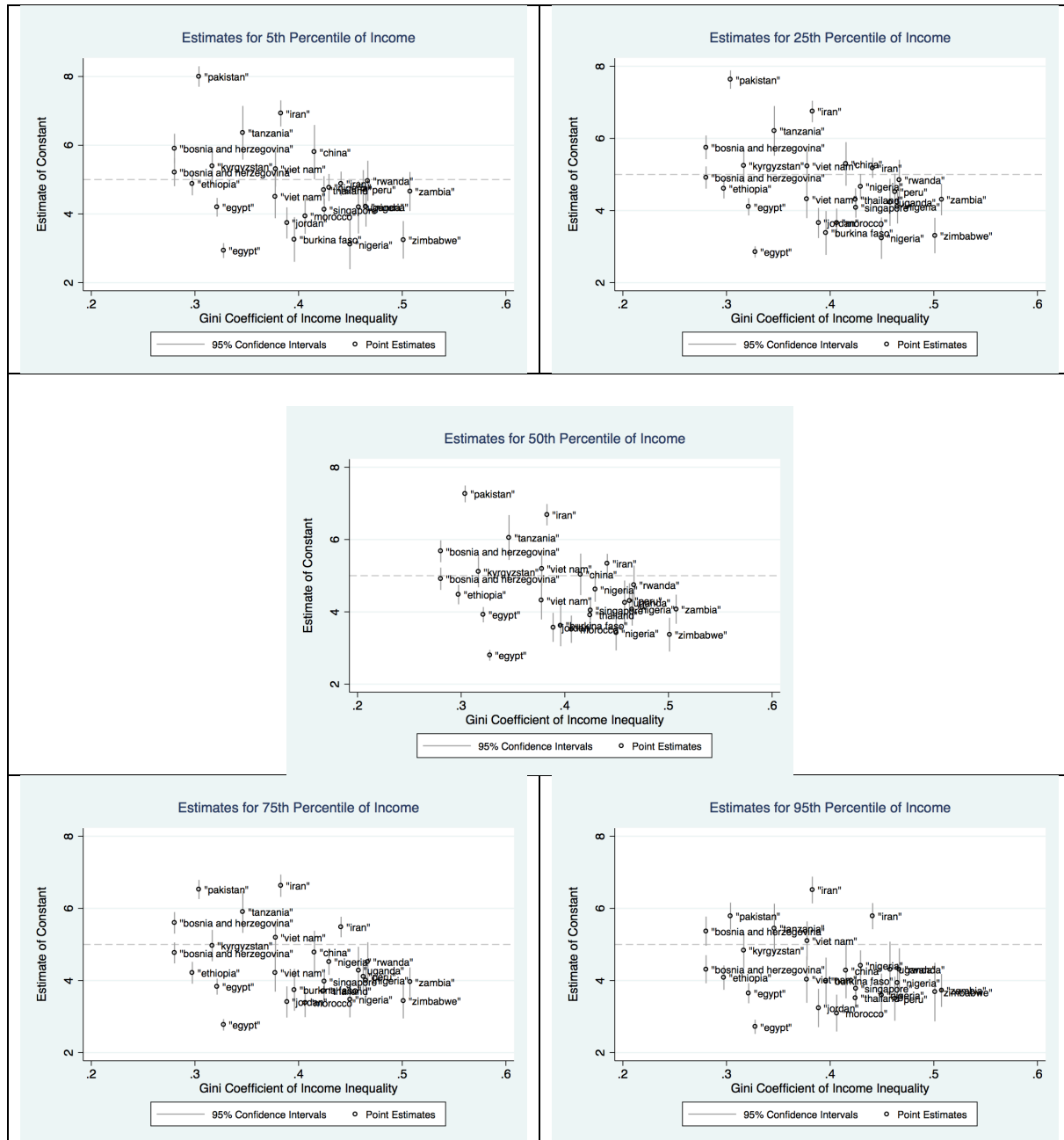


Figure Three: Estimates of Support for Redistribution for ‘Typical’ Citizens at Varying Levels of Income, against Income Inequality



Note: All figures show estimate of constant term from linear regressions of preferences over redistribution at the country-year level for male, employed citizens with mean education, religiosity, children, and age. The dashed line represents a constant term of five, to help compare scatterplots.