Income inequality and popular support for redistribution: A cross-regional and global perspective

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Income inequality and popular support for redistribution: A cross-regional and global perspective

Vicki Birchfield and Michelle Dion

Rising income inequality in advanced capitalist democracies has become a widespread trend over the past two decades (Atkinson, Rainwater and Smeeding 1995; Gottschalk and Smeeding 1997), sparking new debates in comparative political economy about the capacity of welfare states and social policies to counter market inequities through redistribution. Much of the previous scholarship has focused on the various political and institutional factors that help explain cross-national variation in levels of income inequality (Birchfield and Crepaz, 1998; Smeeding 2000, 2003; Bradley et al. 2003; Mahler 2004; Kenworthy and Pontusson 2005; Iversen 2005; Iversen and Soskice 2006), but increasingly debate centers on the relationship between social attitudes and preferences toward redistributive policies and government redistribution and thus levels of inequality (Shapiro and Young 1989; Blekesaune and Quadagno 2003; Kenworthy 2004; Kenworthy and Pontusson 2005; Iversen 2005, Finseraas 2006; Brooks and Manza 2007; Brooks and Manza 2006; Kelly 2004; Kenworthy and McCall 2007). Underlying the various institutional and policy mechanisms of government redistribution are key societal values and public opinion that, at least in established democracies, presumably play a strong role in shaping outcomes (Shapiro and Young 1989; Kelly 2004; Brooks and Manza 2006). Thus, in addition to its relevance for political economy, this new line of research is intrinsically linked to issues of democratic legitimation and government responsiveness, making it of value not only to advanced states debating welfare reform, but also to countries in the process of democratic consolidation or in transition toward market economies.

Surprisingly, however, hardly any effort has been made to understand how these purported relationships between attitudes, welfare effort and inequality might play out in countries beyond the capitalist core. An extension of this research to regions beyond OECD countries appears warranted in light of the cross-national diversity of welfare sates and their differential impact on inequality as well as the theoretically contentious and empirically inconclusive nature of these debates. Developing and middle income societies must also confront the problem of growing income inequality, and popular opinion matters even in younger democracies. This paper offers one of the first attempts to empirically test the key assumption of the Meltzer-Richard (1981) model of preferences and redistribution as well as other key theoretical propositions about attitudes, inequality and redistribution in a multi-regional, global analytical framework incorporating both individual level surveys as well as macro-structural, national level data for 57 countries across a range of political and economic development. We begin by discussing our theoretical and methodological rationale for studying developed and developing countries together and suggest how this global perspective might enhance our effort to better understand the sources of popular support for redistribution and thereby also contribute to the larger debates on income inequality.

Our basic research question can be expressed as follows: what factors shape individual attitudes and support for government redistribution and in what ways do such preferences for social justice vary cross-regionally according to level of economic development or income inequality? The strategy of simultaneously analyzing developed and developing countries to address this question is grounded in both theoretical and methodological motivations. From a theoretical perspective, we believe the processes of economic globalization compel us toward a more systematic global analysis and that greater effort should be made to apply (and test) the

general insights of the varieties of capitalism and welfare state literatures to countries at different stages along the modernization and democratization trajectories. Though the concepts and theories elaborated for Western industrialized societies may not necessarily reflect the same historical dynamics of countries lying outside the capitalist core, we also believe that in a general sense, cross-regional analyses may provide opportunities for reciprocal social learning. Esping-Andersen cautions against confusing the welfare state with equality because welfare states "pursue different conceptions of equality" (1990, 262). One way to better understand these different conceptions of equality is to examine the roots of public attitudes and support for certain types of welfare provision and the resulting linkages to redistribution and income inequality; thus, in some ways, the recent literature's emphasis on social preferences and demand for redistribution indirectly heeds Esping-Andersen's advice by seeking to identify the sources of individual views on social justice that may or may not be inherently connected to certain types of welfare regimes and that may shed light on varying policy choices in different societies. Our paper adds to this latest dimension of the debates by extending the scope of analysis in both time and space. From a broad conceptual and theoretical perspective, it is not unreasonable to consider a wider array of countries that inevitably face similar decisions about the scope of government action in redressing market inequalities.

From a methodological point of view, we begin from the premise articulated by Huber (2003) that cross-regional comparisons can have considerable payoffs in terms of refinement of concepts and theories and as such deserve a more central place in research design. Huber suggests that the value of cross-regional comparisons lies in following areas: "(1) They can increase confidence in the usefulness of our concepts and theories, if we find similar processes in widely different contexts. (2) They can force us to modify concepts and better specify theories

with regard to contextual variables. (3) They can highlight the existence of different paths to the same outcome and thus the need to develop new theories" (2003, 1). Given the pressing need for all societies to strike a balance between the goals of economic growth and social equality, particularly under intensifying conditions of global capitalism, it makes sense to expand our empirical base of information as widely as possible while still seeking to advance our theoretical knowledge about the causal processes that drive socio-economic change. Combining what we have learned from cross-national studies with new insights generated by cross-regional analyses, our study provides a rigorous reconsideration of existing theories about the nature of social preferences and their relationship to issues of income inequality and government redistribution.

Next, we provide an overview of the relevant literature that has been concerned with attitudes towards the welfare state and government redistribution –what we refer to as 'social justice'—scrutinizing those works that directly test the Meltzer-Richard model. The second part of the paper describes the data and methods and presents the results of our analysis. We find some support for the assumption that individual education and income are inversely related to demand for redistribution, but we also find that there is significant cross-national and cross-regional variation in the effects of education and income on support for redistribution. In particular, the assumption of the Meltzer-Richard model is less tenable in less economically developed countries and countries with high levels of income inequality. We conclude with a discussion of the theoretical and policy implications of our study and suggest avenues for further research.

Sources of support for social justice: Individual and national characteristics

As suggested in the introduction, understanding the factors that shape individual preferences for government redistribution is a critical, but understudied, element of the nexus

between attitudes, public policy and equality outcomes. Central to many studies of the welfare state or income distribution is the assumption, formalized in the model developed by Meltzer and Richard (1981), that individual preferences regarding redistribution policies derive from the economic utility individuals expect to receive from such policies. For example, studies of welfare routinely begin from the assumption that higher levels of income inequality will lead to greater demand for redistributive social policy (Moene and Wallerstein 2001, 2003; Iversen and Soskice 2001, 2006;Iversen 2005; Cussack et al. 2006 Kenworthy and Pontusson 2005). Studies of income inequality also cite the Meltzer-Richard model for the expectation that countries with higher pre-tax or pre-transfer inequality should have adopt more redistributive policies to reduce post-tax or post-transfer inequalities (Bradley et al 2003). Even those studies that extend Meltzer-Richard by examining the ways in which different electoral institutions may reproduce not the preferences of the median voter but those of other voters, do not question the primary assumption that voters with lower incomes, who presumably are most likely to benefit from government redistribution, are likely to prefer more redistribution than higher income voters. Such studies instead focus on the ways that public policy fails to reflect the preferences of the median voter due to the configuration of political institutions (Iversen 2005; Iversen and Soskice 2006) or lower turnout among economically disadvantaged voters (Kenworthy and Pontusson 2005).

Given the pervasiveness of the Meltzer-Richard model and the efforts of political economists to resolve the empirical "redistribution paradox" (Iversen and Soskice 2004), it is surprising that more studies have not examined the assumption that individual or household income drives preferences regarding government redistribution.[1] This is not to imply that no

[1] Lübker (2007) is an exception, which questions the *homo ecnomicus* assumption of the Meltzer-Richard model and suggests that cultural factors explain cross-national differences in support for redistribution.

political economists, in light of the limited empirical evidence consistent with expectations that higher inequality leads to greater redistribution, are skeptical of the assumption that economic self-interest universally drives public attitudes toward redistribution, as suggested by the claim that though the "logic of the Meltzer-Richard model captures a dynamic that liberal democracies have in common…there are important cross-national differences in 'tastes for equality' or beliefs about the proper role of government" (Kenworthy and Pontusson 2005, 459). The studies that do examine the effects of income on support for social justice generally find that individual income is inversely related to support for government redistribution of income (e.g., Iversen 2005, 100; Meier Jæger 2005; Meier Jæger 2006a; Meier Jæger 2006b; Finseraas 2006) or redistributive welfare state policies (Blekesaune and Quadagno 2003; Blekasaune 2006). However, nearly all these studies are restricted to advanced industrialized democracies.[2]

By expanding the sample of countries to include middle-income developing countries, we seek to determine whether the assumption that economic self-interest drives attitudes toward government redistribution in less economically developed countries. In the only study that estimates the effect of level of economic development on support for redistribution, the results suggest that more developed countries will have lower average levels of support for redistribution, though the effect was not statistically significant (Finseraas 2006). Because our sample includes greater variation in levels of economic development, we expect the relationship between economic development and average support for redistribution to be more pronounced. In particular, we expect that countries with higher levels of economic development to have less average support for redistribution. Our analysis goes beyond that of Finseraas (2006), however, to model the effects of economic development on the extent to which household income is inversely related to support for redistribution, as Meltzer-Richard would assume. We

[2] Finseraas's (2006) sample includes four post-communist countries.

hypothesize that though economic self-interest may shape attitudes toward redistribution in developed countries, household income may not be a significant predictor of attitudes toward redistribution in developing countries, where public awareness of poverty may create more universal support for redistribution. In other words, support for "basic needs generosity" (Bowles and Gintis 2000) and by association redistribution may be more universal in countries with lower average incomes.

Further, the degree to which the assumption that income is inversely related to support for government redistribution accurately describes preferences may vary according to cultural, historical, or political context.[3] For instance, in Eastern Europe and Central Asia, the legacy of communist rule may minimize the extent to which those with higher incomes disagree that government should redistribute income (e.g., Lipsmeyer 2003) or may erode egalitarian sentiments (e.g., Weakliem, Andersen and Heath 2002). Likewise, Latin Americas, with their Catholic heritage and long histories of state intervention in the economy may be less likely than their counterparts elsewhere to let economic self interest determine their attitudes toward government redistribution. Though ideally these specific cultural or historical legacies would each be modeled, we begin here by merely estimating regional differences in the effects of household income on support for social justice.

A handful of studies examine the relationship between level of income inequality and average level of support for government redistribution in an attempt to evaluate the Meltzer-Richard argument. For example, several studies find no statistically significant relationship between level of inequality and average support for income distribution (Bowles and Gintis

[3] Several studies investigate whether welfare regime policies affect attitudes toward redistribution, with mixed results (Meier Jæger 2006a; Meier Jæger 2005; Mehrtens 2004). Comparable and quality measures of welfare effort beyond the advanced industrialized democracies are not readily available, nor have coherent cross-regional typologies of welfare regimes yet been developed. IMF data on "welfare spending" typically used in cross-regional studies of welfare state effort are problematic because they include both insurance and redistributive expenditures.

2000; Finseraas 2006; Lübker 2007). Though these authors 'test' the assumption that higher inequality translates into higher average support for government redistribution, the tests either use only use aggregate cross-national data (e.g., Bowles and Gintis 2000 and Lübker 2007) or use aggregate inequality to predict differences in average support for redistribution at the micro-level across time (e.g., Kenworthy and McCall 2007) or cross-nationally (e.g., Finseraas 2006).[4] As such, they do not explicitly model the effects of country-level income inequality on the degree to which micro-level income predicts support for redistribution, which would be a better test of the universality of the *homo economicus* assumption of the Meltzer-Richard model. We hypothesize that the effects of income on attitudes toward social justice may vary according to the national level of income inequality. For instance, in countries with high levels of income inequality, not only might we expect support for redistribution to be higher in general, but we might also expect even those with higher incomes to support redistribution in the interest of minimizing societal conflict or potential unrest due to inequality (Alesina and Rodrik 1994). Indeed, one of the advantages of expanding our sample to include countries beyond the advanced industrialized democracies is that we are able to observe greater variation in levels of income inequality in order to better estimate the effects of inequality on the role of income as a predictor of attitudes toward redistribution.

In some studies education is used as a proxy for income (e.g., Finseraas 2006), or in others it is assumed to have similar effects on attitudes toward redistribution as income (e.g., Meier Jæger 2006a; Meier Jæger 2006b). Generally, it is assumed that those with higher education will either also have higher incomes or greater job security, making them less likely to support government income redistribution. Iversen (2005) challenges these assumptions by

[4] Finseraas (2006) uses the analytical strategy closest to that used here, but he only models the effect of income inequality on the residual average (or individual-level regression constant) support for redistribution.

demonstrating that when education leads to skill specificity, demand for social spending increases rather than declines. Because we do not model skill specificity and instead use in our models standard deviation from the mean years of education, the expected effects of education on support for redistribution are ambiguous.

In addition to the role of income and education on preferences for redistribution, other theoretical perspectives as well as empirical research suggest that a host of demographic and other characteristics are strong predictors of attitudes towards matters of redistribution and social justice. Women, those with lower education levels, and union members are all more likely to support greater government redistribution (Art and Gelissen 2001; Blekesaune and Quadagno 2003; Cusack et al. 2005; Iversen and Soskice 2001; Iversen 2005; Jæger 2006a; Jæger 2006b; and Svallfors 1997). Likewise, cross-national studies suggest that the unemployed express greater support for state welfare provision (Blekesaune and Quadagno 2003; Blekasaune 2006) and for government redistribution in general (Iversen 2005; Meier Jæger 2006a; Meier Jæger 2005). These findings are consistent with those of Hasenfeld and Rafferty (1989) that those who are most vulnerable and thus most likely to benefit from welfare programs are more likely to support redistributive policies.[5] Such findings are also largely consistent with the underlying assumption about the role of self interest in shaping preferences according to the Meltzer-Richard model.[6]

[5] Results for models of class and attitudes toward redistribution have been more mixed. Jacoby (1994) found a coherent structure in public attitudes towards social spending than in other areas of government expenditure and Svallfors (1997) noted that class and status are strong predictors of support for redistribution , but Coughlin (1980) and Taylor –Gooby (1998) found that class was only weakly related to attitudes towards the welfare state. Despite theses conflicting findings, there is general support consistent with earlier claims that the more individuals endorse the concept of "social rights" the greater the likelihood that they will support redistribution (Feldman and Zaller 1992; McClosky and Zaller 198; Sears et al.4).

[6] In addition to these individual-level characteristics, several studies have examined the effects of existing state welfare provision on attitudes toward the welfare state and redistribution. In general, the extensiveness of state welfare provision has been associated with slightly higher levels of support for government welfare programs (Edlund 1999; Gelissen 2001; Mehrtens 2004; Blekesaune and Quadagno 2003; Meier Jæger 2006). These studies

As this overview of the literature makes clear, the relationships between individual and country-level characteristics and attitudes toward redistribution are both theoretically complex and understudied beyond the advanced industrialized democracies. Our discussion has also demonstrated is that both the theoretical perspectives and the empirical findings are wide-ranging, sometimes contradictory and at this stage, quite inconclusive. Given the complexity, contradictions, and limitations of the existing literature, our analytical strategy seeks to explore conditions under which or domains to which the existing theories may reasonably apply. As a result, we hope to illustrate the promise and limitations of efforts to make universalizing statements about the sources of support for redistribution. The next section describes our data and the strategy used to analyze the individual and national characteristics that explain patterns of support for social justice.

Data and analysis

Given our interest in testing the extent to which the assumptions of the Meltzer-Richard model and the insights of the literature on attitudes toward redistribution in advanced industrialized democracies may extend beyond highly developed economies, we have privileged broadness of our sample over sophistication of our measures and complexity of our models. We have compiled a dataset that combines 15 international public opinion surveys administered in over 50 countries between 1985 and 2004. The surveys are from the International Social Survey Program (1985, 1987, 1990-1993, 1996, 1998-2000), the Latinobarometer (1996), Eurobarometer (1999, 2001), and European Social Survey (2002, 2004).

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mark a sharp contrast with prior research (Bean and Papadakis, 1998; Bonoli 2000; Gelissen 2000; Svallfors 2003) that had not been able to produce unambiguous evidence to support that different welfare regimes would produce diverging levels of support for state provided welfare, redistribution and egalitarian policies. Unfortunately, we do not currently have the data necessary to test the cross-regional differences in the effects of welfare provision on support for redistribution.

To measure support for *social justice*, we use respondent agreement with the following statement: "It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes." This question, or some subtle variation, was posed in each of the surveys.[7] Responses were coded on a scale of one through five, with five representing the strongest agreement with the statement.[8] Figure 1 graphs the average support for social justice by level of economic development and region. The figure illustrates the cross-national and cross-regional variation in support for social justice. In addition to an inverse relationship between economic development and social justice, regional clusters are apparent. A one-way ANOVA analysis of support for social justice suggests that approximately 13.2% of the cross-national individual-level variation is due to between-country rather than within country variation. Figure 2 uses bar graphs to illustrate the cross-national variation in the distribution of support for social justice within in country, grouped by region. Before addressing this cross-national variation, we begin by estimating individual-level models of support for social justice within each country.

The literature on support for government income redistribution suggests that several individual characteristics explain within country variation. The individual-level models include indicators for *female* and workforce status: *employed* and *unemployed*, with those not in the formal workforce (including students, homemakers, and retired workers) coded as the baseline category. Female and unemployed respondents are expected to express greater support for social justice. *Age* is coded into seven decade increments, beginning with those under 25 and ending

[7] In a handful of surveys, the statement was "It should be the government's responsibility to reduce income differences between the rich and the poor people."
[8] In two surveys, the responses were coded on a four point scale, with no middle category. The responses in these surveys were recoded to match those of the five point scale.

with those 75 and older. The effects of age on attitudes toward redistribution are ambiguous in earlier studies (e.g., Meier Jæger 2006a; Meier Jæger 2006b).

According to the Meltzer-Richard model, respondents with higher relative education and income are expected to support social justice less. Both *education* and *income* are coded as standard deviations from the country mean in each survey in order to standardize the scales across surveys and countries and to capture the relative education and income of each respondent within their national context.[9]

The results of a random coefficients model of individual level explanations of support for redistribution are presented in Table 1.[10] These models pool the survey responses together to measure the average effects of individual level characteristics and the amount of variation in the coefficients of the models between countries. The fixed effects results are the average effect of each individual level variable on support for redistribution in the pooled surveys. The models also estimate the degree of variation between country-surveys around the fixed estimates. The combined model can be written as:

$$socialjustice_{ij} = \gamma_{00} + \gamma_{10} employed_{ij} + \gamma_{20} unemployed_{ij} + \gamma_{30} age_{ij} + \gamma_{40} female_{ij} + \gamma_{50} income_{ij} + \gamma_{60} education_{ij} + u_{0j} + u_{1j} employed_{ij} + u_{2j} unemployed_{ij} + u_{3j} age_{ij} + u_{4j} female_{ij} + u_{5j} income_{ij} + u_{6j} education_{ij} + r_{ij}$$

where γ_{00} through γ_{60} represent the fixed effects of employed through education on support for redistribution and u_{0j} through u_{6j} represent estimates of the random effects.

[9] For education, the number of years of education was used whenever possible. In most cases, income was coded using the standardized deciles in the surveys. Otherwise, the raw income figures were used. Because the data are standardized, the variable is measured in terms of standard deviations from the country-survey mean for each individual.

[10] Though the dependent variable, support for government redistribution, is only scaled one through five, an examination of the residuals from these models suggests that it is normally distributed. Further, given the large sample sizes within each country-survey, the sampling distribution should be asymptotically normal. Though transforming the dependent variable may improve the efficiency of the estimates, it is unlikely to substantively change the results and would unnecessarily complicate interpretation of the results.

The first model in Table 1 includes the full sample of 248 country-years for which we have surveys. The second model does not include the 1996 Latinobarometer and other surveys in which respondent income was not available.[11] The results from the two models are broadly consistent with each other and the expectations of the theoretical literature. The models explain about three percent of the within country variation in support for government redistribution, which is comparable to the percentage of variation explained by many models of public opinion. Female respondents are more likely to support redistribution. Unemployed respondents are also more likely to support redistribution than those not in the workforce, the baseline category, and employed respondents are less likely to support social justice. Age appears to have a positive relationship with support for redistribution.

Of greatest interest are the results for education and income, both of which test the core assumption of the Meltzer-Richard model. Both education and income are negatively associated with support for social justice in both Models 1 and 2. The results for the random effects in Table 1 also indicate that there is significant variation in the individual level coefficients between countries. The coefficients of between-country variation in the individual level parameter estimates are almost all highly statistically significant, which means that there is significant variation in the impact of education and income at the individual levels between countries.

In order to explain the remaining variation in support for redistribution and in the effects of individual level factors across countries, we examine the relationship between economic context and level of income inequality and the effects of individual level education and income. As discussed above, we expect that the effects of individual education and household income may vary across national or regional contexts. *Economic development* is captured by the natural

[11] The Latinobarometer did include a collection of questions intended to measure household wealth. In future analyses we intend to calculate a measure of relative wealth from these questions.

log of the per capita gross domestic product converted using purchasing power parities into 1000s of international dollars in 2000 (World Bank 2007). *Income inequality* is measured using the GINI coefficients published by the UN-WIDER project on income inequality.[12]

To illustrate the cross-national variation in the effects of education and income on attitudes, Figure 2 graphs the regression coefficients from the 248 and 221 regressions estimated to calculate the fixed effects in Table 1. In other words, Figure 2 illustrates the extent to which the Meltzer-Richard assumption about the effects of income and education on preferences for redistribution is tenable across countries and geographical regions. Coefficients that are more negative lend more support to the assumptions of the Meltzer-Richard model, while coefficients closer to zero indicate that income has little effect on support for redistribution. The advantage of presenting the results graphically is that it summarizes a large amount of information in a way that is easier to interpret than the results in Table 1. Panels (a) and (b) graph the coefficients from the individual-level country-survey regressions for education from Model 1 by level of economic development and income inequality respectively. In both panels, the majority of the education coefficients for the country surveys are negative, reflecting the inverse relationship between education and support for social justice predicted by the assumptions of the Meltzer-Richard model. The negative effect of education on support for government redistribution appears to be stronger in more developed countries, which is illustrated by the pattern in panel (a). In less developed countries, education has a less pronounced effect on reducing support for government redistribution. The effect of education on support for redistribution also varies according to the degree of income inequality in a country, according to the pattern illustrated in panel (b). In

[12] Whenever possible, only the GINI coefficients calculated by the WIDER project using the highest quality data were used. In instances of multiple estimates in one year, the average of the estimates was used. When the highest quality data were not available, the next quality was used. If data were missing for a particular year, prior year data, up to two years prior to the missing data, were used. If prior year data were not available, data from the following year was used.

countries with high levels of income inequality, education has little effect on support for redistribution. The results for the analysis of variation in the effects of income on support for social justice in panels (c) and (d) are similar. Whereas those with higher levels of income are less likely to support redistribution in economically developed and relatively equal economies, the effects of income are less pronounced in developing countries and those with highly unequal income distributions. These findings question the universality of the *homo economicus* assumption of the Meltzer-Richard model and suggest that "basic needs generosity" or reciprocity (Bowles and Gintis 2000) or other cultural or contextual variables (e.g., Lübker 2007) may also explain attitudes toward redistribution.

Though the figures are illustrative, we can estimate random slope models that will measure the statistical significance of the contextual effects of economic development and income inequality on the slopes of education and income. Table 2 presents abbreviated results for three random slope models; the full results are presented in the Appendix. Model 1 includes estimates of the effect of economic development and income inequality on the individual level effects of education and income. Model 2 adds contextual effects for other individual level variables,[13] and Model 3 adds region dummy variables, with North America as the excluded category, to model regional effects.[14] In all three models, education and income continue to have a negative effect on support for social justice at the individual level. Individuals with higher education or income are less likely to support government redistribution, which is consistent with the argument of Meltzer and Richard (1981). However, the interactive, or contextual, effects of country-level economic development and income inequality on the role of individual education or income in shaping support for redistribution suggest a more complex pattern. In general, the

[13] Additional models were estimated that included income inequality as a predictor of variation in the coefficients for employed, unemployed, and female. The effects were not statistically significant and are not presented here.
[14] The region coding of the World Bank were used with the exception of post-communist Europe and Central Asia.

results of the three models indicate that higher levels of income inequality reduce the effects of individual education or income on support for government redistribution, though the effect is only statistically significant in the instance of education. These results are consistent with the pattern illustrated in panels b. and d. of Figure 3. At the same time, higher levels of economic development increase the importance of education and income as predictors of support for redistribution, though the effect is only statistically significant in the case of income. These results suggest that individual education and income are more negatively associated with support for redistribution in more developed economies. This too is consistent with the graphs in panels a. and c. of Figure 3. In general, the models suggest that the Meltzer and Richard assumption that education and income are inversely related to support for redistribution may be less tenable in less developed countries or those with inequitable distributions of income.

Despite the consistency and robustness of the results from the multilevel models in Table 2, the estimates of the variance of the individual level parameters (random effects) suggest that there is still significant cross-national variation in the effects of all the individual level characteristics except unemployment. The variances in the random slope models of Table 2 are smaller than those in the random coefficient models of Table 1, but there is still statistically significant variation in the individual-level parameters between country-years.[15] This variation persists because it is likely that there are important country-level predictors of parameter variance that we have not included in our models. For instance, welfare state effort, democracy, dominant religious beliefs, or quality of government may all explain the remaining variation in the individual level parameter estimates. Though we do not yet have these country-level

[15] In future versions of the paper, we plan to model the potential autocorrelation of errors within countries across time, which should improve the efficiency of our estimates. In addition, evidence from Kenworthy and McCall (2007) suggests that we should model the effects of changes in income inequality on the link between individual income and attitudes over time.

measures to model directly, we included regional dummies in Model 3, Table 2 to capture these unmeasured factors.

The results suggest that regional characteristics play an important role in shaping overall support for redistribution and the effects of income and education on support for redistribution. As expected, all of the regional dummies used in modeling variation in the model constant, or average support for redistribution, are positive. All the regions have higher average support for redistribution than North America and the differences are statistically significant. The Middle East and Latin America have the highest average support for redistribution, followed by Europe and post-communist Europe. That the average support for redistribution in Europe and post-communist Europe is higher than that in North America is consistent with arguments that large or generous welfare states lead to greater support for redistribution (Esping-Andersen 1990, 1999; Alesina and Glaeser 2004; Osberg and Smeeding 2005). On the other hand, that Latin America, a region with fewer extensive welfare states but a history of state intervention in the economy, has higher support for redistribution than either Europe or post-communist Europe suggests that welfare state effort alone may not explain the remaining variation in average levels of support for redistribution across regions. Furthermore, including regional dummy variables in the model of the average support for social justice after controlling for individual-characteristics (i.e., the models of the individual-model constants), eliminates any statistically significant effect of economic development or inequality on cross-national variation in support for social justice. This suggests that cross-regional historical or cultural differences are more important in explaining cross-national differences in average support for social justice than levels of economic development or income inequality. In addition, the significance of the results for the effects of the regional dummy variables on the effects of education and income, while

controlling for economic development and income inequality, suggest that additional political, cultural, or policy factors that vary by region may further explain between country variation in the effects of education and income on support for redistribution. These unmeasured regional effects do not, however, completely eliminate the statistically significant effects of economic development on the role of income or of income inequality on the role of education in predicted attitudes toward social justice, which suggests that the tenability of the Meltzer-Richard model assumptions vary by level of economic development in addition to unmeasured regional factors.

Given the complexity of the statistical results and to facilitate interpretation, Figure 5 graphs along the y axis the predicted slopes of income's effect on support for redistribution from Model 3 in Table 2 by the 5th and 95th percentiles of level of economic development and income inequality and by region. The x axis represents the difference between the 5th and 95th percentiles in levels of economic development *within each region*, and some regions have more variation in economic development than others. The slope of the lines reflect the predicted change in the effect of income on support for redistribution as a country moved from a lower level of economic development in their region toward the upward bound of economic development in their region. That all the lines have negative slopes reflects the finding that income tends to have stronger negative effects on support for income redistribution in countries with higher levels of economic development.

In Figure 4, two lines are graphed for each region, one for high inequality (the 95th percentile within that region) and one for low inequality (the 5th percentile within that region). The distance between the two lines for any one region reflects the shift, or difference, in the average effect of income on support for income distribution between countries with relative low inequality and high inequality in that region. This distance is, in part, a function of the amount of

variation in income inequality, and thus the difference between the 5th and 95th percentile, in any one region. Finally, the relative location along the y axis of the lines for each region reflect the range of predicted effects of income on support for education for the range of economic development and income inequality typical of that region. The graph illustrates that, on average, the negative association between income and support for redistribution is likely to be strongest in North America. Put differently, the assumptions of Meltzer and Richard are most likely to be true in North America. In contrast, the effects of income on support for redistribution are closer to zero in the Middle East and Latin America, implying that the Meltzer and Richard thesis is less tenable in these regions. As suggested earlier, a variety of additional factors may explain these variations, but at a minimum these results suggest that the effects of income and education on support for redistribution may not be as universal as some models of individual behavior assume.

Implications and conclusions

Overall, the results of the data analysis suggest that the effects of individual level characteristics on attitudes toward redistribution vary significantly across regional and even national contexts. Though country-level economic development and income inequality explain some cross-national variation in the individual-level models of preferences for redistribution, significant unexplained variation remains. This key finding has at least two important implications. First, cultural, political, or historical factors that were not measured (beyond simple regional dummy variables) in our models may partially explain this remaining variation. Future studies that seek to understand the cross-national differences in support for redistribution should attempt to directly measure and model these sources of variation. Second, though some individual characteristics may *tend* to produce certain preferences for government redistribution,

analysts would be remiss to assume the effects are constant across different economic, cultural, political, or historical contexts. For example, the results presented here suggest that the key assumption of the Meltzer-Richard model upon which many studies of welfare expenditures and income inequality is based may not be universally true. To the extent that individual preferences are not universally shaped by economic interests across national contexts, theories that seek to extend or explain the failures of the Meltzer-Richard model may be missing the mark.

Beyond the implications for research on welfare states and income inequality, our findings suggest that in our collective quest to understand the micro-foundations of preference formation, political economists should be wary of universalizing the origins of preferences. In our efforts to extend and refine micro-economic models of voter preferences, we potentially reduce the range of relevant variables, (e.g., excluding the role of values or culture), that are considered relevant for explaining political and policy outcomes. This is not unlike the "marketization" of public discourse, or as Block explains: "Increasingly, public debate has come to hinge, not on what kind of society we are or want to be, but on what the needs of the economy are. Hence, a broad range of social policies are now debated almost entirely in terms of how they fit in with the imperatives of the market" (1990: 3). When preferences for government redistribution do not follow the logic of individual economic self interest, policy in responsive democracies is also likely to diverge from the needs of the market.

Figure 1: Average support for social justice by economic development, 1985-2004

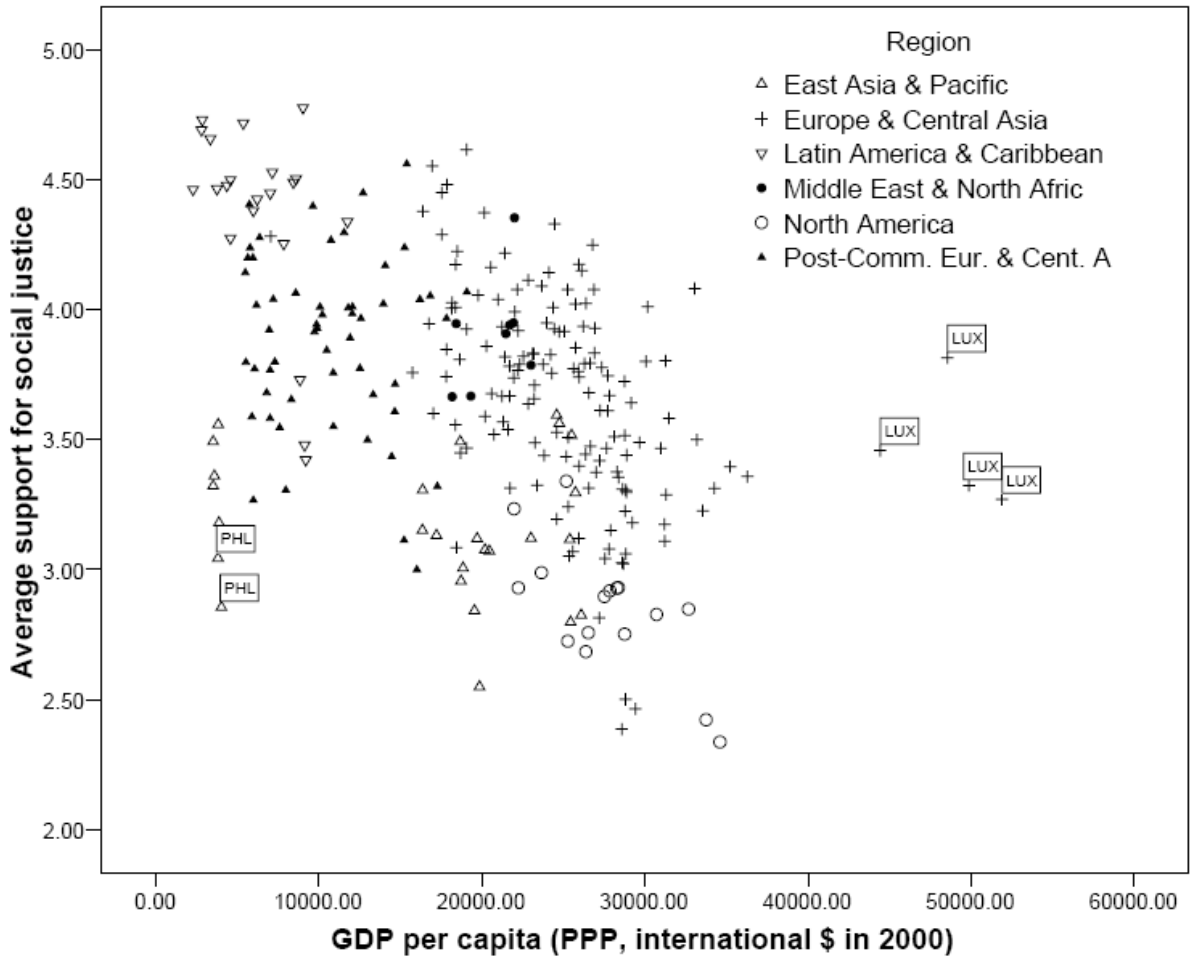


Figure 2: Average distribution of support for social justice by region

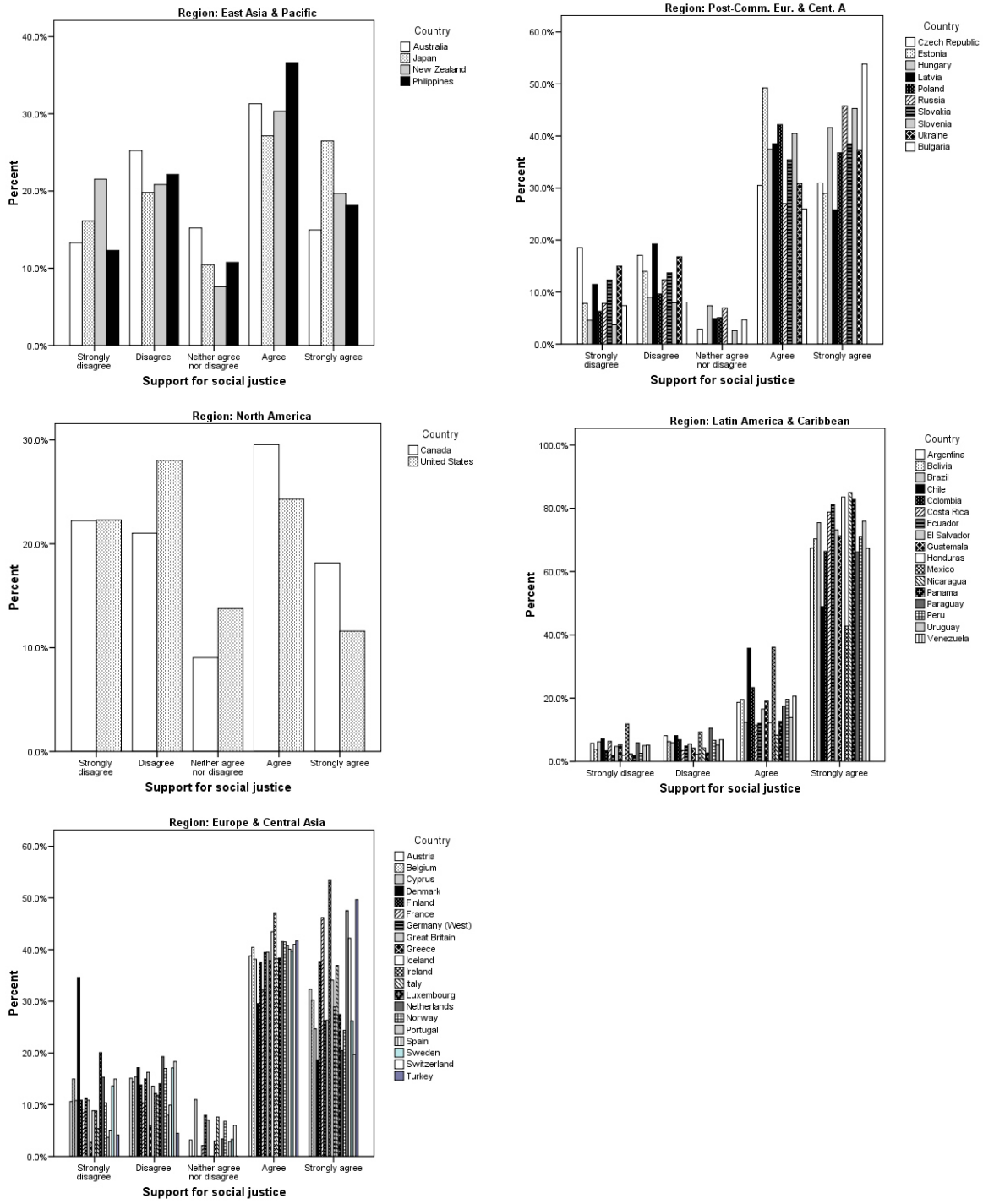
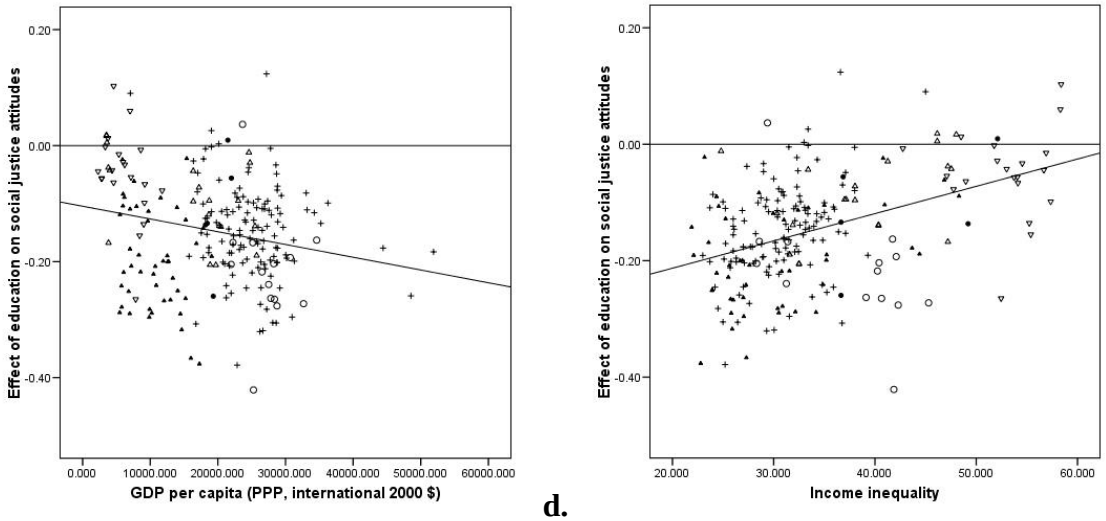


Figure 3: Economic development, inequality and the effects of income and education

a. **b.**



c. **d.**

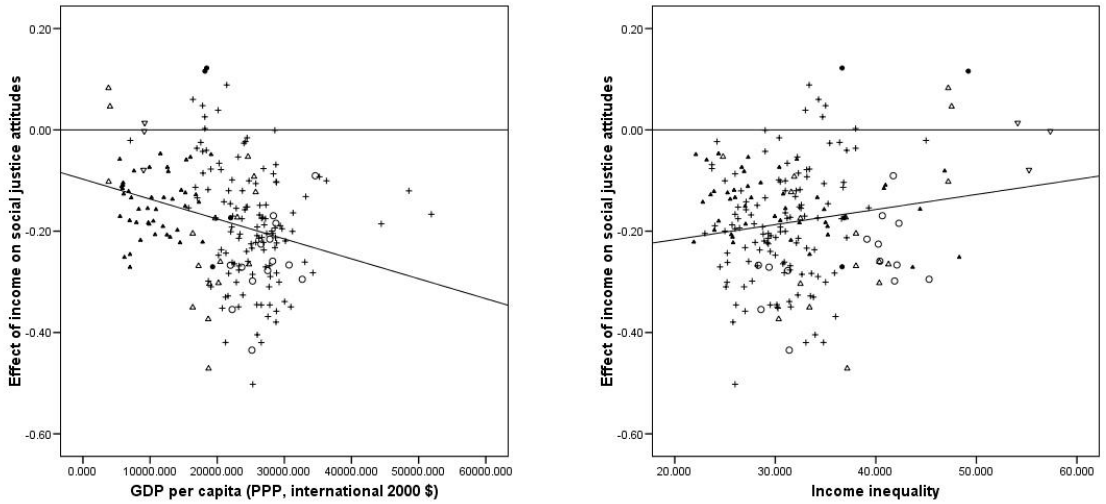


Figure 4: Economic development, inequality and the effects of income by region

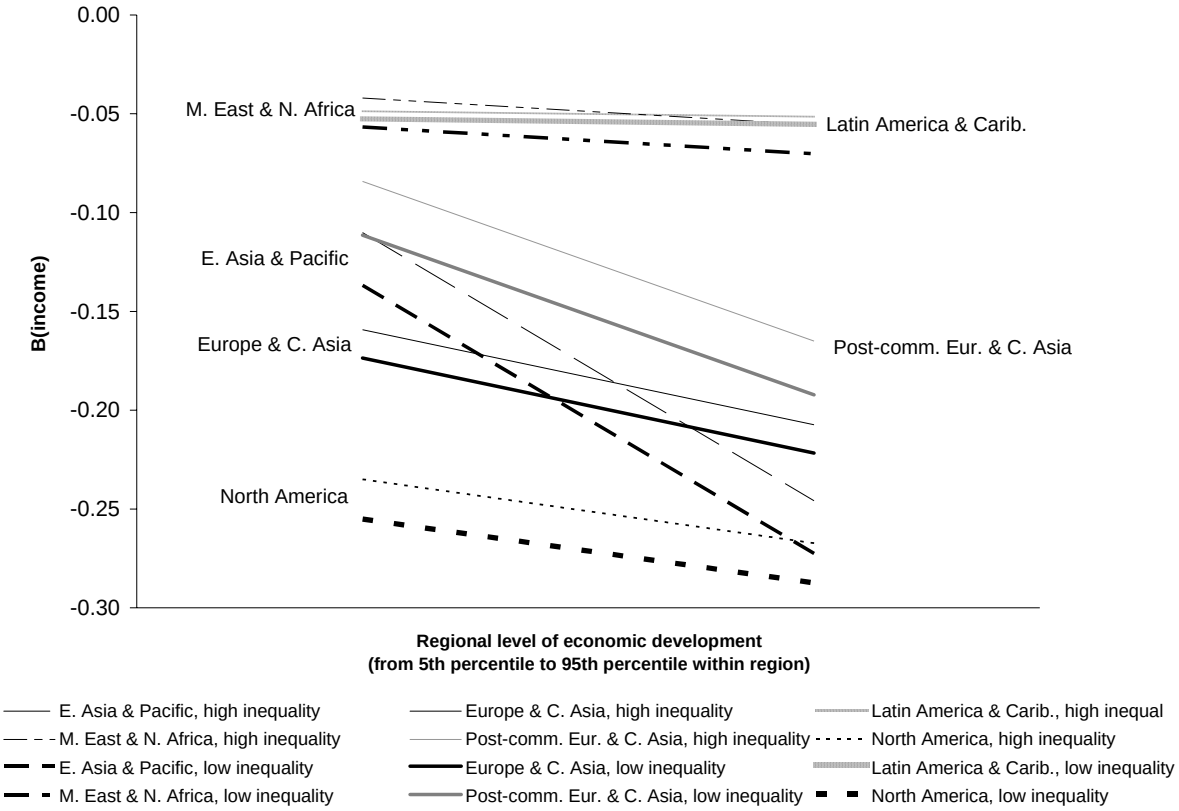


Table 1: Random coefficient models of support for social justice

Fixed effects	*Model 1*	*Model 2*
Employed	-0.059**	0.021*
	(0.008)	(0.008)
Unemployed	0.193**	0.152**
	(0.014)	(0.013)
Female	0.125**	0.124**
	(0.009)	(0.010)
Age	0.017**	0.014**
	(0.004)	(0.004)
Education	-0.154**	-0.115**
	(0.006)	(0.006)
Income		-0.182**
		(0.008)
Constant	3.602**	3.515**
	(0.033)	(0.035)
Random effects	*Variance*	*Variance*
Constant	0.257**	0.244**
Employed	0.008**	0.006**
Unemployed	0.015**	0.007
Female	0.014**	0.013**
Age	0.003**	0.002**
Education	0.007**	0.006**
Income		0.011**
Σ^2	1.534	1.520
- 2 X Log Likelihood	1016922.20	774170.40
N (country-surveys)	310534 (248)	236935 (221)

** $p \leq 0.001$ * $p \leq 0.050$. Robust standard errors in parentheses.

Table 2: Random slope models of support for social justice

Fixed effects	*Model 1*	*Model 2*	*Model 3*
Employed	0.022*	0.035	-0.043
Unemployed	0.147**	-0.164*	-0.140*
Female	0.124**	-0.029	-0.031
Age	0.014**	0.226**	0.229**
Education	-0.385**	-0.148*	-0.209*
Income	-0.109*		-0.069
Constant	5.150**	3.407**	3.428**
Interactive effects			
Employed X Economic Development		-0.034*	0.022
Unemployed X Economic Development		0.126**	0.100**
Female X Economic Development		0.054**	0.053*
Age X Economic Development		-0.046**	-0.049**
Age X Inequality		-0.002**	-0.002**
Interactive effects	*Education*	*Education*	*Education*
Economic Development	0.042**	-0.046*	-0.015
Inequality	0.005**	0.003*	0.003*
East Asia & Pacific		0.072*	0.072*
Europe & Cent. Asia		0.063*	0.048*
Latin America & Caribbean		0.029	-0.016
Mid. East & N. Africa		0.045	-0.031
Post-Comm. Europe		-0.034	-0.028
Interactive effects	*Income*	*Income*	*Income*
Economic Development	-0.041**		-0.071*
Inequality	0.001		0.001
East Asia & Pacific			-0.002
Europe & Cent. Asia			0.069*
Latin America & Caribbean			0.108*
Mid. East & N. Africa			0.175*
Post-Comm. Europe			0.054
Interactive effects	*Constant*	*Constant*	*Constant*
Economic Development	-0.336**	-0.154*	-0.176
Inequality	-0.020**	-0.002	-0.002
East Asia & Pacific		0.252*	0.233*
Europe & Cent. Asia		0.726**	0.753**
Latin America & Caribbean		1.202**	0.835*
Mid. East & N. Africa		1.085**	1.113**
Post-Comm. Europe		0.715**	0.733**
Random effects	*Variance*	*Variance*	*Variance*
Constant	0.234**	0.187**	0.193**
Employed	0.006**	0.007**	0.006**
Unemployed	0.006	0.009*	0.005
Female	0.013**	0.013**	0.013**
Age	0.002**	0.002**	0.002**
Education	0.005**	0.005**	0.005**
Income	0.010**		0.009**
N (country-surveys)	236935 (221)	310534 (248)	236935 (221)

** $p \leq 0.001$ * $p \leq 0.050$. See APPENDIX for complete results with standard errors.

APPENDIX: Complete results from Table 2

Fixed effects	*Model 1*	*Model 2*	*Model 3*
Employed	0.022*	0.035	-0.043
	(0.008)	(0.035)	(.048)
Unemployed	0.147**	-0.164*	-0.140*
	(0.013)	(0.055)	(0.067)
Female	0.124**	-0.029	-0.031
	(0.010)	(0.038)	(0.052)
Age	0.014**	0.226**	0.229**
	(0.004)	(0.032)	(0.032)
Education	-0.385**	-0.148*	-0.209*
	(0.053)	(0.084)	(0.108)
Income	-0.109*		-0.069
	(0.050)		(0.115)
Constant	5.150**	3.407**	3.428**
	(0.256)	(0.378)	(0.464)
Interactive effects			
Employed X Econ. Dev.		-0.034*	0.022
		(0.012)	(0.016)
Unemployed X Econ. Dev.		0.126**	0.100**
		(0.020)	(0.024)
Female X Econ. Dev.		0.054**	0.053*
		(0.014)	(0.018)
Age X Econ. Dev.		-0.046**	-0.049**
		(0.007)	(0.008)
Age X Inequality		-0.002**	-0.002**
		(0.000)	(0.000)
Interactive effects	*Education*	*Education*	*Education*
Economic Development	0.042**	-0.046*	-0.015
	(0.011)	(0.015)	(0.022)
Inequality	0.005**	0.003*	0.003*
	(0.001)	(0.001)	(0.001)
East Asia & Pacific		0.072*	0.072*
		(0.029)	(0.031)
Europe & Cent. Asia		0.063*	0.048*
		(0.026)	(0.028)
Latin America & Caribbean		0.029	-0.016
		(0.036)	(0.036)
Mid. East & N. Africa		0.045	-0.031
		(0.045)	(0.044)
Post-Comm. Europe		-0.034	-0.028
		(0.034)	(0.042)

TABLE CONTINUED ON NEXT PAGE….

APPENDIX: Complete results from Table 2 ***(continued from previous page)***

	Model 1	*Model 2*	*Model 3*
Interactive effects	*Income*	*Income*	*Income*
Economic Development	-0.041**		-0.071*
	(0.011)		(0.024)
Inequality	0.001		0.001
	(0.001)		(0.001)
East Asia & Pacific			-0.002
			(0.038)
Europe & Cent. Asia			0.069*
			(0.026)
Latin America & Caribbean			0.108*
			(0.042)
Mid. East & N. Africa			0.175*
			(0.097)
Post-Comm. Europe			0.054
			(0.039)
Interactive effects	*Constant*	*Constant*	*Constant*
Economic Development	-0.336**	-0.154*	-0.176
	(0.062)	(0.076)	(0.104)
Inequality	-0.020**	-0.002	-0.002
	(0.005)	(0.005)	(0.005)
East Asia & Pacific		0.252*	0.233*
		(0.098)	(0.098)
Europe & Cent. Asia		0.726**	0.753**
		(0.068)	(0.071)
Latin America & Caribbean		1.202**	0.835*
		(0.144)	(0.303)
Mid. East & N. Africa		1.085**	1.113**
		(0.104)	(0.144)
Post-Comm. Europe		0.715**	0.733**
		(0.112)	(0.136)
Random effects	*Variance*	*Variance*	*Variance*
Constant	0.234**	0.187**	0.193**
Employed	0.006**	0.007**	0.006**
Unemployed	0.006	0.009*	0.005
Female	0.013**	0.013**	0.013**
Age	0.002**	0.002**	0.002**
Education	0.005**	0.005**	0.005**
Income	0.010**		0.009**
σ^2	1.520	1.534	1.520
- 2 X Log Likelihood	774143.8	1016710.2	774064.2
N (country-surveys)	236935 (221)	310534 (248)	236935 (221)

** $p \leq 0.001$ * $p \leq 0.050$. Robust standard errors in parentheses.

APPENDIX: List of country-surveys included in the sample

International Social Survey Program

1985	Australia, Austria, West Germany, United Kingdom, Italy, United States
1987	Australia, Austria, West Germany, United Kingdom, Italy, United States, Hungary, Netherlands, Poland, Switzerland
1990	Australia, Unified Germany, United Kingdom Hungary, Ireland, Israel, Italy, Norway, United States
1991	Austria, Unified Germany, United Kingdom, Hungary, Ireland, Israel, Italy, Netherlands, New Zealand, Norway, Philippines, Poland, Russia, Slovenia, United States
1992	Australia, Austria, Canada, Unified Germany, United Kingdom, Hungary, Italy, New Zealand, Norway, Philippines, Poland, Russia, Slovenia, Sweden, Switzerland, United States, Bulgaria
1993	Canada, Czech Republic, Unified Germany, United Kingdom, Hungary, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Philippines, Poland, Russia, Slovenia, Spain, United States, Bulgaria
1996	Australia, Unified Germany, United Kingdom, Ireland, United State, Austria, Hungary, Italy, Netherlands, Norway, Sweden, Czech Republic, Slovenia, Poland, Bulgaria, Russia, new Zealand, Canada, Philippines, Israel, Japan, Spain, Latvia, France, Cyprus
1998	Australia, Unified Germany, United Kingdom, United States, Austria, Hungary, Italy, Ireland, Netherlands, Norway, Sweden, Czech Republic, Slovenia, Poland, Bulgaria, Russia, New Zealand, Canada, Philippines, Israel, Japan, Spain, Latvia, Slovakia, France, Cyprus, Portugal, Chile, Denmark, Switzerland
1999	Australia, Unified Germany, United Kingdom, United States, Austria, Hungary , Ireland, Norway, Sweden, Czech Republic, Slovenia, Poland, Bulgaria, Russia, New Zealand, Canada, Philippines, Israel, Japan, Spain, Latvia, France, Cyprus, Portugal, Chile, Slovakia
2000	Australia, United Germany, United Kingdom, United States, Austria, Hungary, Italy, Ireland, Netherlands, Norway, Sweden, Czech Republic, Slovenia, Poland, Bulgaria, Russia, New Zealand, Canada, Philippines, Israel, Japan, Spain, Latvia, Portugal, Chile, Denmark, Switzerland, Finland, Mexico

Latinobarometer

1996	Argentina, Bolivia, Brazil, Colombia, Costa Rica, Chile, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela, Spain

Eurobarometer

EB 52.1, 1999	France, Belgium, Netherlands, Unified Germany, Italy, Luxembourg, Denmark, Ireland, United Kingdom, Greece, Spain, Portugal, Finland, Sweden, Austria
EB 56.1, 2001	Belgium, Denmark, Unified Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, Netherland, Portugal, United Kingdom, Austria, Sweden, Finland

European Social Values Survey

2002	Austria, Belgium, Switzerland, Czech Republic, Unified Germany, Denmark, Spain, Finland, France, United Kingdom, Greece, Hungary, Ireland, Israel, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Sweden, Slovenia
2004	Austria, Belgium, Switzerland, Czech Republic, Unified Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Greece, Hungary, Ireland, Iceland, Luxembourg, Netherlands, Norway, Poland, Portugal, Sweden, Slovenia, Slovakia, Turkey, Ukraine

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