Public Opinion on Income Inequality in 20 Democracies: The Enduring Impact of Social Class and Economic Inequality

Robert Andersen and Meir Yaish
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Public Opinion on Income Inequality in 20 Democracies

The Enduring Impact of Social Class and Economic Inequality

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Abstract

Utilizing International Social Survey Program (ISSP) data, we explore the relationship between economic inequality—both at the individual-level and the national-level—and attitudes toward income inequality in 20 capitalist societies. Our findings suggest that experience of economic inequality has an enduring effect on attitudes. Specifically, respondents’ own social class and their father’s social class are both significantly related to attitudes, with working class individuals tending to be more egalitarian in their views than others. Still, our findings also suggest that attitudes are unrelated to experience of social mobility per se. Tests for random effects of class origin and destination further demonstrate that class has a similar effect across societies. In terms of contextual influences, we demonstrate that as income inequality rises, people of all classes tend to have less egalitarian views. In contrast to suggestions of previous research, however, we find no evidence that economic development or equality of opportunity influence public opinion on what is considered fair income differences.

Keywords: attitudes, social class, economic inequality, social mobility, contextual effects
1. Introduction

Public opinion on what should be considered a fair income distribution has implications for both social scientists and policy makers. Growing evidence suggests that elected officials attempt to maximize their chance of re-election by implementing policies that reflect public opinion (Stimson 1995, Wlezien 2004, Brooks and Manza 2007). Others argue that redistribution policies reflect compromises stemming from class struggle—which implies an awareness of class-related issues such as income differences—and cross-class alliances (Esping-Andersen 1990, Korpi and Palme 1998, Svallfors 1997). The importance of this topic is further highlighted by two recent developments in most modern democracies: (1) income inequality has been on the rise (Fisher and Hout 2006, Goesling 2001, Firebaugh 2000), and (2) electoral politics on economic issues has moved decidedly to the right (see Brooks and Manza 2007). It is important, then, to uncover the possible influences on public opinion regarding what is an acceptable level of income inequality. While some work has been done on this issue, many questions have been left unanswered.

Previous research suggests that while there is a general consensus over the ranking of specific occupations in the earnings structure in most modern societies, by no means is there a consensus over the amount of income that specific occupations should receive (Kelley and Evans 1993, Kelley and Zagorski 2005, Svallfors 1993). In fact, Osberg and Smeeding (2006: 471) suggest that attitudes toward incomes in the US are so polarized that “a relatively small migration of voters may suffice to tip the balance between two very different conceptions of ‘fair’ equality.” There is also evidence to suggest that opinions on acceptable income differences vary cross-nationally according to differences in economic development, welfare state involvement (Kelley and Evans 1993) and democratic tradition (Kelley and Zagorski 2005, Fisher and Heath 2006). Nevertheless, the relationship between attitudes toward incomes and other potentially important contextual variables—such as the level of equality of opportunity (see Osberg and Smeeding 2006) and, more importantly, the actual level of income inequality in the country (c.f. Uslaner 2002, Uslaner and Brown 2005, Andersen and Fetner 2008)—has yet to receive rigorous investigation.

The present paper assesses the relationship between economic inequality and attitudes toward income inequality in 20 countries during the 1990s. Using survey data from the International Social Survey Program (ISSP) and national-level data from various official sources, we advance on previous research in two ways: (1) we simultaneously test for a wide array of individual-level and national-level influences on attitudes, and (2) rather than focus only on the effects of one’s own social class on attitudes, we also explore the enduring influence of class of origin and experience of social mobility. Our findings demonstrate that attitudes toward income inequality
are strongly influenced by economic conditions. Consistently across societies, public opinion is most egalitarian among the working class. Attitudes and class of origin are similarly related, suggesting socialization processes that reflect the economic conditions in which people were raised. Nevertheless, attitudes appear to be unaffected by the actual experience of intergenerational social mobility. Consistent with these individual-level effects, national-level equality of opportunity also has no apparent effect on attitudes. On the other hand, country differences in attitudes are profoundly related to national-level income inequality, even after controlling for other economic factors. In short, as income inequality increases, people tend to be more accepting of it.
2. Literature review

2.1. The Role of Social Class

In recent decades, theories of individualization have become increasingly fashionable in political sociology. These theories take many forms—e.g., postmaterialism (Inglehart 1990, 1997), postindustrialism (Castells 1996, Giddens 1984), second modernity (Beck 1995), postmodernity (Pakulski and Waters 1996)—but all agree that social class identities are of minimal importance to political values and behaviours in modern societies. In this regard, a significant amount of attention has been given to the decline in class voting (see the edited volume by Evans 1999). Nevertheless, although not as strong as before the 1970s (De Graff, Nieuerbeerta and Heath 1995, Andersen and Heath 2002), recent evidence suggests that the class-party relationship continues to persist in many modern societies, including the US (Hout, Brooks and Manza 1995), Britain (Andersen and Heath 2002; Andersen, Yang and Heath 2003), France (Andersen and Evans 2005), Germany (Andersen and Zimdars 2003), Israel (Andersen and Yaish 2003) and the Scandinavian countries (Nieuwbeerta and Ultee 1999).

Even if one accepts the argument that the relationship between social class and voting has disappeared, it does not necessarily follow that social class is not an important social identity. A weakening of the class-party relationship could largely reflect that political parties have become less likely to champion working class issues (Evans 1999, 2000; Andersen, Yang and Heath 2003). If people are rational actors concerned with self interest, it is sensible to suppose that people in less fortunate economic positions tend to think differently from those in more fortunate positions, regardless of whether or not political parties cater to their interests. In fact, recent research indicates that social class continues to shape several attitudes, including happiness (Hout 2003), social tolerance (Svallfors 2006; Andersen and Fetner 2008, Andersen and Milligan 2009), and redistribution policies (Svallfors 1997), even in affluent societies.

Most relevant to the present study, there is also some evidence of a relationship between occupational class and attitudes toward incomes. Using the same ISSP data that we employ, Kelley and Evans (1993, see also Kelley and Kelley 2009) demonstrate that there is a strong consensus about how occupations should be ordered in terms of income but noteworthy class differences in opinions regarding the amount of income particular occupations should receive. Specifically, compared to people in working class occupations, those with middle class occupations tend to think middle class jobs should be paid more. Similarly, Osberg and Smeeding (2006) suggest that there is a “substantial gulf” in desired policies within many countries, especially in the US, that may reflect a polarization in
attitudes according to socio-economic status. They provide no empirical testing of this speculation, but argue that it is worthy of future research.

Given that social and political attitudes are largely an expression of social interaction and socialization processes (cf. Kelley 1992, Turner, 1992, De Graaf et al 1995), it seems likely that class of origin also plays a role in attitude formation. We might also expect that experience of intergenerational class mobility shapes attitudes (cf. Tocqueville 1945[1838], Lipset 1992, Turner 1992). Previous research has generated mixed results on these issues, however. On the one hand, Turner (1992) concludes that both class position and class of origin affect political attitudes but social mobility per se does not (see also Kelley 1992). On the other hand, De Graaf et al. (1995) demonstrate that those who are upwardly mobile tend to have political orientations that are slightly to the left of those who didn’t experience mobility. In contrast, Alesina and La Ferra (2005, see also Alesina and Giuliano 2009) argue that those who experience upward mobility tend to have less support for redistribution polices. More relevant to our research, Kelley and Kelley (2009) suggest that both social mobility and the perception of social mobility are positively associated with one’s desired level of income inequality.

2.2. The Role of National Context

A growing body of research suggests that cross-national differences in attitudes at least partly reflect national context, especially economic and political conditions. In this regard, Kelley and Evans (1993) assert that there is a negative relationship between economic development and acceptance of income inequality. Although Kelley and Evans provide no empirical testing to support this conjecture, it is consistent with a huge body of cross-national research influenced by Inglehart’s (1990, 1997) postmaterialist thesis. The postmaterialist thesis argues that sustained economic growth in modern societies has resulted in widespread economic security among their citizens. This economic security allegedly decreases the importance of economic issues, thus freeing citizens to give greater consideration to social issues. This thesis is explicit that citizens living in modern societies tend to be more “postmaterialist” in their values than citizens from less developed societies.

Another common view also suggests a relationship between equality of opportunity and attitudes toward incomes. The assertion that equality of opportunity might influence social and political attitudes has a long history. To explain the absence of a serious social democratic party in the United States, Lipset and Bendix (1959; see also Iversen and Soskice 2005) argued that American beliefs were significantly more capitalistic than others because they perceived their country to have a high level of socioeconomic mobility. Although more recent comparative research suggests that the US is not an exceptionally mobile and open society (Featherman, Jones and Hauser 1975,
In fact, more recent research (cf. Jencks & Tach 2006) continues to suggest that economic inequality is perceived to be fair provided that there is equality of opportunity.

Some emphasis has also been placed on the role of communism. For example, Kelley and Evans (1993:116) argue that “Communist countries are much more equalitarian than Capitalist ones.” Kelley and Zagorski (2005) further demonstrate that public opinion toward incomes followed the transition to a market economy. They state that “Central-East Europeans are fundamentally similar to Westerners, so that differences in their norms about inequality are just a reflection of their different circumstances” (Kelley and Zagorski 2005:352).

Research on postmaterialist values suggests quite different implications for past-communist rule. This line of research suggests that we should look to the cultural rather than economic conditions associated with communist rule. For example, Inglehart (1997 see also Rose 1994) demonstrates that political oppression under communism resulted in a high level of social distrust. This distrust of others led to less concern for others. It is possible that this distrust manifest itself in less concern for equality. In other words, rather than having a positive relationship with egalitarian views as Kelley and Evans (1993) have suggested, former-communist rule may have had a lingering effect on cultural values that leads to less egalitarian views. Experience of political oppression may have encouraged people to desire greater freedom generally, including in the market, and consequently less equality in incomes.

Finally, there is increasing evidence that the level of economic inequality within countries is an important predictor of national differences in attitudes. Uslaner’s (2002) research on social trust demonstrates that inequality leads to less social trust and ultimately less social cohesion. Similarly, Andersen and Fetner’s (2008) analysis of survey data from 35 democracies shows a strong relationship between national-level income inequality (as measured by the Gini coefficient) and acceptance of homosexuality. Similar mechanisms may be at play for attitudes toward income inequality. If inequality is negatively related to social trust and cohesion, and social cohesion is positively related to egalitarianism, we might also expect a positive relationship between inequality and attitudes towards inequality. The relationship between income inequality and attitudes regarding income may also be less complicated, however. If inequality is related to any attitudes at all, it would be difficult to argue against the notion that it must also affect attitudes toward itself. In other words, it may simply be that people’s attitudes reflect the conditions in which they live.
3. **Hypotheses**

Based on the literature review above, we derive and test seven hypotheses regarding influences on attitudes toward inequality. At the individual level we evaluate three hypotheses:

**H1.** Working class individuals are more egalitarian than others in their attitudes toward income inequality (Kelley and Evans 1993).

**H2.** Father’s social class influences attitudes independently of one’s own class position (Kelley 1992). In other words, the economic conditions one experiences in childhood have a persistent influence on attitudes into adulthood. We expect these effects to be similar—though weaker, on the grounds that immediate economic conditions have a stronger impact than previous ones—to the effects of respondent’s own social class.

**H3.** Experience of intergenerational social mobility *itself* affects attitudes toward income inequality. This implies that class of destination and class of origin interact in their effects on attitudes. In this regard, we evaluate two competing hypotheses pertaining to intergenerational mobility:

a. Upwardly mobile people are more egalitarian than others on the grounds that they understand the difficulty involved in moving out of the working class (Kelley and Kelley 2009, De Graaf et al., 1995).

b. Upwardly mobile are less egalitarian, with the mechanism being that they believe that a failure to move up largely reflects a lack of merit, rather than structural barriers (c.f., Lipset and Bendix 1959).

In terms of contextual effects, our main concern is with the role of economic inequality within countries. Nevertheless, we start by considering other common arguments with the goal of assessing whether or not they stand up after considering the role of inequality. We test four hypotheses about the role of national context:

**H4.** Following previous findings, we have two competing hypotheses regarding the role of a Communist past:

a. If Kelley and Evans (1993; see also Kelley and Zagorski 2005) are correct, experience of Communist communism is *positively* related to egalitarian attitudes. Underlying this hypothesis is the logic that Communist societies tended to be more equal in terms of incomes than capitalist societies, which in turn had an enduring effect on values.

In contrast, the postmaterialist thesis (Inglehart 1990, 1997) would suggest that experience of Communist communism is *negatively* related to egalitarian attitudes. Underlying this argument is the logic that people reacted against the oppression of the Communism regime by embracing capitalist ideology, leading to an elevated desire for inequality.

**H5.** Consistent with Inglehart’s (1997) post-materialist thesis, we expect a negative relationship between economic development (as measured by GDP per capita) and acceptance of income inequality.
H6. Based on the conjectures of Lipset and Bendix (1959) we expect egalitarian attitudes to be negatively related to inequality of opportunity. This argument is based on the premise that the perception of equality of opportunity leads people to assume that it is an individual problem—rather than a social problem—if someone does not succeed economically.

H7. Finally, and most importantly, we consider the role of income inequality within nations. Consistent with research on social trust (Uslaner 2002) and social tolerance (Andersen and Fetner 2008), we expect a positive relationship between income inequality (as measured by the Gini coefficient after transfers) and respondents’ desired level of income inequality. Although our analysis is unable to disentangle the direction of causation, this hypothesis is also consistent with the argument that public opinion influences public policy (Brooks and Manza 2007).
4. **Data and methods**

Our main source of data comes from waves II and III of the International Social Survey Program (ISSP) modules on Social Inequality, conducted in 1992 and 1999. The ISSP was designed for the explicit purpose of multi-national comparative research. These data have been used extensively to study attitudes towards income inequality in comparative perspective (Kelley and Evans 1993; Kelley and Zagorski 2005; Osberg and Smeeding 2006; Fisher and Heath 2006), ensuring that our results are directly comparable with those of existing research. Our analysis is based on the 27 ISSP surveys administered to probability samples of national populations in 1992 and 1999 (representing 20 countries). After removing respondents with missing information, and those under 18 years of age, the analytical sample contains 18,369 individuals clustered within the following societies: Australia, New Zealand, the USA, Canada, Czechoslovakia, West Germany, East Germany, France, Sweden, Norway, Spain, Portugal, Cyprus, the Czech Republic, Russia, Latvia, Hungary, Slovenia, Slovakia, Chile, and Poland.¹

At the societal level, we utilize data from the Standardized World Income Inequality Database (Solt, 2009), the United Nations (http://data.un.org), and ISSP data aggregated to the country level. More details of these data sources are provided later when discussing the operationalization of the contextual variables.

4.1. **Dependent Variable**

The dependent variable taps opinions on the incomes of nine specific occupations (doctors, CEOs, lawyers, shop assistants, factory owners/managers, judges, unskilled factory workers, and national government cabinet ministers). For each respondent, we measure their desired level of income inequality based on what they stated each of the nine occupations “ought” to be paid (see also, Osberg and Smeeding, 2006).² The wording of the questionnaire item from which this information was extracted is as follows:

---

¹ The first wave of the ISSP module on Social Inequality was conducted in 1987 in 10 countries. Unfortunately these data contain different questionnaire items for the occupational income items than did the surveys we employ, and hence they could not be employed in our analysis. For more information on the national surveys that we employ, see Table A1.

² Although respondent were presented with more than nine occupations, only nine were identical in both ISSP survey years.
Next, what do you think people in these jobs ought to be paid – how much do you think they should earn each year before taxes, regardless of what they actually get...

First, about how much do you think a skilled worker in a factory should earn?  
A doctor in general practice?  
The chairman of a large national corporation?  
A Lawyer [A SOLICITOR in 1992]?  
A shop assistant?  
The owner-manager of a large factory?  
A judge in [COUNTRY’S HIGHEST COURT]?  
An unskilled worker in a factory?  
A cabinet minister in the [NATIONAL] government?

Following Osberg and Smeeding (2006) we use opinions of pay for these nine occupations to calculate a Gini index representing each individual’s preferences for inequality. A standardized measure of inequality, the Gini index has a theoretical range from 0 (perfect equality) to 1 (perfect inequality, where one person has all of the income). Because the items used to calculate the index for each individual were measured on the same metric, the resulting Gini coefficients are directly comparable across individuals regardless of the fact that different individuals may have used different metrics. In other words, the measure is unaffected by the fact that responses were recorded in local currencies and inconsistently for annual income and or monthly income. Following Glasser (1962, also Dixon et al 1987), we calculate the Gini index formulas follows

$$G_i = \frac{\sum_{j=1}^{n} \sum_{k=1}^{n} |x_j - x_k|}{2n^2\mu}$$

where $x_j - x_k$ represents the income differences for all pairs of occupations, $n$ is the number of occupations (there are nine for all respondents)$^3$, and $\mu$ is the mean of the respondent’s desired incomes for the nine occupations. We multiply the Gini by 100 in order to ease interpretation of the coefficients from the statistical models.

4.2. Individual-level Predictors

Given our goal to assess the effect of economic inequality on attitudes, the individual-level independent variables of most interest to our analysis are respondent’s social class (destination class) and their father’s social class (origin class). We use social class rather than income as a proxy for economic conditions for two reasons: 1) social class tends to be more stable throughout the life course, making it a better marker of long term economic conditions, and 2) social class was more reliably measured, and contained far fewer missing cases, thus making cross-national comparisons of economic conditions more feasible. Following Hout et al (1999), we use an occupation-

$^3$ We calculated the Gini index only for respondents who recorded income for all nine occupational categories. Analysis of the non-response—both our own and research done by others (Kelley and Evans 1993)—suggests that it is largely random. As a result, we employ list-wise deletion to deal with missing data throughout the analysis. Nevertheless, preliminary models also employed multiple imputation techniques (see Schafer 1999) to replace missing data on each of the nine items used to calculate the Gini index. The substantive results of these analyses were very similar to those reported here.
based measure of social class, dividing occupations into four classes: (1) professionals, (2) managers, (3) routine non-manual (i.e., clerks and other low paying occupations that do not employ manual labour), and (4) the working class (i.e., occupations characterized by manual labour, including skilled labour). Unfortunately we did not have reliable information on self-employment so we could not create a separate class category to measure it. The same social class classification applies to both respondent’s class and their father’s class (when respondents were 14 years old). Our coding was facilitated by the fact that the ISSP data include the International Labour Organization’s International Standard Classification of Occupations (ISCO) for both respondent’s and their father’s occupations (ILO 1990).

We also created two dummy regressors to capture the effects of intergenerational social mobility: (1) upwardly mobile (coded 1 for those in managerial or professional occupations but with working class origins), and (2) downward mobility (coded 1 for those whose origins were in the professional or managerial classes but who themselves fell to working class occupations). The reference category includes all other respondents.\(^4\)

Other independent variables at the individual level are used mainly to control for the compositional differences of the societies. These include a dummy variable representing the respondent’s education (degree=1, else=0), a dummy variable for parent’s education (if at least one parent obtained a university degree=1, else=0), age (measured as a continuous variable), sex (coded 1 for men, 0 for women), and marital status (married=1, else=0).\(^5\)

### 4.3. National-Level Independent Variables

*Post communist rule* is measured by a simple dummy variable coded 1 for societies having experienced communist rule, 0 for societies having never experienced communist rule.

*Economic development* is measured by GDP per capita in current US dollars for the year of the survey (i.e., 1992 or 1999). This information was extracted from the online UNdata archive (http://data.un.org). In order to make the results of the statistical models more easily interpretable, we divide GDP per capita by 1,000.\(^6\)

---

4 The standard approach to test for an interaction of this type would be to construct interaction terms from the product of the two variables (i.e., respondent’s social class and father’s social class). Our alternative method was chosen for three reasons: (1) its simplicity allows for a clear test of our specific hypotheses, (2) in terms of economic hierarchy, it is difficult to distinguish between managers and professionals, (3) we ignore movement in and out of the routine non-manual class with the goal of restricting our assessment of the effects of mobility to the contrast between those whose mobility results in a significant level of social distance. Nevertheless, a model specified using the standard interaction approach yielded the same substantive results.

5 In preliminary models we also included a dummy for year of survey, specified both as a fixed and as a random variable. The results reported here were similar regardless on the specification employed.

6 Following Treiman and Yip (1989), we also explored whether replacing GDP per capita with the percentage employed in the service sector gave different findings. The substantive findings were similar regardless of which measure of economic development we used.
Inequality of opportunity was estimated from the relationship between father’s occupational status and respondent’s occupational status in each country. We first converted the ISCO occupational codes for both respondent’s occupation and their fathers’ occupation into Ganzeboom and Treiman’s (1996) International Socio Economic Index (ISEI). We then regressed respondent’s ISEI on father’s ISEI, and controls for sex, age, respondent’s education and parental education. The resulting coefficient for father’s ISEI—measured for each country separately—is employed as our measure of inequality of opportunity in the final models predicting attitudes. For all countries, this variable takes on a positive value, with higher values indicating higher levels of inequality of opportunity.

Income inequality is measured by the Gini index for household income after transfers (net Gini). This net income inequality measure best captures the level of economic inequality in society, in comparison to the gross Gini which captures only market generated inequality without considering policy-related adjustments (cf. Kenworthy and McCall, 2008). We use household incomes instead of individual incomes because the latter can misrepresent the economic conditions in which people actually live. Information on the net Gini for each country and year was extracted from the Standardized World Income Inequality Database (SWIID), which standardizes the United Nations University’s World Income Inequality Database (Solt, 2009). As with the dependent variable, we multiplied the net Gini by 100 before including it in the statistical models.

Descriptive statistics for the societal-level indicators and the dependent variable are presented in Table 1. Countries are sorted in descending order according to public opinion from least to most egalitarian as determined by the average of the dependent variable (i.e., the Gini index for desired income inequality). Table 2 displays the relationships among the context variables.

Table 1  Summary statistics by country (ranked in ascending order on the dependent variable)
USA  No  32,690  0.12  0.37  0.35  672
Hungary  Yes  4,820  0.26  0.31  0.35  628
W. Germany (92)  No  25,650  0.33  0.27  0.35  870
USA (92)  No  24,030  0.14  0.34  0.36  777
France  No  24,040  0.10  0.28  0.36  859
Czech Republic  Yes  5,880  0.23  0.25  0.37  1,172
Russia  Yes  1,320  0.14  0.44  0.38  309
Latvia  Yes  3,040  0.04  0.32  0.39  514
Poland  Yes  4,360  0.18  0.31  0.43  395
Chile  No  4,800  0.36  0.52  0.44  295

Table 2  Descriptive statistics for contextual variables (country as unit of analysis) and bivariate correlations between them.

<table>
<thead>
<tr>
<th></th>
<th>Communist past</th>
<th>GDP per capita</th>
<th>Inequality of opportunity</th>
<th>Net Gini</th>
<th>Mean (standard deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communist past</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>44.4</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>-0.637***</td>
<td>1</td>
<td></td>
<td></td>
<td>15,210 (10,717)</td>
</tr>
<tr>
<td>Inequality of opportunity</td>
<td>-0.364</td>
<td>-0.060</td>
<td>1</td>
<td></td>
<td>0.214 (0.092)</td>
</tr>
<tr>
<td>Net Gini</td>
<td>-0.264</td>
<td>-0.191</td>
<td>0.127</td>
<td>1</td>
<td>30.50 (6.54)</td>
</tr>
</tbody>
</table>

***p<.001

4.4. Statistical Models

Since we are interested in attitudes toward inequality within countries, as well as between them, we employ a set of multilevel models to test our hypotheses (see Pinheiro and Bates 2002). We report two sets of models fitted in an incremental manner. The first three models explore the effects of individual-level social class—both of the respondent’s and their father’s—on attitudes but do not include any country-level information. The second set of models build on the first set by testing for the contextual effects. We start by specifying separate models that include each contextual variable by itself. In other words, these models assess the effects of only one context variable at a time, not controlling for the effects of the others. Our final model includes all four contextual variables simultaneously. All models account for the clustering of individual respondents within countries by specifying a random term at the country-level for the intercept. This random term also allows us to gauge the extent to which attitudes are influenced by the national context variables. We also fitted preliminary models that specified random terms for the effects of respondent’s social class and father’s social class. None of these terms was statistically significant, however, so they were omitted from our models.
5. Results

5.1. The Role of Social Class

We begin with Table 3 to assess the impact of social class on attitudes. Recall that our first hypothesis expects the working class to be least favorable than the middle classes (i.e., managers and professionals) of income inequality. We see quite clearly from Model 1 that the social class differences in attitudes correspond to this hypothesis. Compared to those in middle class occupations, working class respondents tended to be far more egalitarian in their views of incomes. This result persists in Models 2 and 3, which further control for social class origins and experience of social mobility. In short, social class has a strong influence on one’s attitudes. We provide a more detailed discussion of this effect later.

Our second hypothesis suggests that class of origin has an affect on attitudes that is independent of the effects of destination class. Model 2 provides support for our hypothesis. Although not as strong, the effect of class of origin operates in the same manner as the effect of class of destination. This finding is consistent, then, with the idea that the economic conditions of class of origin have an enduring effect on attitudes into adulthood.

Turning to Model 3, we find no evidence to support either of our competing hypotheses regarding the effects of intergenerational mobility. One hypothesis suggested that experience of intergenerational mobility magnifies the effect of one’s destination class. The other hypothesis expected class of origin to dampen the effects one’s own social class. Nevertheless, neither the upward mobility coefficient nor the downward mobility coefficient is statistically different from 0. Moreover, both an analysis of deviance (Chi2=1.94, 2 d.f., p=0.380) and the AIC measure of model fit (which increases slightly) indicate that Model 2 provides a better fit to the data. We conclude, then, that the actual experience of mobility has no effect of its own on attitudes. We thus exclude the measures of mobility from the statistical models from here onwards.
To clearly illustrate the relationship between social class and attitudes uncovered by Model 2, we have plotted fitted values for respondents’ social class by social class origins in Figure 1. The Figure exhibits two noteworthy patterns. First, when all four plots are examined together, we clearly see that the classes are ranked from most to least egalitarian in the following order: working class, routine technicians, professionals, and managers. Secondly, within each plot, we clearly see the effect of class origins—those who came from the working class tend to be more egalitarian in their views of incomes than those who came from the middle classes. In other words, although the occupationally mobile tend to think more like their destination class than their origin class, they retain some

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Footnote: All predictors except respondent’s class and father’s class are set to their means to calculate the fitted values. See Fox and Andersen (2006) for more information.
of the attitudes they developed before adulthood. It is important to remember, however, that the actual experience of mobility per se had no independent effect. That is, father’s class has a similar effect regardless of one’s own social class.

Figure 1  Barplots of fitted values of attitudes toward income inequality (from Model 2) by respondent's social class (horizontal axis) and father's social class (vertical axis). All other variables in the model are set to typical values (means for quantitative variables and median for categorical variables).

Recall that Models 1-3 include a random term for the intercept but no other variance components. As mentioned earlier, we also tested for random effects of father’s social class, respondent’s social class, and intergenerational mobility but none of these was statistically significant. This suggests that the class effects uncovered in
Model 2 are quite general across the countries we examine. Given the importance of both one’s social class and father’s social class to attitudes, we control for these effects in the rest of our analyses.

5.2. The Role of National Context

Figure 2 graphically explores the cross-national relationships between public opinion on income inequality (measured by country-level means on the dependent variable) and the four context variables. Panel (a) divides the societies according to whether or not they have ever experienced Communist rule. The horizontal lines in each side of the graph indicate the group averages for attitudes toward income inequality. The figure suggests that people living in post-Communist societies tend to be less egalitarian than those living in non-Communist societies. The difference between post-Communist (33.5) and other societies (31.0) is statistically significant when individuals are used as the unit of analysis (p<0.001) but statistically insignificant when country is used as the unit of analysis (p=0.439). Panel (b) provides tentative evidence for the hypothesis that economic development is positively related to egalitarian attitudes. The correlation between GDP per capita and attitudes toward income inequality is moderate and statistically significant at conventional levels (r=-0.39, p=0.042). Panel (c), on the other hand, provides no support for the standard argument that equality of opportunity leads to greater acceptance of inequality. The correlation between the two variables is miniscule (r=0.027) and statistically insignificant (p=0.680). Finally, the relationship between income inequality and aggregate public opinion confirms to our hypothesis. As expected, there is a strong positive correlation (r=0.574, p=0.002) between income inequality and acceptance of income inequality. Of course, it is possible that these relationships are altered when both individual-level and contextual-level controls are considered.

---

8 Although Chile is a significant outlier, it does not unduly affect the results. Robust tests (M-estimates) for differences in the means (see Andersen 2008), both using individuals and countries as unit of observations, gave similar results.
We now turn to Table 3, which displays the results from the multilevel models. We start by testing for the effects of each of the context variables on its own, without controlling for the others. Model 4 indicates that a Communist past has no discernable influence on attitudes toward incomes. Its coefficient is statistically insignificant and adding it to the model explains virtually none of the country-level variation in the intercept. Moreover, the coefficients for the individual-level variables are nearly identical to those estimated in Model 2. In other words,
we fail to find convincing evidence for either the conjectures made by Kelley and Evans (1993) or our speculation based on Inglehart’s (1997) research on postmaterialist values.

Table 4  Models assessing the effect of national context on desired level of income inequality

<table>
<thead>
<tr>
<th></th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
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<td>(0.29)</td>
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<td>(2.22)</td>
<td>(2.22)</td>
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<td>(0.12)</td>
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<td>4.02</td>
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<tr>
<td></td>
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<td>(12.28)</td>
<td>(12.28)</td>
<td>(12.28)</td>
<td>(9.85)</td>
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<td>Income inequality (Net GINI)</td>
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*p<.05; **p<.01; ***p<.001

aCompared to a null model with a random intercept but no predictors

Consistent with Figure 3, Model 5 supports the hypothesis that public opinion becomes less accepting of income inequality as economic development rises. GDP per capita (measured in $1000 US) has a statistically significant negative effect on attitudes toward income inequality. Still, it is important to note that the estimated effect of GDP per capita is rather small. To better understand its magnitude, we compare the response of a typical respondent from a country with a GDP per capita of $15,000 with the response of a typical respondent from a coun-
try with a GDP per capita of $25,000. Controlling for social background, the respondent from the richer country has a predicted value for the dependent variable that is about 2.3 percentage points lower (i.e., they are 2.3 points more egalitarian in their views). It is also important to remember that this finding results from a model that does not control for any other contextual variables. We will return to this discussion later.

Model 6 assesses the role of inequality of opportunity (i.e., the relationship between father’s and respondents SEI in each country). Contrary to our hypothesis, Model 6 demonstrates a positive association between equality of opportunity attitudes towards income inequality. Although its coefficient is not statistically significant, we cannot entirely rule out the possibility that a larger number of countries would yield statistically significant results. That is, the positive association is consistent with the idea that people simply adjust their attitudes to fit with the reality of the conditions of their society. Based on this model, however, we conclude that attitudes toward income inequality are not influenced by inequality of opportunity in the manner expected by our hypothesis.

We now turn to the role of income inequality, our most important context variable. Consistent with our findings regarding individual-level social class, Model 7 provides further evidence that people are influenced by the unequal economic conditions. The effect of the Gini coefficient for net income inequality is positive and statistically significant. It is also very large—as the level of income inequality increases by one per cent, attitudes towards income inequality increase by .5 per cent. Moreover, including the net Gini in the model substantially improves the fit of the model (as evidenced by the decrease in the AIC value over previous models), and accounts for nearly one-quarter of the country-level variance in the intercept. To further illustrate the role of inequality on attitudes toward income inequality we can consider change in the two variables for the seven countries for which we have measures in 1992 and 1999 (see Table 1). Based on the results of this model, change in actual inequality within these seven countries explains slightly more than 40 per cent of the change in average attitudes over time. Simply put, there is a very strong relationship between public opinion on income inequality and actual national levels of income inequality.

Given that the four contextual variables are correlated with each other, it is possible that the conclusions differ when all four context variables are included in the model. We turn to Model 8 to assess this possibility. This model has two main objectives: 1) to assess whether the effect of income inequality persists even after considering the other variables considered important to attitudes, and 2) to determine whether controlling for income inequality negates the effects of the other contextual variables. Model 8 provides several noteworthy findings. First, the effect of income inequality not only persists but it gets slightly larger (the coefficient increases from 0.50 to 0.53). Secondly, the influence of economic development virtually disappears. Its coefficient is less than one third its size.
from Model 5, and is no longer statistically significant. Thirdly, the effects of a communist past and inequality of opportunity continue to be statistically insignificant, though it is worth noting that the coefficient for a communist past is now almost 40 per cent larger. Fourthly, the percentage explained of the country-level intercept variance increases substantially over any previous model (to approximately one-third), including the model with the net Gini as the only context variable (Model 7), suggesting the possibility that the lack of statistical significance for some of the context variables reflects the relatively small number of countries under analysis.

The combination of the increase in the communist coefficient and the significant decline in the intercept variance led us to further evaluate the robustness of the results of Model 8. We started by fitting a series of models that included all possible combinations of the contextual variables (see Table A2). Although a model including all of the contextual variables except per capita GDP fit slightly better according to the AIC value, only the effect of the Gini coefficient was statistically significant in this model. The robustness of the results of Model 8 was further verified by several other diagnostic models including series of models that left out respondents from each country from the analysis separately, used alternative measures of economic development in place of GDP per capita, and replaced the dependent variable with a measure of the ratio of respondents desired highest to lowest pay for the nine occupations used in the Gini index. Regardless of which of these specifications was employed, the basic conclusion was straightforward—attitudes toward income inequality are influenced by the economic conditions that people experience. We found little evidence that any of the other contextual variables are important.

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9 Diagnostics indicated that Spanish public opinion on pay for specific occupations was significantly different from public opinion elsewhere. We thus refitted the model without respondents from Spain. Although some of the coefficients and their standard errors changed somewhat, the substantive story remained unchanged. Following research by Osberg and Smeeding (2006) we also fit the models with a different measure of attitudes toward incomes as the dependent variable. More specifically, we calculated the ratio of the maximum income and minimum income that respondents thought the nine jobs “ought” to be paid and replaced the Gini with this measure in Model 8. For this dependent variable, Spain was a significant outlier. More than 25 per cent of Spanish respondents felt that the highest paying occupation should receive at least 5,000 times more than the lowest paying occupation. In no other country did a single respondent report such a high differential. Not surprising, including the Spanish respondents in the analysis distorted the findings (see Model A1 in Table A3). On the other hand, when Spanish respondents are removed from the analysis, the substantive story derived from Model 8 persists (see Model A2 in Table A3).
6. Discussion and conclusions

Our main goal was to assess the impact of economic inequality on attitudes toward income inequality. Consistent with recent research (see Andersen and Fetner 2008), we provide additional evidence that attitudes are influenced by both individual and contextual economic conditions. In this regard, we contribute new findings to the debate over the relevance of social class as a source of identity in modern societies (see Clark and Lipset 1991; Hout, Manza, and Brooks 1999). We also add to the growing literature suggesting that inequality has detrimental effects for attitudes important to democracy (Uslaner 2002, Uslaner and Brown 2002, Andersen and Fetner 2008). Our findings thus have important implications for public policy regarding income inequality.

Our results clearly demonstrate that relative to those who live in relatively affluent economic conditions (e.g., professionals and managers), people who live in poorer conditions (i.e., the working class) are less accepting of income inequality. The fact that random components for the class effects were statistically insignificant suggests that class operates in a relatively similar manner across societies. These findings contradict claims that social class “no longer exists as a meaningful social entity” (Pakulski and Waters 1996, 667). We suspect that an even finer grained measure of social class (e.g., as proposed by Weeden and Grusky 2005) would garner even stronger class effects. The ISSP data are not well suited to constructing more finely grained class categories, however, so this issue could not be properly explored in our analysis.

Perhaps our most important contribution to the “end of class” debate is the finding that class of origin plays an important role, independent of one’s own social class, in shaping attitudes. Although weaker in strength, the effect of origin class operates in the same manner as the effects of destination class. That is, the higher the social class, the less egalitarian one is in their views of incomes. Similar to the destination class effects, we found no evidence of class of origin having random effects across countries. We argue that the effect of class origin reflects lingering socialization processes related to the economic conditions one experienced as a child.

In contrast to results from other recent research (De Graff et al. 1995; Kelley and Kelley 2009), our findings illustrate that people’s attitudes toward incomes are not affected by the experience of intergenerational mobility per se. This finding challenges the long standing argument that social mobility on its own changes how people perceive the world (cf. Tocqueville 1945[1838], Turner 1992, Kelley and Kelley 2009). Still, the typical argument pertains largely to a “contextual effect” of social mobility rather than to individual experiences. This argument is based on the assertion that Americans believe the US to be “the land of opportunity” and thus hold relatively strong capitalistic views (Lipset and Bendix 1959). Even the premises of this argument are questionable, however.
For example, cross-national research demonstrates that the US stratification structure is not exceptionally open (cf. Featherman et al. 1975, Erikson and Goldthorpe 1992), and Osberg and Smeeding (2006) demonstrate that Americans attitudes toward income inequality are also not exceptional. It is not surprising, then, that consistent with our finding regarding the effects of experience of mobility, we also found no evidence of a contextual effect of inequality of opportunity on attitudes.

Driven by previous cross-national research, we also assessed whether the experience of communist rule was associated with more egalitarian attitudes (Kelley and Zagorski 2005). Employing more sophisticated statistical tests than used previously to assess this question, we failed to find strong evidence of this relationship. Although the direction of the relationship was consistent with Inglehart’s (1997) argument that oppression associated with a communist past can lead to views favoring economic freedom, it was statistically insignificant. Of course, we cannot entirely discount the possibility that the lack of statistical significance for the communist effect reflects the relatively small number of countries in the analysis. Given that the coefficient representing the communist effect was larger—rather than smaller—for the model including all other contextual variables compared to one with only the communist variable itself, it is possible that an analysis of more countries would yield a statistically significant result. At the present time, however, such an analysis cannot be pursued because appropriate data simply are not available.

Motivated by Inglehart’s (1990) claims that economic development is a major contributor to the shift to postmaterialist values in modern societies, we also investigated the relationship between per-capita GDP and attitudes to income inequality. Consistent with Inglehart’s thesis, we found that egalitarian attitudes increase with per-capita GDP but only when no other contextual variables are included in the statistical models. When other variables are controlled for, however, the effect of per-capita GDP is reduced substantially and no longer statistically significant. Contrary to the postmaterialist thesis, this finding implies that average level of economic prosperity is not the major force propelling value change in modern industrial society that postmaterialist theorists claim it to be.

Andersen and Fetner’s (2008) research on the postmaterialist thesis suggests that attitudinal research could benefit from shifting attention from the role of between country inequality to the role of within country inequality. It is here that we believe we make our most important contribution. Our results indicate that cross-national variation in income inequality within countries was the only important predictor of cross-national variation in attitudes towards income inequality. More specifically, a suppressed income distribution appears to result in public opinion that is more egalitarian. This finding is consistent with Uslaner’s (2002) argument that economic inequality un-
dermines social trust, which results in social intolerance. At a more basic level, this result once again suggests that people adjust their attitudes to the reality of the economic conditions that they experience.

In concluding, we ponder the political implications of our findings. There is growing research demonstrating a link between the level of income inequality in society and various attitudes related to social cohesion (Uslaner 2002, Uslaner and Brown 2002, Andersen and Fetner 2008). Others suggest that democratic principles are best promoted in societies where social cohesion is highest (Putnam 1993, Putnam 2000). Taken together, these findings suggest that inequality must be limited in order to ensure a healthy democracy. Nevertheless, in recent decades most modern democracies have experienced a sharp increase in income inequality (Fisher and Hout 2006, Goeßling 2001, Firebaugh 2000). If politicians respond to public opinion as many suggest (Wezien 2004, Weakliem et al. 2005, Brooks and Manza 2007), our results have implications for those who wish to turn back the tide of rising inequality.

We demonstrated that countries with a high-level of income inequality tend also to be characterized by public opinion supporting it. In other words, the Marxist notion that economic crisis can turn public opinion against capitalism seems untenable. Instead, our results suggest that people tend to accept the conditions in which they live. That is, inequality perpetuates itself in a continuous cycle through popular support. Simply put, if politicians respond only to public opinion, significant change to redistribution policy is unlikely to come quickly. Other evidence suggests that people tend to underestimate the level of actual income inequality, and that differences between perceived and desired levels of income differences are quite pronounced (Osberg and Smeeding 2006). This implies, then, that breaking the cycle is not an easy task. It would require a bold political leader who is willing to educate the public of the actual extent of inequality, something that is unlikely to receive support from the majority of elites who fund political campaigns.
References


Tables

Table A1: The ISSP data used in this study, by country and module.

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<th>Country</th>
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<th>Social Inequality III (ISSP 1999)</th>
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Table A2: AIC for models including all combinations of the contextual variables

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<td>9c</td>
<td>GDP, Inequality of opportunity</td>
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<td>Communist, Gini</td>
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</tr>
<tr>
<td>9e</td>
<td>GDP, Gini</td>
<td>142,873</td>
</tr>
<tr>
<td>9f</td>
<td>Inequality of opportunity, Gini</td>
<td>142,868</td>
</tr>
<tr>
<td>10a</td>
<td>Communist, GDP, Gini</td>
<td>142,870</td>
</tr>
<tr>
<td>10b</td>
<td>Communist, GDP, Inequality of opportunity</td>
<td>142,871</td>
</tr>
<tr>
<td>10c</td>
<td>GDP, Gini, Inequality of opportunity</td>
<td>142,869</td>
</tr>
<tr>
<td>10d</td>
<td>Communist, Gini, Inequality of opportunity</td>
<td>142,862</td>
</tr>
</tbody>
</table>
Table A3  Models assessing the effect of national context on desired level of income inequality as measured by the ratio of the maximum income and minimum income that respondents thought the nine jobs “ought” to be paid

<table>
<thead>
<tr>
<th></th>
<th>Model A1 (All countries)</th>
<th>Model A2 (Excluding Spain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>62.99</td>
<td>4.34</td>
</tr>
<tr>
<td></td>
<td>(549.13)</td>
<td>(2.68)</td>
</tr>
<tr>
<td>Age</td>
<td>0.29</td>
<td>0.05**</td>
</tr>
<tr>
<td></td>
<td>(0.26)</td>
<td>(0.02)</td>
</tr>
<tr>
<td>Men</td>
<td>9.72</td>
<td>3.30***</td>
</tr>
<tr>
<td></td>
<td>(8.58)</td>
<td>(0.58)</td>
</tr>
<tr>
<td>Married</td>
<td>7.52</td>
<td>−0.35</td>
</tr>
<tr>
<td></td>
<td>(8.79)</td>
<td>(0.60)</td>
</tr>
<tr>
<td>Degree</td>
<td>14.06</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td>(12.84)</td>
<td>(0.28)</td>
</tr>
<tr>
<td>Respondent’s Social class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professionals</td>
<td>1.31</td>
<td>2.61**</td>
</tr>
<tr>
<td></td>
<td>(14.55)</td>
<td>(0.98)</td>
</tr>
<tr>
<td>Managers</td>
<td>18.38</td>
<td>3.19**</td>
</tr>
<tr>
<td></td>
<td>(15.80)</td>
<td>(1.06)</td>
</tr>
<tr>
<td>Routine/Technical</td>
<td>10.56</td>
<td>2.71***</td>
</tr>
<tr>
<td></td>
<td>(10.26)</td>
<td>(0.70)</td>
</tr>
<tr>
<td>Working class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental education</td>
<td>6.06</td>
<td>−0.24</td>
</tr>
<tr>
<td></td>
<td>(15.60)</td>
<td>(1.06)</td>
</tr>
<tr>
<td>Father’s Social class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professionals</td>
<td>25.28</td>
<td>2.20</td>
</tr>
<tr>
<td></td>
<td>(17.52)</td>
<td>(0.38)</td>
</tr>
<tr>
<td>Managers</td>
<td>−2.33</td>
<td>2.33**</td>
</tr>
<tr>
<td></td>
<td>(13.30)</td>
<td>(0.90)</td>
</tr>
<tr>
<td>Routine/Technical</td>
<td>−5.73</td>
<td>0.29</td>
</tr>
<tr>
<td></td>
<td>(11.32)</td>
<td>(0.77)</td>
</tr>
<tr>
<td>Working class</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Contextual Effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-Communist</td>
<td>−164.30</td>
<td>3.69</td>
</tr>
<tr>
<td></td>
<td>(200.62)</td>
<td>(4.26)</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>−5.06</td>
<td>−1.40</td>
</tr>
<tr>
<td></td>
<td>(9.29)</td>
<td>(2.87)</td>
</tr>
<tr>
<td>Inequality of opportunity</td>
<td>501.46</td>
<td>0.54</td>
</tr>
<tr>
<td></td>
<td>(730.54)</td>
<td>(1.39)</td>
</tr>
<tr>
<td>Income inequality</td>
<td>0.78</td>
<td>6.78***</td>
</tr>
<tr>
<td>(Net GINI)</td>
<td>(12.05)</td>
<td>(1.34)</td>
</tr>
<tr>
<td>Variance component</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>114,779</td>
<td>46.73</td>
</tr>
<tr>
<td>Per cent variance explained</td>
<td>0</td>
<td>41.4</td>
</tr>
<tr>
<td>N (individual)</td>
<td>18,369</td>
<td>17,857</td>
</tr>
<tr>
<td>N (surveys)</td>
<td>27</td>
<td>26</td>
</tr>
</tbody>
</table>

*p<.05; **p<.01; ***p<.001

aCompared to a null model with a random intercept but no predictors
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Aims

The core objective of GINI is to deliver important new answers to questions of great interest to European societies: What are the social, cultural and political impacts that increasing inequalities in income, wealth and education may have? For the answers, GINI combines an interdisciplinary analysis that draws on economics, sociology, political science and health studies, with improved methodologies, uniform measurement, wide country coverage, a clear policy dimension and broad dissemination.

Methodologically, GINI aims to:

- exploit differences between and within 29 countries in inequality levels and trends for understanding the impacts and teasing out implications for policy and institutions,
- elaborate on the effects of both individual distributional positions and aggregate inequalities, and
- allow for feedback from impacts to inequality in a two-way causality approach.

The project operates in a framework of policy-oriented debate and international comparisons across all EU countries (except Cyprus and Malta), the USA, Japan, Canada and Australia.

Inequality Impacts and Analysis

Social impacts of inequality include educational access and achievement, individual employment opportunities and labour market behaviour, household joblessness, living standards and deprivation, family and household formation/breakdown, housing and intergenerational social mobility, individual health and life expectancy, and social cohesion versus polarisation. Underlying long-term trends, the economic cycle and the current financial and economic crisis will be incorporated. Politico-cultural impacts investigated are: Do increasing income/educational inequalities widen cultural and political ‘distances’, alienating people from politics, globalisation and European integration? Do they affect individuals’ participation and general social trust? Is acceptance of inequality and policies of redistribution affected by inequality itself? What effects do political systems (coalitions/winner-takes-all) have? Finally, it focuses on costs and benefits of policies limiting income inequality and its efficiency for mitigating other inequalities (health, housing, education and opportunity), and addresses the question what contributions policy making itself may have made to the growth of inequalities.

Support and Activities

The project receives EU research support to the amount of Euro 2.7 million. The work will result in four main reports and a final report, some 70 discussion papers and 29 country reports. The start of the project is 1 February 2010 for a three-year period. Detailed information can be found on the website.

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GINI GROWING INEQUALITIES’ IMPACTS

Project funded under the Socio-Economic sciences and Humanities theme.