INCOME INEQUALITY AND POLITICAL ENGAGEMENT

IN

EASTERN EUROPE

CANDIDATE NUMBER: 510831

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MPHIL IN POLITICS

IN THE DEPARTMENT OF POLITICS AND INTERNATIONAL RELATIONS

UNIVERSITY OF OXFORD

TRINITY TERM 2010

29446 WORDS (EXCLUDING BIBLIOGRAPHY)

ABSTRACT.

The thesis examines whether income inequality in post-Communist Eastern Europe depresses political engagement or increases the potential for conflict and instability. The thesis finds that while overall income inequality is correlated with lower political engagement and political engagement is stratified by income, income inequality does not appear to depress political engagement among the poor in post-Communist Eastern Europe. I use multilevel modeling to examine mass survey data from the survey done by Professors Whitefield and Evans as part of an ESCR-funded project as well the World Values Surveys.

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INTRODUCTION

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Social commentators going as far back as Aristotle have raised concerns about the implications of economic inequality for democracy and political stability. Aristotle and several influential thinkers following him, including de Tocqueville and Madison, have argued that high levels of economic inequality are inimical to democracy (Anderson and Beramendi 2008: 3). In his *Politics*, Aristotle argues that democratic societies require a large middle class and must avoid extreme disparities of wealth and status among citizens.[1]Both Aristotle and Madison trace the seeds of divisive political factions to economic inequality –in the Tenth Federalist Paper Madison points out that "the most common and durable source of factions has been the various and unequal distribution of property" (Hamilton, Madison and Jay 1961: 79).

The idea that equality is necessary for democracy threads its way through many major works of modern political science (Dahl 1971, 2006; Linz and Stepan 1996). In *Polyarchy* Dahl argues that extreme inequalities help produce hegemonic regimes, and that the allocation of economic resources determines the levels of political inclusiveness (1971: 89). Inequality is often referred to as a condition so obviously related to the healthy functioning of democracy that it does not need to be examined –for example Linz and Stepan (1996) state that democracy would be unsustainable without some "alleviation of gross economic inequality." Concerns among political scientists about the implications of economic inequality for democracy have recently come to a head with the organization of the 2004 APSA Task Force on Inequality and American Democracy inspired by observations of rising income inequality in established democracies.

[1] Aristotle. *Politics*. Book IV.11 Mineola, NY: Dover Publications: 2000

Extreme inequality in status, wealth, income and other characteristics logically leads to divergences in the interests of various groups in society making consensus difficult. The resulting conflict not only causes political stalemates but may even threaten the stability of political regimes. Several political scientists argue that extreme inequality explains regime change (Muller 1988; Acemoglu and Robinson 2006; Boix 2003).

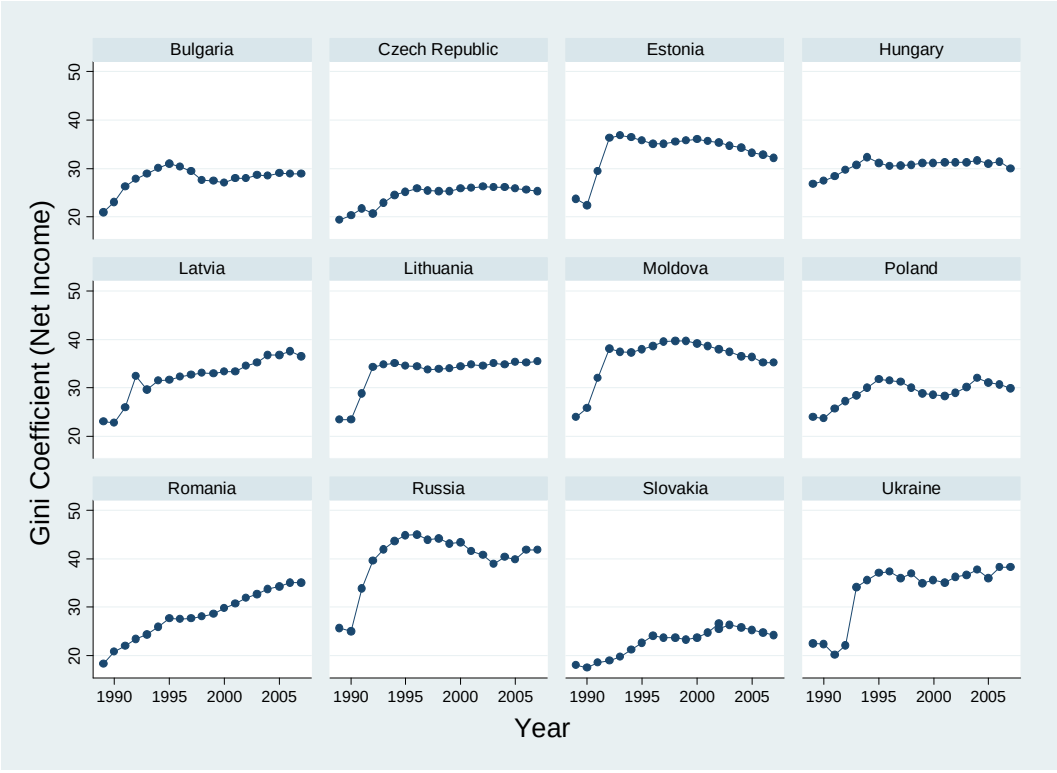
However the consequences of inequality are complex and ambiguous, and in many cases even contradictory. While many political scientists argue income inequality is the cause of redistributive conflict and political instability, others suggest that income inequality may cause disaffection and apathy among the poor, resulting in a decline in overall political participation (Goodin and Dryzek 1983; Anderson and Beramendi 2008; Solt 2008). Despite the concern about income inequality, the causal mechanisms linking macro-level inequality to individual level behavior are still far from clarified by existing scholarship. One of the main goals of this thesis is to throw light on these causal linkages by reexamining the question of how income inequality affects political engagement in light of the extensive literature on political participation (Verba and Nie 1972; Verba et al. 1995a 1995b) and most importantly by testing the literature's existing conclusions in the new context of post-Communist Easternl Europe. Until now the effects of income inequality on political participation have been studied in the context of the United States and wealthy OECD countries (Solt 2008; Anderson and Beramendi 2008; Bartels 2002; Brady 2004).

INCOME INEQUALITY AND POLITICAL ENGAGEMENT IN POST-COMMUNIST EASTERN EUROPE.

The question of how income inequality influences political engagement and consequently political participation has particular salience in the post-Communist context given the combination of Communist legacy of social egalitarianism and the increase in income inequality produced by the economic transition. Over the decade or more since the

collapse of Communism the level of income inequality have drastically increased in several of the post-Communist countries particularly in Russia and Ukraine, where the levels of income inequality have more than doubled in the first five years of the transition (SWIID 2009). Studies have shown that despite the general consensus behind the free market reforms, compared to established democracies, the level of support for redistribution and equality of wages in post-Communist countries is still quite high (Corneo and Gruner 2002). One would expect that the experience of such economic hardship, particularly the sharp increases income inequality, would mobilize political protests in Eastern Europe.

Figure 0.1: Income Inequality over Time in 12 post-Communist Countries



Source Standardized World Income Inequality Database 2009

Indeed as countries of Eastern Europe and the former Soviet Union were beginning the transitions to market economies, many Western analysts predicted that the pain inflicted by the economic reforms would cause an extensive popular backlash. Several observers

pointed to the argument that simultaneous economic and political transformations could lead to democratic breakdown (Elster 1993). Observers suggested that economic reforms would lead to the escalation and intensification of collective protest (Ekiert 1993). The dire predictions about the consequences of the economic reforms are best captured by Przeworski's gloomy prognosis:

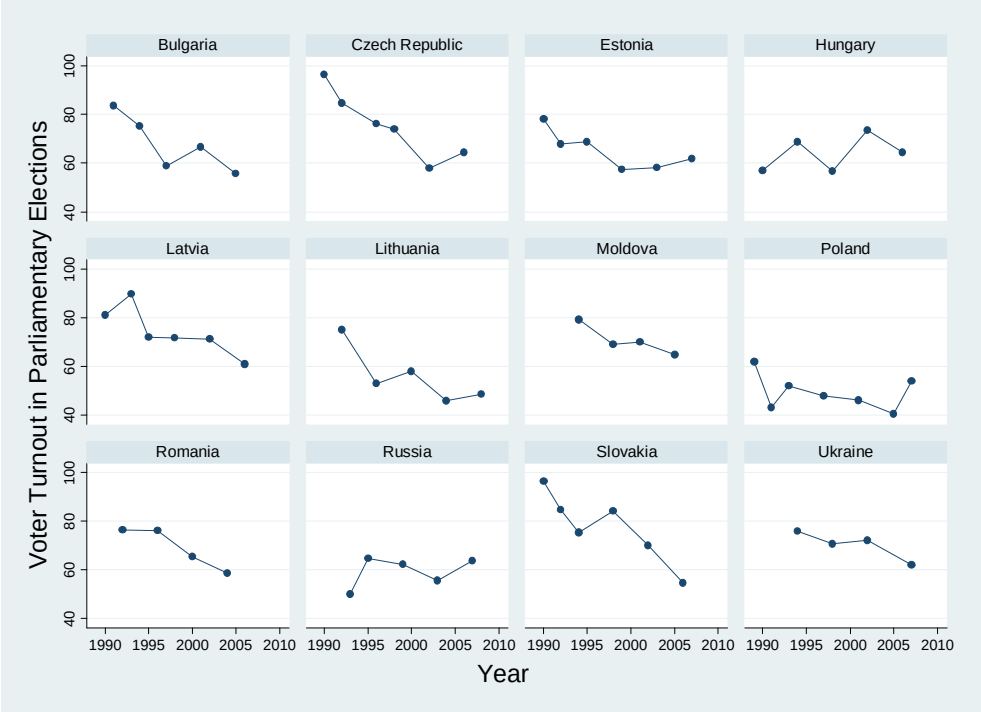
> Market-oriented reforms necessarily cause a temporary fall in aggregate consumption. They are socially costly and political risky… they hurt large social groups and evoke opposition from important political forces. And if that happens, democracy maybe undermined or reforms abandoned or both… Under democratic conditions, where the discontent can find political expression at the polls, even the most promising reform strategies may be abandoned. Either politicians are concerned about electoral support and reverse policies that will cause them to lose elections, or they lose to competitors more attuned to the political consequences of structural transformation. And in some cases, egalitarian ideologies with strong populist and nationalistic overtones can be mobilized against democracy and reforms (Przeworski 1991: 136).

Przeworski famously concluded that "the East has become the South" implying that Eastern Europe would face the same populist reactions and political instability as Latin America.

Yet Przeworski's predictions about the mobilizing effect of the pain caused by the economic reforms seem to have been disproved. Post-Communist countries have faced only sporadic protests and those that did occur have been of a non-violent nature (Greskovits 1998:92). Most did not significantly threaten the hold of incumbent governments. If anything as years have gone by since the collapse of communism, political

participation, in particular turnout, has steadily dropped (Kostadinova 2003; Kostadinova and Power 2007). Figure 0.2 shows clear declines in parliamentary elections in all countries with the exception of Hungary and Russia. Kostadinova and Power (2007) conclude that the drop in turnout is driven by a wearing off of the initial excitement of the democratization, suggesting a progression towards 'normalcy.'

Figure 0.2: Voter Turnout in Parliamentary Elections



Source: International Institute for Democracy and Electoral Assistance http://www.idea.int/vt/

However despite the apparent lack of violent backlash against the economic reforms, economic issues have been of great concern to citizens in post-Communist countries. In *Transitional Citizens,* Colton notes that according to surveys in Russia in 1995 and 1996, more than 60 percent of survey respondents listed an economic malady first when asked in an open-ended question to name the most serious problems the motherland has faced in recent time (Colton 2000: 90). *Thus the question arises has the unrelenting progression of economic reforms and the resulting adverse economic conditions, particularly income inequality, had an effect on political participation?*

The existing studies that seek to explain the drop in turnout in post-Communist countries use aggregate data (Kostadinova 2003; Kostadinova and Powers 2007; Pacek et al. 2009). These studies find that the drop in turnout seems to be related more the institutional and political factors rather than adverse economic conditions. Kostadinova and Powers (2007) attribute the drop in turnout to passing of the initial euphoria of the political transition, whereas Pacek et al. find that the decline in turnout is not caused by disaffection resulting from experiences of economic hardship, but rather turnout is determined by whether elections are of high stakes. However aggregate level studies do little to explain individual level behavior: it is entirely possible that aggregate level measures fail to capture the effects of economic conditions since they have a positive effect on some social groups and a negative effect on others, canceling each other out at the aggregate level. Therefore the aggregate studies do not show whether declines in turnout result from equal levels of abstention across all social groups or whether the decline is concentrated in specific social groups.

Several of the studies on income inequality and political participation show that income inequality depresses political engagement particularly among the lowest income groups (Goodin and Dryzek 1983; Solt 2008; Anderson and Beramendi 2008). These studies explain the particularly negative effect of income inequality on lower income groups using the idea of relative power: individuals with relatively lower incomes perceive themselves to be at a disadvantage compared to wealthier individuals who have more politically relevant resources and greater access to policymakers, and therefore poorer people are more likely to come to become politically disengaged as they decide that they have little political clout. Interestingly the studies on the decline in turnout in Eastern Europe do not

consider the impact of income inequality (Kostadinova 2003; Kostadinova and Powers 2007; Pacek et al. 2009) –these studies only consider adverse economic conditions such as inflation, declines economic growth (GDP per capita), and unemployment.

This thesis will examine whether income inequality in anyway explains the drop in voting participation in post-Communist countries. The literature on income inequality and political participation suggests that lower income groups are less likely to participate, and that as income inequality increases this stratification becomes stronger –in other words income inequality has stronger marginal effects on lower income groups than higher ones. To test the conclusions of this literature in the context of post-Communist countries , this thesis will test whether indeed political engagement is stratified by relative income and secondly whether the stratification by relative income is greater under conditions of higher income inequality. If the answers are affirmative to the last two questions then the overall decline in turnout can be at least in part explained by disaffection and apathy among the lowest income groups in post-Communist countries resulting from greater inequality.

THE EASTERN EUROPEAN COUNTRIES EXAMINED

In this thesis I will examine the research question in the context of twelve post-Communist countries representing four groups defined by geographic location, history and culture in the period from the collapse of Communism until 2007 (last survey year included in the datasets):

- Visegard states: Poland, Czech Republic, Slovakia, and Hungary,
- The Baltic states: Lithuania, Estonia, and Latvia,
- The Balkan states: Bulgaria and Romania
- And finally the CIS states: Russia, Moldova and Ukraine.

For the purposes of this research project, I will treat the countries in the analysis as electoral democracies that are still in the process of consolidation. While of course Russia cannot be treated as an equivalent of Western democracies, I will treat the CIS states as being on a fluid spectrum between hegemony and democracy in the spirit of Dahl (1971). Dahl places regimes in a fluid space defined by two axes of inclusiveness and competitiveness where the differences between hegemony and democracy are a matter of degrees rather than strict categories. While elections in themselves do not guarantee full democracy, their existence even in a flawed manner is still indicates a progress along the axis of competition towards democracy. Belarus will be not be included considering its strongly authoritarian character, and secondly because data on electoral institutions is unavailable for this country.

I will not claim that these twelve cases are in anyway representative of some larger universe of new democracies. Rather I will restrict their representativeness to the 'universe' of post-Communist new democracies characterized by a common Communist past and thus some common characteristics that influence political engagement and participation. Indeed all post-Communist countries experienced the initial euphoria in political engagement associated with the collapse of the communist regimes. These countries also may share attitudes towards politics and income inequality. Studies have shown that these countries relative to other regions of the world do generally show more support for redistribution and wage equality, which are characteristics relevant to the research question. In the context of the post-Communist universe, the number of cases examined is quite large.

As the Figure 0.1 on page 7 shows, these twelve countries display much variation in income inequality across both time and space allowing for variation in the key independent variable while the selection of cases along similar historical and cultural lines allows for some implicit controls. In the effort of isolating the effects of income inequality, the possibility of increasing the number of cases by including countries that are relatively similar is a great asset. In this analysis each country survey-year will be treated as a separate case. The multilevel analysis of these cases will thus represent a cross-sectional analysis with several survey years per a country..

THE SURVEYS

I will use statistical data from two surveys: % Waves of the World Values Survey (WVS) and the set of surveys conducted by Geoffrey Evans and Stephen Whitefield of Oxford University (from now on referred to as the ESRC/EurEqual Survey). The years 1993 to 2001 of the latter survey were funded as a part of the British Economic and Social Research Council's East-West Program, Phase 2 "Emerging Forms of Political Representation and Participation in Eastern Europe and the EU-funded INTAS Project, Ethnicity, Nationality and Citizenship in the Former Soviet Union and Economic and Social Research Council; grant # R000223624 "The Development of Social Class in Post-Communist Russia." The survey in 2007 was conducted as a part of the EurEqual Project.[2]

THE PLAN OF THE THESIS

In the first chapter, I will re-examine the existing literature on income inequality and political participation in light of the extensive literature on the individual-level causes of political participation. The discussion will clear up some of the ambiguities about the

[2] http://eurequal.politics.ox.ac.uk/

causal mechanisms linking income inequality, relative income and voting participation by carefully considering voting using the resource and Civic Voluntarism models. The chapter will be concluded by proposing the hypotheses based on the existing theories linking income inequality and voting participation as well a path model I propose which integrates these theories with the models on political participation.

The empirical analysis will be divided between Chapters 2 and 3. In Chapter 2, I will empirically test the path model and determine whether relative income has an effect on political engagement and voting participation in post-Communist countries. In Chapter 3, I will examine the effects of income inequality. Firstly I will empirically examine whether income inequality affects turnout and political engagement at the aggregate level and how the effects of income inequality compare to other institutional and economic determinants of turnout. I will conclude the empirical analysis by testing whether indeed the effects of relative income on political engagement are conditional in levels of income inequality using multilevel models.

At the end in the short Conclusion, I summarize the findings of the empirical chapters and re-assess the usefulness of the existing theories on income inequality and political participation in explaining patterns of political engagement and voting participation in post-Communist Eastern Europe.

CHAPTER 1

INEQUALITY AND POLITICAL PARTICIPATION:

CONCEPTS AND CAUSAL LINKAGES

This chapter lays the theoretical groundwork that will guide the empirical analysis in this thesis by discussing and defining the key concepts, relative and absolute income and income inequality, as well as by reviewing all the existing literature on income inequality and political participation. I will discuss some of the literature's contradictory conclusions about the effect of income inequality on political participation as well as various ambiguities about the character of income as a determinant of political participation – namely whether it plays the role of a resource or an incentive. To clarify some of these ambiguities, I re-examine the available theories and literature on income inequality and political participation in light of the highly robust models of individual level political participation such as the resource and Civic Voluntarism models (Verba et al. 1995a 1995b). The critique of the literature on income inequality and political participation shows that many of the difficulties faced by the authors of this literature stem from the failure to carefully consider the literature on political participation, especially the various resources and 'civic orientations' needed for specific forms of political action.

In an effort to progress beyond the key studies on income inequality and political participation (Solt 2008; Anderson and Beramendi 2008), I focus my attention on clarifying the specific causal mechanisms linking income inequality, relative income and voting participation. By merging the relative power (Goodin And Dryzek 1983) and redistributive conflict theories (Acemoglu and Robinson 2006) with the Civic Voluntarism Model (Verba et al. 1995b), I propose a new path model that shows how, though income is largely irrelevant as a direct resource for voting participation, relative income indirectly determines whether individuals chose to vote or not by shaping certain forms of political

engagement tied to relative power considerations, particularly external political efficacy and interest in politics. In the final section of the chapter, I propose several hypotheses that test the proposed path model as well as the explanatory power of the relative power and redistributive conflict theories. These hypotheses will guide the empirical analysis in the following chapters.

THE RELEVANCE OF POVERTY AND INEQUALITY FOR POLITICAL PARTICIPATION: ABSOLUTE VERSUS RELATIVE INCOME.

Before embarking on a discussion of the literature on income inequality and political participation, some distinctions are in order –particularly between the concepts of relative and absolute income and analogously between poverty and inequality, as the concepts in each pair, while intimately linked, have very different implications for political participation. Poverty and inequality are concepts which are easily conflated –in a highly unequal society, individuals at the lower end of the income distribution may live in poverty, however this is not necessarily the case as the following discussion will show. Distinguishing between poverty and inequality is important, because as the discussion of relative and absolute income shows, the two former concepts are linked to political participation via different mechanisms. Absolute income and poverty determine the direct resources an individual has for political participation –monetary resources determine whether an individual can make campaign contributions, time determines whether an individual can volunteer on a campaign, civic skills and education determine whether an individual can convey his preferences. Relative income and income inequality, on the other hand are related to normative considerations of power differentials between individuals and their respective abilities to prevail in political struggles by making their voices heard and to force through public polices in their own interests.

To illustrate the difference between relative and absolute income it is helpful to imagine two countries with the same level of income inequality but different levels of absolute income. For example in hypothetical country A the average income of the lowest decile is $100 per a month, whereas the highest income decile has an average income of $1,000 per a month. In hypothetical country B, the lowest income decile has an income of $15,000 a month and the highest decile has an average income of $150,000 a month. Both societies have the same level of income inequality, as the ratios between the average incomes of the top and the bottom deciles are 10 to 1. However individuals in the same deciles but from different countries are vastly unequal: in society A someone in the lowest decile has an income that is ten times smaller than that of an individual in the lowest decile in society B. While the levels of income inequality are the same in both societies, the level of poverty may be much higher in society A than B. In so far as resources in an absolute sense matter for participation in politics, the abilities of someone to participate in the lowest decile in society A and B are vastly different. Taking for example campaign contributions, if in society A individuals in the lowest decile live in poverty meaning that their income are close to subsistence levels these individuals are unlikely to be able to spare any proportion of their income for donations. Whereas in society B, which is much more economically developed, even individuals in the lowest decile, may theoretically be able to give up part of their income as a campaign donation. The impact of absolute levels of resources on participation is even more obvious in the areas of literacy –one can easily imagine the difficulties faced in voting by illiterate individuals in country A compared to their relatively poor but educated and literate counterparts in society B. Therefore one can see how political participation may require at least some minimum absolute level of resources such as literacy.

The link between absolute income and political participation is reflected by the extensive literature that finds a positive correlation between economic development and democratization beginning with Seymour Martin Lipset's (1959) argument that modernization causes democratization (Bollen and Jackman 1985; Burkhart and Lewis-Beck 1994; Gasiorowski 1995; Barro 1996; Przeworski et al.2000). These large N-studies have suggested various mechanisms linking economic development and democracy especially education (Barro 1996). At the individual-level, the resource models of political participation have shown how various resources in absolute terms such as a wide vocabulary, income, time, and public-speaking skills determine individuals' abilities to participate in politics (Verba et al. 1995a).

Relative income on the other hand affects participation indirectly by shaping normative attitudes towards participation -in other words an individual's relative income position can work as an incentive or disincentive for participation. Again the influence of relative income can be illustrated by two hypothetical societies, A and B, with equal levels of economic development -that is with equal average absolute incomes of $30,000, but different levels of inequality. In society A the top decile earns on average $40,000 a month and the lowest decile earns $20,000 so that the ratio between the top and bottom deciles is 2 to 1, whereas in society the highest decile earns $100,000 compared to the lowest deciles $20,000 yielding a ratio of 5 to 1. Again returning to the example of campaign donations, if in each society individuals in both the top and bottom deciles each donated 10% of their income to a political campaign, the difference in the political clout wielded by individuals in the lowest deciles relative to the that of individuals in the top income decile is readily apparent: in society A the individuals in the lowest quintile donate $2,000 yielding a ratio of 1 to 2 compared to the $4,000 donated by individuals in the top

decile, while in society B individuals in the lowest decile also give 10%, that is $2,000, but this sum constitutes only one fifth of the $10,000 donated by individuals in the top decile. Therefore logically, if an individual in the lowest decile considers his chances of being able to help his favored political party win elections by giving campaign donations relative to the richest individuals in his society, the poorest individuals in society A will perceive themselves to have much greater relative power than their counter parts in society B. These relative power considerations are distinct from the question of absolute resources: the $2,000 in both society A and B may be able to buy the same number of flyers and computers for political campaigns, however in relative power terms, the party favored by the poor in society A has a much greater chance of winning than in society B. Therefore the individuals in the lowest income quintile in society A will have much higher levels of political efficacy than their counterpart in society B. To sum up, absolute income is a direct resource for political participation that has relevance in terms of buying power, whereas relative income describes relative power - that is the value of resources possessed by one individual compared to those of another which determine probability that either can win a political struggle.

The distinction between absolute and relative incomes and their respective functions as resources and incentives for participation will underlie the discussion through this thesis. The distinction between income's role as a resource and as an incentive is crucial to understanding the mechanisms that link overall income inequality and individual-level political participation –income in its relative and absolute sense works through two distinct causal pathways: as a resource in the absolute sense by providing the direct means for participation and as an incentive in relative sense by shaping political engagement.

INCOME INEQUALITY: DEFINITION AND MEASURES.

Having distinguished between relative and absolute income, a definition of inequality is in order. Defining inequality is far from straightforward. As Bermeo (2009) notes, inequality implies a certain difference between groups or individuals. Inequality is always relative – meaning a certain reference point is necessary. When someone is described as poor, in relative terms, this means this individual has fewer resources than a second individual who is used as the reference point –thus inequality is not an inherent or absolute quality of a person such as age, gender, or literacy.

Secondly inequality can relate to a myriad of characteristics –income, wealth, education levels, literacy, physical strength, intelligence, political rights, social connectedness, and status just to name a few. Bermeo (2009) suggests an overall definition of inequality as "the condition of being unequal as regards the command of any resources deemed valuable for a human well-being." Since inequality can relate to so many dimensions with different determinants, inequalities in these different spheres need not necessarily be correlated. For example inequality in wealth and income are not necessarily correlated –Sweden, which is considered an egalitarian country, has low income inequality but high inequality in wealth (Domeija and Klein 2002). Thus considering 'inequality' or even 'economic inequality' as a causal variable rather than disaggregating the concept into inequalities in specific characteristics may preclude the clarification of specific causal mechanisms linking some form of inequality to individual political behaviors.

In the interest of precision and being able to establish some plausible causal links, this thesis will focus exclusively and explicitly on income inequality. Though inequalities in wealth and other spheres may also influence political participation, I hope that by just

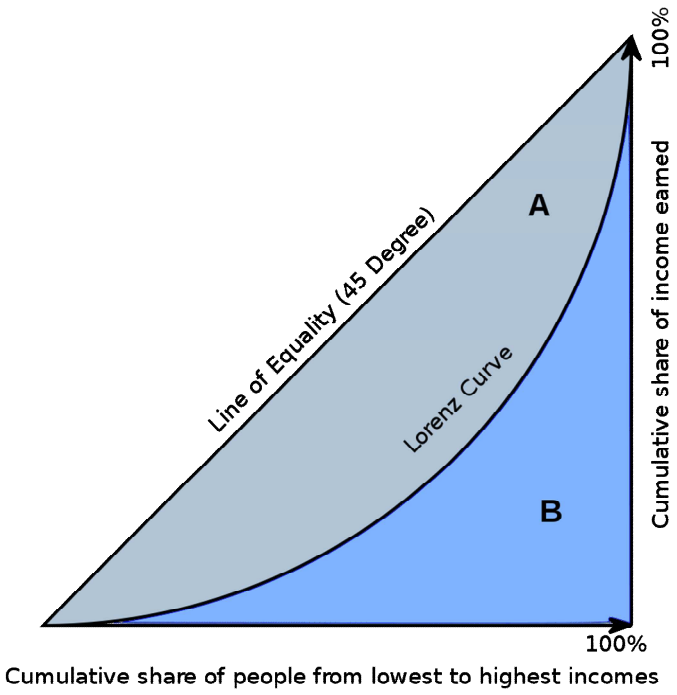
focusing on inequality in one dimension my energies will be more efficiently spent on an exhaustive examination of causal paths. Furthermore a focus on income inequality is strategic, particularly when studying post-Communist countries, since data on income inequality is most readily available. Data on inequality in wealth for example is practically nonexistent for most Eastern European countries and especially for the former Soviet Union (Heyns 2005).

Despite the frequency with which measures of income inequality are used in quantitative political science studies, the measurement of inequality is far from straightforward. Not only are there different measures of income inequality –ratios, gini coefficients, variation around a measure of central tendencies, each having different underlying assumptions about social welfare (Atkinson 1970)- but also the measures can differ in their definitions of income, reference units, and scope of a country's population covered. While the different measures have various advantages and drawbacks, in this thesis I will use the most commonly known measure of income inequality –the gini coefficient- since it is the most readily available for post-Communist countries allowing greater scope across time and space.

The Gini index measures the extent to which the distribution of income among individuals or households within a country deviates from a perfectly normal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, moving up the ranking of individuals or households by income starting with poorest. The Gini coefficient measures the area between the Lorenz curve and a hypothetical straight line of absolute income equality (45 degree line) expressed as the percentage of the maximum area under the line. A value of 0 represents perfect equality, a value of 100 perfect inequality (World Development Indicators 2008: 70). The eleven

post-Communist countries examined in this thesis show a high degree of variation in Gini coefficients over the period studied (since the collapse of Communism until 2007) ranging from 23 to 41.

Figure 1.1: Graphic Representation of the Gini Coefficient



Atkinson and Brandolini (2001) warn about dangers of using secondary datasets that mix measures of inequality that use different definitions of the underlying components. Unfortunately comparable measures of income inequality yield few observations and most secondary datasets particularly those with Gini coefficients mix measures of inequality based on different components. To overcome most of the problems identified by Atkinson and Brandolini, I will use the SWIID (Standardized World Income Inequality Dataset) created Frederick Solt. I will discuss this further in Chapter 3.

RELATIVE INCOME: COMPETING LOGICS OF POLITICAL ACTION.

The existing literature on income inequality and political participation (Solt 2008: Anderson and Beramendi 2006), identify three theories that describe the relationship between income inequality and political participation : the relative power theory, redistributive conflict theories, and finally the resource theories. With the exception of the relative power theory, these "theories" have not been explicitly formulated by pre-existing literature in relation to the question about the relationship between income inequality and political participation. Rather the authors of the two previously mentioned articles classified various bodies of literature on political participation and democratization into these three groups that could be said to reflect three underlying theories. The fact that these 'theories' were never explicitly formulated in reference to income inequality and political participation means that deriving testable hypotheses based on these' theories,' which are really generalizations about bodies of literature, is a challenging endeavor prone to oversimplification and consequent error. However, given the absence of more clearly formulated theories, one is forced to follow the path set out by Solt and Anderson and Beramendi. Through a detailed review of the literature behind these 'theories' I hope to specify as clearly possible what hypotheses can be attributed directly to the literature and which hypotheses are based on certain inferences.

The relative power and redistributive conflict theories make opposite predictions about the effects of inequality on political participation at the aggregate level. The relative power theory predicts a negative relationship between individual forms of political participation such as voting (as I will later note relative power theory distinguishes between the effects of inequality on individual and collective forms of political participation). Less well off citizens refrain from participating in politics because, having fewer resources, they have a smaller chance of influencing political outcomes. The 'redistributive conflict theories' on

the other hand argue that economic[1] inequality has an overall positive effect on political participation. As income inequality grows, the interests of the rich and poor diverge, thus increasing conflict and incentives for both groups to participate. Though Solt (2008) and Anderson and Beramendi (2008) also introduce 'resource theories' of political participation (Solt 2008: 49; Anderson and Beramendi 2006: 303), I will present them following the discussion of the first two theories, since I will show that the resource theories are not actually directly relevant to the research question in the way the two sets of authors suggest.

Though Solt (2008) cites several instances where the logic of relative power is apparent particularly from literature on political power (Schattschneider 1960; Bachrach and Baratz 1962; Lukes 2005), the idea of relative power as it pertains to political participation is most explicitly laid out by Goodin and Dryzek (1980). Goodin and Dryzek argue that the unequal distribution of economic resources and other resources relevant to political participation beget an unequal distribution of power: the wealthy, who are richer relative to other individuals, will also become more politically powerful relative to those poorer individuals. Goodin and Dryzek's relative power model is a reaction against the social psychological model of political participation proposed by Verba and Nie (1972) according to which people who are more rewarded by the system are psychologically disposed to feel better about themselves and about the general system that rewarded them (Goodin and Dryzek 1980: 275). Goodin and Dryzek criticize the model for emphasizing absolute rather than relative income, and they argue that the absolute amount of resources does not matter as much as the relative influence of different actors. The authors compare the political arena to an auction where actors bid for a fixed number of scarce goods ,policy outputs, and which ever player can bring to bear the most resources wins. Goodin

[1] Acemoglu and Robinson really refer to economic inequality rather than specifically income inequality.

and Dryzek conclude that "in political markets just as in economic ones, relative resources decide the outcome […] those with relatively few political resources and little hope of outbidding likely opponents should, if they are rational, save their resources for another time or another market in which they might bring better returns" (278). The authors describe a model in which political participation is determined by two independent variables: the probability of winning as determined by an individual's relative power and the utility, or pay off, from winning a political struggle. Relative power is operationalized as relative income: a person's income divided by the median income. While Goodin and Dryzek make the important contribution of shifting the emphasis from consideration of absolute socio-economic status to the relative position of persons, the relative power model's parsimony limits its ability establish the causal mechanisms between relative position in terms of various resources and the different forms of participation. I will discuss this problem further on.

Several empirical studies, in addition to Goodin and Dryzek's own analysis of 38 countries, show a negative impact of inequality on turnout both at the aggregate and the individual level. Boix (2003) shows that overall inequality in the United States in the 19th and early twentieth century was correlated with turnout levels –when inequality increased either because of unequal wage growth or demographic changes spurred by immigration, political elites strengthened franchise restrictions (Boix 2003: 118-129).[2] Another aggregate level study, by Solt (2004), shows that participation across Italy's regions is positively correlated with equality in landownership. La Ferrara's (2002) study of group participation in rural Tanzania finds some negative effects of inequality on participation though the effects are conditional on whether the groups in question provide open and

[22] Boix suggests a different mechanism by which inequality depresses turnout than Goodin and Dryzek. Boix's mechanism shows how elites restrict franchise in reaction to high inequality, whereas Goodin and Dryzek suggest that lower income voters opt themselves out of politics.

restricted access. By far the most comprehensive studies on the effect of income inequality on political participation to date are Solt (2008) and Anderson and Beramendi (2008). Both studies find the overall effect of income inequality to be negative for all income groups, both below and above the median income. Though the negative effects of inequality found by these studies do not contradict the relative power theory, neither do they prove the validity of the mechanisms proposed by Goodin and Dryzek, since overall declines in participation do not necessarily indicate that lower income groups have opted out at a higher rate. Only Solt (2008) explicitly tests the mechanisms suggested by the relative power theory finding that income inequality had a more negative effect on lower income groups, in line with the relative power theory. Thus the empirical literature shows some evidence for the validity of the relative power theory.

Contrary to the relative power theory, redistributive conflict theories suggest that income inequality may have a mobilizing effect on political participation (Meltzer and Richards 1983; Acemoglu and Robinson 2004, 2006). I call these theories 'redistributive' conflict theories, since they suggest that as income inequality grows, the interests of the poor and rich diverge, and the poor favor greater redistribution whether by taxation, nationalization of assets, or other means, while the wealthy want to protect their income and assets. The Meltzer-Richards median voter theorem (Meltzer and Richards 1983) provides the foundation for the idea of the redistributive conflict. According to the median voter the size of the government (the amount of redistribution) depends on the relation of the mean income to the income of the decisive voter. With universal suffrage the median voter (in terms of income) is the decisive voter. The distribution of income is generally skewed to the right so that the mean income lies above the median income. Universal suffrage concentrates votes below the mean, leading to greater redistribution. In the Richard and

Meltzer model, policy outcomes are simply the product of the majority since every vote has equal value. Acemoglu and Robinson (2004; 2006) extend the implications of Richard-Meltzer model to create an 'economic theory' of democratization, by characterizing democracy as the outcome of a conflict between the elites and the masses over redistribution. While Acemoglu and Robinson describe the process of how democracies arose and reasons for the expansion of franchise which is of little relevance to post-Communist new democracies, the fundamental idea of a conflict between the interests of the rich and the poor is applicable in so far as it explains how inequality can serve as an incentive for political participation.

While neither Meltzer and Richards nor Acemoglu and Robinson explicitly address the implications of income inequality for political participation (apart from expansion or restriction of franchise in the case of Acemoglu and Robinson), one can infer that if inequality increases the conflict between the rich and poor will also increase and this in turn will provide increased incentives for both the rich and the poor to participate so as to defend their conflicting interests. However both sets of authors assume that the poor do not experience any barriers to collective action or individual political participation once universal suffrage has been instituted. In other words both assume that universal franchise means that the preferences of all voters will be expressed, however taking into consideration the argument of the relative power theory one could well imagine that the actual median voter is not the same as the median eligible voter.

Though the redistributive conflict theories are logically compelling, no empirical studies have conclusively demonstrated that inequality indeed serves as an incentive for individual forms of political participation . At most the macro-level studies on effects of economic

conditions on political participation and political stability suggest some evidence that adverse economic conditions (which include income inequality among others such as inflation) inspire political mobilization, however the conclusions are far from unanimous with empirical findings pointing in various contradictory directions. The aggregate level study by Muller (1988) shows a correlation between income inequality and the survival of democracy, suggesting that income inequality is associated with intense political conflicts that can even cause the collapse of a democratic government. The literature on economic conditions and turnout does suggest that in some contexts adverse economic conditions can increase turnout. Radcliff (1992) suggests that in developing countries with weak welfare systems, adverse economic conditions may increase turnout since the potential human costs of poor economic conditions are greater (446), whereas in countries with strong welfare systems the economy may have less of an impact on whether people vote. The literature on the effect of economic reforms in new democracies also shows that the relationship between economic hardship and popular protest and opposition is far from clear (Weyland 2004; Stokes 2001). Both authors find that under certain conditions the public may be willing to support drastic economic reforms and economic hardship with the hope that the reforms will bring prosperity later on. Therefore the literature on economic conditions and democracy shows that depending on various contextual variables, adverse economic conditions can have both mobilizing and depressing effects on political participation thus providing no clear empirical support for the redistributive conflict theories.

The two studies (Oliver 1999; Brady 2004) mentioned by Solt (2008) that supposedly show evidence at the individual level for mobilizing impact on inequality are also far from conclusive. Oliver (1999) finds that in American cities, which are more economically

heterogeneous, political participation is higher since the competition for public goods is fiercer.[3] However the implications of Oliver's (1999) findings may not be generalizable beyond the level of local politics and beyond the United States. Brady (2004) provides even less conclusive evidence. At the end of his article, Brady (2004) concludes "An increase in inequality not only reduces the incomes of lower-class families but also changes that group's political circumstances. As a result, increases in income inequality can provide motivations for political participation" (Brady 2004: 697). However Brady is unable to provide any clear evidence that would support his conclusion. Finding no clear correlation between ratios in the turnout and income of the highest and lowest income quintiles, Brady suggests that the mobilizing and demobilizing effects of inequality might cancel each other out (Brady 2004: 691). Thus overall empirical evidence for the mobilizing effects of income inequality suggested by redistributive conflict theories is rather slim, but given their compelling logic they must be given due consideration.

Before considering what effect income inequality has on political participation based on these very general theories just mentioned, the effect of income itself must be examined more closely. In asking what effect overall income inequality has on individual level political behaviour, one must establish through which individual-level mechanism income inequality 'works." Logically the effects of income inequality on an individual should be conditional on the individual's income –suggesting an interaction between income inequality and individual level income. If the effects of income inequality work through income, then the effects of income on political participation must be considered.

[3] Points to importance of political implications of economic segregation in urban areas on political engagement. Post-Communist countries particularly those of the former Soviet Union economic segregation is still quite low in major urban areas compared to the United States.

I will first review the efforts made by the two main studies on inequality and political participation (Anderson and Beramendi 2008) to link macro-level context of inequality to income and how the studies consider the relevance of income for political participation (specifically voting). By returning to the extensive literature on political participation particularly the 'resource' model of political participation (Verba, Brady and Schlozman 1995), I will suggest that while income is not a direct resource for most common forms of political participation (particularly voting), income inequality and relative income are still relevant, since both have an effect on participation by shaping political engagement. In the conclusion I will present a path analysis model that shows how relative income shapes political engagement (defined as political efficacy, interest in politics and discussing politics), and thus has an indirect impact on political participation (voting). The idea of a path model according to which socio-economic status shapes political engagement or 'civic orientations' thus indirectly influencing political participation is hardly new as it constitutes the core of Verba and Nie's social psychological model in *Participation in America (1972).*

Both the 'redistributive conflict theories' and relative power theory explain aggregate level effects of inequality through individual level dynamics (desire for redistribution or the feeling of powerlessness relative to the rich), however the two main studies on inequality and political participation (Anderson and Beramendi 2008; Solt 2008) pay relatively little attention to the mechanisms that connect the macro-level context to individual level behaviour thus coming to rather questionable conclusions. Quoting Anderson and Beramendi:

> At the same time we argue that is critical to differentiate that the impact of income as a resource versus the role that income plays as an incentive to get involved.

> Specifically we argue that the mechanism by which inequality affects participation differs between high- and low- income individuals: while inequality at the lower end reduces participation among low income individuals because it deprives them of resources, higher inequalities at the upper end reduce participation by creating disincentives for the very rich people to get involved (2008:303).

Anderson and Beramendi's conclusion is problematic as the authors measure participation using voting abstention when income is not a direct resource for voting. While the positive relationship between socio-economic status (education, income, and occupation) and political participation appears "with monotonous regularity" (Nagel 1987: 59), unpacking the various components of SES and differentiating between the voting and other more difficult political tasks shows that the relationship between SES components and various forms of participation is far from clear. Wolfinger and Rosenstone (1980) unpack SES into its constituent parts and find that education rather than occupation or income has the strongest consequences for voting. The irrelevance of income for voting makes sense in so far as voting does not incur monetary costs. Income also does not convert into civic skills and time which are the two resources that are most relevant for voting from among the three considered in the resource model (civic skills, time and income). Verba et al. (1995a) find an inverse relationship between time and income (275), thus income does not buy more leisure time, and in fact higher wages raise the opportunity costs of time. In testing a full resource model, Verba et al. show that free time and civic skills are both important resources for voting, but by far political interest is the most important determinant of turnout (1995a: 284). The authors find income to entirely lack statistical significance for voting. Returning to consider Anderson and Beramendi's conclusions, one finds their argument that vote abstention among those with below median incomes is driven by a lack

of resources is inaccurate given the findings of the literature on resource models of participation.

The fact that Anderson and Beramendi find relative income to be statistically significant for voting, unlike the resource models, implies that they have omitted some key variables that measure 'civic orientations,' such as interest in politics, which are shaped by an individual's relative income position. In other words if relative income (distance from the median) is statistically significant, relative income must be a proxy for certain attitudes towards political participation. In conclusion, relative income affects voting participation by shaping incentives for individuals both above and below the median income.

Unlike Anderson and Beramendi, Solt (2008) asks whether income inequality affects political engagement rather than participation, however he still uses voting as one of the measures of political engagement, again making the questionable assumption that income somehow has a direct effect on voting. When setting out his hypotheses Solt claims, "According to the resource theory, then, inequality should affect political engagement because for any given average income, higher levels of inequality mean fewer resources with which to pay the costs of engagement for a country's poorer citizens and more such resources for its richer citizens" (5). Though he does not explicitly examine the relationship between income and voting by treating political engagement as his dependent variable, Solt still in effect implies that income has relevance as a measure for voting. In his conclusions he suggests that income inequality has an effect on voting even though the interaction term between income inequality and relative income as well as the coefficient for relative income itself are both not statistically significant. Thus both Solt (2008) and Anderson and Beramendi (2008) make the false assumption that income may somehow

serve as a resource for voting participation. Their mistake results from a failure to carefully consider the literature on political participation which clearly shows that income is not a direct resource for voting participation.

INTEGRATING MODELS OF POLITICAL PARTICIPATION WITH THEORIES ON INEQUALITY AND PARTICIPATION.

Thus far I have focused on discussing the existing literature on the income inequality and political participation and the theories on income inequality and participation considered by this literature. I have discussed the various contradictions inherent to this literature which result from its failure to clearly specify the mechanisms that link income inequality and relative income to political participation, specifically voting. I have already discussed in the past section how contrary to the reviewed literature (Solt 2008; Anderson and Beramendi 2008), income is not a direct resource for voting, which raises the question: *if income has no direct effect as a resource on voting, are therefore (relative)income and income inequality irrelevant for voting?*

In this section, I will argue that in fact relative income and thus income inequality have an effect on voting, though an indirect one. Through a consideration of the most robust models of political participation including Verba and Nie's social psychological model (Verba and Nie 1972), the resource model (Verba et al. 1995a) and the Civic Voluntarism model (Verba et al. 1995b), I will show how relative income shapes the 'civic orientations' which in turn are the most important determinants of turnout even when compared to politically relevant resources. I will conclude by presenting a path analysis model that describes the entire chain of mechanisms that link income inequality to the individual-level act of voting. The path analysis model will be a synthesis of the various models of political participation and the relative power and conflict theories.

Before moving on, I would like to clarify that in this thesis I will only consider the effects of income inequality and relative income on one form of political participation : voting – the reason being that the mechanisms behind each form of political participation are different. Each type of political act –voting, contacting politicians, campaign work, making political contributions, protesting just to mention the main ones –are each associated with a different combination of resources and 'civic orientations ' (Verba et al 1995b: 363). Given these complexities, generalizations about the determinants of overall participation are likely to be erroneous. In fact Goodin and Drysek suggest inequality is likely to depress individual forms of political participation, but stimulate collective forms as the relatively poor pool their resources to overcome those of the rich (Goodin and Dryzek 1980: 286). To conclude rather than ask how income inequality and relative income affect political participation in general, a more prudent approach is to consider the effects of these variables on a particular form of political participation via particular types of 'civic orientations.' Voting is logical starting point for the general research project of investigating the effects of income inequality on political participation as voting is the most prevalent for of political participation (Verba et al. 1995b: 51) and arguably it is the single most effective, though crude, means individuals have of communicating their preferences and controlling the government (Verba and Nie 1972: 113).

The Civic Voluntarism Model developed by Verba, Brady, and Schlozman, is the culmination of several decades of the authors' work on political participation, and it thus synthesizes all the prior models into one grand model. In the sixties and seventies, Verba and Nie sought to move beyond the standard SES models of participation, which did little more than predict participation, towards explaining the mechanisms linking socioeconomic

status and participation. The authors' first models focused on how socio-economic status shaped psychological engagement in politics answering the question whether people 'want' to participate. While measures of psychological engagement in politics are extremely strong predictors of participation, they work less well as explanations, since psychological engagement in politics is inextricably linked to the activity itself. While psychological engagement in politics facilitates participation, participation in turn enhances a sense of efficacy and interest. To address the 'endogeneity' problem, Verba and his co-authors moved from examining the question of why people 'want' to participation in politics towards whether they 'can,' thus refocusing the research from psychological engagement to the resources necessary for participation such as time, money, and civic skills . In the final model, the Civic Voluntarism Model, presented in *Voice and Equality*, the authors reintegrate the resource model with the earlier social psychological model accounting for not only how resources determine the capacity to participate but also people's psychological desire to do so. While the resource explanation is some ways superior to the psychological explanation by overcoming the endogeneity problem, in the end an exclusively resource-based explanation of political participation is incomplete without consideration of political engagement. Political participation is after all a voluntary activity, and therefore while individuals may have resources to participate, they are still free to decide whether or not to deploy them in a given situation. The fundamentally voluntary nature of political participation ties back in with the logic of the Goodin and Dryzek's relative power theory according to which consideration of relative power differentials and the probability of winning a political struggle determine whether people deploy their resources in a given political struggle.

According to the Civic Voluntarism model the factors that have the greatest impact on voting in order of strength are: political interest, partisan strength, citizenship, and political information, whereas income has a very weak effect. These results show that political engagement is a much stronger determinant of voting than resources.

The next question is: given the *determinants of voting established by the Civic Voluntarism Model, through which of these factors does relative income operate?* Of course depending of the model specification, income may show some direct effect that has not been accounted for through control variables. As income does not matter directly for voting, relative income must have an effect on voting through political engagement. So which particular 'civic orientation' or political attitudes are most likely to be linked to relative income? To answer this question, it is useful to return to the logic set out by Goodin and Dryzek of how considerations of relative power affect a person's assessment of whether it is worth participate. Considerations of relative power differentials determine an individual's sense of being able to win a political struggle. The greater the differentials perceived by poorer individuals between their own incomes and those of wealthier, the more likely they are to think that their chances of winning the political struggle and influencing policy outcome are small –thus their sense of efficacy is dependent on relative power considerations. Political efficacy has two forms internal and external –internal which 'refers to an individual's confidence in his own abilities regardless of political circumstances,' and external efficacy which 'is the respondent's perceived probability of success at influencing public officials, or, alternatively, the political responsiveness of officials" (Pollock 1983: 402) As relative power considerations relate to the probability of winning a political struggle based on a comparison of an individual's resources to those of the other players, relative power considerations should most closely relate to external

efficacy. Secondly, if poorer individuals' considerations of relative power indicate that the chances of winning a political struggle are small, then they will be less invested in influencing political outcomes and thus less interested in politics. Thus out of the various forms of political engagement, efficacy and interest in politics are the two most likely to be effected by relative income.

The other theory describing the effects of inequality on political participation is the redistributive conflict theory. The main contribution of the theory to understanding the impact of inequality is the suggestion that higher income inequality increases heterogeneity of preferences between the rich and the poor. Arguably increasing levels of conflict should fuel interest in politics. Unlike the relative power theory, the redistributive conflict theories suggest that the effects of inequality will be equal across all income groups mobilizing both the poor and the rich to defend their respective preferences, since they assume that all individuals both below and above the median income have equal capacities to participate in politics. One of the assumptions of the median voter theorem as applied in the redistributive conflict theories is that all potential voters vote. As the redistributive conflict models assume the all income groups have equal capacities for undertaking political action, they must by extension have equal feelings of political efficacy, so income inequality will have a neutral relationship with political efficacy. In conclusion, the redistributive conflict theories would suggest that income inequality will affect political interest of all income groups in the same direction and in equal measure.

Having established the various forms of political engagement which are most likely to be shaped by relative power considerations and redistributive conflict , I will now summarize the arguments by presenting a path model that integrate the Civic Voluntarism Model, the social psychological model and the theories on inequality and participation. I will first

present the Civic Voluntarism model as it pertains to voting, and then a reworked model that pertains shows the linkages between income inequality, relative income and voting.

Figure 1.2: Civic Voluntarism Model Applied to Voting (Only Factors significant at .05 level

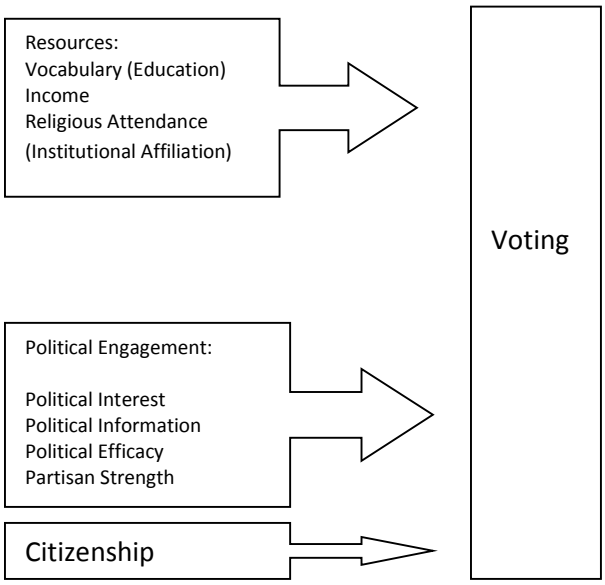


Figure 1.2 shows the Civic Voluntarism Model as it applies to the political act of voting. Only the factors that are significant at the .05 level are shown.

Figure 1.3: Civic Voluntarism Model Applied to Question About Effects of Inequality on

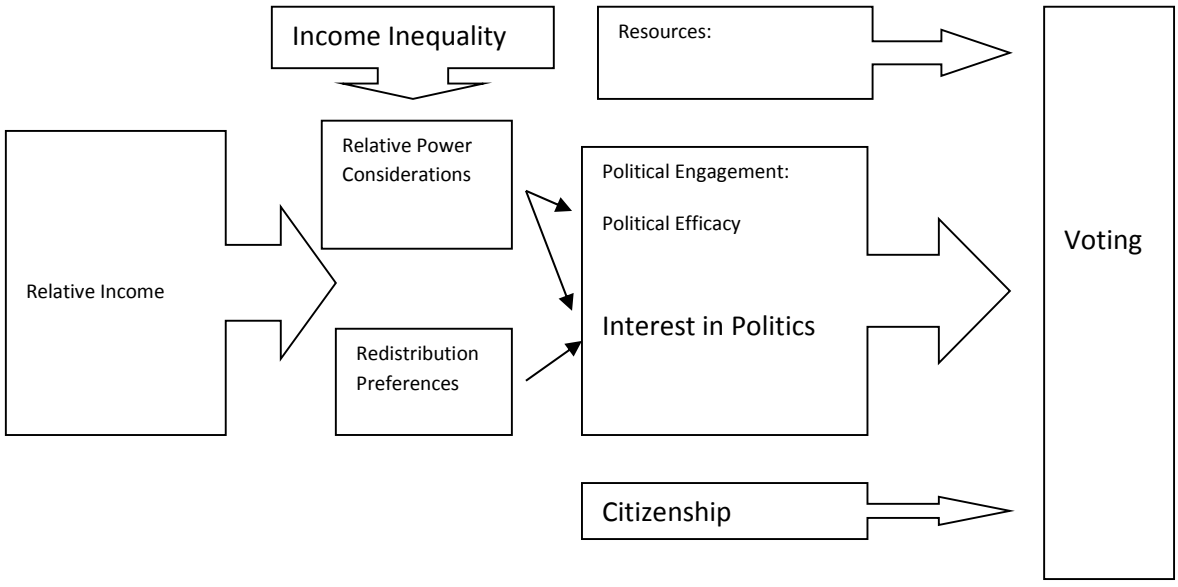


Figure 1.3 shows the model as it pertains to inequality and relative income. According to the integrated model, relative income shapes two forms of political engagement: interest in politics and external political efficacy. Income inequality is shown as a variable mediating the relationship between relative income and political engagement which will be tested in the multi-level model using a cross-level interaction term in the multi-level mode in Chapter 3. As the model shows, income inequality has an indirect effect on voting through political engagement, rather than by determining the levels of resources relevant for voting.

Of course relative income is not the only factor shaping political engagement. Verba and Nie's model suggests that political engagement is shaped by socio-economic status overall thus implying that the components of socio-economic status other than income also have a role in shaping political engagement. A full model that tests the effect of relative income on forms of political engagement must therefore control for the effects of other socio-economic factors.

ADAPTING MODELS OF PARTICIPATION TO THE POST-COMMUNIST CONTEXT.

The models of political participation considered thus far have been developed based predominantly on the American experience, so before applying these models in the post-Communist context, any unique features of participation in post-Communist countries must be taken into account. Comparing determinants of political participation between the American and post-Communist contexts is somewhat complicated by paucity of individual-level analyses of political participation in the post communist context (see Tucker 2002 for a review of the existing literature on voting in post-Communist countries). A generous amount of literature exists on voting in post-Communist countries, however

the vast majority of the studies focus on aggregate level turnout and just examine macro-level institutional and economic factors. Therefore these studies are of little use in studying participation the individual level. A few individual-level studies on participation in single countries exist particularly Timothy Colton's in depth study of Russian voters, *Transitional Citizens* (2000), as well as smaller studies of voting in Eastern European countries,but no studies give a solid and wide comparative analysis of post-Communist countries. The other useful source is the literature on class voting (see Evans and Whitefield) and social cleavages (see various publications by Evans and Whitefield) in post-Communist countries. Both give some idea of the cross-country differences in voting patterns. I will discuss the adaptation of the models in to post-Communist context in the empirical chapters.

THE HYPOTHESES.

In this final section of the chapter, I will lay out the hypotheses that will be tested in this thesis. The hypotheses will form three overall groups: the first describe individual level determinants of voting participation and political engagement across the post-Communist countries, the second describe the effects of income inequality at the aggregate level, and finally the third set will integrate the initial findings describing the interaction between income inequality and relative income. The overall goal of the hypotheses will be to test the explanatory strength of the relative power and redistributive conflict theories as well as the integrated model of political participation developed in this chapter.

Effects of Relative Income on Political Engagement and Voting Participation

As I have argued in this chapter, before considering the effects of income inequality, it is necessary to first consider the effects of relative income on political engagement and voting. Also before addressing how the relative power and redistributive conflict theories suggest relative income should affect the two sets of dependent variables, one must consider how the relationship between political engagement and voting should be reflected in the results of the regression analysis. As the models of political participation illustrate, political engagement is the strongest determinant of voting participation, and relative income indirectly affects voting via political engagement. Therefore we would expect to find that if voting is regressed on relative income along with controlling for other socio-economic and demographic factors and relative income is found to be statistically significant, it is so because relative income is serving as a proxy for political engagement. The coefficient and statistical significance of relative income should diminish with the addition of political engagement variables to the model predicting voting participation.

Hypothesis 1: The effects[4] of relative income on voting participation should disappear with the addition of controls for forms of political engagement (political efficacy and interest in politics).

The next question to be addressed is what kind of effect relative should have on political engagement and voting (via political engagement). As to the existing literature suggests (Solt 2008; Anderson and Beramendi 2008), relative income can serve as both an incentive and disincentive for voting participation. To address this question, I will carefully examine how the relative power and redistributive conflict theories suggest that relative income should determine whether an individual chooses to vote.

[4] Coefficient size and statistical significance. I have tested this effect yet. Also unfortunately the measures for interest in politics and political efficacy are not in the same survey so I cannot control for both in one model.

The relative power theory suggests a positive relationship between relative income and political engagement and by extension voting participation and that the effect of relative income increases 'monotonically.'[5] Goodin and Dryzek argue that "were politically relevant resources are concentrated instead in the hand of the few, it might be rational for the powerful few to participate (knowing they can win) but it would be daft for the powerless masses (who can only lose) to try challenging them." (286). The relative power model emphasizes the probability of winning a political struggle as the primary determinant of participation. Therefore in a hypothetical scenario, a rational individual would determine the odds of winning by comparing his own resources relative to those of the other players engaged in the political struggle. Though relative income is measured as an individual's income divided by the median family income (thus relative to the median), relative income still functions as a monotonically increasing linear variable – the higher the value of an individual's relative income the greater the chance the individual will decide to vote. The positive and monotonically increasing relationship between relative income and voting participation should hold true for individuals both below and above the median income. The logic justifying the positive effect of relative income is the following: in each hypothetical political struggle, each player will assess his resources relative to those of other players, and will determine his own odds of winning based on this assessment. The higher an individual's income relative to the other players involved the more like is this individual to win a political struggle, and the higher an individual's income relative to *all possible* players, that is to all players in his society, the more likely the individual is to prevail in a particular political conflict with any given combination of players out of the overall set of possible players in the entire society. In conclusion, the

[5] A function is called monotonic (also monotonically increasing, increasing or non-decreasing), if for all x and y such that $x \leq y$ one has $f(x) \leq f(y)$, so f preserves the order.

higher an individual's income relative to all the individuals in the society, the more likely he is to chose to participate in politics.

Hypothesis 2a: If the relative power theory holds true, relative income should have a positive and monotonically increasing effect on political engagement (external political efficacy and interest in politics) and, by extension, on voting participation.

The redistributive conflict theory, on the other hand, suggests that relative income should serve as an incentive for participation for individuals with incomes above and below the mean with equal effect –thus a comparison of the odds of voting participation of individuals below and above the mean should show them to be equally likely to participate.[6] According the Meltzer-Richards median voter theorem and Acemoglu and Robinson's adaptation of this model (adaptations assuming two players: the poor and the rich), individuals below the mean income would always benefit from redistribution, whereas individuals above the mean would either not gain anything or lose as their relative income is progressively higher. The models assume that rich and poor agents receive the same transfer but pay taxes proportional to their income, thus richer agents share a heavier burden, meaning their costs are higher than their net gains. To conclude any person with an income above the average would favour no redistribution at all, and an individual below the average would favour a positive tax rate (for the full formal argument leading to this conclusion see Acemoglu and Robinson 2006: 102). Thus the opinions regarding redistribution of individuals below and above the mean are symmetrically opposed –if

[6] In purely theoretical sense, the redistributive conflict theories might suggest a "U" shaped pattern of political engagement according to relative income –that is the individuals on the two furthest ends of the income distribution are the ones that would be most for or against redistribution and there most invested in the outcome of the political conflict. However my income data is probably too granular' to show this effect.

opposition to redistribution increases among the rich it must be mirrored by an equal increase in support for redistribution among the poor. In terms of political engagement, individuals below (the poor) and above (the rich) the mean income should show equal engagement in politics and an equal propensity to vote –so relative income should have no effect on political engagement.

> **Hypotheses 2b: If the conflict theory holds true, levels of political engagement should be equal for all individuals below and above the mean income, in other words a comparison of the relative levels of political engagement (and odds of voting) across income quartiles (both above and below the mean income) should show no difference.[7]**

Effects of Income Inequality on Overall Political Engagement and Turnout

Having discussed how an individual's relative income affects levels of political engagement and thus the odds of choosing to vote, I will now discuss how inequality affects aggregate turnout. Again the relative power and redistributive conflict theories suggest opposite effects of income inequality.

As discussed before, the relative power theory suggests that individual's make their decisions about whether or not they are able to prevail in a political struggle based on relative power differentials. Therefore the higher income inequality is, the greater the negative differentials for poor individuals, discouraging them from participating. In

[7] I have been using income quartiles, but from a theoretical point of view this hypothesis would suggest distance from the mean income as more elegant measure of relative income. For testing the relative power theory, income quartile make more sense.

Goodin and Dryzek's (1983) words: " Under conditions of approximate social equality, people should participate more in politics" (286) and:

> This [rational choice] model portrays people as reacting to their relative standing in the community power structure; and it predicts that, on aggregate, people will participate more in communities of approximate equals because in such communities power differentials will be less dramatic and more people will have a better chance of influencing the outcome. This suggests a strong negative correlation, at the aggregate level of the communities as a whole, between inequality and individualistic [voting and contacting] official participation (287).

Hypothesis 3a: If the relative power theory holds true, income inequality should have a negative effect on political engagement and therefore voting participation at the aggregate level.

The redistributive conflict theories predict the exact opposite effect of income inequality on political engagement and voting participation at the aggregate level. As income inequality increases, the median voter's income falls below the average income, therefore the median or decisive voter is increasing likely to support redistribution, whereas the rich will oppose it.

Hypothesis: 3b: If the redistributive conflict theory holds true, income inequality should have positive effect on aggregate levels of interest in politics and therefore on aggregate levels of turnout.

Effects of Inequality on the Stratification by Relative Income of Political Engagement and turnout: Marginal Effects of Income Inequality on Income Quartiles

To fully test the theories on income inequality and political participation, particularly the relative power theory, one needs to consider how the relationship between relative income and political engagement (and voting) is affected by income inequality. In the case of the relative power theory, individuals' political engagement and consequent decisions whether to participate or not are determined by considerations of relative income differentials – the greater the relative income differentials the less likely are poor individuals to participate. The size of these differentials is dependent on income inequality, so in effect individuals' relative power considerations are conditional onl income inequality. We would expect that as income inequality increases, political engagement will become more stratified by relative income –other words the differences in levels of political engagement between the richest and the poorest should be greater in more unequal societies. Testing the changes in political engagement driven by income inequality requires an interaction term between relative income and income inequality. Solt (2008) uses such an interaction term so I will follow his example.

If as the relative power theory suggests, rising income inequality should cause the gap between levels of political engagement of the poor and the rich to increase, then this increase in stratification should be expressed by marginal effects of income inequality on relative income. The relative power theory is clear in stating that income inequality should have a negative effect individuals who relatively poorer (see page 12 for discussion about increasing income differentials), however the relative power theory is not as clear on the marginal effects of income inequality on the richest individuals. Solt (2008) looks to other sources to explain how inequality should affect the rich in keeping with the relative power

theory. Solt attributes to Schattschneider the idea that the richer citizens need to participate less as the need to defend their interests from the poor decline and issues relevant to the poor disappear form the public sphere. Solt points out that, based on Schattschneider's analysis, participation among the wealthier individuals is still sustained by disagreements among themselves. Schattsschneider writes that "Absention reflects the suppression of the options and alternatives that reflect the needs of the non-partisans. It is not necessarily true that the people with the greatest needs participate in politics more actively "(1960:105). Based on Solt's interpretation inequality will have a negative marginal effect on the richest individuals as well, but it will be much weaker than the marginal effect on the poor.

> **Hypothesis 4a: If the relative income theory holds true, the coefficient for income inequality should be negative and interaction term between income inequality and relative income should be positive. In other words the marginal effect of income inequality should be increasingly negative the lower the income quartile.**

With regards to predictions based on the redistributive conflict theory, Solt (2008) suggests that the conflict theory would predict the marginal effects of income inequality to be equal across all income groups. However from more precise theoretical point of view, income inequality should have more positive marginal effects at the very highest and lowest ends of the income distribution –however such effects are unlikely to be detectable in the available empirical data.

> **Hypotheses 4b: If the conflict theory holds true, the coefficient for income inequality should be positive across all income quartiles and the interaction term between income inequality and relative income should have no effect.**

CONCLUSIONS.

This chapter has examined the existing literature on income inequality and political participation. While the thesis uses the two studies directly on this topic by Anderson and Beramendi (2008) and Solt (2008) as a foundation, in this chapter I have sought to further clarify the implications of the relative power and redistributive conflict theories described in these studies by referring to the extensive literature on political participation. A close examination of the models of political participation show that income (relative and absolute) should have no direct effect on voting participation, but rather that relative income, and therefore income inequality, has an indirect impact on voting participation via political engagement. The suggested mechanisms linking relative income and political participation are hardly a new concept. The earlier work on political participation that attempted to move beyond the socio-economic status models (Verba and Nie 1972) has already suggested that socio-economic status influences political participation by shaping political engagement. To clearly illustrate how the theories on effects of income inequality fit in with the existing models of political participation, I have suggested a path model that shows how relative income shapes certain forms of political engagement which are most relevant to considerations of relative power (external political efficacy and interest in politics) and thus has an indirect effect on voting. Owing to data limitations I will be unable to fully test the path model, however it will serve to structure the discussion throughout the thesis and to explain the relationship between the different forms of political engagement and voting. Finally in this chapter I have laid out the hypotheses that will be tested in the following chapters. The hypotheses test predictions based on the relative power and redistributive conflict theories, the effect of income inequality on

overall turnout and finally how income inequality affects the relationship between income inequality and political engagement.

CHAPTER 2

RELATIVE INCOME AND POLITICAL ENGAGEMENT AND VOTING

INTRODUCTION: RELATIVE INCOME AND POLITICAL ENGAGEMENT IN POST-COMMUNIST COUNTRIES

As discussed in the last chapter, before asking how income inequality affects voting participation, it is necessary to first examine how relative income itself relates to political engagement and voting participation. Existing literature on income inequality and political participation has suggested that (relative) income may be a resource for voting participation (Solt 2008; Anderson and Beramendi 2008). However a re-examination of the literature on the determinants of political participation starting from the early literature on SES models to the Civic Voluntarism model, shows that though political participation, including voting participation are positively correlated with socio-economic status, which includes income, income itself is not a direct resource for voting.

Yet relative income is still relevant for voting participation even if indirectly. Earlier studies on political participation show that socio-economic status indirectly influences political participation by shaping political engagement (Verba and Nie 1972). Therefore I have argued that though income may not be a direct resource for voting, relative income position has an indirect effect on voting via two forms of political engagement most closely related to relative income: political efficacy and interest in politics. These two forms of political engagement are selected based on logic of relative power and redistributive conflict theories. To clarify the pathway of the causal mechanisms linking relative income and voting participation via political engagement, I presented a path model.

In this chapter I will test the three hypotheses that relate to the path model and the effects of relative income on political engagement and voting participation:

- Hypothesis 1: The effects of relative income on voting participation should disappear with the addition of controls for forms of political engagement (external political efficacy and interest in politics).
- Hypothesis 2a: If the relative power theory holds true, relative income should have a positive and monotonically increasing effect on political engagement (external political efficacy and interest in politics) and, by extension, on voting participation.
- Hypotheses 2b: If the conflict theory holds true, levels of political engagement should be equal for all individuals below and above the mean income, in other words a comparison of the relative levels of political engagement (and odds of voting) across income quartiles (both above and below the mean income) should show no difference.

I will try to test these hypotheses as fully as the data allows. Unfortunately the available data does impose several limitations. Firstly the absence of one single dataset that would include all the relevant measures of political engagement and voting participation restricts the possibility of fully testing the path model. Secondly, the measures of relative income are far from perfect, however the relative income has same effects regardless of how it is measured. The measurement problems will discussed further in the section of relative income.

In the following sections I will discuss the measurement of the two pairs of dependent variables: the two measures of political engagement (political efficacy and interest in politics) and the two measures of voting participation (voting in past parliamentary elections and vote

intention). Then I will describe how relative income is measured and also I will discuss the selection of control variables.

Both income and socio-economic status seem to have the same positive effects on political engagement in post-Communist countries as in established democracies. In one of the few comprehensive cross-national studies of voting participation in post-Communist Eastern Europe, Bernhagen and Marsh (2007) find that overall models of voting participation developed in context of advanced democracies are applicable in Eastern Europe. The authors found that the common determinants of voting have effects in same directions and of similar size in both the East and West, and most importantly they found that relative income (household income in quintiles) is positively correlated with voting participation.

However the literature on social cleavages in post-Communist Eastern Europe suggests that income and social economic status may not shape political behavior in the same way across all countries (Evans and Whitefield 1993; Whitefield 2002). Evans and Whitefield (1993) find that the social bases of party competition differ across post-Communist countries –in some countries such as Poland, Hungary, and the Czech Republic socio-economic cleavages dominate but not in others. Though studies on social cleavages and bases of party competition do not addresses the causes of participation, it is possible that the presence social cleavages along socio-economic lines is somehow correlated with the strength of socio-economic determinants of political participation. Therefore in examining the effect of relative income, it would be wise to not only look at partially pooled regressions (multilevel models), but also at results acquired by running the models within individual countries.

METHODOLOGY AND MEASUREMENT:

Dependent Variables:

In this section I present measures of political engagement and voting participation. Unfortunately the measures for all four dependent variables do not correspond to the same set of country survey years, since the questions measuring voting where not asked in every survey year in every country. However the discrepancy should not negatively impact the quality of results, since the results for the pooled model for political engagement do not change with a reduction of the number of cases.

Voting.

Before discussing, the two measures for voting a few points are in order. Firstly, in this analysis I focus on measuring past voting participation and vote intention in parliamentary elections, since all twelve countries in this analysis hold parliamentary elections, while not all hold presidential elections. Secondly, individuals who are ineligible to vote because they citizenships are excluded from the analysis. While non-citizenship status may be correlated with relative income, the purpose of the analysis is to determine how relative income position may serve as incentive or disincentive for political participation. Therefore the research question assumes that the decision whether to vote or not is made on an entirely voluntary basis rather than by compulsion. Thirdly, I use two measures of voting participation, voting in past elections and vote intention, since Solt (2008) and Anderson and Beramendi (2008) each use one of these measures for voting participation without comparing between the two. As the analysis in this chapter will show relative income has no effect on past voting but it does on vote intention suggesting that in fact the two measures are not entirely equivalent.

Vote Intention. The exact survey question in the EurEqual survey asks: "Assuming there was a parliamentary election tomorrow, which of these parties would you be most likely to vote for?" The respondent is given the options of choosing an existing party in his country, or selecting one of the alternative answers: "don't know," "not eligible" among others. The majority of answers are concentrated in the three groups: either a respondent chose a party, answered "don't know" or "will not vote." As it is not possible to readily determine how the respondents in the "don't know" category differ from the other two categories, I first create create a measure of vote intention that retains the three categories: 1: "Will vote" 2: "Don't know" and 3: "Will not." Table 2.1 shows the distribution of the responses in the three categories in each country survey year.

Table 2.1: Participation in Prospective Parliamentary Elections

	Will vote	Don't know	Will not Vote
Estonia '95	79.82	10.45	9.74
Russia '03	73.78	26.22	0.00
Estonia '07	70.78	17.81	11.42
Romania '93	68.78	17.45	13.77
Slovakia '07	66.23	13.46	20.32
Czech rep '94	66.22	25.47	8.31
Poland '93	65.11	9.22	25.67
Czech rep '07	64.99	15.06	19.95
Latvia '07	64.66	18.85	16.48
Latvia '96	64.23	19.46	16.32
Moldova '07	62.42	29.30	8.28
Slovakia '94	61.46	21.49	17.05
Lithuania '07	60.94	18.42	20.64
Bulgaria '93	59.98	16.07	23.95
Estonia '93	56.46	30.39	13.15
Russia '96	52.36	34.07	13.57
Lithuania '93	51.50	34.64	13.86
Russia '95	49.84	24.65	25.51
Moldova '96	48.73	27.83	23.44
Ukraine '95	30.12	43.70	26.18
Ukraine '93	23.00	44.24	32.76
Russia '93	22.97	33.20	43.83
	53.36	26.33	20.31

Total Number of Observations: 31, 242 individual observations, and 22 country survey years.

As Table 2.1 shows, the patterns in the dispersion of responses across the three categories vary greatly within the same countries. While most of the country survey years for the CIS countries (Russia, Ukraine, and Moldova) are concentrated at the bottom the table having the lowest number of respondents with definitive political preferences, Moldova and Russia appear in mid- and higher- ranges of the table in individual years. In terms of levels of income inequality (see Table 1.1, Chapter 1), while the most unequal countries, the CIS countries, show lower frequencies of respondents with decisive preferences in line with the relative power theory and the findings of the literature on inequality and participation (Solt 2009; Anderson and Beramendi 2008), the overall patterns are far from clear: Estonia which has relatively high levels of income inequality shows the highest frequency of decisive voters, while the Visegrad countries that are the most equal fall in the middle of the table in terms of

the number of decisive voters. The overall the patterns in Table 2.1 seems to vaguely reflect the positive association between levels of inequality and the frequencies of decisive voters, but one must proceed with caution before arriving at any conclusions, since many other factors particularly party system instability (Birch 2000, 2001; Tavits 2005) as well other electoral system characteristics, are highly plausible explanations for the patterns in the frequencies in the number of decisive voters.

The analysis in this chapter shows that actually the non-voters and indecisive voters do not differ in terms of relative income and education, the other key component of socio-economic status. Therefore for the purposes of analysis in the following chapter, I create a two category variable for vote intention merging the non-voters and indecisive voters: 0: Non-Voters and Indecisive voters, and 1: Decisive Voters. Table 2.2 shows the dispersion of the responses.

Table 2.2: Participation in Prospective Parliamentary Election

Country Year	Undecided	Will Vote
Estonia '95	21.55	78.45
Estonia '07	28.73	71.27
Russia '03	30.47	69.53
Romania '93	31.22	68.78
Slovakia '07	33.77	66.23
Czech rep '94	33.78	66.22
Poland '93	34.89	65.11
Czech rep '07	35.01	64.99
Latvia '07	35.34	64.66
Latvia '96	35.77	64.23
Slovakia '94	38.54	61.46
Lithuania '07	39.06	60.94
Bulgaria ‘93	40.02	59.98
Moldova '07	42.61	57.39
Estonia '93	44.95	55.05
Russia '96	47.64	52.36
Lithuania '93	48.50	51.50
Russia '95	50.16	49.84
Moldova '96	51.27	48.73
Ukraine '95	69.88	30.12
Ukraine '93	77.00	23.00
Russia '93	77.03	22.97
Total	46.69	53.31

Total number of observations: 32, 134 individual observation, and 22 country survey years

Again as in the case of the three category measure of vote intention, the CIS countries show lower frequencies of decisive voters, whereas the more equal Visegrad countries tend to have more decisive voters.

For both measures of vote intention, the ineligible voters were removed. Ineligibility was determined by the responses to two survey questions “v54 “Which party did you vote for?” which provided the response option “not eligible” and “v53: Which of the following phrases on this card best explains why you did not manage to vote” which provided the option of answering “No right to elect” in the surveys done in Estonia. Ineligible voters were concentrated in Russia, Moldova, Estonia, and Romania. In the 2003 survey carried out in Russia, all the voters who answer “Will not vote” where in fact ineligible voters, thus the survey year was removed from the analysis of the three category measure of vote intention.

Past Vote. The second measure of voting participation is the participation in past parliamentary elections. For this measure the following question from the EurEqual was used “v52: Now I want to ask you about the last parliamentary elections which were held in [date - specify when] Talking to people about the elections, we have found that a lot of people didn't manage to vote. How about you? Did you vote in the last election?” The possible answers to the question where either yes or no, so this variable was coded as binary with responses 1: “Did vote” and 0: “Did not vote.” Again non-eligible voters were removed. Table 2.3 shows the distribution of the participation in past parliamentary elections.

Table 1: Participation in Parliamentary Elections

	Did Not Vote	Voted
Romania '93	9.45	90.55
Bulgaria '93	12.16	87.84
Slovakia '94	12.67	87.33
Czech rep '94	16.25	83.75
Ukraine '98	19.65	80.35
Moldova '96	20.80	79.20
Romania '07	22.14	77.86
Hungary '93	22.38	77.62
Lithuania '93	23.57	76.43
Hungary '07	23.82	76.18
Russia '96	26.90	73.10
Estonia '93	28.54	71.46
Estonia '07	30.22	69.78
Estonia '93	30.38	69.62
Czech rep '07	30.56	69.44
Ukraine '95	30.62	69.38
Lithuania '97	30.92	69.08
Moldova '07	31.48	68.52
Russia '01	34.65	65.35
Latvia '96	38.82	61.18
Poland '93	40.08	59.92
Russia '95	41.74	58.26
Russia '03	43.82	56.18
Total	27.02	72.98

Total Number of Observations: 33,646 individuals, 23 survey years

Participation in the past parliamentary election shows even greater variation within countries than the measure for vote intention: some of the survey years for Moldova, Russia, and Ukraine show high levels of turnout while in other years these countries fall to lowest end of the table in terms of voting participation, and Poland in 1993 shows one of the lowest levels of voting participation. Only Estonia shows relative stability in levels of voting participation showing very little variation between the first survey in 1993 and the last in 2007.

Political Engagement. Political engagement is measured using two types of 'civic orientation' –political efficacy and interest in politics. These two types of political

engagement were selected, because, as discussed in Chapter 1, political efficacy and interest in politics are the most closely linked to relative power considerations and redistributive conflict. The measures for political efficacy and interest in politics come from two separate surveys: the EurEqual Survey and World Values Survey respectively, since neither survey contained measures for both.

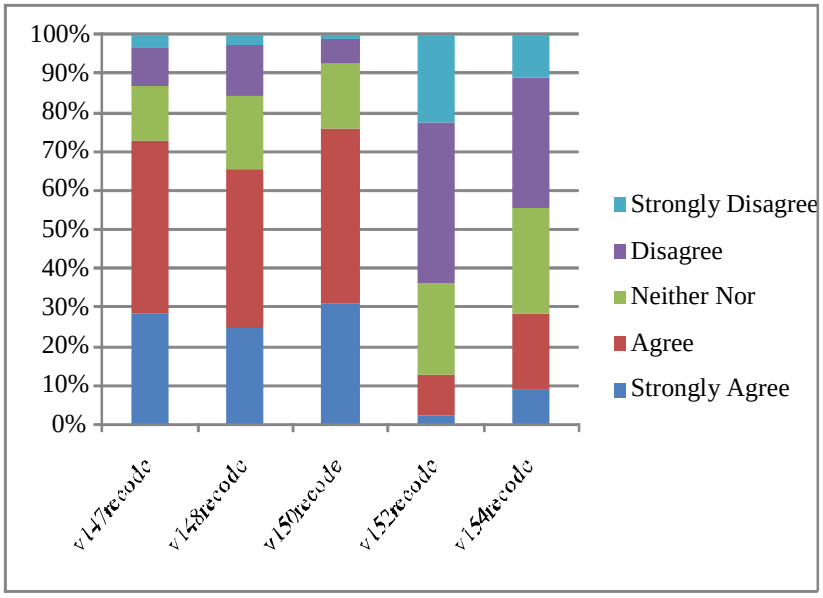
Political Efficacy. Most generally political efficacy is a sense of political 'competence'on the part of a citizen to use Almond and Verba's term, which is manifested by the perceptions individuals have about the amount of influence they can exert over government decisions (Almond and Verba 1963: 140; Verba and Nie 1972). To capture this multifaceted general concept, rather than use a single item measure, I create a scale that combines a several item battery of questions on efficacy in the EurEqual Survey. The questions used to create the scale are the following:

- V147: People like me have no say in what the government does.
- V148: Sometimes politics seem so complicated that a person like me cannot really understand what is going on.
- V150: Elected officials don't care much what people like me think.
- V152: On the whole, what governments do in this country reflects the wishes of ordinary people.
- V154: There is no point in voting because the government can't make any difference.

The responses to the questions form a 5-point Likert scale: 1 "Strongly agree" 2"Agree" 3 "Neither nor" 4 "Disagree" and "Strongly Disagree" and sixth option offered is "Don't know." In creating the measure for political efficacy, the responses in the "Don't know

category" and the "neither nor" were merged. Figure 2.1 shows the distribution of the responses for each of the questions.

Figure 2.1: Distribution of Responses to Efficacy Scale Items



Source: EurEqual Survey Integrated 1993-2007 Dataset

Overall the responses show low levels of political efficacy: for "v147: People like me have no say…" about 70% of the respondents answer affirmatively, for "v148: Politics seem so complicated.." about 60% answer affirmatively, for "v150: Elected officials don't care…" over 70% answer affirmatively, and for "v152:..what governments do in this country reflects the wishes of ordinary people" over 60% answer negatively. Only for item "v154: No point in voting" the majority disagree or have no opinion. To conclude the distribution of the responses show low levels political efficacy across post-Communist countries.

The survey questions are positively and negatively worded creating a 'balanced" scale that reduces acquiescence bias (Evans and Heath 1995). In creating the scale, v152, the one positively worded item was recoded in reverse so that the responses to all items would form a

scale 1 to 5: 1 being the lowest level of political efficacy and 5 being the highest. The scale was created by summing the scores of all the items and then dividing by five. Factor analysis of the 5 items in the scale gives an alpha of .53 which is acceptable considering that balanced scales generally yield lower alphas (Evans and Heath 1995). The factor analysis of the five items shows one factor confirming that indeed the five questions measure one underlying concept. Table 2.4 shows the mean levels of the overall measure of political efficacy across the country survey years.

Table 2.4 : Overall Political Efficacy

	Mean
Bulgaria 1993	2.5462766
Czech rep 1994	2.6059035
Estonia 93	2.4423106
Estonia 95	2.5643211
Hungary ' 93	2.4601516
Latvia '96	2.3130664
Lithuania 93	2.5662213
Lithuania 97	2.5421892
Moldova ' 96	2.2814159
Poland '93	2.3327103
Romania '93	2.7177807
Russia '93	2.3805737
Russia '95	2.308443
Russia '96	2.4908879
Russia '98	2.2877148
Russia '01	2.380047
Slovakia ‘94	2.3980809
Ukraine '93	2.2744242
Ukraine '95	2.082698
Ukraine '98	2.1233289
Russia '03	2.4114134
Bulgaria ‘07	2.2331787
Czech rep ‘07	2.3945807
Estonia '07	2.5594161
Hungary ' 07	2.3879781
Latvia '07	2.2628916
Lithuania ‘07	2.3148832
Moldova '07	2.6203498
Poland '07	2.3384615
Romania '07	2.3820677
Russia '07	2.3340528
Slovakia ‘07	2.5422164
Ukraine '07	2.372909
Total	2.3847729

I also create measures of internal and external political efficacy –internal efficacy 'refers to an individual's confidence in his own abilities regardless of political circumstances,' and external efficacy which ' is the respondent's perceived probability of success at influencing public officials, or, alternatively, the political responsiveness of officials" (Pollock 1983: 402). While the analysis in this chapter shows that overall political efficacy, internal, and external efficacy, are all positively correlated with relative income position, in the Chapter 3 I will show that income inequality has different effects on the two forms of political efficacy: income inequality has a negative effect on external efficacy and no effect on internal efficacy. As discussed in the previous chapter, according the logic of the relative power theory, changes in income inequality should affect external rather than internal political efficacy since changes in relative power differentials do not relate to the inherent absolute abilities of individuals to understand politics but represent a change in the external circumstances. The basis for distinguishing internal and external political efficacy is theoretical rather than empirical – factor analysis shows that the strongest scale is the five item scale that mixes the measures of internal and external efficacy. The two separate scales for internal and external efficacy have very low alphas of .47 and .37 respectively, however alphas are generally low if few items are included.

Internal efficacy. The scale measuring internal efficacy, which is an individual's sense of his own abilities to influence politics irregardless of external political circumstances, is created out of the following EurEqual survey questions:

- v147: People like me have no say in what the government does.

•v148: Sometimes politics seem so complicated that a person like me cannot really understand what is going on.

The same recoding procedure was applied as for the scale for overall efficacy: the responses are coded on a five point Likert scale: 1 “Strongly agree” 2”Agree” 3 “Neither nor” 4 “Disagree” and “Strongly Disagree”. The sixth option offered “Don’t know” has been coded into the midpoint category. The five point scale can be understood as a scale measuring efficacy with 1 being the lowest level of political efficacy and 5 being the highest. To create the scale the two items were added together and then divided by two.

External efficacy. External political efficacy, which can be understood as an individual’s perceived probability of influencing government officials or responsiveness of the government, is measured by the following three items:

•V150: Elected officials don't care much what people like me think.

•V152: On the whole, what governments do in this country reflects the wishes of ordinary people.

•V154: There is no point in voting because the government can't make any difference

Again the coding procedure for this scale is same as for the internal political efficacy. To create the scale the scores of the three items were summed and divided by three.

Interest in politics. The second measure of political engagement is interest in politics. Interest in politics is one of the most common measures of political engagement in the literature on political participation (Wolfinger and Rosenstone 1980: 18-19; Verba et al. 1995b). Citizens who are interested in politics follow politics, care what happens and about who wins or loses.

Interest in politics is related to both relative power considerations and redistributive conflict. If individuals believe that they have a chance of influencing political outcomes, they will be more interested in politics. Whereas as income inequality increases, then the stakes in the outcomes of the conflict over redistributive policies increase for individuals both below and above the mean income increasing general interest in politics.

Interest in politics is measured using the straightforward question from the World Values Survey which asks "e023: How interested would you say you are in politics?" the responses form a four point, or 'forced choice' scale with 1: "very interested" 2: "Somewhat interested" 3: "Not very interested" and 4: "Not at all interested." The four point scale measuring interest was reversed to make the scale more intuitive so that 1 would be the lowest level of interest in politics and 4 the highest. Table 2.5 shows the distribution of mean levels of interest in politics by country survey-year. The Czech Republic in 1990 and Romania in 1993 are the clear extremes the Czech Republic in 1990 having the highest mean level of political interest and Romania in 1993 having the lowest. Again the table shows that there is a great amount of variation within countries over time.

Table 2.5: Mean Level of Interest in Politics

	Mean
Czech Rep '90	3.7277657
Slovakia '90	3.5010799
Latvia '90	3.040724
Bulgaria '90	2.8509804
Czech rep '99	2.835443
Lithuania '90	2.8296593
Czech Rep '91	2.827619
Estonia '90	2.6556557
Czech Rep '98	2.5507881
Slovakia '98	2.5462878
Russia 90	2.5287474
Lithuania '99	2.5178571
Bulgaria '99	2.4944612
Latvia '96	2.485786
Moldova '02	2.4855434
Ukraine '06	2.4327122
Slovakia '91	2.4129663
Estonia '96	2.4122288
Hungary '91	2.4084084
Poland '90	2.3820459
Hungary '98	2.3661538
Ukraine '99	2.3567202
Lithuania '97	2.3406375
Russian 99	2.3146067
Bulgaria '97	2.3038095
Ukraine '96	2.2789165
Bulgaria '06	2.2675026
Russian 95	2.2599705
Moldova '96	2.2461696
Romania '98	2.2438825
Moldova '06	2.2435283
Russia '06	2.2408613
Poland '05	2.2379032
Poland '99	2.2341598
Poland'97	2.1826087
Romania '05	2.0313748
Romania '93	1.8984587
Total	2.4519791

Independent Variables.

In this section I cover the independent variables, the most important of which is of course relative income, and the individual-level control variables.

Relative Income. The measures of income used in this thesis are far from flawless. Firstly the measures of income in the World Values Survey and EurEqual Surveys are different. The World Values Survey measures household income and is unclear about whether it is asking the respondents to give pre- (gross) or post-tax (net) income. The EurEqual Survey on the

other hand asks for individual post-tax (net) income. Of course arguments can be made that relative income position measured using gross versus net income and individual versus household income can have different effects on political engagement and voting participation. One can argue that net (post-tax) income is more relevant for relative power considerations in so far as political influence depends on disposable income –for example campaign donations are made out of the net income. Also material possessions that are used as status symbols and displays of wealth are also bought using net income. On the other hand, wealth in the form of property such as real estate is not redistributed through income taxes. One can also argue that household rather than individual income is more relevant in shaping political behaviours since the context of the household in which one lives shapes political attitudes.. In short measuring income is difficult both in a technical and theoretical sense. The measures of income I will use are far from ideal, however the results show similar patterns in the relationship between relative income and political engagement using data from both surveys.

In the World Values Survey income is measured using the following question: “Here is a scale of incomes and we would like to know in what group your household is, counting all wages, salaries, pension and other income that come in. Just give the number of the group your household falls into, after taxes and other deductions.” 1: Lowest ; 10: Highest. An examination of the survey documentation including the individual country surveys shows that no income ranges were given along with the 10-point scale to prompt the respondent. Therefore self-placement on the scale was determined entirely on the respondent’s perceptions of his relative position.

In the EurEqual survey respondents were asked for the their monthly individual income before taxes in the national currency: “V269: Can you tell me please what is your own

monthly income before taxes from your work, pension and any other sources of income, such as child benefit, family allowances, etc that you may have?" The respondent's answer was coded into income ranges which varied by country and survey year.

To create a measure of relative income position I recoded the income data into quartiles using the following procedure: individuals within each country survey year were ranked by income and then divided into quartiles. Some income ranges overlap with two income quartiles, in other words individuals who were coded into the same income range get split between two quartiles, however this occurs randomly thus not introducing systematic bias into the measure. Using this method I was able to create quartiles with very equal numbers of observations.

In determining which control variables to include the primary goal was to 'isolate' the effect of relative income, thus only the controls that are most closely related to relative income were included. The goal of models is not to identify every determinant of voting participation, but rather to reduce omitted variable bias which would lead to the overestimation of the coefficient for relative income. As the literature on political participation discussed in Chapter 1 shows, the components making up socio-economic status are most powerfully and consistently correlated with political participation and each of the individual components (income, education, social status measured by occupation) are strongly correlated not only with participation but each other. Therefore education is the most powerful covariate of relative income that will be included in the model. Status measured by occupation is too closely related to income and likely to cause the coefficient for relative income to be underestimated. Arguably much of status significance of occupation is determined by the salary.

Education. The literature on political participation shows that education has both a direct and indirect effect on voting participation. The resource models show that an extensive vocabulary is a direct resource for political participation (Verba et al 1995a, 1995b), thus education is a resource in so far as it helps develop a wide vocabulary. As one of the key components of socio-economic status, education also has an indirect effect on political participation by shaping political engagement. Though in examining the effect of relative power considerations, Goodin and Dryzek (1980) focus on relative income, education levels could also theoretically figure in relative power considerations and can shape individual's sense of political efficacy and consequently his interest in politics.

As the education systems vary between countries, the level of education achieved by each respondent was coded into one of three categories: 1-Primary/No education 2 Secondary Education 3 Tertiary Education. Furthermore for some years in the EurEqual survey, the question on education level was missing –so for these years the education level was approximated using the question asking at what age the respondent completed his education. The age boundaries were determined so as to achieve approximately the same distribution of responses as for question asking about highest completed level of education.[1]

Age. Age has been consistently shown to be a predictor of political participation across many countries (Almond and Verba 1963; Wolfinger and Rosenstone 1980) and to have a positive effect on political participation. Explanations of the effect of age focus on the idea that increased social responsibilities are positively correlated with political participation (Verba,

[1] The age boundaries corresponding to the three levels of education are the following: primary as ages one to thirteen years, secondary as ages fourteen to twenty and tertiary as ages 21 and over.

Nie and Kin 1974, Anderson and Beramendi 2008: 288). Studies on voting participation in post-Communist countries show that age has the same positive effect as in established democracies (Colton 2001; Bernhagen and Marsh 2007). Age is a relevant control for relative income, since until retirement age, income generally increases with age. Age has also been shown to have a non-linear effect (Wolfinger and Rosenstone 1980; Colton 2001) as overall voting participation increases with age but then drops in late life. To control for curvilinear effects I have included a term with age squared.

I have also included controls for marital status and gender. Several studies have shown that married people are more likely to be engaged in politics and are thus more likely to vote (Campbell et al. 1960; Wolfinger and Rosenstone 1980). Campbell in *The American Voter* argues that married people vote more frequently, since they remind each other to do so (Campbell et al, 1960: 109). The positive effect of marriage holds in post-Communist countries as well (Colton 2001; Bernhagen and Marsh 2007). Again married couples are likely to have larger household incomes, therefore marital status is a relevant control. The literature on political participation has also shown that women are less likely to vote then men (Almond and Verba 1963; Wolfinger and Rosenstone 1980; Hansen1997; Jennings 1983). Bernhagen and Marsh (2007) found that in Eastern Europe as well women are less likely to vote. Again gender is correlated with income as men tend to earn more than women.

Studies on political participation have shown that other variables such as union membership and church attendance have effects on political engagement and participation. However in the World Values Survey and EurEqual Survey the questions measuring these two factors have over half of the observations missing, therefore I was unable to include either in the models.

RELATIVE INCOME AND POLITICAL ENGAGEMENT AND VOTING: INDIVIDUAL LEVEL ANALYSIS.

To fully understand how income inequality and relative income affect political participation it is necessary to examine the effects of relative income on political engagement alone before testing whether the relationship between the latter is dependent on income inequality. Full multilevel models, which will be used in the analysis in the following chapter, may not be very good at testing the relationship between dependent and independent variables when the dependent variable is included in an interaction (Braumoeller 2004). Braumoeller shows that using the statistical significance of the coefficients of variables included in an interaction term for hypothesis testing is likely to lead to erroneous conclusions. Therefore it is prudent to test the effects of relative income alone before introducing an interaction between relative income and income inequality.

Tables 2.6 and 2.7 in this section show the results of the regression of the two forms of political engagement (political efficacy and interest in politics) and the two measures of voting participation (voting in past parliamentary elections and vote intention) on relative income (measured by income quartiles) and other socio-economic and demographic characteristics. The results presented in the two tables have been obtained using a two-level multilevel (or hierarchical) model with random intercepts at the country survey-year level. As discussed in the previous section, the dependent variables show almost at much variation with countries from year to year as between countries, therefore each country survey-year is treated as a separate case. Logistic models with dummy variables for the country survey-year level would be inadequate since the dummy variable terms for several of the country survey year-levels

would be lost as a result of collinearity. There is some debate over whether these models should have fixed or random intercepts (Snijders and Bosker 1999:43-45): a random coefficient model assumes that the higher level cases constitute a sample from a population whereas a fixed effects model assumes that the higher level cases form entirely distinct categories such as religious denominations. Country survey years do not fit entirely in either category. However both a fixed and random effects model yields the same results in the substantive sense, so for the purposes of this analysis the model choice seems adequate.[2]

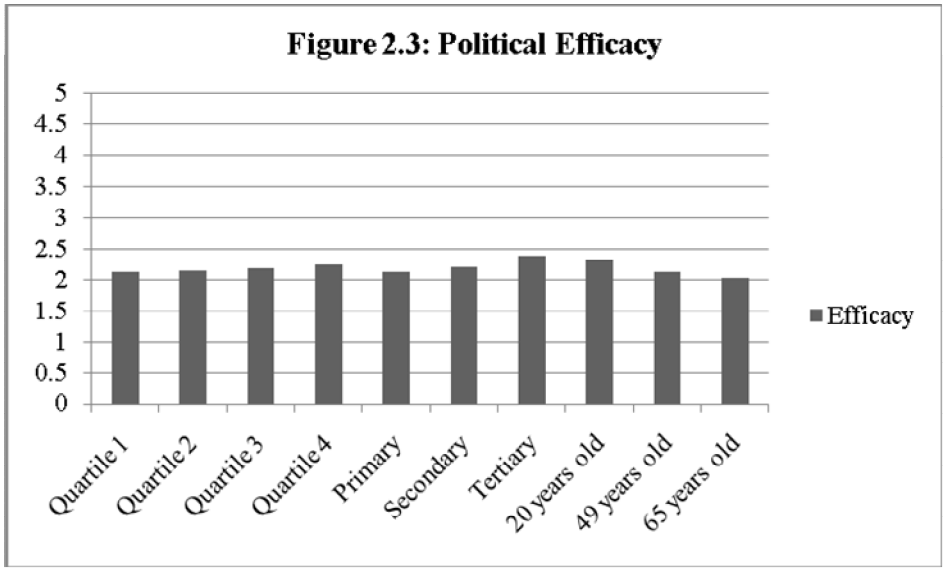
All of the models presented in the Tables 2.6 and 2.7 have also been estimated for each country survey year separately to test whether effects check whether the effects of relative income are the same in all the country survey years. The results of analysis for each country survey year are included in the Appendix.

The tables also specify the type of model used for each regression. The dependent variables for political engagement which are measured on Likert scales are treated as interval data thus they are analyzed using ordinary least squares. The variables measuring voting are binary or three category thus logit and multinomial logit models are used, respectively. Finally relative income position measured by income quartile is turned into dummy variables in the models to make any curvilinearity or lack of effects more visible.

Relative Income and Political Engagement

[2] Arguably not only the intercept but also the slope for relative income may vary between country survey year, however again the results do not change with the addition of a random slope for relative income.

As Table 2.6 shows, relative income, measured by income quartiles, has a positive effect on political efficacy. The effects of relative income appear to be small: a shift from the lowest to the highest quartile makes difference of .10 on the scale of one to five for political efficacy. However compared to the effects of other variables, relative income has quite substantive effects as Figure 2.2 illustrates. As predicted by the relative power theory, levels of political efficacy increase with relative income position.



The control variables education and gender demonstrate the effects predicted by the literature on electoral participation. Literature on political participation suggests that education should have a positive effect on voting participation not only because education serves a direct resource for participation –Verba et al (1995) find that a greater vocabulary which results from higher levels of education is direct resource for participation making the actual act of voting easier to carry out- but also because education has fosters 'civic competence' or efficacy (Wolfinger and Rosenstone 1980: 18-19; Almond and Verba 1963: 161-164). The positive effect of education on political efficacy is very clear in Figure 2.2. Also confirming the literature that suggests women are less likely to be politically engaged and to vote

(Almond and Verba 1963; Wolfinger and Rosenstone: 1980: 107; Hansen 1997; Jennings 1983; Bernhagen and Marsh 2007), the results show women tend to have lower levels of political efficacy. However age has opposite effect from those predicted based on general literature on electoral participation (Wolfinger and Rosenstone 1980) -political experiences of living under Communism may reduce political efficacy among older generations. Marriage is not statistically significant.

Table 2.6: Regressions of Political Engagement on Relative Income

Independent Variable	**Interest in Politics**	**Political Efficacy**		
	OLS	**Overall**	**Internal**	**External**
			OLS	
Income Quartile				
2	.065***	.023***	.028***	.018**
	(.011)	(.0077)	(.011)	(.0085)
3	.087***	.062***	.060***	.063***
	(.012)	(.0078)	(.010)	(.0087)
4	.13***	.12***	.15***	.11***
	(.012)	(.0080)	(.011)	(.0089)
Age	.027***	-.0063***	-.0017	-.0092***
	(.0015)	(.0097)	(.0014)	(.0011)
Age^2	-.00021***	.000061***	-.0000025	.00010***
	(.000015)	(.000010)	(.000014)	(.000011)
Education				
2	.35***	.084***	.14***	.048***
	(.014)	(.0087)	(.012)	(.0097)
3	.63***	.26***	.40***	.17***
	(.016)	(.010)	(.014)	(.011)
Female	-.27***	-.11***	-.21***	-.044***
	(.0081)	(.0055)	(.0076)	(.0061)
Married	.062***	-.0090	-.024***	.00066
	(.0094)	(.0060)	(.0084)	(.0067)
Constant	1.42***	2.44***	2.21***	2.60***
	(.067)	(.034)	(.039)	(.0442)
Random Part				
Country-Year Level				
$\sigma 2$	.12	.022	.020	.040
	(.029)	(.0054)	(.0049)	(.0099)
Individual Level				
σ^2	.64	.34	.67	.42
	(.0045)	(.0023)	(.0043)	(.0027)
Individuals	40784	47085	47288	47170
Country-Years	36	33	33	33
Countries	12			
-2 x Log Likelihood	-49013.273	-41410	-59601.47	-46580.02

***p<.001 **p<.05 *p<.10

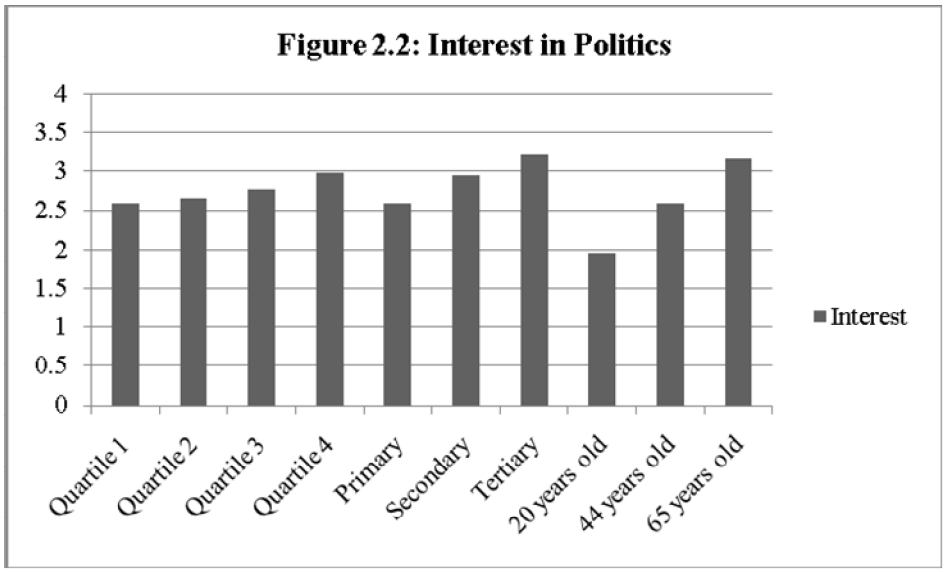
As Table 2.6 shows, relative income has a positive effect on both internal and external efficacy. For the purpose of the analysis of in this chapter whose goal is to establish the effect of relative income political engagement and voting participation distinguishing between internal and external efficacy has little relevance, however as will be shown in Chapter 3 the distinction will have relevance to later analysis, since income inequality has different effects on internal and external efficacy.

Overall the results of the analysis of the effects of relative income on political efficacy seem to provide evidence for Hypothesis 2a according to which if the relative power theory is holds true relative income should have positive and monotonous effect on political engagement.

However as discussed earlier in relation to the variation in social cleavages across post-Communist Eastern Europe, general trends visible in the partially pooled[3] analysis may not hold in each individual country across all the years since the collapse of Communism. Looking at individual country survey years, political efficacy is generally stratified by income quartile. However in CIS countries (Moldova, Ukraine, and Russia) particularly in the later transition years efficacy is not stratified by income quartile. These countries are all characterized by weak socio-economic cleavages which not only means that people lack different voting preferences according to socio-economic status in these countries, but also that patterns of political participation based on socio-economic status, especially relative income position, may be weaker. To conclude political efficacy in CIS countries may be shaped by political and institutional factors and political experiences rather than socio-economic status.

[3] Multilevel model with country survey years as second level.

As Table 2.6 shows, relative income has a positive effect on interest politics showing support for the relative power theory (Hypotheses 2a). Again as in the case of political efficacy, the effects of relative income seem small. This time compared to the other key variables such as education and age, the effects of relative income do indeed seem small in the substantive sense as Figure 2.3 illustrates. The control variables are all statistically significant and behave as expected.



An examination of the effects of relative income on interest in politics in individual countries by survey year shows that though relative income has a positive effect in most countries, in a few it shows no effect and most interestingly a curvilinear effect in Moldova 1996, Poland 1995, Russia 1999, and Ukraine 1999. (see Table 1 in Appendix).

Relative Income and Voting Participation

Table 2.7 shows the regression of voting measures on relative income and other socio-economic and demographic determinants of voting participation. The results show relative income is not statistically significant for electoral participation in past parliamentary elections –in other words individuals in all income quartiles are equally likely to vote. The results support the resource and Civic Voluntarism models which suggest that income no direct effect on electoral participation.

Table 2.7: Regression of Voting Participation on Relative Income

Independent Variable	**Past Vote** LR		**Vote Intention** (ref. Cat.: Non-Voters) Undecided | Decided MLR		**Vote Intention** (Non-Voters &Undecided vs. Decided Voters) LR	
Income Quartile						
2	.058	.047	-.026	.040	.044	.031
	(.036)	(.036)	(.048)	(.043)	(.035)	(.035)
3	.019	-.018	.044	.14***	.085**	.044
	(.036)	(.037)	(.050)	(.04)	(.086)	(.036)
4	-.061	-.14***	-.0015	.23***	.20***	.13***
	(.037)	(.038)	(.052)	(.0058)	(.037)	(.037)
Age	.11***	.11***	-.019***	.012	.022***	.026***
	(.0045)	(.0046)	(.0063)	(.0058)	(.0045)	(.0046)
Age^2	-.00091***	-.0010***	.0028***	.0000082	-.00014***	-.00018***
	(.000047)	(.000048)	(.000068)	(.000062)	(.000048)	(.000049)
Education						
2	-.042	-.09**	.038	.11**	.26***	.22***
	(.038)	(.039)	(.053)	(.048)	(.036)	(.037)
3	.30***	.16***	.218	.39***	.62***	.48***
	(.046)	(.047)	(.062)	(.056)	(.043)	(.044)
Female	.047*	.11***	.22***	-.083	-.20***	-.13***
	(.026)	(.026)	(.036)	(.032)	(.025)	(.026)
Married	.31***	.32***	.036	.11	.097***	.10***
	(.028)	(.028)	(.039)	(.035)	(.028)	(.029)
Political Efficacy		.58***				.59***
		(.022)				(.022)
Constant	-1.93***	-3.40***	.41***	.31**	-.72***	-2.20
	(.16)	(.17)	(.009)	(.15)	(.18)	(.18)
Random Part						
Country-Year Level						
σ2	.39	.38	.31	-	.44	.40
	(.12)	(.11)	(.052)		(.13)	(.12)
Individuals	34908		29740	-	30433	30300
Country-Years	23	23	21	-	21	21
-2 x Log Likelihood	-19092.52	-18690.03	-29339.22	-	-19208.59	-18767.51

***p<.001 **p<.05 *p<.10

Source: Calculations based on data from EurEqual Survey

Note: Multilevel models are hierarchical logistic models with random intercepts for country survey years estimated with GLLAMM. Standard errors are in the parentheses.

The control variables with the exception of gender all have the expected effects. The literature on voting participation suggests that men are more likely to vote than women (Almond and Verba 1963: 324-335; Hansen 1997; Jennings 1983), while the results in Table 2.7 suggest the reverse. Indeed though most of the literature suggests women are less politically engaged Schlozman et al. (1995) disagrees. Interestingly, as discussed further on, women are most likely to be undecided voters.

The addition of political efficacy to the regression for electoral participation in past elections, shows mixed support for Hypothesis 1 according to which effects of relative income should be reduced by the addition of measures of political engagement. To start with relative income had shown no effect, but with the addition of political efficacy, the coefficient for the highest income quartile becomes statistically significant and negative suggesting that individuals in the highest income quartile are less likely to vote than those in the lowest income quartile. As discussed in Chapter 1, Schattschneider suggests that richer individuals' need to participate in politics in order to defend their interests declines as issues relevant to the poor are removed from public debate (1960: 105). Anderson and Beramendi also suggest that relative income may show a curvilinear relationship with voting participation, since at very high levels of income the odds of electoral participation drop again (Anderson and Beramendi 2008: 291). Analysis of the favored forms of political participation by income level suggests that the wealthiest individuals are more likely participate in politics through campaign donations and other means where monetary resources matter (Schlozman et al 1995: 436) –thus while higher income individuals may have correspondingly higher levels of political efficacy they may actually choose to engage in politics in ways other than voting. These results not only go

against the relative power theory and showing evidence against Hypothesis 2a, but suggest that factors other than political efficacy and relative power determine participation for the highest income quartile.

Overall the results of the regression analysis of participation in past elections support the resource and Civic Voluntarism models according to which income is not a direct resource for electoral participation and thus show overall confirmation for Hypothesis 1 which is based on the premise that any effects of relative income on voting participation are in fact reflective of the effects of political engagement rather than the effects of income as a resource.

Unlike participation in past parliamentary elections, vote intention does show stratification by relative income. The results of the multinomial regression that tests the differences between the three categories of voters –non-voters, undecided and decided- shows that the higher an individual's income, the more likely the individual is to have clear political preferences. The results also show that in terms of relative income position non-voters and undecided voters are similar. The results for the 2-category measure of vote intention show support for hypothesis 2a which states that in accordance with the relative power theory, relative income should have positive and monotonical effect on voting participation (if no controls for political engagement are included in the model). The control variables for the two category measure of vote intention all show expected results in accordance with literature on electoral participation: age has a positive but curvilinear effect, education has positive effect, women are less likely to be have clear political preferences, and married individuals are more likely to fall into the decided category.

The addition of political efficacy into the regression model for vote intention reduces the effects of relative income position thus giving support for Hypothesis 1 according to which the effects of relative income on voting participation should disappear with the addition of controls for political engagement. The effects of relative income do not disappear entirely with the addition of political efficacy, suggesting that other forms of political engagement are missing from the model. Unfortunately the dataset does not include other measures of political engagement across all the survey years. However the reduction in the size and statistical of the coefficients for relative income confirms the idea that relative income serves as proxy for political engagement that are shaped by relative income position.

The differences in the results for regression of participation in past elections and vote intention suggest that the vote intention and actual voting participation are not equivalent. Relative income shows no statistical significance for participation in past elections while it does for vote intention. Overall the effects of relative income and other control variables on vote intention are more similar to the effects shown by these variables on the measures of political engagement than on participation in past parliamentary elections, thus in fact vote intention may be closer to political engagement than actual political behavior. The differences between vote intention and actual electoral participation suggest that Anderson and Beramendi's (2008) use of vote intention as a measure of electoral turnout is questionable. Their results show that vote intention is clearly stratified by relative income position, however in fact the authors' results may be showing the effect of relative income position on political engagement, not on actual voting participation.

CONCLUSIONS

To conclude I return to the hypotheses, to discuss overall confirmation or disproval of each. The regression analysis of electoral participation in past elections and vote intention shows some support for **Hypothesis 1 according to which the effects of relative income on voting participation should disappear with the addition of controls for political engagement.** The regression for electoral participation in past elections shows slightly ambiguous support for the hypothesis – the addition of political efficacy actually increases the statistical significance of the coefficient for the highest income quartile. However the regression for two category measure of vote intention shows clear support for Hypothesis 1: the addition of political efficacy into the model reduces both the size and the statistical significance of the coefficients for income quartiles –confirming the idea that relative income serves as proxy for political engagement.

The regression analysis of both political engagement and vote intention shows clear support for **Hypothesis 2a according to which if the relative power theory holds true relative income should have monotonically positive effect on political engagement.** The results have shown that both interest in politics and political efficacy increase with relative income.

The regression results shows no evidence for **Hypotheses 2b according to which if the conflict theory holds true political engagement should be equal for all individuals below and above the mean income.** Even higher quality income data is unlikely to confirm the conflict theories. As discussed in Chapter 1, at high levels of income inequality, deducing from logic underlying the median voter and redistributive conflict theories, interest in politics

should show a "U" shaped pattern –meaning that engagement is highest among the poorest and very richest individuals. However the findings in this chapter show that if relative income shows any curvilinearity it has the shaped of an inverted "U."

Overall my findings differ from Solt's (2008) whose results do not show relative income to be not statistically significant for political engagement. Unlike Beramendi and Anderson, Solt does not explicitly test whether his dependent variables, political engagement and electoral participation, are stratified by relative income position. Instead he only presents the results from the full model that tests the interaction between income inequality and relative income. Solt finds that the interaction terms between income and income inequality are statistically significant for political engagement but not voting participation, while the actual coefficients for relative income are not statistically significant for any of the dependent variables. Solt does note that Braumoller (2004) argues the statistical significance of the variables included in interaction terms should not be used in hypothesis testing, therefore the statistical signifance of the relative income in his model cannot be used to determine whether it has an effect on its own. However in not testing for the effects of relative income separately Solt effectively makes an assumption that relative income affects political engagement.

Unlike Anderson and Beramendi, Solt (2008) uses data on actual electoral participation in past elections, therefore Solt's finding that neither the interaction term between income inequality and nor relative income has any statistically significant effect on actual electoral participation confirms my results that show that relative income has no direct effect on electoral participation.

In this chapter I have shown that indeed as the resource and Civic Voluntarism suggest, relative income does not have a direct effect on voting participation, but rather it has an indirect effect via political engagement. The analysis has confirmed the argument that any discussion about how income inequality affects voting participation should focus on how socio-economic status and relative income position shapes political engagement rather than on the question of whether monetary resources are needed for voting.

CHAPTER 3

INCOME INEQUALITY AND POLITICAL ENGAGEMENT IN POST-COMMUNIST COUNTRIES

INTRODUCTION: INCOME INEQUALITY AND POLITICAL ENGAGEMENT

Research on political participation, over the course of several decades, has confirmed that socio-economic (SES) models of political participation hold across countries and time: generally the better educated and the wealthier an individual, the more likely this individual is to participate. The individual level analysis in Chapter 1 has shown that indeed, overall, wealthier individuals in post-Communist countries are more politically engaged and as a result more likely to vote. The recent interest among political scientists in income inequality has raised the question of whether changes in income inequality explain the strength of the relationship between income and political participation described by the SES models. Currently this question has only been investigated in the context of established democracies (Brady 2004; Solt 2008 Anderson and Beramendi 2008). The theories on income inequality and political engagement tested in this thesis, both the relative power and redistributive conflict theories, suggest that levels of political engagement at the individual level are influenced by income inequality. The main existing studies on income inequality and political participation (Solt 2008; Anderson and Beramendi 2008) suggest that indeed political engagement and voting participation become more stratified by relative income if income inequality increases. As discussed in the Introduction, investigating whether this pattern holds true in post-Communist countries is particularly important since several experienced unprecedented jumps income inequality while being the process of democratizing. If indeed income inequality negatively influences political engagement and voting participation in post-Communist countries then there might be some grounding for the fears expressed in the early 1990s that dual economic and political transitions would undermine successful

democratization. Income inequality could help explain some of the difficulties in democratizing experienced by the CIS countries of Russia, Moldova, and Ukraine. Thus this chapter investigates how income inequality affects overall political engagement and whether the stratification of political engagement by relative income is dependent on income inequality in the new research context of post-Communist countries. I will test the following four hypotheses, that had been laid out in Chapter 1, the first two of which pertain to the effect of income inequality on political engagement at the aggregate level and the second two test for the cross-level interaction between income inequality and the effect of relative income on political engagement:

- Hypothesis 3a: If the relative power theory holds true, income inequality should have a negative effect on political engagement and therefore voting participation at the aggregate level.
- Hypothesis: 3b: If the redistributive conflict theory holds true, income inequality should have positive effect on aggregate levels of interest in politics and therefore on aggregate levels of turnout.
- Hypothesis 4a: if the relative income theory holds true, the coefficient for income inequality should be negative and interaction term between income inequality and relative income should be positive. In other words the marginal effect of income inequality should be increasingly negative the lower the income quartile.
- Hypotheses 4b: If the conflict theory holds true, the coefficient for income inequality should be positive across all income quartiles and the interaction term between income inequality and relative income should have no effect.

INCOME INEQUALITY AND POLITICAL ENGAGEMENT: AGGREGATE ANALYSIS

In this section the overall goal to is to test for effects of income inequality on political engagement and voting participation at the aggregate level, and, secondly, to test the explanatory power of income inequality against other macro-level determinants of turnout suggested by the literature. Jackman (1987) argued that various institutional variables related to electoral systems can explain 75% of the variation in turnout between countries, therefore to fully determine whether income inequality can explain differences in political engagement and voting participation in post-Communist countries it is important to compare its explanatory power to various the institutional determinants of turnout. The aggregate analysis will test the explanatory power of income inequality against the main determinants of turnout suggested by the seminal studies on cross-national variation in turnout (Lijphart 1984; Jackman 1987; Powell 1986), as well those suggested by studies focused specifically on post-Communist Eastern Europe (Kostadinova 2003; Kostadinova and Power 2007; Pacek et al. 2009).

Both the general literature on turnout and the literature focused on post-Communist countries suggest numerous factors that can explain variation in political engagement across post-Communist countries. As the goal of this thesis is not to identify every determinant of overall political engagement across post-Communist countries, I select only the most robust determinants using the most comprehensive study over determinants of overall turnout I have found by Kostadinova and Power (2007). Other studies of turnout in post-Communist countries exist (see Tucker 2002 for an extensive review), however they either focus on a small group of countries or they do not fully consider all the determinants of turnout suggested

by the general literature (for example: Pacek et al. 2009). Using the study by Kostadinova and Power (2007), the following factors have been identified as the most robust[1] determinants of turnout in post-Communist countries: the number of years elapsed since the collapse of Communism, unicameralism, multipartyism, disproportionality, and district magnitude. I also add two typical economic determinants: economic development and growth. Given that the levels of political engagement differ as much within countries over time as between countries, I predict that factors which change over time, such as the number of years elapsed from the collapse of Communism and multipartyism as well the economic indicators, are the most likely predicators political engagement and voting participation. Owing to the small sample of country survey years, rather than testing all the macro-level determinants in one model, I first test each one separately to reduce the chance of a Type II error (false negative), and then I include along side income inequality only the variables that were statistically significant when tested singly.

Description and Measurement of Macro-level Determinants of Political Engagement and Voting.

The measures of the institutional and economic determinants of turnout have been compiled from several different datasets. Most of the measures of institutional determinants were kindly supplied by Kostadinova and Power (2007) and are supplemented by the Database of Political Institutions (Thorsten Beck, George Clarke, Alberto Groff, Philip Keefer, and Patrick Walsh, 2001. "New tools in comparative political economy: The Database of Political Institutions." 15:1, 165-176 (September), *World Bank Economic Review*.) as well by the dataset of election indices created by Michael Gallagher[2] (Gallagher and Mitchell 2003). The measures for

[1] Statistically significant at or below the .05 level.
[2] Indices available on Michael Gallagher's website: http://www.tcd.ie/Political_Science/staff/michael_gallagher/ElSystems/index.php) Version used in this thesis downloaded in Jan 2010.

economic development and growth come from the United Nations Statistics Division. Finally the measure for income inequality has been obtained from the Standardized World Income Inequality Database (SWIID) created by Frederick Solt.[3] The precise measurement methods for each determinant will be discussed in the following sections.

The Dependent Variables.

The dependent variables investigated in the aggregate analysis are the two measures of political engagement (interest in politics and political efficacy including overall, internal and external efficacy) as well as the two measures of voting (participation in past parliamentary elections and vote intention). The measurement and nature of these variables has already been discussed in the last chapter.

The Independent Variables: Income Inequality and Other Institutional and Economic Determinants of Political Engagement.

I would like to note that to maintain the right time ordering when analyzing past voting, the measures of the independent variables were adjusted. The EurEqual Survey, which is used for the measure of past voting participation, was not conducted immediately after an election but anywhere from a few months up to three years following it. To preserve proper causal ordering, I use measures of all the independent variables, including income inequality, from the election year rather than the survey year. Of course it is possible that the relative income position of the individual respondents has changed between the election and the survey, so the analysis makes the assumption that social mobility is low and the relative income positions of respondents have not changed.

[3] http://www.siuc.edu/~fsolt/swiid/swiid.html

Income Inequality.

I will begin by discussing the measurement of income inequality which of course is the most important variable in this analysis and also the most likely to draw criticism as to its measurement. As the types and theoretical aspects of the measures of income inequality, particularly the gini coefficient used in the this thesis, have been discussed in Chapter 1 and the definitions of income have been discussed in Chapter 2 , I will not repeat the discussion of these issues. Instead here I will focus on the measurement and data issues pertaining specifically to the gini coefficient..

The use of the gini coefficient as a measure of income distribution by social scientists has been severely criticized both because of definitional issues and the reliability of sources on national income data. Atkinson and Brandolini (2001) point out the several dangers of using the widely available 'secondary' datasets with measures of income inequality related particularly to their quality and consistency. The authors point out that the measures provided in the two main 'secondary' datasets, the Deringer and Squire Dataset and World Income Inequality Dataset (WIID), provide a variety of gini coefficients which are based on different definitions of income (inclusion or exclusion of income from interest, rent in addition to earnings from wages), reference units (household, person, tax unit), tax treatment (gross/pre-tax or net/post-tax) among other criteria as well as being derived from different sources including Household Surveys or national administrative data. These secondary datasets often provide several different estimates of income distributions for one year in a country. Depending on the progressivity of the tax system, income distribution estimates based on

gross and net income can vary greatly for a given country in one year. Furthermore no single consistent choice of measurement criteria provides data points for every year. Considering that measures calculated using different combinations of criteria yield quite different estimates, Atkinson and Brandolini rightly warn against using the secondary datasets without considering the type of underlying data. The best way to overcome the problems associated with measurement inconsistencies would be to use data from the Luxemburg Income Study (LIS) which carefully standardizes the original micro-level data, however the LIS covers few countries and years, including only eight of the post-Communist countries analyzed in this thesis.

To maximize the number of countries and years covered while addressing some of the key measurement issues identified by Atkinson and Brandolini (2001), I use the Standardized World Income Inequality Database (SWIID) created by Frederick Solt. While the data in the SWIID is far from perfect as it uses observations from the WIID with not just the highest quality rating in order to maximize coverage, the standardization process used by Solt accounts for the discrepancies caused by differences in reference units and income definitions as well as sudden jumps over time due to measurement error (for a full description of the techniques used in the creating the SWIID see Solt (2009)). The general 'smoothness' of the changes in income inequality for post-Communist in SWIID data suggests that most discrepancies have been accounted for. The huge jumps in the early years of the transition were caused by actual underlying structural not by measurement error. There is some discussion about how accurately these jumps have been estimated by the given data, and the increases in income inequality in CIS countries may be somewhat overestimated (Milonovic 1998: 152-155), however the fact that the measurements show the increased levels of income inequality to be sustained over more than a decade since the initial jump is additional

evidence that several of post-Communist countries experienced real and quite permanent changes in their income distributions (see graphs of income inequality over time in the Introduction, Figure 0.1). Returning to Figure 0.1, in the Introduction, the CIS countries (Russia, Ukraine and Moldova) experienced the greatest jumps in income inequality followed by the Baltic republics. Whereas in the Visegrad countries, income inequality remained close to the pre-transition levels. Much of the variation in the changes in income distributions can be attributed to the degree of restructuring necessary in the transition to market economies. Despite being under Communist regimes, the Visegrad countries still retained high levels of private property and enterprise compared to former Soviet Union.

The SWIID dataset provides two sets of gini coefficients: based on net and gross income. In the analysis I used the measure for the net or post-tax income distribution (for a discussion of the gini coefficient as a measure of the income distribution and theoretical reasons for using the gini based on net income see Chapter 1, pp. 5-8).

Multipartyism.

Multipartyism is the effective number of parties in the lower house or unicameral legislature . Jackman (1987) argues that the number of parties is inversely correlated with turnout, since voters see that their votes will not translate well into the formation of government if the party system is too fractionalized. Other studies have suggested that large numbers of parties confuse and alienate voters (Kostadinova 2003). Therefore multipartyism is likely to depress political engagement.

To measure multipartyism I use the effective number of parties index from Michael Gallagher's dataset.[4] For the years in the dataset with missing data [5], I have substituted in

[4] See citation earlier in chapter. The version of his indices used in this thesis were downloaded in February 2010.

values from Kostadinova and Power (2007) who use the same method as Gallagher in calculating the least squares index (see Appendix B of Gallagher and Mitchell (2008)). For mixed electoral systems with proportional and single member districts, two separate measures are calculated and then the two are combined with weighting for proportion of seats in the legislature chosen according to each system.

Unicameralism.

Unicameralism means that the legislature has a single chamber. Some nominally bicameral legislatures can have a dominant lower chamber making the legislature effectively unicameral –Lijphart (1984) calls this type of bicameralism asymmetrical. Unicameralism can be measured on a scale ranging from legislatures with a single chamber, nominally bicameral legislatures whose chambers are assymetrical favoring the lower one, to strong bicameralism where both chambers hold equal power. Lijphart also introduces a second dimension according to which to measure the degree of unicameralism: congruence. If both chambers represent the same territories and populations they are congruent. According to Lijphart congruence makes a bicameral legislature closer to unicameralism (1984: 99), since both chambers are in greater consensus as they represent identical populations.

Unicameralism has been shown to increase turnout (Jackman 1987), since elections to unicameral legislatures are seen as more decisive and voters feel that the make up of a unicameral legislature is more likely to have a policy impact. Several studies have shown the decisiveness of electoral outcomes positively influences turnout (see Blais 2006 for review). Kostadinova and Power (2007) find that the positive effect of unicameralism holds in post-Communist Eastern Europe.

[5] Ukraine 1998, Ukraine 1994, Russia 1993

To measure the degree of unicameralism I use the data from Kostadinova and Power (2007) who have used Lijphart's scale to measure unicameralism across post-Communist countries. I have kept the 5 point scale used by the authors: countries with nominally unicameral legislatures receive a score of 4, countries with nominally bicameral legislatures but which are congruent and asymmetrical favoring the lower chamber thus in practice unicameral receive a score of 3, countries with incongruent bicameralism receive a score of 2, countries with bicameralism receive a score of 2 or strong bicameralism receive a score of 0. Most post-Communist countries (including Bulgaria, the Czech republic, Estonia, Hungary, Latvia, Lithuania, Slovakia , Ukraine and Moldova) have unicameral legislature. Russia is strongly bicameral. Whereas Poland and Romania fall into the intermediate categories.

Disproportionality.

Disproportionality is the distortion of representation caused by the translation of votes into seats. Disproportionality has been shown to depress voting participation (Lijphart 1984;) since voters have less of an incentive to vote if their votes do not translate into seats for their favored party. Kostadinova and Power have found disproportionality have a negative effect on turnout in post-Communist countries.

There are various ways of measuring disproportionality: Lijphart and Powers and Kostadinova (2008) use the proportion of votes to seat shares for the two largest parties whereas Gallagher's 'least squares index' measures the disproportionality between the distribution of votes and seats for all parties. I use the least square index from Michael Gallagher's dataset as a measure of disproportionality. Some of the election years are not covered by his dataset such as Russia 1993, Russia1995, and Ukraine 1998. For these years I have calculated the least squares index following Gallagher's formula (see Appendix B, Gallagher and Mitchell (2008)) using data from on election results from the PARLINE database of the

Interparliamentary Union[6] and from the Project on Political Transformation and the Electoral Process in Post-Communist Europe database.[7]

District Magnitude

District magnitude is the number of candidates per district. Powell (1986) argues that single member district plurality does not provide incentives for parties to run candidates everywhere, thus some districts are simply written off by parties and parties do not make an effort to mobilize voters in these districts. Whereas proportional representation systems which allow for higher district magnitude encourage parties to mobilize voters in every district. Several studies have confirmed the positive impact of district magnitude on overall turnout (Powell 1986; Jackman 1987; Kostadinova and Power 2007).To measure district magnitude I use data on district magnitude from World Bank Database of Political Institutions[8] supplemented by Kostadinova and Power (2007).

Years Elapsed From the Collapse of Communism

O'Donnell and Schmitter (1986) argue that voting participation should be expected to decline as the initial excitement of transition to democracy wears off though they did not test this claim empirically. Kostadinova and Powers (2007) show that with every election since the heady days of the collapse of communism turnout declines as the levels of interest in politics

[6] http://www.ipu.org/parline/parlinesearch.asp. Data downloaded February 2010.
[7] http://www2.essex.ac.uk/elect/database/database.asp

[8] http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20649465~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html; Thorsten Beck, George Clarke, Alberto Groff, Philip Keefer, and Patrick Walsh, 2001. "New tools in comparative political economy: The Database of Political Institutions." 15:1, 165-176 (September)

return to 'normalcy.' I calculate the number of years elapsed from the first free election at the time of the survey.

Economic development and economic growth.

Several studies have argued for a positive relationship between economic growth and democracy, especially the modernization argument (Lipset 1959). Przeworski et al. (1997, 2000) have argued that there is no relationship between levels of economic development and democracy, however some studies (Powell 1982) have found that turnout tends to be higher in more economically developed countries. The individual level analyses of political participation particularly those based on the SES or resource models suggest that participation is positively correlated with absolute levels of resources. Especially as this thesis investigates the effect relative rather absolute income, a control for overall economic development is important when considering the effects of changes in income inequality. To measure economic development I use the standard measure of GDP per capita obtained from the United Nations Statistics Division[9]

The literature on turnout shows that economic growth can have contradictory effects depending on such factors as the overall level of welfare spending (Radcliff 1992). In countries with strong welfare systems, economic growth has little of no effect on turnout, whereas in countries that lack strong safety nets, poor economic growth can have mobilizing effect. To measure economic growth I use the measure of economic development (GDP per capita) to calculate growth over the year proceeding the survey year.

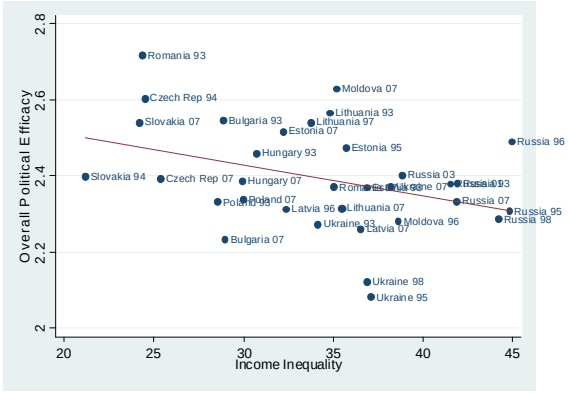
Results of Aggregate Analysis.

[9] http://unstats.un.org/unsd/default.htm. Measures of GDP per capita downloaded in March 2010.

As discussed before the relative power theory suggests that income inequality should depress political engagement, whereas the redistributive conflict theories suggest that income inequality should mobilize political engagement and voting participation as conflict over redistribution intensifies. To test the effects of income inequality on overall levels of political engagement and voting participation I look at correlations and then use standard least squares (OLS) regressions. The results show that income inequality overall has a negative impact on political engagement and voting participation however the effect of income inequality on most of the measures, witht the exception of overall and external efficacy, disappears when other institutional and economic determinants of turnout are controlled for.

Figure 1: Association between Overall Efficacy and Income Inequality

Figure 2:Association between Overall Political Efficacy and Income Inequality



As Figures 3.1 and 3.2 show, overall income inequality shows a negative aggregate level correlation with the two measures of political engagement, interest in politics and political efficacy. However the correlations are only moderately strong (interest in politics: r= -.38; overall political efficacy: r =-.36) and weakly statistically significant (interest in politics p=.03 ; overall political efficacy p=.04). On the other hand, income inequality appears to have a much stronger negative correlation with external political efficacy (-.59) which is strongly

statistically significant (p=0.0002). For comparison, the correlation between income inequality and internal political efficacy (r=0.31) is weakly significant (p=0.08). Figures 3.3 and 3.4 illustrate the different association between internal and external efficacy and income inequality. The strong negative aggregate correlation between income inequality and external efficacy supports the relative power theory according to which increased income differentials should cause lower income individuals to decide that they cannot prevail in political conflicts.

Figure 4: Association Between External Efficacy and Inequality

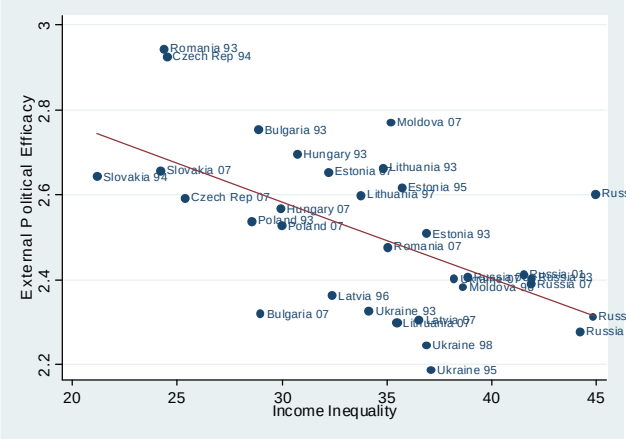
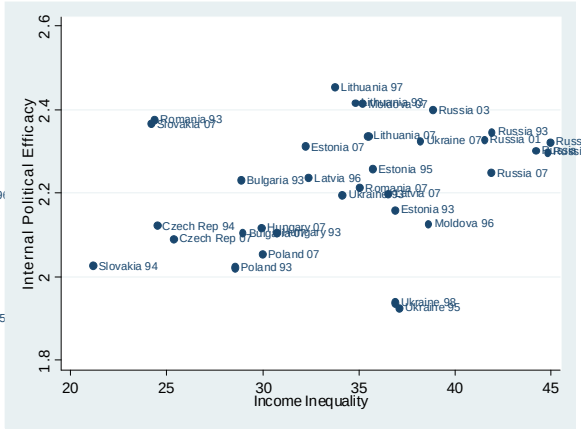


Figure 4: Association Between Internal Efficacy and Inequality



Aggregate level analysis shows that the negative effect of income inequality on political efficacy retains its strength and statistical significance even when controlling for other macro-level determinants of political engagement. Before including macro-level variables as controls alongside income inequality, I first tested each determinant of turnout separately regressing each of the forms of political engagement on each on each of the eight macro-level determinant of turnout. The results are shown in Table 3.1 and 3.2.

Table 3.1: Aggregate Political Efficacy Regressed on Individual Determinants of Political Engagement

	Overall Efficacy OLS				Internal Efficacy OLS				External Efficacy OLS			
	Coefficient	Constant	N	R^2	Coefficient	Constant	N	R^2	Coefficient	Constant	N	R2
Income Inequality	-.0081** (.0036)	2.67 (.12)	33	0.17	.0070* (.0040)	1.98 (.13)	33	0.094	-.018*** (.0044)	3.12 (.15)	33	0.35
GDP per capita	0.00000071 (0.000006)	2.40 (0.036)	33	0.0001	-.0000011 (.0000053)	2.23 (.037)	33	0.0044	.0000018* (.000007)	2.50 (.049)	33	0.0023
GDP/capita growth	.0027** (.0013)	2.36 (.029)	33	0.11	.0016 (.0013)	2.21 (.031)	33	0.043	.0032 (.0017)	2.47 (.040)	33	0.10
Disproportionality	.00012 (.0061)	2.39 (.056)	32	0.0013	-0.0017 (.0063)	2.23 (.058)	32	0.0024	.0032 (.0084)	2.49 (.076)	32	0.0047
Unicameralism	.00060 (.015)	2.40 .050)	33	0.000	-.029** (.014)	2.30 (.047)	33	0.12	.018 (.020)	2.45 (.070)	33	0.037
District Magnitude	-.00011 (.00046)	2.40 (.034)	33	0.0046	.00059 (.00046)	2.19 (.034)	33	0.051	-.00057 (.00063)	2.54 (.047)	33	0.026
Years Elapsed from last election	-.0015 (.0040)	2.41 (.044)	33	0.0046	.0022 (.0041)	2.20 (.046)	33	0.0094	-.0040 (.0055)	2.54 (.061)	33	0.0171
Multipartyism	-.019 (.015)	2.48 (.07)	33	0.05	.0023 (.016)	2.21 (.072)	33	0.0007	-.035* (.02)	2.66 (.093)	33	0.087

If all eight macro-level variables would be included in one model, then given the small number of country survey years, the regression would underestimate their statistical significance leading to a Type II error or 'false negative.' After regressing each of the forms of political engagement on each macro-level determinant of turnout separately, I select the determinants of each for of political engagement that show some statistically significance and include all of them as covariates alongside income inequality.

Table 3.1: Aggregate Interest in Politics Regressed on Individual Determinants of Voting Participation

	Interest in politics OLS			
	Coefficient	Constant	N	R2
Income Inequality	-.012** (.0057)	2.76 (.18)	30	0.14
GDP per capita	.0000050 (.0000195)	2.36 (.067)	32	.0022
GDP/capita growth	-.0050** (.0019)	2.38 (.034)	29	0.20
Disproportionality	-.00017 (.0098)	2.39 (.092)	30	0.0010
Unicameralism	.069** (.025)	2.16 (.087)	30	0.21
District Magnitude	-.00016 (.00081)	2.38 (.052)	30	0.0013
Years Elapsed from First Free Election	-.015* (.0081)	2.49 (.076)	30	0.11
Multipartyism	-.026 (.026)	2.48 (.11)	30	0.035

* p<.10 **p<.05 ***p<.01 ; Source: World Values Survey 5 Wave (1990-2006) Dataset

While income inequality on its own shows a negative effect on interest in politics, income inequality loses statistical significance once other relevant determinants of interest in politics are controlled for. As the Table 3.2 shows, three determinants of political engagement other than income inequality have an effect on interest in politics: economic growth (GDP per capita), unicameralism, and the number of years elapsed from the first free election. The effects shown by these determinants are in accordance with the literature. Economic growth shows a negative effect on interest in politics. Economic

conditions particular economic growth can have both positive and negative effects on turnout depending on levels of welfare spending in a country (Radcliff 1992). Unicameralism has a positive effect on interest which agrees with the literature on turnout that suggests that incentive to vote increase if the elected political body is more decisive (Jackman 1987: 409). Finally the number of years elapsed from the first free election has a negative effect on interest in politics supporting the idea mobilization of voters declines after the founding elections (O'Donnell and Schmitter 1986; Kostadinova and Power 2007). As Table 3.3 shows, income inequality is not a strong determinant of interest in politics. Income inequality loses statistical significance once controls for economic growth , unicameralism, and years elapsed since the first free election are added.

Table 3.3: Regressions of Voting Participation and Political Engagement on Relevant Macro-level Institutional and Economic Determinants (SEs in parentheses)

	Past Vote	Vote Intention	Overall Political Efficacy	Internal	External	Interest in Politics
Income Inequality	-.0049 (.0034)	-.0033 (.0049)	-.0087** (.0039)	.0037 (.0046)	-.018*** (.0047)	-.0051 (.0057)
GDP per capita		.0000013 (.000087)	.0000026 (.000005)		.000006 (.0000059)	
GDP/capita growth		.0054** (.0025)				-.0046* (.0022)
Disproportionality						
Unicameralism				-.021 (.017)		.043* (.025)
District Magnitude						
Years Elapsed from last election		-.0019 (.0094)				.0045 (.0092)
Multipartyism	-.024* (.013)				-.018 (.018)	
Constant	.99 (.10)	.62 (.17)	2.71 (.14)	2.16 (.19)	3.23 (.18)	2.37
R2	0.33	0.49	0.14	.14	0.39	0.35
N	23	22	33	33	33	29

* p<.10 **p<.05 ***p<.01 ; Source: EurEqual Survey 1993-2007 Integrated Dataset; OLS models used for all regressions

While income inequality does not have strong effects on interest in politics, it does appear to have a strong enough effect on political efficacy that it retains the size and statistical

significance even when other controls are added (see Tables 3.1 and 3.3). Table 3.3 shows that the negative effects of income inequality on overall and external political efficacy remain constant despite the addition of the relevant controls. The negative effect of income inequality on external efficacy is the strongest and is highly statistically significant with a p-value of 0.001.

Figure 3.5: Association between Vote Intention and Inequality

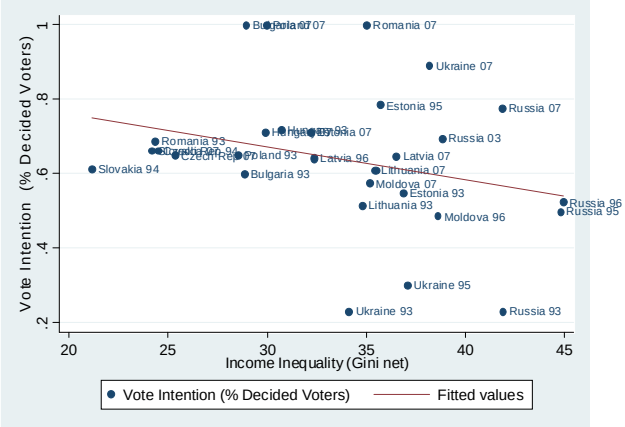
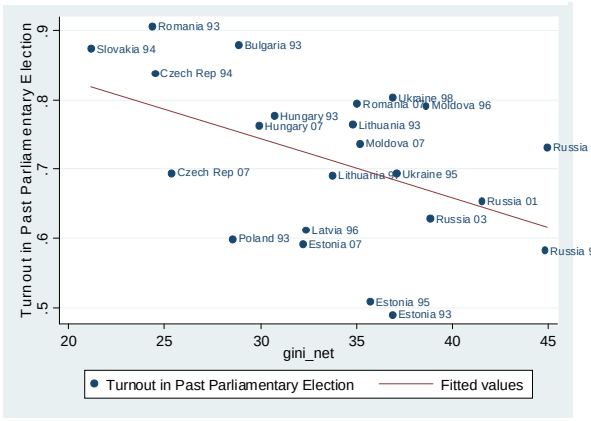


Figure 1: Association Between Turnout and Inequality



The aggregate analysis shows that income inequality has a moderately significant negative effect on voting participation, which loses statistical significance once other determinants of turnout are controlled for confirming the argument from Chapter 1 that income inequality and relative income do not have direct effects on voting participation. Figures 3.5 and 3.6 show that income inequality has a negative correlation with both measures of voting participation (past vote: r=-.47; vote intention r= -0.44) that is moderately statistically significant (for past vote p=0.02 ; vote intention p=0.03). Table 3.4 shows that when both measures of voting participation are regressed on income inequality alone, income inequality has a negative effect. However, as Table 3.3 shows, once the other determinants of voting participation identified in Table 3.4, are controlled for, the negative effect of income inequality loses statistical significance suggesting that income inequality does not have direct effect on voting participation. Table 3.3 shows that for participation in

past parliamentary elections multipartyism has a stronger effect than income inequality, whereas economic growth is a stronger determinant of vote intention than income inequality. The effect of both multipartyism and economic growth show the predicted effects: increased number of parties creates confusion among voters depressing turnout, whereas economic growth in countries with moderate welfare systems encourages participation (Radcliff 1992). The aggregate analysis shows further confirmation of Hypothesis 1 which is based on the argument that income inequality and relative income do not have a direct effect on voting participation but rather have an indirect effect through political engagement.

Table 3.4: Measures of Voting Regressed on Individual Institutional and Economic Determinants of Turnout

	Past Vote LR			Vote Intention LR		
	Coefficient	Constant	N r2	Coefficient	Constant	N r2
Income Inequality	-.00098*** (.0033)	1.02 (.11)	21 0.30	-.0097** (.0044)	.90 (.15)	22 0.19
GDP per capita	0.0000026 (.0000076)	.71 (.034)	22 0.006	.000011** (.0000058)	.52 (.041)	22 0.14
GDP/capita growth	-.00077 (.0011)	.70 (.026)	21 0.0276	.0057*** (.0013)	.50 (.030)	22 0.46
Disproportionality	.0055 (.0067)	.66 (.064)	20 0.035	-.0057 (.0074)	.63 (.070)	21 0.0302
Unicameralism	.0034 (.020)	.70 (.070)	20 0.0016	.014 (.020)	.52 (.069)	22 0.026
District Magnitude	-.00027 (.00073)	.71 (.037)	20 0.0078	-.00024 (.00060)	.58 (.045)	22 0.0078
Years Elapsed from First Free Election	-.00091 (.0048)	.72 (.038)	23 0.0017	.010** (.0049)	0.48 (.048)	22 0.18
Multipartyism	-.033** (.012)	.87 (.059)	23	.000055 (.021)	.57 (.10)	22 0.000

* p<.10 **p<.05 ***p<.01 Source: EurEqual 1993-2007 Integrated Dataset

To conclude, the results of the aggregate analysis shows support for the relative power theory rather than redistribute conflict theories. As the aggregate analysis has shown income inequality has a negative effect on political engagement and political participation

confirming Hypothesis 3a according to which if the relative power theory holds true, income inequality should have a negative effect on political engagement voting participation at the aggregate level. Most interestingly the results show that income inequality has the strongest effects on overall and external political efficacy providing additional support for the relative power theory, since relative power considerations pertain to how external circumstances shape an individual's ability participate. The aggregate analysis shows no confirmation for Hypothesis 3b according to which if the redistributive conflict theory holds true, income inequality should have positive effect on aggregate levels of interest in politics and therefore on aggregate levels of turnout.

ARE THE EFFECTS OF RELATIVE INCOME ON POLITICAL ENGAGEMENT DEPENDENT ON INCOME INEQUALITY? MULTILEVEL ANALYSIS

So far the analysis has shown that relative income does have a positive effect at the individual level and that income inequality has a negative effect at the aggregate level. These results show that wealthier individuals are more politically engaged than poorer ones, and that overall political engagement declines with income inequality. However thus far the analysis has tested the effects of relative income and income inequality separately when in fact the two variables work together. The relative power theory suggests that overall political engagement declines as income inequality increases, because political engagement among the (relatively) poor is declining. Thus the following half of this chapter addresses the following questions: *does stratification of political engagement by relative income increase with income inequality? In other wards does inequality cause the gap between levels of political engagement of top and lowest quartiles to increase?* As the analysis in the previous section and in Chapter 1 has shown that relative income and income inequality primarily have an effect on voting through political engagement, this

analysis will focus on how income inequality affects the relationship between relative income and political engagement.[10]

The models used for this analysis are three level multilevel(hierarchical) models with random intercepts at the both higher levels and a random slope for relative income at the second level. The three levels of the models are : the individual level (level 1), the country survey year level (level 2), and the country (level 3). The choice to include three levels is based on the results of an analysis of variance of each of the measures of political engagement. The analysis shows that most of the variation in political engagement is at the individual level, some of the variation occurs at the second, country survey year level, and very little at the country level. Though the percentage of variance at the country level is less than 1%, it is statistically significant for external political efficacy and interest in politics, as shown in Table 3.5. [11] Therefore the models should have three levels to avoid the risk of a Type 1 error

Table 2.5: ANOVA (Analysis of Variance) Model of Political Engagement Across Three Levels of Analysis

Parameter	Overall Political Efficacy OLS	External Political Efficacy OLS	Interest in Politics OLS
Fixed Effects			
Constant	2.40***	2.53	2.50***
	(.028)	(.041)	(.077)
Variance Components			
Country Variance (L-3)	.0035	.011*	.040**
	(.0038)	(.0082)	(.028)
Country Survey Year Variance (L-2)	.015***	.024***	.086***
	(.0045)	(.007)	(.025)
Within-Country Survey Year Variance (L-1)	.35***	.43***	.71***
	(.0022)	(.0027)	(.0049)
Number of Observations			
Countries	12	12	12
Country survey years	33	33	36
Individuals	49026	49111	42163
log likelihood		-48923	-52699

* p<.10 **p<.05 ***p<.01; Statistical significance of variance components based on likelihood-ratio test of models with and without each of the higher levels.

[10] Voting Intention in this chapter is treated as a form of political engagement since the results in Chapter 1 showed it to be more similar to political engagement than actual voting.

[11] Internal political efficacy is not included in this analysis since the aggregate analysis has shown the inequality has no effect on it. Whereas vote intention does not have enough cases at the higher levels to allow for an ANOVA of all three levels.

The full multilevel model used in the analysis consists of four 'sub-models': the level-1 model which shows political engagement as dependent on relative income and other socio-economic factors, the two models that account for the variation in the intercept at the country survey year and country levels, and finally the model that allows the slope of relative income to vary across country survey years. Equation 3.1 shows the level-1 model with political engagement as being dependent on relative income and other socio-economic variables. Equations 3.2 and 3.4 show that the intercept for relative income is allowed to vary at the two higher levels: country-survey year (level-2) and at the country level (level-3).

$$\begin{aligned} \boldsymbol{PoliticalEngagement_{ij}} &= \boldsymbol{\beta_{0j} + \beta_{1j}\, RelativeIncome_{ij} + \beta_{4j} Age + \beta_{4j} Age^2} \\ &+ \boldsymbol{\beta_{4j} EducPrimary + \beta_{4j} EducSecondary} \\ &+ \boldsymbol{\beta_{4j} EducTeriary + \beta_{4j} Female + \beta_{4j} Married + r_{ij}} \end{aligned} \quad (3.1)$$

$$\boldsymbol{\beta_{0jk} = \delta_{00k} + U_{0jk}} \quad (3.2)$$

$$\boldsymbol{\delta_{0jk} = \gamma_{000} + V_{00k}} \quad (3.3)$$

To determine whether income inequality increases the stratification of political engagement by relative income, the multilevel model contains an interaction between income inequality and relative income. To simplify the creation of the interaction term, relative income is treated as an interval variable. This treatment of relative income is justifiable in so far as the partially pooled models in Chapter 2 (see Table 2.6) show relative income to have a positive and monotonous effect on political engagement –in other words in so far as relative income does not have a curvilinear relationship with political engagement. The interaction term between income inequality and relative income is created by allowing the slope for relative income to vary across country survey years and by introducing income inequality as a level-2 variable explaining the variation in the

slope for relative income as shown by Equation 3.4 (Snijders and Bosker 1999: 73-75; Bauer and Curran 2005: 387).

$$\boldsymbol{\beta_{1jk} = \delta_{10k} + \delta_{11k} Inequality_{jk} + U_{1jk}} \quad (3.4)$$

The interaction term becomes apparent in the 'reduced' or combined form of the model shown by Equation 3.6. The reduced form of the model with the interaction term between income inequality and relative income is created by substituting in the models for the random intercepts and random slope into the level one model. After substituting in the models for the random effects, the reduced model is rearranged so that the fixed effects come first followed by the four random effects (Equation 3.5)

$$\begin{aligned} PoliticalEngagement_{ij} &= \gamma_{000} + (\delta_{10k} RelativeIncome_{ijk} \\ &+ \delta_{11k} Inequality_{jk} RelativeIncome_{ijk} + \beta_{4j} Age \\ &+ \beta_{4j} Age^2 + \beta_{4j} EducPrimary + \beta_{4j} EducSecondary \\ &+ \beta_{4j} EducTeriary + \beta_{4j} Female + \beta_{4j} Married + V_{00k} \\ &+ U_{0jk} + U_{1jk} RelativeIncome_{ijk} + r_{ij} \end{aligned} \quad (3.5)$$

The results of the multilevel analysis shown in Table 3.6 show, that contrary to the predictions of the relative power theory, political engagement does not become more stratified by relative income in more unequal countries. In other words, the gap in levels of political engagement between the lowest and highest income quartiles does not increase with income inequality. The results of regressions of the measures of political engagement on relative income done in each country survey year (see Appendix) indeed show that political engagement is most stratified in the Visegrad countries which have the most equal income distributions and conversely political engagement is least stratified predominantly in the CIS countries which are the most unequal. The multilevel analysis suggests that though overall turnout is negatively correlated with income inequality as shown by

aggregate analysis in this chapter, stratification of political engagement by relative income seems to be caused by factors other than income inequality such as the existence of social cleavages.

Table 3.6 : Parameter Estimates of Political Engagement Regressed on Relative Income and Income Inequality and Interaction Between the Two

	Overall Efficacy [b]	Overall Efficacy	External Efficacy [b]	Interest in Politics [b]	Vote Intention [c]
Income Inequality	-.0062	-.0011**	-.016***	-.027***	-.027
	(-.0044)	(.0037)	(.0046)	(.0084)	(.023)
Income	-.0014	-	-.0013	-.00041	-.0003
Inequality*Relative	(.0010)		(.00090)	(.0097)	(.0030)
Income					
Relative	.092***	.041***	.084***	.053**	.074
Income(Income	(.035)	(.0025)	(.031)	(.030)	(.11)
Quartile)					
Age	-.0067	-.0068***	-.0096***	.027***	.020***
	(.00010)	(.00096)	(.0011)	(.0015)	(.0042)
Age2	.000065***	.000063***	.00011***	-.00021***	-.00013***
	(.0085)	(.000010)	(.000011)	(.000015)	(.000044)
Education					
2	.077***	.081	.037***	.36***	.28****
	(.0085)	(.0087)	(.0095)	(.014)	(.035)
3	.25***	.25	.15***	.64***	.61***
	(.0010)	(.010)	(.011)	(.0081)	(.042)
Female	-.11***	-.11***	-.043***	-.27***	-.19***
	(.0054)	(.0056)	(.0061	(.0081)	(.024)
Married	-.015***	-.014**	-.0053	.064***	.080***
	(.0060)	(.0062)	(.0067)	(.0094)	(.026)
Constant	2.61***	2.81***	3.10***	2.19***	.33
	(.15)	(.15)	(.15)	(.26)	(.80)
Random Part[a]					
Country Level (Level 3)					
Intercept Variance	.0013	.0041	-	.019	-
	(.0036)	(.0040)		(.016)	
Country Survey-Yr					
(Level 2)					
Variance	.019	.013	.020	.090	.54
	(.0053)	(.0042)	(..055)	(.024)	(.16)
Slope Variance	.0011	-	.00079	.0012	.0070
(Relative Income)	(.00031)		(.00026)	(.0041)	(.0027)
Covariance Intercept	-.0019	-	-.0026	-.0063	-.017
and Slope	(.0012)		(.00087)	(.0027)	(.016)
Residual Variance	.34	.34	.42	.64	_
(Level 1)	(.0022)	(.0023)	(.0027)	(.0045)	
Number of					
Observations					
Countries	12	12	-	12	-
Country Survey Yrs	33	33	33	36	26
Individuals	48630	48630	48715	40784	36227
Log Likelihood	-42738.	-40129	-48150	-48983	-22278

[a]The statistical significance of the random effects is not marked since t-ratios using SE after the full estimate of the MLM should not be used as the random parameters divided by their standard errors do not have a t-distribution (Snijders and Bosker 1999: 88); b Estimated using multilevel linear models with random intercepts and slope for in relative income.; c Estimated using multilevel (hierarchical) logit model with random intercepts and random slope for relative income and 2-levels.

As discussed earlier, the multilevel analysis includes the cross-level interaction between income inequality and relative income to see if stratification of political engagement is dependent on the levels of income inequality. Table 3.6 shows that across all the measures of political engagement, the coefficient for the interaction term between income inequality

and relative income is not statistically significant indicating that the stratification of political engagement by relative income is not dependent on income inequality. Furthermore the coefficient of the interaction term is negative rather than positive as predicteded by the relative power theory. The negative coefficient for the interaction term indicates that the gap in levels of political engagement between the lowest and highest income quartiles may shrink in the most unequal post-Communist countries (of course this is only a tentative suggestion as the coefficient for the interaction term is not statistically significant). To more clearly illustrate this point, Table 3.7 shows that marginal effects of income inequality on each income quartile. Income inequality has the most negative marginal effect on the highest income quartiles which suggests that if in more equal countries individuals in higher income quartiles are more likely to be politically engaged , then as income inequality increases, their levels of political engagement drop towards the levels of individuals in the lowest income quartiles. These marginal effects found based on an analysis of post-Communist countries are the opposite of the marginal effects found by Solt (2008). Solt only analyzed the effects of income inequality in more established democracies including Poland and Slovenia. Thus it is possible that income inequality has a different effect on political behaviour depending on how democratic a country is. Also the set of countries examined by Solt are more likely to have established social cleavages, so political behaviour is more likely to be correlated with socio-economic status particularly relative income in these countries

Table 3.7: Marginal Effects of Income Inequality by Income Quartile

Dependent Variable	Poorest Quartile	Second Quartile	Third Quartile	Fourth Quartile
Interest in Politics	-.0274	-.0278	-.0282	-.0286
Overall Efficacy	-.0076	-.0090	-.0104	-.0118
External Efficacy	-.017	-.0186	-.0199	-.0212
Vote Intention	-.0273	-.0276	-.0279	-.0282

Overall the effects of the other variables shown by the multilevel analysis agree with the results of the individual level and aggregate analysis. As Table 3.6 shows, the coefficients for relative income for all measures of political engagement is positive and statistically significant confirming results from Chapter 2 which show that relative income has a positive and monotonous effect on political engagement. Table 3.6 shows also that income inequality has a negative effect on political engagement as found in the aggregate analysis. The regressions of overall political efficacy and vote intention produce coefficient for income inequality which are not statistically significant, possibly indicating some instability in the results. Income inequality regains statistical significance when overall political efficacy is regressed on income inequality, relative income and the individual level controls without the interaction term. For vote intention however income inequality remains insignificant even when the interaction term is removed. These anomalies are probably caused by the small number of cases at the higher levels in the model.

The multilevel analysis does not provide confirmation of neither the relative power nor the redistributive conflict theories. If the relative power theory holds true, then as Hypothesis 3a states, the coefficient for income inequality should be negative while the interaction term between income inequality and relative income should be positive. In other words the marginal effects of income inequality should be more negative the lower the income quartile thus increasing the gap in levels of political engagement between wealthy and the poor. The results of the multilevel analysis show exactly the opposite results suggesting that there is no correlation between income inequality and stratification of political engagement, and that possibly stratification of political engagement is weaker in more unequal post-Communist countries. The results of the multilevel analysis show also little if any support for the redistributive conflict theory. According to Hypotheses 3b, if the conflict theory holds true, the coefficient for income inequality should be positive across

all income quartiles and the interaction term between income inequality and relative income should have no effect. While the multilevel analysis shows that the interaction terms are not statistically significant, the coefficients for income inequality are negative disproving the redistributive conflict theories..

CONCLUSION

The findings in this chapter contradict the two main studies in inequality and political participation suggesting that in the post-Communist context income inequality has little or no effect on the degree to which political engagement and voting are stratified by relative income. Solt (2008) and Anderson and Beramendi (2008) both find that income inequality depresses political engagement and electoral participation, and Solt (2008) finds that inequality depresses political engagement particularly among individuals in the lower income quintiles in accordance with the relative power theory. The aggregate analysis in this chapter shows some confirmation for the findings of the two studies: income inequality has a negative effect on political engagement and voting participation, and the negative effects on political efficacy, overall and external, remain unchanged even when controlling for various institutional and economic determinants of turnout. However the findings of the multilevel analysis cast doubt on the idea that income inequality can explain the levels of political engagement in post-Communist countries. If indeed as the relative power theory suggests inequality depresses political engagement and turnout because lower income individuals become disaffected with rising income inequality, then one would expect to find that the gap in levels of political engagement between the rich and the poor to be greater in more unequal post-Communist countries particularly the CIS countries, Moldova, Russia, and Ukraine. However the findings show that relative income has a greater effect on political engagement in the more equal Visegrad countries. These

findings suggest that in the post-Communist context inequality does not cause stratification of political engagement by relative income. While explaining alternative causes of the variation in the effects of relative income across post-Communist countries is beyond the scope of this thesis, it possible that the presence of socio-economic cleavages determines whether relative income has an effect on political engagement. The literature social cleavages in post-Communist countries (Evans and Whitefield 1993; Whitefield 2002) shows that socio-economic cleavages are strongest in the very countries in which relative income is the most powerfully predicts political engagement and voting participation. To conclude, these findings suggest that if income inequality has an effect on political engagement that effect is highly conditional on the specific national context. Income inequality may have a stronger effect in established democracies where cleavages along socio-economic lines have already formed.

CONCLUSIONS

The aim of the thesis was to examine whether the rise in income inequality during the transition to market economies in post-Communist countries can explain the drop in the turnout in these countries. The literature on income inequality and political participation suggests that lower income groups are less likely to participate, and that income inequality increases stratification by relative income –in other words income inequality has stronger negative marginal effects on lower income groups compared to higher ones (Solt 2008). Solt (2008) explains this pattern using the relative power theory (Goodin and Dryzek 1980) according to which lower income individuals become increasingly disengaged as income inequality rises, because they consider their chances of influencing political outcomes to decline as relative power differentials increase between the rich and the poor. Examining whether these conclusions extend to the post-Communist context seems especially important given that several of countries, the CIS countries in particular, experienced unprecedented jumps in income inequality while transitioning to free market economies. I began this analysis with the supposition that income inequality could in part explain some of the difficulties these countries have experienced in democratizing. However the findings in this thesis cast doubt on whether the conclusions of the studies on income inequality and political participation in established democracies can extend to the post-Communist context.

Firstly through a re-examination of the literature on the causes of political participation (Almond and Verba 1963; Verba and Nie 1972; Wolfinger and Rosenstone 1980; Verba et al. 1995a, 1995b), I have clarified the ambiguities about the causal links between relative income and voting participation in Solt (2008) and Anderson and Beramendi (2008), showing that income is not a resource for voting. Both Solt and Anderson and Beramendi suggest that relative income has an effect on voting both as resource and an incentive. However the findings of the literature on the causes of political participation, in particular the resource and Civic Voluntarism Models (Verba et al. 1995a, 1995b) show that

though voting participation is stratified by socio-economic status, income is not a resource for, therefore direct cause of, voting.

Secondly, I have shown that while income is not a resource for voting, relative income, and therefore income inequality, is still relevant in explaining voting participation, since relative income shapes political engagement thus indirectly affecting voting participation. To illustrate how relative income shapes voting participation through political engagement I have proposed a path model that integrates the relative power theory (Goodin and Dryzek 1980) and Civic Voluntarism Model of political participation (Verba et al. 1995b). The findings of the individual level analysis in the first chapter confirm the path model by showing that any effects of relative income on voting participation disappear with the addition of controls for political engagement.

Having clarified the relationship between relative income and voting participation, I test whether the relative power and redistributive conflict theories, which are the main theories linking income inequality and political participation, are applicable in the post-Communist context paying particular attention to whether the conclusions of main empirical studies on income inequality and political participation (Solt 2008 and Anderson and Beramendi 2008) that income inequality increases the gap in political engagement between the rich and the poor hold in the new context. The results of both the individual and aggregate analysis would suggest that the conclusions of the studies hold in post-Communist Central and Eastern Europe, and that the relative power theory can explain some of the dynamics of political participation in these countries. The individual level analysis shows that indeed overall political engagement is stratified by relative income in post-Communist countries, while the aggregate analysis shows that income inequality has a negative effect on political engagement and voting participation. The negative effects of inequality on political efficacy hold even when other institutional and economic determinants of voting participation are

controlled for supporting the relative power theory. However the multilevel analysis in the last chapter shows that the stratification of voting by relative income is not dependent on income inequality. Examining the results of regressions run in each country survey year separately show that that in fact relative income has a stronger effect on political engagement in the more equal Visegrad countries including Poland and the Czech Republic and has the least effect in the highly unequal CIS countries such Moldova, Russia, and Ukraine. These findings suggest that factors other than income inequality determine the effect of relative income on political engagement and that the analytical framework used by Solt (2008) in particular the relative power and redistributive conflict theories are inadequate. While the consideration of other explanations is beyond the scope of this thesis, it is possible that the presence of socio-economic cleavages determines whether relative income has an effect on political engagement and voting participation. An examination of the findings of the literature on social cleavage in post-Communist Eastern Europe shows that there is an overlap between the countries, in particular the Visegrad countries, which have socio-economic cleavages and the countries in which this thesis has found relative income to be a determinant of political engagement.

To conclude this thesis suggests that though income inequality has been long accepted as being inimical to democracy, the effects of income inequality on political engagement and participation are far from clear and direct. The existing empirical studies on that do find income inequality to have an effect have focused on established democracies from among the OECD countries. The fact that this thesis has been unable to replicate the findings of these studies in the post-Communist context suggests that if indeed income inequality has an effect on political engagement, its effects are contingent national context, such as the presence of socio-economic cleavages, just to mention one possible intervening variable. Though many political scientists are currently expressing fears about the consequences of the rising income

inequality among existing democracies (APSA Task Force on Income Inequality 2004), the effects of income inequality on political participation and democratic stability are far from being as clear cut as theoretical arguments on redistributive conflict (Acemoglu and Robinson 2006) , relative power (Goodin and Dryzek 1980), and economic bases of political equality (Dahl 1971) would suggest.

APPENDIX

Table 1: Regression of Interest in Politics on Relative Income and Other Socio-Economic Determinants of Political Engagement

	Bulgaria '90	Bulgaria '97	Bulgaria '99	Bulgaria '06	Czech Rep '91	Czech Rep '98	Czech Rep '99	Estonia '90	Estonia '96	Hungary '91
Income										
Quartile 2	0.116	0.0966	0.0405	0.0953	0.0889	0.105	0.0966	-0.0659	0.119	0.0128
	(0.0734)	(0.0813)	(0.0847)	(0.0862)	(0.0549)	(0.0962)	(0.0599)	(0.0642)	(0.0769)	(0.0839)
Quartile 3	0.106	0.0382	0.0768	0.136	0.114*	0.247*	0.129*	0.0640	0.232**	0.235**
	(0.0741)	(0.0874)	(0.0882)	(0.0930)	(0.0572)	(0.105)	(0.0654)	(0.0640)	(0.0810)	(0.0868)
Quartile 4	0.212**	0.0154	0.0207	0.127	0.258***	0.383***	0.161*	0.0666	0.302***	0.472***
	(0.0745)	(0.0896)	(0.0929)	(0.0960)	(0.0582)	(0.109)	(0.0659)	(0.0644)	(0.0867)	(0.0888)
Age	0.00270	0.0481***	0.0499***	0.0211	0.0313***	0.0391***	0.0223**	0.0453***	0.00394	0.0167
	(0.0105)	(0.00892)	(0.0102)	(0.0113)	(0.00729)	(0.0105)	(0.00747)	(0.00949)	(0.0103)	(0.0103)
Age2	-0.0000621	-0.000410***	-0.000436***	-0.000103	-0.000318***	-0.000254*	-0.000119	-0.000443***	0.000106	-0.000154
	(0.000112)	(0.0000900)	(0.000101)	(0.000118)	(0.0000774)	(0.000109)	(0.0000767)	(0.000111)	(0.000116)	(0.000104)
Education										
Secondary	0.777***	0.297***	0.689***	0.382***	0.768	0.511***	0.324***	0.678**	0.360***	0.466***
	(0.116)	(0.0697)	(0.0986)	(0.0860)	(0.575)	(0.0870)	(0.0535)	(0.242)	(0.0850)	(0.0935)
Tertiary	1.071***	0.731***	1.003***	0.613***	1.086	0.873***	0.674***	0.913***	0.531***	0.723***
	(0.125)	(0.0888)	(0.109)	(0.102)	(0.577)	(0.116)	(0.0744)	(0.243)	(0.0987)	(0.134)
Female	-0.197***	-0.383***	-0.206***	-0.203***	-0.282***	-0.160**	-0.193***	-0.209***	-0.154**	-0.223***
	(0.0522)	(0.0542)	(0.0563)	(0.0582)	(0.0368)	(0.0602)	(0.0399)	(0.0466)	(0.0520)	(0.0579)
Married	0.0207	0.0326	0.0157	0.198**	0.0434	-0.0353	-0.000625	0.128*	0.0770	0.0637
	(0.0681)	(0.0692)	(0.0677)	(0.0672)	(0.0480)	(0.0766)	(0.0473)	(0.0521)	(0.0594)	(0.0718)
Constant	2.063***	0.966***	0.613*	1.023***	1.339*	0.808**	1.770***	0.899**	1.550***	1.478***
	(0.230)	(0.196)	(0.250)	(0.247)	(0.592)	(0.257)	(0.164)	(0.293)	(0.215)	(0.241)
N	905	878	933	891	2010	915	1702	993	982	970
adj. R-sq	0.148	0.175	0.143	0.111	0.0848	0.142	0.117	0.138	0.0882	0.135

Standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001

Table 1 (cont.) :Regression of Interest in Politics on Relative Income and Other Socio-Economic Determinants of Political Engagement

	Latvia '90	Latvia '96	Lithuania	Lithuania '97	Lithuania '99	Moldova '96	Moldova '02	Poland '90	Poland '97	Poland '99	Poland '05
Income											
Quartile 2	0.105	0.00128	0.0309	-0.0827	0.175*	0.0986	0.0625	0.231**	0.0569	0.120	0.125
	(0.0684)	(0.0655)	(0.0690)	(0.0730)	(0.0700)	(0.0698)	(0.0706)	(0.0752)	(0.0750)	(0.0735)	(0.0785)
Quartile 3	-0.0427	0.114	0.116	0.00106	0.147*	0.194**	0.0813	0.0930	0.0783	0.146	0.113
	(0.0686)	(0.0677)	(0.0705)	(0.0773)	(0.0735)	(0.0712)	(0.0719)	(0.0751)	(0.0747)	(0.0744)	(0.0813)
Quartile 4	0.0179	0.226**	0.0158	0.0616	0.329***	0.0371	0.0825	0.179*	0.223**	0.0909	0.205*
	(0.0685)	(0.0698)	(0.0701)	(0.0801)	(0.0777)	(0.0723)	(0.0743)	(0.0755)	(0.0783)	(0.0764)	(0.0830)
Age	0.0451***	0.0129	0.0288**	0.0450***	0.0448***	0.0234**	0.0330***	0.0373***	0.0428***	0.0370***	0.0296**
	(0.00980)	(0.00827)	(0.00906)	(0.00927)	(0.00955)	(0.00903)	(0.00949)	(0.0110)	(0.00883)	(0.00907)	(0.00934)
Age2	-0.000396***	0.00000673	-0.000214*	-0.000307**	-0.000298**	-0.000255**	-0.000276**	-0.000354**	-0.000372***	-0.000290**	-0.000185
	(0.000112)	(0.0000908)	(0.000102)	(0.000100)	(0.000103)	(0.0000980)	(0.000106)	(0.000117)	(0.0000889)	(0.0000901)	(0.0000952)
Education											
Secondary	0.155	0.360***	0.406***	0.459***	0.325**	0.169	0.300**	0.385***	0.479***	0.479***	0.420***
	(0.155)	(0.0977)	(0.107)	(0.0930)	(0.104)	(0.0883)	(0.105)	(0.109)	(0.0644)	(0.0660)	(0.0785)
Tertiary	0.301	0.524***	0.620***	0.733***	0.584***	0.428***	0.506***	0.725***	0.726***	0.875***	0.523***
	(0.154)	(0.104)	(0.109)	(0.104)	(0.114)	(0.107)	(0.113)	(0.128)	(0.0919)	(0.0881)	(0.107)
Female	-0.175***	-0.228***	-0.216***	-0.229***	-0.201***	-0.294***	-0.196***	-0.551***	-0.307***	-0.301***	-0.230***
	(0.0503)	(0.0457)	(0.0485)	(0.0501)	(0.0487)	(0.0495)	(0.0505)	(0.0529)	(0.0525)	(0.0530)	(0.0557)
Married	-0.0819	0.0267	-0.0197	0.0467	-0.0270	0.204**	0.0544	0.0214	-0.0335	-0.0230	-0.00983
	(0.0594)	(0.0500)	(0.0573)	(0.0583)	(0.0560)	(0.0621)	(0.0619)	(0.0707)	(0.0574)	(0.0598)	(0.0637)
Constant	1.884***	1.561***	1.704***	0.673***	0.810***	1.536***	1.349***	1.255***	0.863***	0.901***	0.998***
	(0.244)	(0.190)	(0.194)	(0.202)	(0.205)	(0.197)	(0.199)	(0.248)	(0.212)	(0.221)	(0.212)
N	852	1159	918	918	839	952	918	918	1093	1062	925
adj. R-sq	0.0960	0.107	0.113	0.157	0.188	0.118	0.0836	0.163	0.134	0.154	0.0926

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Table 1 (cont.):Regression of Interest in Politics on Relative Income and Other Socio-Economic Determinants of Political Engagement

	Romania '93	Romania '98	Romania '05	Russia '90	Russia '95	Russia '99	Russia '06	Slovakia '91	Slovakia '98	Ukraine '96	Ukraine '99	Ukraine '06
Income												
Quartile 2	0.0346	0.0117	0.133*	0.0870	0.0996	0.0708	0.105	0.0206	-0.118	0.0296	0.137	0.120
	(0.0648)	(0.0713)	(0.0632)	(0.0665)	(0.0545)	(0.0503)	(0.0588)	(0.0717)	(0.0845)	(0.0480)	(0.0713)	(0.0827)
Quartile 3	0.0581	0.0525	0.0866	0.127	0.0703	0.157**	0.0114	0.0686	-0.0983	0.0840	0.0429	0.191*
	(0.0651)	(0.0743)	(0.0676)	(0.0674)	(0.0557)	(0.0522)	(0.0602)	(0.0738)	(0.0887)	(0.0497)	(0.0723)	(0.0859)
Quartile 4	0.119	0.130	0.0960	0.190**	0.0753	0.152**	0.139*	0.0811	-0.0175	0.0599	0.137	0.388***
	(0.0653)	(0.0762)	(0.0723)	(0.0733)	(0.0581)	(0.0543)	(0.0632)	(0.0734)	(0.0908)	(0.0511)	(0.0741)	(0.0880)
Age	0.0156	0.0302**	0.0337***	0.0127	0.0279***	0.0206***	0.0117	-0.000499***	-0.000317**	-0.000111	-0.0000874	-0.000126
	(0.00921)	(0.00965)	(0.00798)	(0.00995)	(0.00700)	(0.00621)	(0.00766)	(0.000107)	(0.000113)	(0.0000692)	(0.0000950)	(0.000104)
Age2	-0.000135	-0.000260*	-0.000324***	-0.000102	-0.000172*	-0.000102	0.00000178	0.0436***	0.0351**	0.0161*	0.0150	0.0233*
	(0.0000971)	(0.000103)	(0.0000795)	(0.000110)	(0.0000732)	(0.0000639)	(0.0000863)	(0.0100)	(0.0108)	(0.00653)	(0.00905)	(0.00965)
Education												
Secondary	0.349***	0.277***	0.229***	0.321**	0.288***	0.414***	0.123	-0.578	0.330***	0.398***	0.533***	0.225
	(0.0761)	(0.0719)	(0.0581)	(0.110)	(0.0641)	(0.0738)	(0.135)	(0.802)	(0.0806)	(0.0617)	(0.117)	(0.187)
Tertiary	0.661***	0.574***	0.364***	0	0.661***	0.778***	0.360*	-0.332	0.664***	0.712***	0.769***	0.478*
	(0.0833)	(0.0937)	(0.0738)	.	(0.0746)	(0.0834)	(0.141)	(0.806)	(0.112)	(0.0696)	(0.127)	(0.193)
Female	-0.284***	-0.355***	-0.358***	-0.259***	-0.303***	-0.349***	-0.278***	-0.306***	-0.281***	-0.365***	-0.314***	-0.324***
	(0.0467)	(0.0507)	(0.0439)	(0.0519)	(0.0395)	(0.0365)	(0.0413)	(0.0497)	(0.0569)	(0.0344)	(0.0520)	(0.0601)
Married	0.0785	0.0280	0.105*	0.0220	0.0849	0.0979*	0.124**	-0.00195	0.137	0.126**	0.0718	0.116
	(0.0565)	(0.0622)	(0.0528)	(0.0600)	(0.0435)	(0.0386)	(0.0467)	(0.0626)	(0.0729)	(0.0418)	(0.0572)	(0.0620)
Constant	1.165***	1.342***	1.130***	1.835***	1.137***	1.212***	1.574***	2.251**	1.497***	1.495***	1.401***	1.361***
	(0.207)	(0.204)	(0.183)	(0.220)	(0.166)	(0.147)	(0.187)	(0.827)	(0.235)	(0.146)	(0.214)	(0.268)
N	1088	1210	1547	892	1916	2327	1646	1062	902	2215	1148	921
adj. R-sq	0.123	0.0968	0.106	0.0542	0.108	0.123	0.0962	0.0780	0.104	0.127	0.0865	0.115

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Table 2: Regression of Overall Political Efficacy on Relative Income and Other Socio-Economic Determinants

Independent Variable	Bulgaria '93	Bulgaria '07	Czech Rep. '94	Estonia '93	Estonia '95	Hungary '93	Latvia '96	Lithuania '93	Lithuania '97	Moldova '96
Income Quartile										
2	0.096**	0.161**	0.088	0.086*	-0.054	0.136**	-0.002	0.096*	0.106*	-0.067
	(0.033)	(0.058)	(0.050)	(0.043)	(0.056)	(0.052)	(0.036)	(0.038)	(0.042)	(0.047)
3	0.106**	0.091	0.126*	0.081	0.055	0.209***	0.031	0.145***	0.224***	-0.050
	(0.035)	(0.061)	(0.052)	(0.045)	(0.060)	(0.053)	(0.036)	(0.039)	(0.044)	(0.048)
4	0.129***	0.157*	0.241***	0.210***	0.221***	0.243***	0.149***	0.207***	0.239***	0.018
	(0.037)	(0.068)	(0.053)	(0.048)	(0.062)	(0.057)	(0.038)	(0.040)	(0.044)	(0.050)
Age	-0.000	0.001	-0.007	-0.013*	-0.013	-0.013*	-0.008	-0.004	-0.014*	0.006
	(0.005)	(0.008)	(0.006)	(0.005)	(0.008)	(0.006)	(0.005)	(0.005)	(0.006)	(0.007)
Age^2	0.000	0.000	0.000	0.000**	0.000	0.000	0.000	0.000	0.000**	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education										
2	0.019	0.025	0.159***	0.087*	0.119*	0.039	0.055	0.171***	0.216***	0.013
	(0.028)	(0.085)	(0.045)	(0.040)	(0.052)	(0.059)	(0.042)	(0.049)	(0.058)	(0.059)
3	0.148***	0.181	0.374***	0.434***	0.355***	0.515***	0.237***	0.342***	0.156	0.148*
	(0.036)	(0.095)	(0.068)	(0.051)	(0.066)	(0.082)	(0.045)	(0.057)	(0.147)	(0.070)
Female	-0.027	-0.035	-0.087**	-0.198***	-0.129***	-0.031	-0.100***	-0.148***	-0.110***	-0.088**
	(0.024)	(0.043)	(0.033)	(0.030)	(0.038)	(0.036)	(0.026)	(0.026)	(0.030)	(0.034)
Married	0.008	0.006	-0.029	-0.042	0.015	-0.086*	-0.020	-0.108***	-0.002	0.071
	(0.028)	(0.043)	(0.041)	(0.033)	(0.043)	(0.043)	(0.029)	(0.030)	(0.035)	(0.041)
Constant	2.360***	1.992***	2.578***	2.570***	2.685***	2.658***	2.457***	2.502***	2.432***	2.179***
	(0.106)	(0.196)	(0.127)	(0.108)	(0.156)	(0.148)	(0.116)	(0.108)	(0.128)	(0.151)
R2	0.022	0.022	0.060	0.133	0.086	0.097	0.060	0.068	0.039	0.020
N	1836	859	1376	1333	1009	1186	1898	1854	1882	1439

* p<0.05, ** p<0.01, *** p<0.001

Table 2 (cont.): Regression of Overall Political Efficacy on Relative Income and Other Socio-Economic Determinants

Independent Variable	Poland '93	Romania '93	Russia '93	Russia '95	Russia '96	Russia '98	Russia '01	Russia '03	Russia '07	Slovakia '94	Ukraine '93	Ukraine '95	Ukraine '98
Income Quartile													
2	0.037	0.006	0.047	-0.027	0.041	-0.005	-0.011	0.074	-0.00	-0.030	-0.019	-0.014	0.079*
	(0.038)	(0.044)	(0.036)	(0.039)	(0.038)	(0.041)	(0.042)	(0.047)	(0.05)	(0.042)	(0.031)	(0.036)	(0.037)
3	0.113**	0.097*	0.137***	0.049	0.116**	0.066	0.003	0.004	0.06	0.026	0.011	0.003	0.043
	(0.040)	(0.046)	(0.037)	(0.041)	(0.040)	(0.042)	(0.043)	(0.048)	(0.05)	(0.044)	(0.031)	(0.036)	(0.038)
4	0.146***	0.096*	0.278***	0.124**	0.238***	0.119**	-0.024	0.100*	0.08	0.073	-0.046	0.000	0.128**
	(0.040)	(0.047)	(0.038)	(0.042)	(0.042)	(0.044)	(0.045)	(0.050)	(0.05)	(0.045)	(0.032)	(0.037)	(0.039)
Age	-0.021***	0.006	-0.015*	-0.010	-0.007	-0.011*	-0.000	-0.006	-0.02**	-0.002	0.001	0.007	-0.008
	(0.006)	(0.007)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.01)	(0.005)	(0.004)	(0.005)	(0.006)
Age^2	0.000**	-0.000	0.000*	0.000*	0.000	0.000*	0.000	0.000	0.00**	-0.000	-0.000	-0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.00)	(0.000)	(0.000)	(0.000)	(0.000)
Education													
2	-0.025	0.230***	0.088	0.080	0.007	0.075	0.116*	0.110	0.07	0.101*	0.042	0.010	-0.015
	(0.033)	(0.060)	(0.065)	(0.049)	(0.043)	(0.050)	(0.055)	(0.068)	(0.17)	(0.043)	(0.042)	(0.050)	(0.053)
3	0.216***	0.444***	0.237***	0.236***	0.201***	0.230***	0.252***	0.223**	0.14	0.391***	0.179***	0.126*	0.108
	(0.045)	(0.064)	(0.068)	(0.051)	(0.047)	(0.056)	(0.058)	(0.073)	(0.17)	(0.059)	(0.044)	(0.053)	(0.055)
Female	-0.083**	-0.109***	-0.174***	-0.156***	-0.150***	-0.131***	-0.063*	-0.090**	-0.07*	-0.087**	-0.136***	-0.117***	-0.151***
	(0.027)	(0.031)	(0.026)	(0.028)	(0.028)	(0.030)	(0.030)	(0.033)	(0.03)	(0.029)	(0.023)	(0.027)	(0.027)
Married	-0.053	0.028	-0.076**	0.011	0.019	0.019	-0.023	-0.054	0.02	-0.026	-0.012	0.011	0.038
	(0.034)	(0.042)	(0.028)	(0.031)	(0.030)	(0.032)	(0.032)	(0.035)	(0.03)	(0.036)	(0.026)	(0.030)	(0.029)
Constant	2.786***	2.282***	2.579***	2.382***	2.578***	2.475***	2.288***	2.462***	2.62***	2.394***	2.244***	1.955***	2.274***
	(0.114)	(0.151)	(0.130)	(0.111)	(0.114)	(0.120)	(0.122)	(0.131)	(0.20)	(0.120)	(0.086)	(0.116)	(0.126)
R2	0.060	0.065	0.084	0.047	0.088	0.047	0.014	0.023	0.01	0.057	0.028	0.016	0.030
N	1692	1491	1959	1805	1712	1545	1704	1507	1668	1439	2477	2387	2259

* p<0.05, ** p<0.01, *** p<0.001

Table 2: Regression of Overall Political Efficacy on Relative Income and Other Socio-Economic Determinants

Independent Variable	Czech Rep '07	Estonia '07	Hungary '07	Latvia '07	Lithuania '07	Moldova '07	Poland '07	Romania '07
Income Quartile								
2	0.001	0.011	-0.029	-0.002	-0.050	0.015	-0.068	0.030
	(0.062)	(0.069)	(0.070)	(0.056)	(0.064)	(0.067)	(0.050)	(0.046)
3	0.048	0.169*	0.083	0.027	-0.003	-0.042	0.022	0.050
	(0.064)	(0.072)	(0.069)	(0.058)	(0.063)	(0.065)	(0.051)	(0.048)
4	0.248***	0.225**	0.090	0.230***	0.144*	-0.059	0.147**	0.102*
	(0.071)	(0.077)	(0.072)	(0.062)	(0.067)	(0.062)	(0.054)	(0.051)
Age	-0.016*	-0.019*	0.002	-0.032***	-0.018*	-0.010	-0.007	0.004
	(0.008)	(0.009)	(0.008)	(0.007)	(0.008)	(0.008)	(0.006)	(0.006)
Age^2	0.000*	0.000*	-0.000	0.000***	0.000*	0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education								
2	0.215**	0.131	0.165	0.206***	0.187**	-0.010	0.086	0.012
	(0.072)	(0.074)	(0.089)	(0.058)	(0.067)	(0.059)	(0.050)	(0.058)
3	0.581***	0.462***	0.623***	0.366***	0.401***	0.060	0.295***	0.156*
	(0.089)	(0.085)	(0.113)	(0.070)	(0.082)	(0.060)	(0.062)	(0.066)
Female	-0.058	-0.086	-0.100	-0.019	-0.038	-0.050	-0.042	-0.135***
	(0.046)	(0.051)	(0.051)	(0.041)	(0.044)	(0.046)	(0.037)	(0.033)
Married	-0.021	0.045	-0.033	-0.035	-0.081	0.055	0.030	-0.003
	(0.047)	(0.050)	(0.051)	(0.042)	(0.047)	(0.048)	(0.040)	(0.035)
Constant	2.499***	2.695***	2.279***	2.732***	2.539***	2.803***	2.410***	2.301***
	(0.200)	(0.201)	(0.185)	(0.154)	(0.149)	(0.160)	(0.151)	(0.131)
R2	0.117	0.101	0.081	0.087	0.056	-0.003	0.060	0.044
N	769	685	730	830	812	627	1113	1093

* p<0.05, ** p<0.01, *** p<0.001

Table 2 (cont.): Regression of Overall Political Efficacy on Relative Income and Other Socio-Economic Determinants

Independent Variable	Russia '07	Slovakia '07	Ukraine '07
Income Quartile			
2	-0.000	0.076	-0.044
	(0.046)	(0.056)	(0.047)
3	0.062	0.110	-0.073
	(0.045)	(0.057)	(0.047)
4	0.079	0.242***	-0.122*
	(0.047)	(0.060)	(0.051)
Age	-0.016**	-0.005	0.000
	(0.005)	(0.007)	(0.006)
Age^2	0.000**	0.000	-0.000
	(0.000)	(0.000)	(0.000)
Education			
2	0.067	0.168*	-0.005
	(0.166)	(0.082)	(0.058)
3	0.144	0.456***	0.350
	(0.171)	(0.094)	(0.251)
Female	-0.067*	-0.069	-0.110**
	(0.033)	(0.041)	(0.036)
Married	0.021	0.022	-0.005
	(0.033)	(0.042)	(0.036)
Constant	2.617***	2.378***	2.529***
	(0.197)	(0.167)	(0.130)
R2	0.012	0.087	0.012
N	1668	758	1351

* p<0.05, ** p<0.01, *** p<0.001

Table 3: Voting In Past Parliamentary Elections Regressed on Relative Income and other Socio-economic Determinants By Country Survey Year

	Bulgaria '93	Czech Rep '94	Estonia '93	Estonia '95	Hungary '93	Latvia '96	Lithuania '93	Lithuania '97	Moldova '96
Income									
Quartile 2	-0.0119	0.0877	0.186	0.254	0.0789	0.179	0.0714	0.238	-0.187
	(0.223)	(0.263)	(0.141)	(0.162)	(0.220)	(0.136)	(0.167)	(0.150)	(0.206)
Quartile 3	0.131	-0.213	0.396**	0.367*	0.228	0.100	0.263	0.430**	-0.515*
	(0.240)	(0.259)	(0.147)	(0.169)	(0.226)	(0.138)	(0.174)	(0.156)	(0.201)
Quartile 4	-0.191	-0.206	0.527***	0.802***	0.192	0.309*	0.0515	0.553***	-0.549**
	(0.236)	(0.263)	(0.155)	(0.180)	(0.243)	(0.147)	(0.171)	(0.160)	(0.208)
Age	0.181***	0.186***	0.00249	-0.00102	0.167***	0.00668	0.0835***	0.0432*	0.140***
	(0.0265)	(0.0276)	(0.0180)	(0.0216)	(0.0258)	(0.0204)	(0.0226)	(0.0213)	(0.0283)
Age2	-0.00157***	-0.00154***	-0.000351	-0.000263	-0.00133***	0.0000489	-0.000480	-0.00000622	-0.00126***
	(0.000276)	(0.000291)	(0.000188)	(0.000216)	(0.000270)	(0.000222)	(0.000257)	(0.000234)	(0.000317)
Female	-0.319*	-0.122	0.0342	0.129	0.281	-0.0883	0.170	0.228*	-0.0818
	(0.156)	(0.166)	(0.0971)	(0.111)	(0.153)	(0.0983)	(0.118)	(0.107)	(0.141)
Married	0.410*	0.609**	0.0181	-0.204	0.393*	0.0628	0.500***	0.259*	0.625***
	(0.170)	(0.194)	(0.109)	(0.125)	(0.173)	(0.110)	(0.132)	(0.122)	(0.160)
Education									
Secondary	-0.123	0.833***	0.130	0.336*	0.695**	0.175	0.763**	1.018***	-0.0551
	(0.188)	(0.211)	(0.135)	(0.152)	(0.256)	(0.160)	(0.234)	(0.217)	(0.262)
Tertiary	0.139	1.477***	0.172	0.277	1.555***	0.194	1.605***	1.474*	-0.0368
	(0.249)	(0.442)	(0.164)	(0.187)	(0.409)	(0.174)	(0.292)	(0.668)	(0.304)
Constant	-2.540***	-3.870***	0.364	0.305	-4.393***	-0.264	-2.554***	-2.597***	-2.034***
	(0.581)	(0.588)	(0.368)	(0.454)	(0.592)	(0.443)	(0.469)	(0.452)	(0.580)
N	1848	1378	1889	1417	1161	1914	1854	1882	1439
adj. R-sq									

* p<0.05, ** p<0.01, *** p<0.001

Table 3 (cont.): Voting In Past Parliamentary Elections Regressed on Relative Income and other Socio-economic Determinants

	Poland '93	Romania '93	Russia '95	Russia '96	Russia '01	Slovakia '94	Ukraine '95	Ukraine '98	Russia '03
Income									
Quartile 2	0.0514	-0.144	-0.0151	0.144	0.134	0.0272	-0.0493	0.188	0.0294
	(0.154)	(0.267)	(0.144)	(0.160)	(0.156)	(0.259)	(0.134)	(0.162)	(0.167)
Quartile 3	0.216	-0.309	0.138	0.0696	0.0557	0.293	0.0537	0.0702	0.00928
	(0.162)	(0.271)	(0.150)	(0.167)	(0.159)	(0.269)	(0.135)	(0.161)	(0.172)
Quartile 4	0.275	-0.0777	-0.0633	-0.0762	0.00730	-0.0213	-0.133	0.179	-0.247
	(0.167)	(0.281)	(0.154)	(0.173)	(0.162)	(0.269)	(0.135)	(0.166)	(0.176)
Age	0.185***	0.130***	0.0679***	0.0970***	0.0840***	0.230***	0.114***	0.0334	0.0837***
	(0.0248)	(0.0361)	(0.0191)	(0.0197)	(0.0197)	(0.0292)	(0.0189)	(0.0248)	(0.0207)
Age2	-0.00160***	-0.00123**	-0.000367	-0.000760***	-0.000569**	-0.00200***	-0.000833***	-0.000677**	-0.000389
	(0.000277)	(0.000382)	(0.000219)	(0.000206)	(0.000210)	(0.000313)	(0.000207)	(0.000232)	(0.000228)
Female	-0.226*	-0.0694	0.110	-0.0341	0.149	-0.146	0.00462	-0.0425	0.0807
	(0.111)	(0.183)	(0.104)	(0.117)	(0.112)	(0.181)	(0.0977)	(0.116)	(0.116)
Married	0.243	0.447*	0.262*	0.366**	0.241*	0.739***	0.322**	0.226	0.490***
	(0.136)	(0.225)	(0.113)	(0.125)	(0.119)	(0.195)	(0.109)	(0.123)	(0.124)
Education									
Secondary	0.586***	0.254	0.327	0.302	0.510*	0.240	-0.348	0.123	0.266
	(0.136)	(0.352)	(0.183)	(0.185)	(0.207)	(0.260)	(0.208)	(0.247)	(0.251)
Tertiary	1.621***	0.611	0.790***	0.506*	0.725**	1.401**	0.0193	0.493	0.650*
	(0.211)	(0.388)	(0.194)	(0.205)	(0.222)	(0.493)	(0.221)	(0.257)	(0.269)
Constant	-4.898***	-1.220	-2.488***	-2.187***	-2.623***	-4.244***	-2.397***	1.236*	-2.927***
	(0.502)	(0.805)	(0.410)	(0.460)	(0.446)	(0.631)	(0.424)	(0.570)	(0.467)
N	1682	1498	1828	1725	1590	1440	2387	2259	1582
adj. R-sq									

Standard errors in parentheses ;* p<0.05, ** p<0.01, *** p<0.001

Table 3 (cont.): Voting In Past Parliamentary Elections Regressed on Relative Income and other Socio-economic Determinants

	Czech rep '07	Estonia '07	Hungary '07	Moldova '07	Romania '07
Income					
Quartile 2	0.207	0.643**	0.211	0.508	0.287
	(0.228)	(0.208)	(0.274)	(0.277)	(0.219)
Quartile 3	0.120	0.695**	0.218	0.207	0.229
	(0.233)	(0.221)	(0.279)	(0.262)	(0.226)
Quartile 4	0.314	0.562*	0.119	-0.00663	0.409
	(0.260)	(0.239)	(0.301)	(0.246)	(0.243)
Age	0.0238	0.0374	0.0632*	0.131***	0.135***
	(0.0284)	(0.0268)	(0.0296)	(0.0287)	(0.0254)
Age2	-0.0000268	-0.000276	-0.000493	-0.00107***	-0.00110***
	(0.000276)	(0.000276)	(0.000294)	(0.000295)	(0.000257)
Female	0.0670	0.563***	0.0325	-0.0991	0.00428
	(0.172)	(0.158)	(0.211)	(0.189)	(0.160)
Married	0.331	0.221	0.292	0.415*	0.539**
	(0.173)	(0.159)	(0.210)	(0.195)	(0.165)
Education					
Secondary	0.987***	0.378	0.547	0.275	0.0541
	(0.245)	(0.220)	(0.340)	(0.242)	(0.275)
Tertiary	1.873***	1.013***	1.806**	0.228	0.295
	(0.348)	(0.267)	(0.551)	(0.248)	(0.326)
Constant	-1.702*	-2.067***	-1.474*	-2.915***	-2.881***
	(0.718)	(0.592)	(0.687)	(0.611)	(0.579)
N	776	817	616	750	1176
adj. R-sq					

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Table 4: Vote Intention Regressed on Relative Income and Other Socio-economic Determinants By Country Survey Year

	Bulgaria '93	Czech Rep '94	Estonia '93	Estonia '95	Latvia '96	Lithuania '93	Moldova '96	Poland '93	Romania '93
Income									
Quartile 2	0.203	0.156	0.119	0.170	-0.0647	0.0817	0.197	0.000172	0.221
	(0.138)	(0.181)	(0.148)	(0.208)	(0.137)	(0.138)	(0.156)	(0.144)	(0.163)
Quartile 3	0.184	0.318	0.0541	0.441*	0.133	0.149	0.271	0.300*	0.0983
	(0.147)	(0.189)	(0.154)	(0.220)	(0.142)	(0.142)	(0.157)	(0.152)	(0.168)
Quartile 4	0.304	0.452*	0.135	0.653**	0.336*	0.0572	0.644***	0.606***	0.379*
	(0.156)	(0.194)	(0.164)	(0.238)	(0.151)	(0.145)	(0.167)	(0.161)	(0.177)
Age	0.00927**	0.0189***	-0.000289	-0.0119*	0.0167***	0.0207***	0.00342	0.0133***	0.0103*
	(0.00337)	(0.00408)	(0.00344)	(0.00488)	(0.00346)	(0.00355)	(0.00406)	(0.00372)	(0.00425)
Female	-0.306**	-0.218	-0.392***	-0.271	-0.231*	0.0519	0.140	-0.234*	-0.494***
	(0.0998)	(0.120)	(0.103)	(0.150)	(0.101)	(0.0964)	(0.112)	(0.106)	(0.115)
Married	0.172	-0.236	0.185	0.00311	-0.0590	0.281**	0.168	-0.0666	-0.144
	(0.112)	(0.140)	(0.112)	(0.155)	(0.107)	(0.104)	(0.130)	(0.119)	(0.142)
Education									
Secondary	0.102	0.200	0.416**	0.261	0.0736	0.806***	0.646***	0.540***	0.104
	(0.120)	(0.162)	(0.138)	(0.186)	(0.161)	(0.174)	(0.192)	(0.125)	(0.218)
Tertiary	0.306*	0.588*	0.626***	0.221	0.500**	0.989***	1.205***	1.384***	0.545*
	(0.152)	(0.270)	(0.171)	(0.243)	(0.179)	(0.205)	(0.230)	(0.203)	(0.240)
Constant	-0.240	-0.312	-0.114	1.562***	-0.297	-1.838***	-1.304***	-0.443*	0.298
	(0.250)	(0.295)	(0.186)	(0.272)	(0.269)	(0.284)	(0.322)	(0.219)	(0.342)
N	1787	1322	1635	1146	1912	1845	1431	1694	1491
adj. R-sq									

Standard errors in parentheses * p<0.05, ** p<0.01, *** p<0.001

Table 4 (cont.): Vote Intention Regressed on Relative Income and Other Socio-economic Determinants By Country Survey Year

	Russia '93	Russia '95	Russia '96	Slovakia '94	Ukraine '93	Ukraine '95	Russia '03	Czech Rep '07	Estonia '07	Hungary '07
Income										
Quartile 2	0.139	0.00611	0.0403	0.248	0.0460	-0.0959	0.0519	0.101	0.00690	-0.00921
	(0.176)	(0.138)	(0.140)	(0.167)	(0.134)	(0.127)	(0.173)	(0.217)	(0.231)	(0.256)
Quartile 3	0.665***	0.270	-0.0312	0.378*	0.0230	-0.237	-0.0536	-0.194	0.0813	0.518
	(0.171)	(0.143)	(0.147)	(0.172)	(0.136)	(0.129)	(0.180)	(0.219)	(0.246)	(0.272)
Quartile 4	1.056***	0.180	0.0703	0.439*	-0.194	-0.108	-0.119	0.178	0.434	0.199
	(0.173)	(0.148)	(0.155)	(0.175)	(0.142)	(0.130)	(0.188)	(0.244)	(0.278)	(0.279)
Age	0.0293***	0.00460	0.0117***	0.0254***	0.0000522	0.0117***	0.0111**	0.00824	-0.0105*	-0.000460
	(0.00438)	(0.00332)	(0.00347)	(0.00432)	(0.00316)	(0.00303)	(0.00419)	(0.00486)	(0.00521)	(0.00538)
Female	-0.264*	-0.0621	-0.211*	-0.265*	-0.415***	-0.298**	-0.155	-0.293	0.332	-0.307
	(0.115)	(0.0990)	(0.103)	(0.115)	(0.0999)	(0.0939)	(0.124)	(0.162)	(0.178)	(0.203)
Married	-0.255*	0.0202	0.279**	-0.0559	0.291**	0.0973	-0.119	0.121	0.278	-0.0209
	(0.123)	(0.104)	(0.107)	(0.133)	(0.112)	(0.102)	(0.128)	(0.159)	(0.175)	(0.190)
Education										
Secondary	0.457	0.626***	0.314*	0.0748	0.445*	0.506**	0.724***	0.467	-0.268	0.575
	(0.304)	(0.173)	(0.155)	(0.165)	(0.210)	(0.192)	(0.217)	(0.240)	(0.243)	(0.307)
Tertiary	0.647*	0.856***	0.535**	0.142	0.889***	0.980***	0.723**	0.811**	0.146	1.293**
	(0.313)	(0.181)	(0.172)	(0.228)	(0.213)	(0.199)	(0.230)	(0.312)	(0.296)	(0.453)
Constant	-3.146***	-0.917**	-0.852**	-0.793**	-1.726***	-1.834***	-0.132	-0.190	1.102**	0.396
	(0.398)	(0.280)	(0.276)	(0.297)	(0.308)	(0.287)	(0.358)	(0.412)	(0.400)	(0.491)
N	1915	1828	1717	1376	2451	2364	1352	771	717	598
adj. R-sq										

Standard errors in parentheses * p<0.05, ** p<0.01, *** p<0.001

Table 4 (cont.): Vote Intention Regressed on Relative Income and Other Socio-economic Determinants By Country Survey Year

	Latvia '07	Lithuania '07	Moldova '07	Slovakia '07
Income				
Quartile 2	0.412	-0.266	0.167	0.0423
	(0.226)	(0.220)	(0.227)	(0.221)
Quartile 3	0.278	-0.188	-0.0491	0.0808
	(0.234)	(0.215)	(0.223)	(0.222)
Quartile 4	0.0513	0.189	0.641**	0.113
	(0.246)	(0.230)	(0.222)	(0.232)
Age	-0.00133	0.0115*	0.0101*	0.00620
	(0.00479)	(0.00465)	(0.00501)	(0.00533)
Female	0.231	0.206	-0.0308	-0.0218
	(0.168)	(0.153)	(0.160)	(0.163)
Married	0.418*	0.000386	0.00808	0.290
	(0.167)	(0.156)	(0.157)	(0.159)
Education				
Secondary	0.296	0.477*	0.117	-0.284
	(0.224)	(0.224)	(0.200)	(0.329)
Tertiary	0.781**	0.742**	0.238	0.133
	(0.287)	(0.284)	(0.207)	(0.385)
Constant	-0.236	-0.576	-0.493	0.400
	(0.365)	(0.337)	(0.353)	(0.451)
N	716	808	749	758
adj. R-sq				

Standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001

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