

Public Opinion and Social Policy

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For Bill

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ACRONYMS

<i>ISEA</i>	<i>International Survey of Economic Attitudes</i>
<i>ESS</i>	<i>European Social Survey</i>
<i>ISSP</i>	<i>International Social Survey Program</i>
<i>OECD</i>	<i>Organization for Economic Co-operation and Development</i>
<i>ISO</i>	<i>International Organization for Standardization</i>
NUTS	Nomenclature of Territorial Units for Statistics
GDP	Gross Domestic Product
PPP	Parity Purchasing Power
SES	Socioeconomic Status
FLP	Female Labor Force Participation
OLS	Ordinary Least Squares
2SLS	Two-Stage Least Squares Regressions
ML	Maximum Likelihood
SEM	Structural Equation Modeling
RMSEA	Root Mean Squared Error of Approximation
SRMR	Standardized Root Mean Square Residual
GOF	Goodness of Fit

Two-Letter Country Codes

OZ	Australia
AT	Austria
CA	Canada
DK	Denmark
FI	Finland
FR	France
DE	Germany
IE	Ireland
IT	Italy
JP	Japan
NT	Netherlands
NZ	New Zealand
NO	Norway
PT	Portugal
ES	Spain
SE	Sweden
CH	Switzerland
GB	Great Britain
US	United States

FOREWORD

Throughout most of human history public opinion did not have an impact on society, in some ways it did not exist. At least not in the way it is understood today. There were no surveys, no Gallup polls. There were no public spheres or media platforms for discussion and distribution of mass preferences. There were no policy-makers working to keep their jobs via public support. Leadership was imposed instead of elected. Individuals existed in familial and social groups that were hierarchical. By design these families and societies had leaders who made decisions for the group. These were often the most physically dominant, traditionally appointed, or oldest members. In family-units this was often one person, while in social groups of many families (e.g. tribes, kinship networks, small societies) decisions often were made by small groups of elders or dominant individuals. The public were out-of-the-loop and obliged to accept the decisions made for them. Often there were social norms or scripts that determined how the public should think and act and these were not open to deliberation or debate.

As the size of societies increased, the concept of stewardship and nobility arose as ruling without direct familial linkages. Nobles would rule over societies and excise taxes and claim other rights to ownership of the labor, physical being, and material possessions of their subjects. The public were bound to the rule of an imposed hierarchy. Although the size and concentration of societies into cities arguably allowed the public to communicate and formulate public opinions, there was no voting or forum for expression of these opinions. Only in extreme cases if the public were fed up enough with their rulers they might revolt and overthrow them. This happened in the First Spanish Republic, the French Revolution and the 1917 Russian Revolutions for example.

There are no measures of public opinion from historical revolutions in Europe and Asia. If a monarch was overthrown, public dissatisfaction is inferred. Furthermore, even

if there was public opinion, there were no organizational practices or laws that conferred any political power to the public. This changed with the rise of democratic ideas and mass social movements. Or so it seems. Today, democracy by definition and by legal precedents, affords the opportunity to exercise political power and decision-making to every citizen of a given society, so long as they are enfranchised (e.g. women and some ethnic groups were not in the beginning of modern democratic systems), and have not lost their political rights (e.g. through illegal activities).

Today public opinion is constantly measured and discussed in democracies. But where do these opinions come from. Does rational thinking lead to unique individual opinions, or are there patterns across social class, ideology, and institutions? Do these public opinions actually shape policy, or are they shaped in order to fit with policy?

These are the two main questions addressed in this dissertation. The approach is macro-comparative and the data are diverse and sampled from many regions and countries. Therefore, I hypothesize about many different ways that public opinion forms and how it interacts with social policy. The dissertation is presented as a coherent book, although the work was initially formed into three studies intent on publication as papers in academic journals. Largely the empirical work remains identical with that in the papers, but the theory has been expanded and streamlined to have a "red thread" connecting it, as my German colleagues would say. At the completion of this dissertation, one of the three papers is published, one is under review for the first time, and one has been reviewed and rejected several times. I am reminded by one of my supervisors that I am not allowed to complain about multiple rejections until I reach the lucky number of thirteen, which one of his mentors Art Stinchcombe achieved before finally getting a paper published. The dissertation is very much a work in progress. It draws on sociology, political science and social psychology, and is intended for an interdisciplinary audience

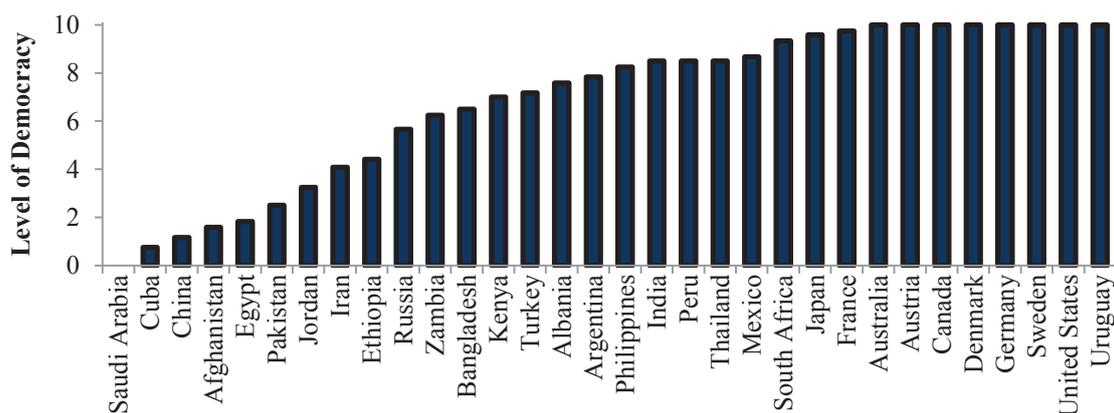
interested in public opinion, social policy, democracy and welfare states. As much as possible I attempt to combine sound theory with rigorous empirics. I believe that statistical analyses should be transparent, consistent with my personal ethical beliefs about science. Therefore, I provide enough information to replicate all the work conducted herein in the form of technical appendices presented at the end of the book.

The work for this dissertation sprang out of my Master's studies at the University of Nevada, Reno and was largely completed during my three year PhD Fellowship at the Bremen International Graduate School of Social Sciences, a collaboration between the University of Bremen and Jacobs University in Bremen, Germany. I am grateful to the German Excellence Initiative of the DFG (*German Research Foundation / Deutsche Forschungsgemeinschaft*) and Steffen Mau, Alexander Gattig, Sibyl Kleiner, Olli Kangas, Olaf Groh-Samberg, Jonathan Kelley, Mariah Evans, Philipp Lersch, Maureen Eger, and Ralf Götze for their comments, and finally to Katja Hanke and Maike Schulz for serving on my defense committee. And special thanks to Judith Offerhaus not only for comments, but also undying support through the thick 'n thin of dissertation study, love and being in my life in general.

1 CHAPTER ONE PUBLIC OPINION AND SOCIAL POLICY IN DEMOCRACIES

Today the world is divided into nation-states that tend to operate under some degree of democratic government. Even the communist system of China has a process of voting, despite the fact that there is only one party and the system is mostly undemocratic. All societies today are more or less democratic with only a handful of exceptions. Figure 1 presents some countries and their levels of democracy from none in totalitarian Saudi Arabia to the most democratic systems in the world, for example in Sweden and the United States.

Figure 1. Democracy in Selected Countries, 2006



Note: Data adapted from Freedom House (Teorell et al. 2010:45).

Level of democracy in Figure 1 is measured on a scale from 0 to 10 based on the amount civic and political freedom individuals have in a country. Political freedom grants the ability to take part in political processes such as policy making. Civic freedom allows individuals to pursue their interests without discrimination or political oppression. The word democracy from Latin denotes *public-rule*, and the idea of democracy is to allow individual citizens to participate in ruling or power-sharing. A democratic society ideally affords all members the chance to weigh-in on the practices and policies of their society.

If effective, this process should help individuals determine what interests they have in common and to shape society to favor these interests (Ringgen 2006). At the level of nation-states, direct democracy where each member is involved in the decision making process is not logistically feasible. Instead, the people elect officials to represent their interests, i.e. representative democracy. With the approval of the public as expressed in voting and public opinion, elected officials take on the responsibility of policy making. Thus, at some basic level democracy carries with it the idea that public opinion has an influence on policy (Key 1961).

Public opinion is an unusual concept. The words describe a singular or cohesive entity, but the public in even the most homogeneous societies is very diverse in terms of class, ethnicity and especially opinions. *So what is public opinion?* Surveys are one way to capture it. But 'it' in a large public such as the citizens of a country is often fractured in their opinion(s). For example, recent public opinion on the legality of abortion is divided between some bitterly opposed, some strongly in favor, and a majority favoring abortion only for exceptional cases (J. Scott 1998). These three facets of abortion opinion(s) constitute public opinion on abortion, as a total entity, when in reality it is not one thing. Surveys employing representative sampling are the only way to measure public opinion of an *entire* population. Although speaking about the public opinion of a whole group is like speaking about a field of grass where each blade is unique.

Measuring opinion with surveys is arguably the best if not only way, but this method is not without limitations. The questions cannot capture all aspects of all issues and policies. Furthermore, the timing of surveys may render public opinion more or less meaningful. Change in democracies requires institutional processes such as deliberative policy-making, ballot-initiatives and scheduled meetings of legislative bodies which only happen at certain times. Also, different members of a public have asymmetrical

information leading to different opinions. Often public members are aware of social policies, such as pensions or health care, but not fully informed about how these policies work; in fact most policy-makers themselves do not possess thorough knowledge of all social policies and instead form expert committees. This is due to the complex nature of modern social policies (Pierson 1996) and large-scale bureaucratic institutions (Weber 1921). Therefore, public opinion as measured in a survey is just a picture of a constantly changing and amorphous thing.

One lesson from over a century of survey research is that public opinion is somewhat predictable and is shaped by a variety of social and political factors. As public opinion should be an important part of the political process in democracies, I seek to uncover more about how public opinion forms. I do not engage in a lengthy debate over the exact nature of democracy. This is an ongoing discussion dating back to ancient Greece and carried to modern times with the writings of Jefferson and Rousseau for example, and continues to be at the center of fervent debates (Dahl, I. Shapiro, and Cheibub 2003). I take the basic idea of democracy that the people within a democratic society have access to and influence on the policy-making decisions in that society and this brings politics to align with their common interests. Public opinion is, as such, as a measure of common interests and effective democracies should transform these interests into social policy.

As shown in Figure 1, and based on the full Freedom House data which is not shown, the advanced nations of the world all score a 10, or a *perfect* score in democraticness. Therefore, I expect that these countries should have nearly perfect transmission of public opinion into social policy. Despite this expectation, researchers struggle to demonstrate that public opinion is a cause of policy (Burstein 2003, 2006; C. Brooks and Manza 2007; Soroka and Wleziem 2010). A reason for this might be the fact

that social policy shapes public opinion (Rothstein 1998; Pierson 2000). As an empiricist I attempt to bring evidence to bear on the formation of public opinion and this perplexing relationship of public opinion and social policy. But social policy is a large net that might capture many policies and public opinion is a contested term. Therefore, I start this process by clarifying my usage of the concepts *public opinion* and *social policy* in the first two sections, and then I finish the chapter with a discussion of my cumulated dissertation research and an outline of this book.

1.1 Public Opinion

A quote from Floyd Allport illustrates the ambiguity of the term *public opinion*.

Whether we personify the notion of the public or not, we are likely to commit a fallacy when we use a collective term as the subject of a verb denoting action. For the statement which the verb implies will often be true only of a part of the aggregate concerned (1937:8).

As Allport's comment suggests, public opinion is not a single thing, nor does it possess qualities of action or independence. Public opinion is a theoretical concept. It is an aggregate measure of individual attitudes in a society. It is a phrase used by journalists, politicians, scholars, and in everyday language to refer to a group.

The usage of the phrase *public opinion* is as a singular noun. This thing, i.e. force, political tool, mass preference, etc., has travelled in its meanings from the preferences discussed amongst the ruling elite in ancient Greece, to its connection with utility and rationality starting in the Enlightenment, to a manufactured product in the public sphere dominated by the power elite, to a near synonym of democracy based on full adult population enfranchisement in the past century (Splichal 1999). I use a definition of public opinion here as nothing more than special political attitudes. Attitudes are mental dispositions with a degree of favor or disfavor toward an object or entity, i.e. person,

place, issue, law, or weather pattern for example; and political attitudes are those that concern government, power relations, policy, and societal organization. It is important to point out that attitudes often predict individual actions (McBroom and Reed 1992), and public opinion predicts social and political outcomes (Converse 1987). Understanding action and outcomes has been a central task of social, political and economic theorists for as long as they have been around (cf. Coleman 1986). Measuring opinion is important for understanding social and political behavior; it helps determine the mood of a given society at a particular time (Zaller 1992). Public opinion should predict collective action and it should shape social policy. But public opinion is not just any set of political attitudes. To qualify as public opinion these attitudes must have special characteristics.

Public opinion is not just any aggregate measure of individual attitudes within a group, it only encompasses *special* attitudes. Paraphrasing from Allport (1937:13), public opinion should meet some rough criteria to qualify it as a special kind of attitudes. In order to have formed public opinion on a particular topic or event, individuals must be capable of expression of their attitudes on this topic and articulation of others' attitudes. This requires universal or widespread awareness of the topic. Many individuals will have attitudes about this topic as opposed to general apathy. The topic must be something in transition or have the potential to be changed, such as an objective or goal for society. Attitudes are often polarized or diverse in favor or opposition of objectives related to this topic. Finally, individuals are aware that many others have attitudes about this topic and shape their attitudes and behaviors in response to this public awareness. Take the examples of nuclear power and the sale of raw milk. While individuals may form coherent opinions on whether each of these should be legal, raw milk is not a polarizing topic with widespread awareness. Furthermore, outside of special interest groups there is little initiative to change the legality of milk sales, whereas some countries made recent

decisions to end the usage of nuclear power in the near future after major news events and many public discussions and protests (Dempsey 2011). Those who wish to study public opinion must be aware of what topics fit these criteria.

Which opinions fit these special criteria are shaped by political elites and the media because each individual cannot experience most major or public events, unless they occur in the individual's immediate surroundings. Thus, individuals are dependent on second-hand information for opinion formation. This information is collected, discussed and disseminated by policy elites, e.g. politicians, policy-makers, academics and policy related journalists. Although the public gets this information second-hand, this is a constant truth about how members of the public get their information. I focus only in this book on what happens after information is received, regardless of the source(s) from where it comes which is studied elsewhere (Zaller 1992).

Walter Lipmann helps contextualize this experience by referencing Plato's shadows of reality. Like the prisoners in Plato's cave whose heads are fixed to look only away from the entrance to the cave and who thus see only the shadows cast by those passing by outside. The prisoners discuss what is taking place outside the cave as though they experienced it. Individuals everywhere experience shadows cast by what is happening out of their field of vision, these shadows are found in second-hand information such as the media. Lipmann brings up the example of an island in 1914 inhabited by English, French and German inhabitants where news from off the island is irregularly delivered. These individuals learned of the outbreak of war six weeks after the event and, "for six strange weeks they had acted as if they were friends, when in fact they were enemies" (Lipmann 1949:vii-5). These island inhabitants had a public opinion; it was one coherent thing that directed their continued peaceful cooperation for six weeks, even though they were technically at war. If there was a survey of these island inhabitants

it would surely show that they believed that there was peace and thus constituted a social force for holding together their way of life.

Surveys are one of the most important tools for measuring or glimpsing the shadow-reality with which members of social groups conduct their affairs. Unless the group is extremely small, it is not possible to discuss opinion with every member and this brings about the need for sampling from the population. Furthermore, the questions asked on the survey cannot cover all possible topics to be the object of opinion. Thus, scientists design surveys to identify what issues *should be* public opinion. They cannot know ahead of time what topics will be widely opined, but use theory and pilot research to develop questions to ask of the public. Thus, public opinion as it is measured will never be the thing that it is theorized to be, it becomes some approximation of what is intended. The closer that survey questions get to asking about the most relevant and widely held social and political preferences of a given population, the more accurate the theoretical models and the deeper the understanding of how human society functions and changes. After identifying what topics should be a part of public opinion social scientists then measure attitudes toward these topics using surveys. The type of survey determines public opinion. Public opinion is like a wave-particle. It may be measured at distinct locations at fixed points in time, but it remains perpetually in motion. There is uncertainty over one person's opinion at any specific moment, but there is strong statistical probability that many people will have levels of opinions during a given timeframe.

Taking a step further, the *public* whose opinion should be known, must be definable as a singular group. Thus, in the case of Germany, the public is all Germans. This can be further broken down into voting-age Germans, non-citizen residents, or in any number of other ways. Therefore the surveys utilized by scientists must target specific groups. Again in the case of raw milk, surveys might only target dairy farmers

and the small group of consumers interested in this product as a way of constructing public opinion toward raw milk. To capture a group opinion requires knowledge about the quantity and whereabouts of the group members. If the group is sufficiently large, as with a country, it requires sampling from the population.

As my dissertation focuses on public opinion in a cross-national comparison, it is best to use the pluralized term *public opinions*. In the first place, each nation-state may be conceived as having a public residing within its borders. The events that impact the country and the ensuing policy responses are not isolated from the global community, but they are restricted heavily to national politics and media coverage. Thus, each nation-state has its own public opinion, and when comparing nations there arises the need for the term public opinions. Furthermore, within each country the formation of public opinion around important issues is divisive. Thus different coherent opinions form in different coherent publics, for example migrants and natives, rich and poor, or men and women.

1.2 Social Policy

Social policy is a category of government policies that target the welfare (i.e. well-being) of individuals in society. I use this term as synonymous with *welfare policy*, although I recognize that the term *welfare* is negatively connoted in some settings, in the US especially. Social policy includes public, as opposed to private, provisions of welfare and redistribution. For example pensions, health care, unemployment, housing and even food. Social policy is a broad term with many potential sub-categories, and policies related to families, marriage, migration and more may also be considered social policies so long as they are relevant for the basic needs or well-being of individuals. Basic needs may be loosely defined, but most traditionally these encompass forms of material security and

health. One particularly contentious issue is redistribution to the poor. Many individuals see the poor as personally responsible for their positions in life, and have no interest in using tax money to redistribute resources to them. Others see the poor as victims of the structure of society and in need of (and deserving) assistance (Van Oorschot 2000). Social policy requires some kinds of redistribution from those who have to those who have not, or have less, because social policy is funded through tax monies, and thus it is expected that those who earn and spend more will contribute more through taxes. Meanwhile those who earn and spend less will contribute less in taxes. So even if all members received equal material benefits from social policy, it would be redistributive due to taxation.

Social policy is a sub-category of policy that is part of the larger *public policy* category which includes any governmental policy that impacts individuals' lives whether welfare related or not. For example, the legality of abortion which only impacts the welfare of those involved with an unplanned or unwanted pregnancy, or, the legality of alcohol consumption in public which arguably has no direct impact on general public welfare. By welfare I follow a literal definition as "the state of doing well especially in respect to good fortune, happiness, well-being, or prosperity" (M-W 2012). Thus, social policy targeting welfare provides for individuals who experience lapses in well-being or prosperity. Lapses may be random, as with illness or sudden job loss, or may be concomitant with life course phase, for example young workers, students or old aged persons who have less ability to provide for their material securities. Social policy also targets group lapses in welfare, for example women whose incomes are tied to male-breadwinners in more traditional households, ethnic minorities who face discrimination in attempts to provide for their own well-being, or individuals who do not have enough

education or capital to secure welfare in a competitive market. Whether for individuals or groups who struggle to obtain welfare, social policy is a means of redistribution to them.

Social policies appeared in almost all societies throughout human history. Ancient Greeks developed systems for offering provisions to citizens in case of sickness, unemployment and or compensation for being a veteran of war for example (Ierley 1984). Similar practices were a feature of Roman society, the early settlements in North America, and across Europe, even during the tumultuous medieval times (Parker 1998). However, modern nation-states are qualitatively different from previous welfare systems. Since the beginning of the 20th Century, the most advanced countries of the world developed nationally centralized bureaucracies designed to publically coordinate welfare provision. This came with the process of nation-state building. This was a departure from previous provision systems which came from families, churches and local organizations, or monarchs or other forms of the power elite. Especially after the 1940s, the most advanced nation-states had expansive social policy provisions and the term *welfare state* emerged as a way to describe these new country-level policy systems. To speak of social policy today is to speak of welfare states.

A welfare state is a national bureaucratic framework that provides social policy at a level that guarantees a minimum welfare for all citizen members of the country, and often all legal residents. Historically the term *welfare state* was utilized in Great Britain as a new direction in social policy departing from the Poor Law where the state would end poverty and eliminate the problems of unemployment. In other words the state would take a heavy hand in centralizing and altering the distributional power of market forces (Briggs 1961). The nation-states were guarantors of civil and political rights and became welfare states when they provided social rights to well-being (e.g. welfare as a right) (Marshall 1992). The latter is evidenced in the rise of welfare states in the United

Kingdom, Germany and eventually Scandinavia and all of continental Europe. This normative framework of social rights embodied in the state is what gives welfare states a classification that is distinct from other nation-states that lack comprehensive social policy provisions.

Welfare states manifest in a variety of forms throughout the world (Arts and Gelissen 2002), each containing divergent notions of social rights (Mau 2003). Who gets what and how much are questions asked in all welfare states, but met with answers that range from the US' extreme liberal market position, where provisions are minimal and means tested; to the United Kingdom's liberal pension and unemployment schemes, but generous universal health care; through German and continental European systems of universal welfare with important contributory and status distinctions; to the social democratic Scandinavian countries who generally provide for all regardless of contributions or means.

The complicated historical rise of welfare states from Bismarck's Germany and Beveridge's England is not the focus of this dissertation. I pick up after the institutionalization of welfare states across the advanced western nation-states which in addition to welfare states, also rose to become some of the most democratic political systems in the world (Freedom House 2012). Thus, after the Golden Age of welfare expansion and through the neoliberal reforms that roughly characterize the late 70s and 1980s, the modern western welfare state of the past 30 years emerged (Esping-Andersen 1996). The modern welfare state is a highly stable democratic state with deeply entrenched policies. However, these policies diverge markedly in their characteristics (Arts and Gelissen 2002).

Since the 1940s, most advanced western nations have increased spending on social policies as a percent of their overall wealth, suggesting an increasing commitment

to welfare. There are some clear exceptions, for example Sweden has seen a sudden decrease in spending since the mid-2000s dropping from its former prominence as the largest spender (OECD 2012). Also, specific social policies have changed, for example the Hartz IV reforms in Germany, the changes in TANF in the US, or the 'privatization' within public provision of the National Health Service in the United Kingdom. As social policies diverge across welfare states, so do public opinions. Democratic theory predicts that public opinion should shape the divergent welfare policies to grow and change over time.

1.3 Cumulous of Three Studies

This book presents the results of over three years of research in the area of public opinion and social policy. Three studies are the empirical basis for this book. The first is published in a peer-reviewed journal (Breznau 2009, 2010a) and it uses *International Survey of Economic Attitudes (ISEA)* data and structural equation modeling (SEM) to show that individuals are not merely self-interested in their opinions (*cross-sections from 1991-1996; N=13,294; country N=5*). Instead, ideology and institutions shape these preferences. Those from formerly Communist social and political regimes, and those who have personal ideological orientations that are more egalitarian, are more supportive of price controls, subsidies and public provision of welfare.

The second study is under review for publication (Breznau and Eger 2012). It uses *European Social Survey (ESS)* data and multilevel regression modeling to support the claim that in-group bias leads native born individuals in western European countries to be less supportive of social welfare policies when they live in areas with more foreign-born (*cross-sections 2007-2009; N=22,049; regional N=112; country N=14*). This paper is co-

authored with Maureen A. Eger, and it required construction of a regional database of European countries at the NUTS 1, 2 and occasionally 3 levels, which includes measures of ethnic diversity, and socioeconomic and demographic conditions (collected from countries' census data). The models in the paper adjust for individual, regional and country-level variables in the complicated opinion formation process. To date Eger and I know of no other systematic review of Western Europe that finds strong support of the in-group bias hypothesis.

The third study is also in the review process (Breznau 2010b, 2011). It uses *International Social Survey Program (ISSP)* data aggregated to the country-level along with *OECD* data and an instrumental variables, non-recursive SEMs approach to provide initial evidence that there is no general feedback loop between opinion and social policy (i.e. welfare spending) (*time period 1985-2006; country N=18; country-time N=61*). Instead policy mostly shapes opinion at the macro-level. The apparent cross-national correlation of opinion and policy is determined by social and political institutional norms which are shown to have significant and similarly sized effects on both opinion and spending and in the same direction. Thus institutional alignment instead of reciprocal causality is supported as the mechanism between opinion and social policy.

The purpose of this book is to combine the findings of the aforementioned papers into a coherent story about public opinion and social policy in advanced democratic countries. Chapter Two, "Determinants of Public Opinion" discusses some theories of what causes public opinion. It derives hypotheses about the roles of structure and demographics (2.1), ideology (2.2), in-group bias (2.3), and institutions (2.4). This chapter makes distinctions between the micro-level of individuals, the macro-level of countries, and the meso-level of sub-national regions. Chapter Three, "Measures of Public Opinion and Determinants" discusses my variable measurements and how others have

measured demographics, ideology, institutions and in-group bias, and derives some best measurement practices within the realm of available cross-national data on public opinion and its determinants. It concludes with a summary of hypothesized effects and the measurements of the variables to test for the effects, presented in Table 4.

Chapter Four, "Testing Determinants of Public Opinion" presents the empirical results from the first two studies that are the basis for this cumulative dissertation. The first in section (4.1) focuses on the individual level, it tests three hypotheses related to the impact of self-interest, egalitarian ideology and former Communist institutions on support for three types of social policy. The second section (4.2) presents the results from the second study looking at in-group bias in Western Europe, focusing on the individual and regional levels (i.e. micro and meso) and the effects of ethnic diversity.

Chapter Five, "Causality of Public Opinion and Social Policy" discusses the relationship of public opinion and social policy. It reviews relevant theory and empirical findings about a reciprocal relationship between the two, i.e. feedback loop (5.1), and about plausible institutional factors that might create the appearance of feedback due to simultaneous impacts on opinion and policy, i.e. institutional alignment (5.2). These two hypotheses give competing explanations for the cross-national correlation of public opinion and social policy. Then Chapter Six, "Testing for Feedback and Alignment" presents the empirical results from the third study undergirding this dissertation which focuses on the macro-level relationship of opinion and policy cross-nationally.

Chapter Seven, "Perspectives on Public Opinion and Social Policy" summarizes the findings of the research presented in this book. The chapter breaks down into three sections that review empirics and limitations; first study (7.1.1), second study (7.1.2), and third study (7.1.3), and five sections reviewing theoretical implications; self-interest (7.2.1), ideology (7.2.2), in-group bias (7.2.3), institutions (7.2.4), and a theory of

opinion-policy (7.2.5). The chapter concludes that self-interest and ideology are both driving forces of opinion formation, although ideology may be even more important. Also, that both social and political institutional norms found in Communism, individualism and corporatism shape public opinions. Finally, it concludes that although public opinion probably has an impact on social policy, this does not appear to be a general impact across democratic societies. Instead, institutions align opinion and policy into a cross-national pattern. The stability of social spending indicates that path dependency of policy impacts the otherwise erratic nature of public opinion. The conclusion (7.3) presents some normative digressions on democracy, public opinion and social policy.

2 CHAPTER TWO DETERMINANTS OF PUBLIC OPINION

Public opinions are somewhat random and somewhat predictable. The parts of opinions that may be predicted are the focus of the theory in this section. This section looks at what causes public opinion formation. Self-interest is one cause. Opinions favor policies that bring material benefits. Also, opinions are ideologically motivated, and individuals' normative beliefs about the world shape their preferences. Ideologies are passed on from parents, schooling and peers, but also from the context of socialization. Individuals identify themselves as members of groups and define their opinions based on these subjective memberships, or group consciousnesses. They often prefer to share with or protect resources of their perceived in-groups. Also, the institutions of a society shape public opinion by providing norms for actions and behaviors. In the following sections I review some of the literature on *self-interest*, *ideology*, *in-group bias* and *institutions* in the formation of public opinion.

I focus on three levels of opinion formation: The individual level which is also the *micro-level*, the regional level within countries which is a *meso-level*, and the country or nation-state which is my highest order level known as the *macro-level*. In order to understand public opinion of a group or country, it is important to look at the determinants at all three of these levels because there are strong theoretical reasons that all matter for shaping opinions and actions in society (Coleman 1986). While discussing theory and deriving hypotheses in this chapter I will use language of levels to locate where each effect should take place. In addition to the determinants of public opinion that I discuss in this chapter, I suggest that social policy itself shapes opinion. I place this discussion in Chapter 5 because it fits with the idea of reciprocal effects between public opinion and social policy. But first: *what determines public opinion?*

2.1 Self-Interest

Individuals have different levels of socioeconomic status (SES). Their status locations within their respective societies determine their opportunities, social and material resources, and their opinions. Educational level, occupational status, and income (i.e. access to material wealth), are three primary ways of understanding SES. Education is no guarantee that an individual will be rich or have a high status job, and similarly an individual being rich is no guarantee that she is highly educated; but often these go together. The structural context of individuals in their early life course phases determine what opinions they develop. Measuring this structural location through SES, and understanding how SES then determines how individuals think and behave throughout their lives, is one of the great tasks of the social sciences throughout history (Wallerstein 1999). Individuals at different ages face different opportunities and constraints independent of their SES, for example older persons are more likely to need health care, and thus behave and opine accordingly, all else equal. SES and demographics form the basic individual-level characteristics for understanding opinion formation.

At the heart of many theories of human attitudes and behaviors is the mechanism of self-interest. A product of classical philosophy and economics is the notion that gaining access to materials motivates individuals (Ricardo 1821; Marx 1887; Papadakis 1993; Friedman 2002). Materials include basic necessities such as food and shelter, and on a social level translate into ownership and control of capital. Self-interest leads individuals to form or join groups with common self-interests, and these groups often espouse common opinions, such as rich people trying to minimize redistribution of their tax monies. I consider self-interest in a narrow and strict sense here by focusing on interests based on material gain. Materials can be in the form of goods such as income or services such as medical treatment. Self-interest in a general sense extends beyond the

goods and services realm because individuals form interests based on ideological beliefs (as I will show in section 2.2), because their interests are coerced by a 'liberal public sphere' (Habermas 1962), or because their interests are momentarily shifted based on affects such as fear (Edwards 1990). These extra-material determinants of interests fall outside of my scope, although it is important to recognize that they are of critical importance to public opinion formation (Zaller 1992; J. Lewis 2001). The simplified story here is that material self-interest is a micro-level determinant of individual attitudes, which collectively may be viewed as public opinions.

There is strong reason to believe in material self-interest in shaping public opinion. Those who are lower in SES have more to gain from centrally provided welfare and redistribution and as such are consistently shown to be more supportive of various social policies (Hasenfeld and Rafferty 1989; Svallfors 1997; Andreß and Heien 2001; Jæger 2006b). More specifically, individuals aim to advantage themselves in relation to others' incomes and their own unemployment experiences (Meltzer and Richard 1981; Gelissen 2000); they demand public insurance given a volatile private market for health care (Barr 2000); and workers with specialized skills tend to support job protection policies because the demand for their skills is more erratic (Iversen and Soskice 2001). Overall, the hypothesis of self-interest is that individuals will hold opinions in support of social policies that will benefit them materially. Status varies substantially within societies. For example, looking at the income distribution in the US the top decile averaged \$93k in 2005 while the bottom decile averaged \$6k, and in Sweden these figures were \$45k and \$9k respectively (OECD 2008). Lower status individuals will espouse higher support of social policy that redistributes material resources to them. Conversely, higher income, education and occupational status individuals should have

lower support of social policy. Thus, public opinions should be dispersed along status lines, as with income but also other measures of SES.

Demographics also play a role. Women face social and material disadvantages compared with men. Women are also disproportionately responsible for childcare and family-work. Therefore, women are expected to have an interest in stronger social policies to mediate material disadvantage and to bolster familial care (i.e. the service that they are disproportionately tasked with providing). Also, age plays a role. Persons who are retired or closer to retirement may be more interested in social policy that gets them better pensions and health care. Those who are unemployed, i.e. labor market status, should be more supportive of unemployment if not other social policies that will take care of them during their times of material risk. The same is true of persons with ill-health or who expect to need medical care.

Individual self-interest is not only determined by individual SES and demographics, but also the context in which an individual lives. The level of development of a region or country for example will shape individual attitudes. Development is a kind of regional- or country-level SES. Economic development is a general concept linked to many specific qualitative features of regions or countries. Some regions and countries have more wealth, better infrastructure, less corruption and etc. and these factors shape individual opinions. Regions within highly developed countries vary substantially in their levels of development. In the US, state-level GDP in 2000 was \$54k per capita in Connecticut and \$43k in California, while being only \$26k and \$32k in Missouri and Kentucky respectively (BEA 2012), also states diverge in education levels with high school completion rates in 2000 of 78% in Mississippi and Texas up to 90% in Colorado and New Hampshire for example (Evans et al. 2009). Similarly in Germany, a large gap between the wealthier and poorer *Länder* (federal states) exists with a per capita GDP of

43k€ in Hamburg, 33k€ in Bremen and only 17k€ in Mecklenburg-Vorpommern in 2000 for example (Eurostat 2012). GDP and educational attainment may be understood as variables of development that lead to dispersion of public opinion throughout the world.

Based on similar theoretical components of self-interest I expect that regions with more development will be less supportive of social policy. This is due to the fact that these regions are filled with individuals who are better off than elsewhere in a given country. These individuals may not want their regional productivity to be redistributed to other regions, i.e. a regional class-based interest, or they may simply be more likely to see themselves as self-sufficient thanks to their materially secure region and adopt a view similar to those others in their region. Although countries differ in their actual levels of regional redistribution, all countries engage in redistribution through the tax structure. When the national government takes taxes and then spends on the needy, wealth is redistributed from wealthier individuals and regions. Wealthier regions may have more persons who are pressing to keep taxes low and thus actively engaged in maintaining low levels of spending on things like social policy. Independent of their own individual SES, individuals should benefit from the collective wealth and development of a region and thus be less likely to perceive a need for social policy. Another argument is that an individual may see her highly developed region as more successful than elsewhere and take on a protectionist stance, or an in-group bias toward her region, I will discuss this group phenomenon more in section 2.3. Finally, regional development may capture levels of individual SES that are unobserved by measuring education, occupational status and income, for example wealth passed on through families.

2.2 *Ideology*

Individual *ideology* plays a role in shaping public opinion. Ideology is something different from an attitude. Ideology comes from familial and early socialization influences and is something deeply held and relatively stable over time. Ideology includes normative notions about ideal ways the world should be. Ideology, conviction, value, norm, opinion and attitude have some overlapping usages and I hope to briefly clarify this language here before specifying the theoretical relationship of ideology to public opinion. Ideology, according to Merriam-Webster (M-W 2012), is "visionary theorizing". I argue that ideology is something that shapes an individual's goals, e.g. a vision of how things should be. I use the concept of ideology as synonymous with *conviction*, as in a "strong persuasion of belief" or "state of being convinced" (ibid.). However, ideology is preferable to conviction because the primary definition of conviction relates to a procedure to identify criminal guilt, or in everyday usage may be confused with religious faith, both of which are not related to the topics at hand (ibid.).

Ideology is something less flexible over time than an *attitude* which is a "mental position with regard to a particular fact or state" (ibid.). The fluidity of mental dispositions, facts and states of being over time, leads to attitudes which may change at any moment as shown in social psychological research (general review in Eagly and Chaiken 1993). A *value* (i.e. *der Wert* in German) is similar to an ideology in the sense that an individual holds a value and it should be somewhat stable over time. However, "value" is rarely used in a singular form in English (or German) and instead comes in a plural form. "Values" (*die Werte*) distinguishes this concept from "value", which is an English word that refers to the worth of something in monetary or equivalent economic exchangeability. Values instead are a set of ethical convictions, notions of what is right or wrong, that are often prefaced by another term to designate what set the values are from;

for example *human values*, *ethical values*, or *family values*. Although values refer to ideologies, the necessity for a preface word makes this term impractical.

A *norm* and an ideology are very similar, but not quite synonymous. A norm is "a principle of right action binding upon the members of a group and serving to guide, control, or regulate proper and acceptable behavior" (M-W 2012). A norm is something external to an individual and exists in the social construction of reality within a group (Berger and Luckmann 1967). Most or all members of the group are aware of the norm; however, not all agree with the norm. Thus, an ideology is an individual's stance or position with respect to a social norm, or normative principle. Norm is to society what ideology is to an individual. For example, being against gender inequality would be an individual ideology, despite the fact that it is one of the most widely held norms in democratic societies (WVS 2008, authors own calculations). An individual has taken on an ideology via socialization and cognitive processes. Although the individual may fluctuate in the extent that she agrees a norm, the norm does not change in its content except over large segments of time or via revolutions.

There are many kinds of individual ideologies in a given population that might shape social policy. One of the most common usages of ideology is in reference to political ideologies that are more left or more right leaning, i.e. more liberal or more conservative to borrow from the US context. There is a plethora of research suggesting that political ideologies (i.e. left v. right, liberal v. conservative) shape public opinion on various issues (R. Y. Shapiro and Young 1989; Rudolph and J. Evans 2005). However, as I am looking specifically at welfare and redistribution related policies, I focus away from political ideology because a left-leaning ideology goes with a left-party preference, and across all European and English-speaking nation-states left-parties are advocates of welfare and redistribution in their political agendas (J. D. Huber 1989). Thus, political

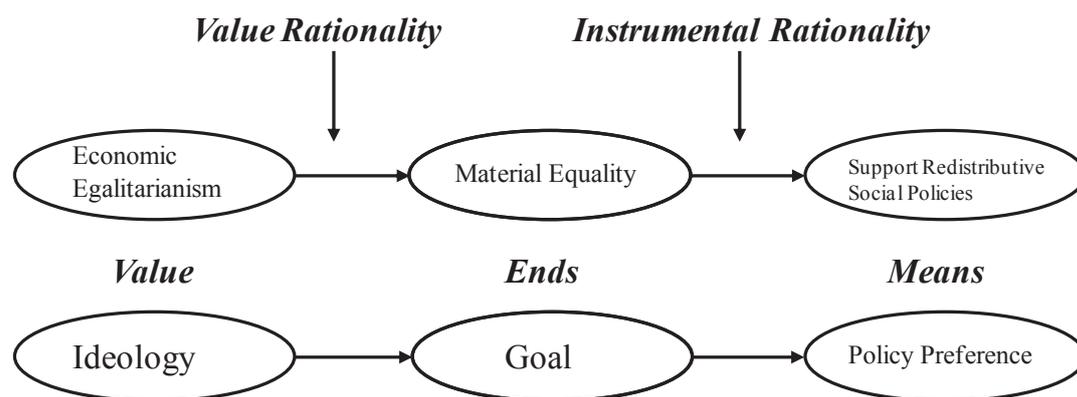
ideology and public opinion toward social policy have conceptual issues, where left ideology and redistributive policy may be one and the same in the minds of survey respondents.

In order to investigate the ideology and public opinion linkage I focus instead on *egalitarian* ideology, i.e. the idea of equality or having a more equitable distribution of resources in society. One function of social policy is to create a more equal distribution of some of a society's resources. Therefore, the belief that society should be more equal should influence preferences for more redistribution and for welfare services that shift resources from those who have to those who have not. At the other end of egalitarianism is anti-egalitarianism, or the belief that society should be unequal. This is a kind of individualism, i.e. the belief that individuals should acquire their own resources and not be required by the collective to share those resources. Although egalitarian ideology is often found amongst subjectively left leaning individuals, it is unique from left-right ideologies and from public opinion toward social policy because it is not a direct measure of policies or policy-making processes. Egalitarian ideology is instead an abstract understanding held within an individual that society should have a more equal distribution of resources.

At the theoretical level I rely on Weber's usage of *instrumental rationality* (*Zweckrationalität*) and *value rationality* (*Wertrationalität*) to provide a framework for the translation of ideology into opinion (Weber 1921:24-26). The idea of value rationality suggests that some actions at the micro-level are based on ideological convictions. These convictions are deeply held and will motivate actions regardless of what outcomes individuals expect from these actions. Thus individuals with more economic egalitarianism should engage in actions that promote a more equal society. The idea of instrumental rationality, i.e. means-ends rationality, is that an individual with specific

goals will choose rationally consistent actions of achieving those goals. If individuals have economic egalitarian goals for society, then they should choose greater government provided redistribution. Thus, value rationality and instrumental rationality should work together. Greater economically egalitarian ideologies should translate into goals of more material equality (regardless of whether individuals believe that this is possible), and these goals should lead individuals to support policies of redistribution of material resources, because the government has the power and the tax revenue to reduce inequality. Thus social policy is a means for achieving the goal. Figure 2 proposes a simple model of this hypothetical process.

Figure 2. Hypothetical Causal Model of Ideology to Policy Preferences



The process from ideology to goal to policy preference along the bottom of the figure provides the abstract idea. The middle row gives the broad categories of value, ends and means; i.e. Weber's theoretical framework. The model hinges on 'values'. As previously distinguished, I use ideology instead of value, although these terms are synonymous in their meanings in my usage. The top row of the figure demonstrates concrete examples with relevance for economic egalitarian ideology leading to a preference for a society with a more equal distribution of material resources which in turn

leads to preferences for increases in social policy. I make no claims over the rational or irrational nature of instrumentally or value motivated opinions. As Weber points out (Weber 1921:26), even if a value leads to irrational behavior (such as giving away money to the poor instead of using it to eat), the instrumental actions that come as a result of the value are consistent with the value and thus have a degree of rationality to them. I do not engage rational-choice debates, as this would require a second and maybe third dissertation. I merely suggest that whether egalitarianism is conceived as an ideology (i.e. Weber's value) or a goal or both, it is a normative ideology and should lead economic egalitarian ideology to increase opinions in favor of social policy.

Although I use Weber's theory to predict that ideology shapes opinion, there are other theories that support this hypothetical process. The psychological concept of cognitive consistency for example suggests that individuals will align their attitudes with each other and with their actions; otherwise they experience the negative state of cognitive dissonance (Festinger 1957; Bem and McConnell 1970). This means again that an individual with egalitarian ideology, understood as a kind of intrinsic attitude or belief, should behave and act consistently. Again, psychological research distinguishes between *implicit* attitudes, those that occur heuristically and without rational cognition, and *explicit* attitudes, those that are the product of thought and reflection. This distinction integrates with Weber's theory. Implicit public opinion may be "automatic" based on ideologies (value rationality) and explicit public opinion may be "deliberate" or calculated based on ideological goals (instrumental rationality) (Gawronski and Bodenhausen 2006:692).

Individuals are exposed to a slew of information during their lives. They receive persuasive messages that might shape their opinions. In this dissertation I look at many factors that shape opinion, but do not explicitly look at information as it is passed from

the media or political elites to individuals. The media in general may be understood as ideologically persuasive (J. Lewis 2001). Various news outlets such as newspapers and television broadcasting organizations utilize ideological biases to distribute information. They take results from public opinion polls and frame them 'ideologically' so as to support a particular position or agenda. In this way the media shapes public opinion by impacting what the public thinks that the public thinks, and by using ideology to shape what individual members of the public think. Those in charge of media sources seem to be well aware of the impact of ideology on opinion and the fact that individuals carry "predispositions" toward certain opinions and these will be activated by information exposure (Zaller 1992:23). Although these processes are presumably important for public opinion, I take them as given, as fixed features of nation-states (and sometimes regions) and I argue that individual ideology reflects the influence of the media over each individual's life course. Thus focusing on ideology here indirectly captures media and many other socialization effects (which are studied in detail elsewhere, see also Converse 1964).

Ideologies therefore do not operate independent of self-interest or media content which may reflect socialization and particular interests and institutions. They develop throughout the life course out of a variety of forces. Scholars note that self-interest may shape ideologies and those further up the SES ladder have more commitment to individualism as opposed to egalitarianism (see discussion in Hasenfeld and Rafferty 1989). Others show that socialization determines ideologies and those raised under liberal markets with democratic principles will have strong commitments to economic individualism with simultaneous commitments to basic levels of egalitarianism; whereas those socialized under Communism will favor ideal levels of egalitarianism as subordination to Communist doctrine (Arts and Gijsberts 1998). Thus, individuals have

ideologies that are deeply held from socialization and early life experience, but also that change due to structural and demographic characteristics.

Here is where the line between micro-level ideology and macro-level norm becomes blurry. The social norms of a society are present in the media, institutions and socialization of individuals. Also, meso-level norms in local media, regional institutions and group consciousnesses shape the socialization of individual ideologies. Thus individuals may ally themselves with any number or variations of different norms present in societies and groups. Thus, the impact that societal norms (at country- and regional-levels) have on individual ideologies is unclear, and may depend on how strong individual characteristics foster alliance with the higher order norms. For example, being white, wealthy and protestant may dispose an American to be strongly opposed to redistribution and strongly in favor of individual acquisition of welfare, but it is hard to tell whether whiteness, wealth or Protestant ideas cause this.

Wegener and Liebig (1995) discuss the phenomenon of *primary* and *secondary* ideologies. They use this ideological dichotomy to explain why individuals may hold contradictory ideological positions, e.g. simultaneously favoring meritocratic acquisition *and* state intervention in distribution of welfare and redistribution. This is due on the one hand to the primary ideology of a nation-state with respect to just distribution of resources, for example the US has a meritocratic primary ideology. On the other it is due to the secondary ideology of a sub-group with respect to social justice. For example, blue collar workers often have a redistributive secondary ideology. Thus an American blue-collar worker would hold meritocratic views while simultaneously favoring redistributive justice, on average. I make a distinction here. When discussing ideology, I only look at individuals and their individual ideologies. These may be a result of primary and secondary ideologies, and a product of socialization and interests. In the next section 2.4 I

discuss institutional norms. Primary ideologies, as used by Wegener and Liebigs are what I will call social or political norms at the country-level, and secondary ideologies are those norms found at lower group levels. Therefore, the Wegener and Liebigs distinction must be re-interpreted for the purposes of my theoretical perspective by replacing their usage of ideology with my usage of norm.

As suggested in the work of Wegener and Liebigs, and others, the range of distributive ideologies throughout a given population might blur the relationship of SES, institutions *and* ideology with social policy opinions. I propose to deal with this issue by using a theoretical causal model with ideology placed in between SES and institutions on one side and public opinions on the other. But I admit that ideology, institutions and SES are reciprocally related, mutually reinforcing, and that causality is never certain and only theoretical. In the end I hope to control for some of the factors that lead to diverging individual ideologies.

My theoretical framework follows the lead of research done in a US sample from Detroit, where Hasenfeld and Rafferty (1989) find that those with stronger normative beliefs in social rights (to well-being and prosperity) had significantly greater support of specific contributory and means-tested social policies net of other variables in the US. It also follows the work of Blekesaune and Quadagno (2003) in showing that egalitarian ideology increases support of government provision of unemployment and health care across Europe.

2.3 In-Group Bias

In between individual- and country-level determinants, meso-level factors shape behaviors and opinions. Membership in groups is a fundamental component of social

organization and the way individuals navigate their social worlds. Although there are many types of groups that distinguish themselves from one another, such as blue or white collar worker, male and female, or young and old, I consider here a group boundary that is especially relevant to social policy. That is the group boundary of ethno-nationalism, what I conceive of as natives versus foreigners.

Festinger (1954) argues that social categorization into a perceived group is an automatic human response to the environment. Individuals see themselves as part of an *in-group* that comprises of individuals who are similar on some salient dimension or dimensions. The in-group is defined by these dimensions which are different from other groups, identified as *out-groups*. *In-group bias* is a tendency of an individual to prefer members of the in-group for social interaction and resource sharing (Tajfel et al. 1971; Turner 1975; Brewer 1979; Mullen, Brown, and C. Smith 1992). Experiments show that people strongly prefer members of their own group, even when group is randomly assigned and has no consequence for the subject (Tajfel et al. 1971; Brewer 1979).

The reason that in-group bias should be a determinant of public opinion is due to immigration. Western European countries for example are more ethnically diverse now than they have been at any point in their respective histories (Castles and Miller 2003). Of the roughly 70 million immigrants residing on the European continent, by the end of 2008, approximately 75% immigrated to Western Europe which is home to the greatest levels of social policy in the world (United Nations 2010). In-group bias should be strong where foreign-born persons are found in large numbers, enough to constitute a sustained presence of an out-group, or out-groups.

With the exception of a few comparative analyses, the majority of scholarship on the relationship between diversity and public opinion comes from the US case. Gilens (1995) finds that racial stereotypes about black work ethics negatively affect white

attitudes towards social policy. Gilens finds the effect of racial stereotypes is greater than that of individualism and economic self-interest. Other evidence comes from Luttmer (2001), who finds that the race of welfare recipients matters for welfare attitudes towards unemployment insurance. The US literature is unique in the sense that it finds a relationship between race and public opinion toward basic means-tested social policies. Blacks in the US however are not immigrants. Also, in Europe social policy has broader coverage beyond unemployment or minimum income; in fact the bulk of spending comes from pensions and health care (OECD 2012). Thus, findings from the American case are not directly transferable to the European case where persons who are ethnically different from the majority often are immigrants, and health care and pensions are distributed more generously.

Nonetheless, scholars have hypothesized that similar group dynamics processes may be at work in Europe as in the US, but thus far have mostly failed to confirm this. Relying on *European Social Survey (ESS)* data from 17 countries in 2008, Mau and Burkhardt (2009) find only a small effect of immigration on support for redistribution. Hjerm and Schnable (2012) also rely on *ESS* data from 18 countries in 2004 and find no effect of immigration on support for redistribution or acceptance of taxation. In comparative analyses of welfare attitudes in 45 countries, Freeze (2011) relies on a number of data sources, including *ESS*, and finds no clear linkage between ethnic heterogeneity and support for redistribution. Brady and Finnigan (2011) also find little evidence that immigration undermines support for the welfare state. Crepaz (2008) finds no relationship between immigration-generated ethnic diversity and social policy attitudes, but data issues also undermine the validity of his results. Crepaz relies on “percent foreign” instead of “percent foreign-born.” Both measures are available from OECD, but they do not measure the same thing, and “percent foreign” captures different

populations in each country. Furthermore, for most countries involved, “percent foreign” is approximately 20-50% smaller than “percent foreign-born.” This means that Crepaz significantly underestimated the size of the first-generation immigrant population.

Some recent research shows that immigration does indeed affect public opinion. Eger (2010b) finds that immigration-generated ethnic diversity reduces support for social policy in Sweden. Larsen’s (2011) comparison of welfare opinions in the US, Sweden, Denmark, and Great Britain provides further evidence. His results show that although Americans’ general distaste for redistribution is truly “exceptional,” stereotypes about immigrants from non-Western countries affect Europeans’ attitudes about social welfare at least as much as stereotypes about African-American work ethic affects American attitudes. Although his analysis does not include objective regional- or country-level measures of diversity, respondents who report hostility towards living in a neighborhood where at least 50% of the residents are from an ethnic out-group are less supportive of redistribution.

The only current research that demonstrates robust statistical relationships between objective measures of ethnic diversity and public opinion toward social policy come from the US and Sweden. Following the work and ideas of Maureen A. Eger, I suggest that this relative lack of support for in-group bias effects is due to the privileging of the nation-state in comparative political research. All of the aforementioned work on Europe compares countries to each other. A large body of research on group dynamics suggests that diversity in smaller, local contexts should lead to in-group bias (Festinger 1954; G. W. Allport 1954; Tajfel 1970; Horowitz 1985; Barth 1969). Furthermore, many countries are extremely diverse in their regional characteristics, and these differences are lost when measuring diversity at the country-level. Research confirms this. The analyses that employ measures of ethnic heterogeneity at the meso-level in the US and Sweden

demonstrate that diversity reduces public support of social policy (Luttmer 2001; C. Fox 2004; Eger 2010b).

A critical caveat of this hypothesis, based on the work of Eger (2010a), is that in-group bias is not the same as out-group hostility. It is not anti-immigrant attitudes that create group based public opinion in opposition to social policy. It is a general bias to prefer the in-group instead of any out-group regardless of the characteristics that define the group boundaries. For example, Protestants could have in-group bias against otherwise phenotypically similar Catholics, or teenagers against adults of the same ethnicity. I do not suggest that racism or prejudice against immigrants or against individuals who are ethnically different does not shape public opinion. These are hypotheses tested elsewhere, and especially supported in the US. Instead, I focus on in-group bias because it is theoretically a factor for all humans and can bridge the diversity experience of a range of countries. Understanding in-group bias may help to build grand theories of public opinion formation, as opposed to racially or ethnically specific theories.

There are many alternative arguments for why diversity should shape public opinion. These include socio-biological fictive kinships or ethnic nepotism (Trivers 1971; Van den Berghe 1981); psychological impacts of empathy on altruism (Batson et al. 1981); neuroscience of negative responses to ethnic out-groups (Gutsell and Inzlicht 2010); evolutionary reciprocal altruism (Trivers 1971); and social psychological trust in homogeneous group characteristics (Brewer 1979; Alesina and La Ferrara 2000) to name a few examples. I focus on the impact of real or perceived group boundaries, which is what all these studies have in common. A greater proportion of out-group members should activate stronger in-group allegiance and lead to reduced support of social policy, i.e. reduced support of sharing resources with out-group(s).

2.4 *Institutions and Norms*

Like ideology at the individual level, norms at the societal level shape public opinions. Social interaction leads to the construction of norms, and repeated social interaction leads to institutionalization of these norms (Jepperson 1991). Norms arise out of common interests such as the need to communicate, take care of sick persons, and make decisions or policies that impact a society. Individuals rely on previously constructed norms to guide present actions. So instead of inventing a new language, new health care practices, or new system of government every time a need arises in society, individuals rely on institutional norms. The process of institutional norm transmission occurs in all societies, e.g. via language, cultural practices, families and socialization (Berger and Luckmann 1967). However, since the rise of bureaucratic organization amongst humans, norm transmission also occurs in formalized political institutions (e.g. assemblies and governments) (Weber 1921); non-governmental organizations (e.g. social movements and unions) (Cornfield 1986); and profit-seeking organizations (e.g. businesses and firms) (Dessein and Santos 2006).

A lexical definition of an institution is a "significant practice, relationship or organization in a society or culture", and an "established organization or corporation...especially of a public character" (M-W 2012). As this definition suggests, an institution is something in practice. Institution implies repeated action or "chronically repeated activity sequences" (Jepperson 1991:145). Institutions require social interaction for their preservation, and the institution itself is a kind of map or framework to guide social interactions. An institution gives a "stable design" to activity sequences (ibid.). The institution cannot exist without stable norms and societies cannot exist without institutions. Norms evolve about the way the world is, the way the world should be, and how to behave accordingly (Geertz 1973). Through norm enforcement amongst members,

institutions exert forces external to each single individual (DiMaggio and Powell 1991). Although behaviors and attitudes on the part of individuals often shape institutional norms and outcomes, the norms and formal rules of an institution shape actions and attitudes of individuals. Institutions serve as connecting points and motivating forces for individuals to develop opinions and behave in ways that reproduce and maintain societies¹ (Weber 1921; Meyer and Rowan 1977).

Institutions tend to be stable, but their characteristics are not permanent, and undergo perpetual change. However, institutions arise as a means of creating order in the disorder of reality. Each conscious individual has a unique subjective reality, and objective reality can only be *inferred* through social interaction in which actors find shared experience of, and agreement over objective reality necessary for survival. Thus, institutions must be consistent and durable in order to offer the stability that individuals require. As Berger and Luckman point out:

[T]he reality of everyday life maintains itself by being embodied in routines, which is the essence of institutionalization. Beyond this, however, the reality of everyday life is ongoingly reaffirmed in the individual's interaction with others. Just as reality is originally internalized by a social process, so it is maintained in consciousness by social processes. These latter processes are not drastically different from those of the earlier internalization. They also reflect the basic fact that subjective reality must stand in a relationship with an objective reality that is socially defined. (1966:149).

Without wandering too far into a philosophy of knowledge, I seek to point out that institutionalization of objective reality is necessary for social existence. Otherwise society unravels into chaos, for example when individuals attempt to trade goods that have no agreed upon value or characteristics; murder their bosses when they seek a promotion; or abandon their children electing to simply make new ones, etc. Institutions by nature tend

¹ I do not engage in the discussion of whether institutions act, or whether they are merely the sum of individual actions, e.g. debates on methodological individualism, rational choice-theory and actor-centered approaches. In social science, institutional effects and transmission of institutions across space and time are observable and exert independent influence on individuals. For me this is sufficient reason to consider them as a force external to individuals, regardless of whether this force is a product of synergy or simply summing of individuals' in their impact on other individuals.

toward stability and replication, which is one of their functions if not hallmarks. This requires norms for enforcement of the institution, and these norms shape public opinions (and behaviors) to align with the contents of the norms.

Hall and Taylor offer a summary of the institutionalist theoretical perspective by pointing out that,

...institutions provide moral or cognitive templates for interpretation and action. The individual is seen as an entity deeply embedded in a world of institutions, composed of symbols, scripts and routines, which provide the filters for interpretation, of both the situation and oneself, out of which a course of action is constructed. Not only do institutions provide strategically-useful information, they also affect the very identities, self-images and preferences of the actors (1996:939).

Seen in collective trends, these actor preferences constitute public opinions. The public may face consequences for not having attitudes or behaviors that align with institutional norms, for example being unable to interact socially, shunned from society, or in more extreme cases criminally punished (see Mau 2003:27-31). Thus, it is the primary hypothesis of this section that institutions, through their normative contents, shape public opinion.

Although there is a barrage of institutions in the world whose boundaries overlap in many cases, I focus on three areas of institutions and institutionalization of norms; these are *social*, *political* and *historical* institutions. With the exception of economic institutions, which I otherwise categorize here under the heading "social", this trichotomy is a common framework for analyzing institutions (Hall and Taylor 1996; Goodin 1996; W. R. Scott 2001). Each of these institutions helps to explain the transmission of norms in a given country.

First, *social institutions*. These are the ways that social order is maintained in families, kinship networks, towns and countries. They are anchored primarily through social interaction and do not necessitate formal structures such as buildings or written rules to uphold them, although many have such features such as churches for the

institution of religion or dictionaries for the institution of language. The usage of social institutions here is synonymous with many features of culture. Normative notions of the ideal way of distributing welfare in a society are part of the fabric of social institutions. These norms are generated through repeated activities in human societies when faced with collective welfare issues, such as how to care for the sick and older members of society when they are unable to do so themselves. In early societies this was analogous to participating in a family or small kinship unit whose members provide welfare for each other. In later societies, the organization is more complicated, but social norms about deservingness, charity, welfare, social justice, and ideal distribution of resources permeate the social landscape of families, regions and countries and are all interrelated with the social norms of a society.

Next, *political institutions*. These are the institutions whose norms are arbiters for the distribution of power in societies. They require formal structures to maintain their frameworks, because power is often contested by individuals and groups. Political institutions are found in governing practices, especially strong in recent times at the level of nation-states. These include constitutional structures, legal practices and bureaucratic buildings, forms and processes. The norms of political institutions relate to power sharing and competition, defense, and collective risk pooling for example. Organizing welfare centrally, by pooling tax resources and then distributing them to those in need, helps provide for those who are sick or without gainful employment. Those who have the most power may prevent the redistribution of (their) tax resources to those in need. The process of negotiating or 'fighting' over welfare is a repeated activity sequence and forges political norms about who gets what and who deserves what.

The third type is *historical institutions*. These are not singular institutions such as a church, school or government, but instead they are systems of institutions. Historical

institutional classification is a way of understanding regimes or entities with ethnic, political or geographical boundaries that exist over long periods of time through many cohorts, for example the Chinese, Roman and British empires. In the case of the Chinese, the 'empire' still exists today although it has taken on a shape of nation-state in recent times, and despite the fact that it had its ruling systems sacked or overthrown on many occasions over the course of 2,000 years. The Roman Empire collapsed entirely, while the British one lost a great deal of size but remains in the United Kingdom as a small cluster of states, with a few outlying territories. The historical institutions of the British for example, do not exist solely in one place, do not have a uniform legal structure over time, and are subject to changing norms. However, there are some commonalities or similarities throughout British history, the most obvious being the English language. The historical perspective highlights the presence of social norms over great lengths of time.

Figure 3 offers an overview of social, political and historical institutions. In this figure some empirical examples are given to show what each type of institution might be observed as, and what types of repeated activities take place within the institution.

Figure 3. Types of Institutions and Examples of Norm Construction

<i>Institution:</i>	<i>Observable as:</i>	<i>Repeated Activities:</i>	<i>Norms:</i>
<i>Social</i>	Language, family structures, neighborhoods, schools	In the family, at the market, in school, across a neighbor's fence	Individualism, egalitarianism, gender equality, universalism
<i>Political</i>	Bureaucracies, interest organizations, rules, conditions of political processes	Elections, policy-making, bargaining	Corporatism, federalism, party identification, legal and political precedents
<i>Historical</i>	Nations/nation-states, ethnicities, geopolitical groupings, regimes, empires	Social, economic and political interaction cumulated across many cohorts	A package of norms over time

In the right hand column are some examples of norms that exist in social and political institutions. The important caveat is that historical institutions are better understood as a package of norms instead of having specific norms.

I focus on the norms that are embedded in institutions and institutional practices. I select three norms that capture an aspect of each of these institutions that should help to theoretically link them to public opinion and, as I discuss further in Chapter 5, social policy. I select the social norm of *individualism*, the normative orientation of political institutions toward *corporatism*, and the difference between *English-speaking* and *European* historical institutions. I discuss these in detail in the next three sections and review some theory and empirical work suggesting how each should impact public opinion related to welfare and redistribution. The primary mechanism at play here is that social norms, or what Wegener and Liebig (1995) call primary ideologies, shape individual ideologies, behaviors and opinions. Specifically, norms provide higher order content for individuals to use to interpret the social world. They use norms to determine how others will act and think, and this in turn determines how they act and think.

2.4.1 *Individualism*

Picking up on the discussion about individual egalitarian ideology, I elect to focus on the country-level social norm of *individualism*. Individualism prioritizes personal time and freedom, and appropriate rewards for individual hard work (Hofstede 1984:148-58). Less individualism is associated with collective time usage and collective solutions to problems on the other hand. Societies with stronger social norms of individualism favor *equality of opportunity*. In the context of employment for example, societies with higher individualism favor independent adaptations to and styles of work and thus unequal pay based on individual performance. This contrasts with lower levels of individualism in a

society which favor order and submission to collective work style and hierarchical pay schemes that are more equal across jobs, in other words *equality of outcome*. In the context of social policy, higher levels of individualism should lead to policies that leave individuals in charge of their own acquisition of welfare. Lower levels in contrast should favor collective provision of welfare, regardless of individual efforts. Thus, greater individualism should lead to public opinion less in support of social policy.

Strong individualism as a social norm does not guarantee that all persons in a society are ideologically individualists. Individualism is a 'primary ideology' to use the framework of Wegener and Liebig (1995) and all persons in an individualistic society (such as the US) will be aware that in the context of work, welfare, family and many other social interactions, that there is an expectation of individualism and this will shape their actions and thoughts. There is an understanding that equality of opportunity and resulting unequal outcomes based on individual freedom and expression is 'normal' for an individualistic social context. However, many individuals will hold individual ideologies, and these may impact their public opinions to be at odds with the dominant social norms, for any number of reasons such as competing group norms (i.e. 'secondary ideologies' or in-group bias) or self-interest (i.e. SES). Overall the norm of individualism should shape the public to be less supportive of collective welfare and redistribution.

Individualism as a social norm (i.e. primary ideology of a country), institutionalized in employment, religions, schools and etc. is opposite in many ways to egalitarian ideology as discussed in section 2.2. However, individualism favors individual freedom, work and gain, and egalitarianism is not necessarily opposed to these things; however, egalitarians seek to redistribute individual gains so that society has a more equal distribution of resources and incomes. I do not want to confuse the reader so I will elect to stay away from the term egalitarianism in the context of social institutions because I

have already used it in reference to individual ideology. Thus, I will point to *collectivism* as the preferred term to capture a social norm opposite to individualism. But I caution that it is possible to have social norms that favor both collectivism and individualism, for example in Germany there is a strong sense of collective social control, following the rules and keeping society in order, while at the same time there is great differences in individual outcomes based on individual abilities and work². In fact Germany is the most individualistic of the otherwise collectivistic societies of Europe (Hofstede 1984). So there is an axis of individualism-collectivism, but there are many types of individualisms and collectivisms.

The research that is relevant for individualism at the level of social institution and its impact on public opinion requires a broad understanding of individualism. Studies struggle to capture this term explicitly. What individualism is and what constitutes an individualistic society is the subject of many debates (Oyserman, Coon, and Kimmelmeier 2002). The individualism Hofstede measured was related most primarily to the way individuals behaved in an organizational work context, and how the patterning of this across countries was evidence of those societies' divergent social norms. I summarize only a snippet of the empirical literature here and try to draw attention to the fact that there are more or less individualistic norms in every country, that these norms are strong and pervasive, and that they shape public opinion.

Research on the US often referred to as the "national values" approach, supports the idea that individualistic norms shape public opinion to oppose social policy (C. Brooks and Manza 2007). This is based on the extensive research of Lipset (1963, 1992)

² The author is aware of the concept of *tight* and *loose* cultures (Carpenter 2000; Triandis 2004), as something that captures such a division as in the German case, which would be considered a somewhat individualistic country but with a tight culture (similar to Hofstede's uncertainty avoidance measure). Although, the axis of tight and loose as a way of distinguishing countries is a fruitful avenue of future research, it is largely in the field of cross-cultural psychology and falls beyond the focus and scope of the present study.

on American norms of equality of opportunity and individual achievement of outcomes. Tests of hypotheses derived from this approach often focus on individual-level data. The effect of the social norm is inferred from measuring individual ideologies as a proxy for how much individuals subscribe to the social norms. This is somewhat dangerous ecologically; however, large-scale representative surveys should allow for distinctions to be drawn across countries while controlling for individual-level characteristics, just as Hofstede did in his work on individualism. Findings show that level of identification with American individualism leads to reduced individual support of social policy (Fine 1992); something also found in specific policy areas such as guaranteed jobs and government provided health insurance (Feldman 1983), welfare spending and food stamps (Feldman 1988), and spending on the most needy (Jacoby 2006). Linos and West (2003) show that ideology about the role of self-determination in getting ahead in life (i.e. individualism) leads to reduced public opinion toward welfare policy in Norway, Australia and the US.

Some scholars have been able to show societal level effects of individualism (or individualism-like factors) on public opinion. Blekesaune and Quadagno (2003) find that egalitarian norms at the country-level increase support of social policy in 24 countries, mostly in Western and Eastern Europe. Research on four Nordic countries reveals that a range of values including universalism (a partial inverse of individualism focused on equality of outcomes) explain some of the class based differences in public opinion toward social inequality (C. Brooks and Svallfors 2010: Table 5). A similar finding exists in analogous research showing that universalism leads to public support for immigration across 21 advanced democracies (Schwartz 2007). These few studies offer direct, as opposed to inferred, evidence on the linkage.

Research on deservingness criteria also supports my individualism hypothesis. Deservingness criteria are widely held views that form the basis for how members of a

public determine why people are poor, i.e. they are norms. These criteria are often on an axis from laziness and lack of effort, to structure and bad luck as explanatory factors. Individualists are expected to see the poor as responsible for their state of being, i.e. they failed to achieve after being granted equal opportunities. Whereas collectivists are expected to see the poor as a product of cumulative disadvantage, and structural or societal disadvantages that they have no control over. Thus, individualism may be inferred based on a society's normative deservingness criteria. Research on deservingness consistently shows patterns of higher blame of the poor for their position (i.e. individualists) as linked to less support of redistributive policies (Van Oorschot 2000; Larsen 2008). A study by Petersen et al. (2011) in Denmark suggests that egalitarianism and deservingness work in concert to shape public opinion, i.e. that they co-vary in predicting public opinion. This is similar in the broad reaching study of Mehrkens (2004) of many advanced welfare states which demonstrates that blame the poor (people should provide for themselves) and anti-redistribution (a presumable result of individualism) are cross-nationally correlated.

Based on my institutional framework and the hypothesis that social norms shape public opinions, and based on the inferences from individual-level findings and especially the evidence of country-level effects; I predict that countries that have stronger individualism as a social norm will have public opinions less supportive of social policy.

2.4.2 Corporatism

Political institutions exist at many levels and are upheld through formal institutional settings such as local assemblies, regional or state governments and unified national governments. They promote norms and practices with respect to politics and power structures such as the symbols and behaviors of various political parties, the tactics used

by parties in their campaigns, and the rules of policy-making. Nowhere are political institutions more powerfully upheld and intrusive into almost all spheres of individual affairs than with the central bureaucracies of nation-states, at least in the developed world where centralized states are the dominant form of political organization. These centralized social policy systems are the reasons advanced democracies are also known as *welfare states*, where regional autonomy is minimal when it comes to welfare and redistribution.

Nation-states uphold institutionalized norms of how power is shared, and how policy is made. These institutions should shape public opinion toward social policy. Although there are many political norms, I focus here on the degree that markets, interests and social interaction are coordinated by the state, known as *corporatism*. When the state takes a leading role in society and markets by maintaining and regulating interests within its formal institutional framework it is more corporatist and when the state is separate from society and economic affairs leaving interests to compete and fend for themselves it is more pluralist. Corporatism should promote collective power and interest sharing and should promote welfare and redistribution as centrally provided features for all interest groups in a given society (as opposed to individual provisions). In a pluralist system the state allows interest groups to compete and exert individual influence on policy making outside of the state (Lijphart and Crepaz 1991:238; Footnote 13 includes a literature review). The norms upheld in a more corporatist political framework are thus more collectivistic in character. Therefore, a more corporatist institutional framework should lead to increased public support of social policy.

Social and political norms overlap in general through common languages and through individuals filling roles as both social and political actors (March and Olsen 1984). There is not a clearly defined line between social and political institutions within a

nation-state, as seen in the line between individualism and corporatism is not so clearly definable. The nation-state provides a formal structure to uphold social and political norms, and pushes these norms in homes, in public and within its own policy-making structures (Skocpol and Amenta 1986). States promote consistent norms which then attract individual practices and attitudes, thereby inducing conformity, and even commitment (Jepperson 1991). National institutions have a force that pushes toward social reproduction of what was before into what is to come allowing mostly for only slow changes, a process known as *path dependency*, which is interrupted only at times of revolution (W. R. Scott 2001; Ebbinghaus 2005).

Social policy builds cohesion and belief in the institutional norms amongst state citizens (Pierre and Rothstein 2010), and cultivates a public willing to accept and support its political institutions based on their belief that their government is just and moral in its practices (Rothstein 1998). Therefore, with the support and cohesion of the people and stable normative social and political structures, a nation-state provides welfare and redistribution both as a norm and a practice (DiMaggio and Powell 1983). More corporatist political institutions give greater bargaining power to those who are at risk or have greater need for welfare and redistribution (such as the lowest occupational statuses and the elderly) by including those who represent their interests in the state policy-making processes. Pluralistic systems on the other hand leave interests in welfare to compete for themselves against other interests. The resulting norms are more competitive and rugged in the case of the pluralistic institutions, and more collective and power-sharing in the case of corporatist. Thus, individuals in more corporatist nation-states should have more allegiance to the state and more trust in the state as welfare provider, whereas those in less corporatist nation-states are not allied to the welfare capacities of the state and are accustomed to individual competition for resources.

More corporatist political institutions overlap with collectivistic social institutions (i.e. less individualistic societies). Again, there is a connection between the social and political. Societies with strongly corporatist, centralized institutional arrangements where welfare is controlled and provided by the state with a large redistributive net for most or all citizens are built on distributive norms of equality of outcome. The pluralistic political institutions are found instead in societies with market-oriented institutions where the state offers some minimum protections and leaves the rest up to individual acquisition, i.e. equality of opportunity only (Mau 2003). Furthermore, corporatist and pluralist political institutions may be understood in a simplified dichotomy of *coordinated* versus *liberal* market economies. In the former the government regulates heavily in economic affairs, and in the latter not (Hall and Soskice 2001).

The research on corporatist institutional norms and public opinion is scarce. I thus draw on the research about the different worlds of welfare to anchor my corporatism hypothesis (Esping-Andersen 1990; Arts and Gelissen 2001, 2002). Those who focus on social welfare policy have repeatedly noticed that levels of welfare and redistribution diverge across countries. The divisions follow particular patterns that may be linked to the corporatist or collectivistic character of nation-states, and also pattern across historical institutions. Therefore, I discuss this analogous literature in detail at the end of the next section on historical institutions as my existing evidence supporting my institutional hypotheses.

2.4.3 *Historical Institutions*

Institutions are overlapping and path dependent, and different institutional configurations maintain stability over time. These configurations have some commonalities of institutions today, but most importantly they have trajectories that connect them socially,

politically and culturally through the experience of history. Although the diffusion and transfer of policy has been a powerful causal mechanism in shaping social policy across the advanced capitalist democracies (Obinger, Schmitt, and Starke 2012) I expect that diffusion and transfer are strongest within two different groupings of advanced nations. The first are the English-speaking societies compared with the European societies, and the second are the formerly Communist societies versus the Western/'capitalistic' societies.

The socialization and political action of individuals cumulated over time and driven, in part, by material interests, generates institutional norms about redistribution, in both social and political institutions (discussions in Coughlin 1980 and Esping-Andersen 1990). On the one hand, history, culture, and socialization carry a set of norms that are institutionalized across a given population, but not necessarily organized in political institutions. On the other hand, bureaucracy, state-building, and law enforcement lead nation-states to carve out institutional social norms within a population, so that the social institutions are shaped by the political ones. Many of these norms may be carried over from the time before nation-states, from the social institutions of a given group of people who engaged in state building, e.g. the remnants of monarchies or totalitarian regimes. Regardless of the origins of institutions, social interaction that generates and responds to norms about redistribution and equality within institutional frameworks carries institutions along a path that is somewhat pre-determined. The impact of social and political institutions is to bring these pre-determined norms to bear on individual thoughts and actions and thus, these institutions shape public opinion (see Jacobs 1992).

English-speaking and European Countries

The English-speaking societies spread through British colonialism all espouse more individualistic social institutions with a focus on equality of opportunity, not

outcome (Olsen 1997; Mau 2003, 2004; Ringen 2006). This is not a coincidence; there are many features of these societies that remain similar after many decades of independence from British rule (Castles and Mitchell 1993). The European societies as well share a history that is rooted in Christianity, the Latin language, the Carolingian Empire and repeated power struggles over resources, ideologies and land (Crouzet 2001). The strong individualism, pluralism and other norms of the English-speaking countries should lead to less support of social policy, while the more collectivistic, corporatist and otherwise normatively similar European countries should have more support.

Individualism is something that was especially strong in England from the early transition away from serfdom and as a cause and result of the industrial revolution (Macfarlane 1978). This individualism grew and spread through British Empire building. The English language and many social norms were exported to Ireland, Australia, New Zealand, the US and Canada (with the exception of Quebec). These English-speaking countries have legacies of individualistic social institutions and these should shape public opinion to be less supportive of redistribution and social policy. These countries were not comprised entirely of Anglo-Saxon individuals by ethnicity or origin, as countries such as Australia and the US are home to a plethora of ancestrally Germanic, Jewish, Italian and many other ethnicities, not to mention the indigenous people and enslaved workers there. Yet the earliest power structures in the political institutions of these countries were handed down via colonialism and especially rested in the hands of the Anglos. Therefore the transmission and reification of norms was strongly 'English' in nature, driven by the wealth and political capital of the white Anglo-Saxon Protestants, who were the earliest in power in the US and Australia and remain a large part of the power structures of these societies.

Weber's work *The Spirit of Capitalism* (Weber 1905) points out that Protestant normative frameworks generated a capitalism that diverged from the Catholic counterparts of southern Europe. Weber also suggests that the spirit of capitalism was particularly strong in New England in the US based on the writings of Benjamin Franklin. As the US came from English origins and power structures, I suggest that Weber's work also demonstrates indirectly how social institutions of capitalist development were exported to the US from England and were diffused in the interconnected social structures of the English-speaking countries. Weber does not deal with individualism as such, but it is clear that religious social structures and the norms of social and economic exchange were peculiar to Western Europe and North America, a phenomenon observed in the work of others who identified the rise of *laissez faire* capitalism (A. Smith 1776) and a unique English individualism (Moore 1966).

The English-speaking countries formed from British colonialism are also the pluralist and liberal market countries. The European countries on the other hand are the corporatist, coordinated market economies and less individualistic. This overlapping characterization of countries is no coincidence. Instead I argue that there is something that uniquely characterizes social and political institutions of continental and Northern Europe as compared to the English-speaking countries and possibly Japan under heavy English-influence after the devastating war. These constitute two distinct *families of nations* (Castles 1993). I add to Castles' phrasing by labeling these as two families of institutions. Whereas most characterizations focus on one area such as welfare policy, political economy, or individualistic norms, the families of institutions idea builds on historical communality and trajectories. Families of institutions exist in long-haul groupings of countries dating to the 19th century if not before.

There is a clear distinction between the historical institutions of Europe and the English-speaking in government spending on social welfare (Wilensky 1975; Castles and Mitchell 1993), economic inequality or 'decommodification' (Esping-Andersen 1990); women's labor force participation and adaptation to new social risks (Bonoli 2007); majoritarianism (Obinger and Wagschal 2001); taxation (Castles and Obinger 2007); social justice norms (Mau 2004); church and state influences (Castles 1993; Evelyne Huber, Ragin, and Stephens 1993; Lijphart 1999); and individualism (Hofstede 1984). The causal mechanisms cannot be captured in the aforementioned analyses, yet the English-speaking contrasted with the European families are present in all of these outcomes, and thus I make an assumption that common norms within each family of countries shape public opinion to be more supportive in Europe and less supportive in the English-speaking countries.

Most importantly for my institutional hypothesis is that public opinion also follows these families of institutions. There is initial evidence of this. Support for social policy is strongest where social justice norms favor universal welfare and weaker where norms favor residual welfare (Coughlin 1979; Esping-Andersen 1990; Svallfors 1997; Arts and Gelissen 2001; Andreß and Heien 2001). As pointed out in the previous section, individual opinions tend to be in opposition to social policy if it is an institutional norm to blame the poor for their position, whereas norms pointing to collective fault will instead lead to support of welfare (Van Oorschot 2000; van Oorschot 2010). Social policy has what Albrekt Larsen (2006, 2008) labels an "institutional logic" (see also Pierson 2000 and Jordan 2010). Of course, each individual in a given society will not have an opinion perfectly reflective of the "logic" of the institutional norms; instead corporatist or collectivistic social and political institutional norms will shape the tendency toward supportive opinions across all individuals in society. This means that there will be lots of

variation in between individuals in a given society based on demographics and SES if not other factors shaping public opinion (Kangas 1997; Barley and Tolbert 1997; Mau 2004).

I make a caveat in my claims that English-speaking historical institutions are not a single mechanism. I do not mean to suggest that being an English-speaking country causes public opinion to be less in favor of social policy. But that all English-speaking countries from the wake of British colonialism have some common social and political norms, that they are two kinds of institutional black-boxes of shared norms. Although it goes beyond this dissertation to specify exactly what these institutions are, I suggest that individualism is a key feature. This individualism sets apart the English countries from the more egalitarian or collectivistic European ones who set out the task of collective welfare state production in the first place where citizenship and social policy were closely linked.

Formerly Communist Countries

The Communist extreme has been deleted by recent history but it was an example of a total state, a fully centralized institution that coordinated nearly every aspect of society. In fact the only interests that are represented in the Communist state are the upholding of Communism and therefore it is a totalitarian as opposed to corporatist democratic institution. Nonetheless, Communism should have provided strong political institutions to dictate, regulate, and socialize individuals into belief in centralized provision of welfare and redistribution (and everything else). It had an explicit focus on the collective. Communism is also an example of a 'natural' experiment for testing the impact of institutions on public opinion, because Communism did not come into being organically in countries such as Poland or Bulgaria and was instead imposed by Russian tanks. Thus, institutional theory leads me to predict that after the fall of Communism, the dominance of its institutional framework for so many years should leave a lasting impact

on public opinion due to its normative legacy. The publics in formerly Communist countries should be more supportive of social policy.

The argument that the public in formerly Communist countries are more supportive of welfare and redistribution is supported in the case of reunified Germany (Roller 1994) and between Eastern and Western European countries (Lipsmeyer and Nordstrom 2003). There is strong evidence after the fall of Communism that individuals were subject to competing norms; on the one hand those handed down from Communism and on the other those developing in the new free and liberalized markets (Arts and Gijssberts 1998). This ties into the conflicting norms (i.e. primary and secondary ideologies) identified by Wegener and Liebig (1995). Although the prediction is that eventually the norms of Communism will be socialized away, in the period of the 1990s shortly after Communism, public opinion should still be normatively shaped by this historical institution to be more supportive of social policy.

3 CHAPTER THREE MEASURES OF PUBLIC OPINION AND DETERMINANTS

As outlined in Chapter One, *public opinion* exists in measurements. In this dissertation I utilize three different surveys that measure public opinion cross-nationally. Each of these surveys has unique questions about social policy. I choose these questions primarily based on their coverage of various common and contested social policies and of course their availability. I attempt to capture a range of public opinions that pertain to welfare and redistribution. The different surveys have different measurements of public opinion toward social policy and I discuss measurements and question wordings of my various *public opinions* in-depth in the respective analytical portions of Chapters 4 and 6. Here I provide an overview of the opinions covered in the three surveys in Table 1. In Chapter 4, public opinion is a dependent variable. In Chapter 6, I construct a test of reciprocal causation between public opinion and social policy which makes each a dependent and independent variable simultaneously.

The most pervasive and expensive social policies provided across advanced democracies are related to old-age care (i.e. pensions) and health care. These policies have redistributive functions shifting resources from those who are younger and healthier into pensions and health care services for those who are not. There are also directly redistributive policies that provide redistribution of income from the top to the bottom and for those who are unemployed. Another two areas of social policy that are not always grouped into welfare state research are price controls and subsidies for basic needs. These utilize public resources to lower the costs of things such as food, health care and housing. Despite the free market capitalism of the advanced democracies, many things are price controlled and subsidized, for example pharmaceuticals, rent and electricity.

I seek to cover a broad range of public opinion toward social policy so I attempt to include as many measures as possible. Furthermore, I seek to generate multiple-item

scales to measure general social policy opinions. Multiple-item scales measuring latent variables are always preferable to single items so long as they are reliable, because they reduce random measurement error.

Table 1. Measurements of Public Opinion in Three Cross-National Surveys

<i>International Survey of Economic Attitudes</i>	<i>European Social Survey</i>	<i>International Social Survey Program</i>
Social Services Health	Redistribution	Social Policy Jobs
Education	(single-item)	Income redistribution
Day-care		Health care
Old-age care		Old-age care
		Unemployment protection
Price Controls Electricity	Health Care	
Food	(single-item)	
Housing		
Health		
Subsidies Electricity	Old Age Care	
Food	(single-item)	
Housing		
Health		

As shown in Table 1, The *ISEA* and *ISSP* have multiple items that capture latent public opinion toward social policy. I use only single measures in the *ESS* because these three questions do not form a satisfactory latent indicator as I discuss in Chapter 4.2, (also see Table 38 and Section 10.2.2 in Technical Appendix Three for more info).

I measure *social policy* as spending on welfare and redistribution as a percentage of GDP taken from the OECD's Social Expenditures Database (2010) (“SOCX”). Although this aggregate measure has been criticized for sometimes failing to represent variation in welfare spending by domain (e.g. health care, pensions and unemployment), it nonetheless may be understood as one way for capturing a nation’s overall commitment to social policy (C. Brooks and Manza 2006b; Kenworthy 2009). More importantly, increased spending overall is directly correlated with less poverty and reduced income inequality (Castles and Obinger 2007), and these are the two features of social policy (welfare and redistribution) that I specifically set out to measure in this dissertation.

Having outlined the theoretical determinants of public opinion toward social policy, I construct a framework for measuring these determinants; in other words the independent variables (IVs). The remaining chapter discusses my measurements for these IVs based on what is preferable and available, and the work of others. The measurements I choose are restricted in their scope because they must be asked in a way that gives them cross-national comparability or are available in comparative statistical databases. For example, I would like to have a yearly measure of the strength of individualistic norms in all of the OECD countries spanning 30 years, but this simply does not exist. I attempt to use the best possible measurements within these constraints. Furthermore, I look for measures with the most detailed information on individuals, regions and countries. For example measures that are continuous as opposed to dichotomous are usually preferable.

3.1 Socioeconomics and Demographics

One of the most basic and fundamental observations that social scientists attempt to make in the world is determination of where individuals are located on the 'social ladder', i.e. how an individual relates to the larger social group(s) she is located in. This structural relationship is determined by the status of an individual. Status (i.e. class) is multifarious and cannot be captured with only one measurement such as income, occupation or race. It is determined by social and demographic characteristics such as education, biological sex, relationship status, and age. This section offers some concrete measurements to help relate individuals, and regions and countries to their statuses.

3.1.1 Individual-level: SES and Demographics

Socioeconomic status (SES) is regularly measured with at least one of the 'big three';

education, income and occupational status. There are other ways to determine an individual's status such as wealth (material possessions) and social networks (for example social capital) but these are not often measured in cross-national surveys.

Education is a commonly measured individual attribute. It is often conceived of in years or in highest degree attained. Educational systems differ across advanced democracies making direct comparison somewhat challenging. Thus, highest degree completed, for example primary, secondary, or tertiary education is one way to standardize the measure. The problem with this practice is that it vastly reduces accuracy of measurement because it leads to an ordinal scale with 3 or 4 categories. Year of education solves this problem to some degree. A person who completed secondary and completed four years of tertiary education (but did not finish the tertiary degree) has a lot more time spent in formal education than a person who just finished secondary education and then left. Years of education is therefore preferable to highest degree completed because it is a more continuous measurement with years running from 0 to something around 24 and has categories that represent linear steps in time. Measurement in years may also be faulted for accuracy in the cases where an individual takes many more years than the average to complete a degree, but it is better than the other options.

Income is a relatively straightforward measure. Although income often suffers from lower measurement reliability, due to the fact that many people refuse to answer income questions and extremely high income individuals are a rare and difficult to sample population, income is regularly asked on surveys, usually as a weekly, monthly or yearly amount. I follow the lead of the surveys that I select for my analysis in measuring income and only utilize income when it has been standardized to an economic parity purchasing power (PPP) unit, such as international dollars or Euros. It is possible to improve upon this measurement of income by taking income in PPP and calculating it as a ratio to the

average blue-collar worker in a respondent's country (Kelley and Evans 1995). This helps to account for the fact that some countries are more prosperous than others. Data that allow for this exist in my first study in Chapter 4.1. With a small number of countries it is not practical to measure levels of development at the country-level, but by calculating this ratio, the individuals are standardized to their country's lowest common denominator of income. Furthermore, I take income always as family (i.e. household) income, so that individuals are placed within the structural location of their family regardless of their individual contribution to its overall income.

Occupational status is a highly contested measure. There are a plethora of schemes to calculate the relative value and social status that a society places on a given occupation. Similar research attempts to measure *occupational prestige*. Occupational status and prestige are both intended to measure class. Both concepts relate to the ranking of occupations in a hierarchy or into distinct groups. Prestige is focused on subjective perceptions of the worthiness of a given occupation while status relates to the opportunities afforded to an individual and the individual's offspring as a result of being in an occupation, but both have no widely agreed upon measurement schemes. Status is often measured based on income, whether the individual is a business owner or manager, the level of education necessary to attain the job, and even how much power the job affords an individual (see Leiulfsrud, Bison, and Jensberg 2005). Most of these rankings are non-linear for example the *International Standard Classification of Occupations* (ISCO) and the *Erikson-Goldthorpe-Portocarero* classifications (EGP) break occupations into categories such as unskilled worker, self-employed farmer, and service class. While it is self-evident that unskilled workers are lower status than the service class³, it is

³ As in managers and administrators, not to be confused with the 'service industry' in the United States which refers to restaurant or hospitality work

unclear how much higher a service class member is in status than an unskilled or self-employed farm worker. This means that the measurements must be taken as a pile of dummy variables in an analytical framework, one for each category of the selected measurement scheme (EGP has 11 for example).

Although there are strong arguments for why occupational status is a non-linear measurement (E. O. Wright 1985), class is theoretically something that exists on a continuum from the lowest proletariat to the highest bourgeoisie (Marx 1887). Thus, I elect to take a continuous measure from the work of Kelley (1990) who compiled a single continuous variable to delineate the relative status of occupations on a scale from 0 to 100. Although it may be interesting for other research to look at non-linear relationships of occupational status to public opinion, my study is only partly focused on this IV and having a single continuous measure provides the most parsimonious analytical models. In the end, as Kelley points out, the continuous measure is also preferable to a typology because, "...you would find that the bottom of Goldthorpe's 'service' class merges smoothly into the top of his routine white-collar class, and so forth down the hierarchy" (1990:327). Thus, a continuous status scale reflective of the theoretical reality of class becomes truncated by lumping categories into typologies. Table 2 gives an overview of Kelley's *Worldwide Status Scoring*, which is based on the tradition of earlier continuous measures used by Blau and colleagues (e.g. the *Socio-Economic Index*) and is focused on the education and income associated with a job, but also the transmission of inherited privilege to offspring and cross-national comparability (Kelley 1990:344).

Table 2. Worldwide Status Scoring for Selected Occupations

Higher Professionals	100
Administrators and Managers	75
Technical Employees	70
Higher Clerical Employees	60
Higher Sales Employees	51
Routine Clerical Workers	38
Skilled Manual Workers	37
Semi-Skilled Workers	24
Unskilled Manual Workers	14
Farm Laborers	0

Source: Kelley (1990)

Another SES variable I measure is those who are *at risk*. I create a dummy measurement which equals 1 when individuals have been sick, unemployed, or retired as their main activity in the past 7 days, and 0 otherwise. Although these three states are qualitatively different, they are all potentially states that increase the likelihood of needing welfare provisions and this might lead self-interest to increase opinions in favor of social policy (as discussed in Chapter 2.1).

I do not explicitly hypothesize about the impact of demographic variables. Thus I do not spend a great deal of time on their measurements. *Female* is an easy way to capture biological sex as a dummy variable, with females coded as a 1 and males 0. *Age* is conventional in years. *Church attendance* is taken as the natural log of days per year, with zero given a -0.5. This is done because days per year would give a similar sized gap in measurement between someone who attends church never or 1 day per year compared to someone who attends 51 compared to 52 days per year. Logically, I expect that someone attending never and someone attending 1 day per year is probably quite different in their religiosity than someone who attends 51 compared with 52 days. Thus, the log emphasizes the differences between those at the low values of days per year. *Suburban* refers to individuals living in suburban neighborhoods, and it is dichotomized so that

suburban equals 1 while urban and rural equal 0. This is a data driven measurement decision, as I have observed that suburbanites tend to be less supportive of redistribution than both of the other groups (see Technical Appendix Two, section 10.2.1). Finally, I measure *married* as a dummy where those who are currently married or in a cohabitating partnership are coded 1 and all others 0.

I measure attitudes toward *government effectiveness* as a control variable in my first study. I do not hypothesize about this variable other than to worry that these attitudes might bias support of social policy, as those who do not think their governments are effective are not likely to support any government activities including social policy provision (more in section 4.1).

3.1.2 *Meso and Macro: Countries and Regions*

I use two measures of economic development at the meso-level (i.e. regional-level). *Gross domestic product (GDP)* per capita taken at PPP, and the percentage of the population with a *tertiary degree*. I also control for the political climate of a region by measuring the percentage of the population that voted for a traditional *left party* (i.e., social democratic, labor, and socialist) and the percentage of the population voting for a *neo-national* party in the last national election. A neo-national party is a party that is explicitly anti-immigrant. Although political values are something held by individuals, the usage of a subjective left-right scale introduces measurement error because subjective values do not necessarily align with voting behaviors, and because this measure contains a great deal of non-response, and as discussed previously it may be endogenous with my DV.

At the country level I measure *female labor force participation (FLP)* as the percentage of women in the labor force as opposed to in household work or otherwise out

of the labor force out of all working age women as it is presented in the *OECD's* statistical database (OECD 2010a). Although this variable measures what kind of labor market a country has, it is also utilized as an instrumental variable which I discuss further in Chapter 6. I measure the demographic structure of a country by calculating *aged* as the percentage of persons 65 and older and *married* as the percentage of persons married or cohabitating 'as married' out of the total population. I measure the government revenue generated from *taxes* and the amount of *military spending* for each country-year as a percentage of GDP (OECD 2010b; SIPRI 2012). Married, taxes and military spending are also instrumental variables discussed later, but they provide information about the demographics, spending power and strength of a nation-state.

3.2 Ideology

I seek to measure *egalitarian* ideology, but I narrow the scope of egalitarianism to focus on economic egalitarianism. Therefore I aim to capture individual ideological positions about the ideal distribution of material resources in society. Thus I measure how much difference individuals desire between rich and poor and if redistribution is something society should have. As this is a deeply held belief in individuals, multiple items are essential for sorting out the ideology from attitudes that might be cued in survey questions. I focus on ideology in my first study, see Chapter 4.1 and the exact question wording and scale construction are available there, but the main aspects of the questions refer to ideal income differences between rich and poor, the importance of redistribution, and targets and goals for the respondents' particular social contexts (i.e. country) with respect to egalitarian outcomes. By utilizing five questions that have both face- and content-validity (see Table 33 in Technical Appendix One), I tap into the latent and

underlying ideology of economic egalitarianism.

As previously mentioned, left-right ideology is often used for capturing 'ideological' impacts on public opinion, but I do not focus on this due to endogeneity issues and the fact that it also introduces an increase in missing data patterns. However, in my second study I offer a sensitivity analysis which controls for subjective left-right placement (see Technical Appendix Two).

3.3 *In-Group Bias*

I measure in-group bias indirectly via the percentage of *foreign-born* individuals in each region of Western Europe, the center of massive migrations in the past few decades. I measure this for Western Europe because the *ESS* is the only individual-level survey data that includes regional representative sampling (112 regions in 14 countries) that aligns with regionally available data in almost all countries. Percent foreign-born is a necessary measure for immigration generated diversity because it is a standard measure that is comparable across Europe. The percentage of the population that is born-abroad captures the proportion of the population that is a first-generation immigrant, regardless of country of origin, naturalization status, length of stay, or any other way that the immigrant population could be sub-divided. It is important to note that this is the *only* measure of immigration that is available at the regional-level across these 14 countries. Regardless of data limitations, for a quantitative, cross-regionally and cross-nationally comparative analysis, this is the only appropriate way of measuring the impact of recent immigration on public opinion.

My in-group bias predictions following the arguments of Eger (2010b) hypothesize that the proportion of the population born-abroad should impact public

opinion when we control for attitudes about immigrants and immigration. In other words that in-group bias operates independently of anti-immigrant sentiment, i.e. these are two different individual attitudes. Thus, I include an individual-level variable that captures *anti-immigrant* as a latent measurement ($\alpha=0.86$) constructed from the mean of three variables that capture respondents answers to the following questions: 1) “Is immigration bad or good for the country’s economy?” 2) “Is the country’s cultural life undermined or enriched by immigrants?” and 3) “Do immigrants make the country a worse or better place to live?” Higher values indicate that individuals are more anti-immigrant (see Technical Appendix Two, p. 233).

3.4 Institutions

I use four measures of institutions to help isolate institutional norms in societies. In the first study I dichotomize a small sample of countries into *formerly Communist* (=1), and otherwise free market (=0). In the second study I do not look at institutions. In the third study, I measure social institutions, political institutions and a rough grouping of historical institutions across a large number of the advanced democracies of the world. I specifically measure social institutions using an axis of *individualism*. In the 1960s and 70s, Hofstede pioneered a way to investigate various social norms across most of the advanced nations of the world by surveying working individuals. His work with an *International Business Machines* survey of its workers provided multiple dimensions of cultural consequences for organizational practices (Hofstede 2001). He developed a way of cross-nationally comparing cultures along specific dimensions. The data was comparable based on survey design and translation and the fact that the surveyed workers were performing similar tasks albeit in different countries. His individualism places

normative importance on active individual achievement of goals as opposed to reliance on collective coordination and incentives for goal achievement. Critical research in cultural psychology finds that there are various types of individualism and collectivism and each is a measure on its own, and societies might have a high or low degree of both (Oyserman 2006). Hofstede's measure captures individualistic values in particular, however, greater individualistic values should crowd out a collectivistic approach to problem solving, therefore I utilize this measure as a proxy of part, but not all possible kinds, of collectivism. Higher scores at the country-level indicate higher levels of individualism.

I measure political institutions on an axis of *corporatism*. This measure is taken from the work of Lijphart and Crepaz (1991) who constructed a standardized scale based on 12 expert measures of corporatism in advanced democratic societies. It is thus a scale of scales, i.e. an averaging of expert definitions. The broad idea of corporatism is more regulation of society by the state. In particular, the expert scales often include the degree to which the state itself organizes and coordinates interests (e.g. workers, profit seekers, lobbies, and so forth). If these interests are left to coordinating themselves outside of state institutions, then this is known as pluralism and is the opposite of corporatism. Lijphart and Crepaz do not measure corporatism for Portugal and Spain, therefore I engage in imputation for these two countries, see Technical Appendix Three, Table 45. The imputed values put Spain above average and Portugal at about average in corporatism. Although, these two countries are known in Europe as less-organized economies in the traditional sense, there is evidence that since the 1980s, globalization and alternative forms of coordination are imposing change giving these two countries surprisingly strong neo-corporatist institutions. Their imputed scores reflect this, placing them far above the US

and other pluralist systems yet below the most corporatist systems of Northern Europe; therefore I see the imputed measures shown in Table 3 as adequate (Royo 2002).

Finally, I measure *English-speaking* countries (=1) based on available spending and opinion data, to include Australia, Canada, Ireland, Japan, New Zealand, Great Britain, and the US, and *European* (=0) as Austria, France, Germany, Italy, the Netherlands, Norway, Portugal, Spain, Sweden and Switzerland for use in my third study in Chapter 6. Japan is a questionable case amongst the English-speaking nations but I leave it there for consistency and a close post-war linkage with English-speaking reconstruction, plus the overwhelmingly positive adoption of Japanese business to English-speaking institutional norms, and the fact that others tend to place it in that group (Ralston et al. 1997; Dore, Lazonick, and O'Sullivan 1999; Hall and Soskice 2001; C. Brooks and Manza 2007). Based on the discussion in Chapter 2.4.3, I do not make this family of institutions measurement linked to any specific causal mechanism, but instead throw a very broad net to collect countries into two groups which have some historical institutional commonalities. I restrict my sample to include only advanced democratic countries in the *ISSP*. Table 3 presents the scoring of individualism, corporatism and English-speaking institutions for all of these countries.

Table 3. Institutional Measures by Advanced Democracy

	<i>Social</i>	<i>Political</i>	<i>Family of Institutions</i>
	Individualism	Corporatism	English-speaking
Australia	90	-1.025	1
Austria	55	1.600	0
Canada	80	-1.335	1
Denmark	74	0.518	0
Finland	63	0.427	0
France	71	-0.725	0
Germany	67	0.480	0
Ireland	70	-0.528	1
Italy	76	-0.851	0
Japan	46	0.053	1
Netherlands	80	1.006	0
New Zealand	79	-1.106	1
Norway	69	1.531	0
Portugal	27	-0.030 ^a	0
Spain	52	0.477 ^a	0
Sweden	71	1.396	0
Switzerland	68	0.505	0
United Kingdom	89	-1.341	1
United States	91	-1.025	1

^aPortugal and Spain corporatism scores imputed, see Technical Appendix Three, Table 45

On a final note, many studies measure norms at the individual level. In fact this is often the only way to get at an institutional norm (i.e. as with aggregating attitudes to get public opinion). Thus, I do not take a strong stance on the difference between ideology and norm. Institutional norms are basically chronically repeated ideologies. Individuals may subscribe more or less to these ideologies. Individual ideology taken at its mean reflects institutional ideology in many cases. However, norms are sometimes heuristic, or difficult to capture in a survey. In fact Hofstede's measure required dozens of questions and it was only through cross-national comparison of the responses did institutional patterns emerge. Thus, using Hofstede's cultural measure and the corporatist measure of

Lijphart and Crepaz helps to identify institutional level norms (i.e. ideologies) that are not simply the averaging of individual responses to the surveys that I analyze.

3.5 Summary of Hypotheses and Measures

Before proceeding to the testing of opinion determinants I summarize the theoretical expectations derived from Chapter 2 on what determines public opinion, what mechanisms are at play, and measurement sources for each hypothesized IV in Table 4.

Table 4. Hypothesized Determinants of Public Opinion toward Social Policy

Determinant	Level	Mechanism	Measure	Effect on Public Opinion
Self-Interest, Individual	Micro	Higher SES have less to gain more to lose	Income, education and occupational status	Decrease support of social policy
Self-Interest, Context	Meso	More development, more to lose	GDP, average educational attainment	Decrease
Ideology	Micro	Value and instrumental rationality	Economic egalitarianism	Increase
Social Institutions	Macro	Individualism norm	Hofstede	Decrease
Political Institutions	Macro	Communist totalitarian collectivism	Former Communist countries v. not	Increase
Political Institutions	Macro	Corporatism, coordination of markets, society and politics by the nation-state	Lijphart and Crepaz	Increase
Family of Institutions	Macro	None specified, proxy for families of institutional norms	English-speaking (v. European)	Decrease
Ethnic Diversity	Meso	In-group bias, natives v. immigrants	Percent foreign-born	Decrease

4 CHAPTER FOUR TESTING DETERMINANTS OF PUBLIC OPINION

In this chapter I empirically test the hypothetical determinants of public opinion toward social policy derived in Chapter 2. It is divided into sections representing my work in two studies. The first is presented in section 4.1 and taken directly from its published version under the title "Economic Equality and Social Welfare: Policy Preferences in Five Nations" (Breznau 2010a). The second study presented in section 4.2 is a product of collaborative work with Maureen A. Eger presented as a conference paper (Breznau and Eger 2012), and I give it a working title "Immigration, Social Policy and Public Opinion in Western Europe". This second study is currently under review for publication. As the article will feature Eger as first author, I have taken care to engage in analyses that extend beyond what is found in our conference paper and to re-write as much as possible as my own. All writing I claim as my own although it is modeled after and inspired by material that we wrote together and may contain some exact phrases from her writing. Also, I credit Eger for her collaborative work in data collection and supervision in this project. The original idea for this second article came from her dissertation, without which none of this would be possible (Eger 2010b, 2010a). She is therefore a co-author by merit for all sections of this dissertation that pertain to the second study.

4.1 First Study: "Economic Equality and Social Welfare: Policy Preferences in Five Nations"

The first study shows evidence that the public are not merely self-interested, but also ideologically motivated and institutionally conditioned. Using survey data from large, representative national samples in Australia, Bulgaria, the Netherlands, Finland, and Poland ($N=13,294$), structural equation estimates correcting for measurement error show

that those with economic egalitarian ideologies are much more supportive of social policies. This is consistent with Weber's theorizing on value and instrumental rationality. I also show that a legacy of Communist institutions increases support of social policy consistent with institutional theory, although the limited number of cases makes this finding speculative. Ultimately, egalitarian ideologies are more important than self-interest and Communist institutions in shaping preferences for social policies of government control of social services, price controls for basic needs, and subsidies for basic needs.

4.1.1 Data and Methods

Existing research on ideology and public opinion toward social policy is somewhat biased toward highly developed western nations, especially the US (Gelissen 2000; Jæger 2006b) and some of the findings also derive from small, urban samples (Feldman and Steenbergen 2001; Hasenfeld and Rafferty 1989). To further investigate public opinion and social policy both cross-nationally and representatively, I select large samples from Australia, Bulgaria, Finland, the Netherlands, and Poland. This gives a mix of western countries and two formerly Communist countries. These countries are part of a unique dataset not previously utilized to model ideology and public opinion. This data includes Australia which provides a highly developed English-speaking alternative to extend the work done on US samples, and the Netherlands and Finland provide continental and Nordic European comparisons. Testing these hypotheses in formerly Communist countries of Poland and Bulgaria in comparison to the others, offers investigation of similar Communist institutions in different economic settings. Poland was rather successful in early transition compared with Bulgaria's turbulence and economic difficulties (Blanchard 1997).

This investigation uses *International Survey of Economic Attitudes (ISEA)* data. It is a survey started in 1991 and conducted in subsequent waves (Kelley, Evans, and Zagorski 2007). The *ISEA* data used in this analysis are from 1994 to 1999 in Australia, Bulgaria, the Netherlands, Finland, and Poland and pooled into one large cross-section as the surveys were started and completed at different points during this period. The respondents include a representative sampling of each country ($N=13,294$). A comparison with national census data confirms that the *ISEA* data are sufficiently representative national samples from the mid 1990s (Sikora 1997). The Australian data were based on simple random samples of Australians conducted by the *ISEA* principals. The data are from 1994, 1995, and 1999 ($N=5,572$). The Institute of Sociology, Bulgarian Academy of Sciences completed the Bulgarian edition in 1997 ($N=1,273$). Turku University conducted the Finnish edition in 1994 ($N=1,720$). The Center for Social Opinion Research did the Polish edition in 1994 and 1997 ($N=3,796$). Interuniversity Center for Social Science Theory and Methodology completed The Netherlands edition of the survey in 1998 ($N=933$). For further details on survey methods in Australia, Bulgaria, Finland and Poland see (Sikora 2005:241).

Measurements of independent variables with means, standard deviations, and test re-test reliabilities; along with multi-item scale means, standard deviations, and alpha reliabilities are presented in Table 5. Self-interest variables include family *income*, *education*, and *occupational status*; and I measure demographic variables of *male*, *church attendance*, and formerly Communist *institutions*. Question wording and means for multi-item, latent intervening variables *egalitarian ideology* and *government effectiveness*, and latent dependent variables capturing public opinion toward social policy that include government control of *social services*, *price controls*, and *subsidies* are in Table 5 through Table 10 respectively showing the face-validity of the scales with similar

questions and question wordings. The measurement of egalitarianism includes five questions that ask about differences in income and wealth in society; government effectiveness includes three questions about the quality of government services; government control of social services includes six questions about the role of the government in service provisions; subsidies includes four questions asking about subsidization of various basic goods; price controls includes four questions specifically asking about governmental regulation of prices.

Table 6 through Table 10 also show the interval scoring for each response category on a scale from 0 to 100. Although recoding questions with a four- or five-point set of answer categories to equal intervals is conventional, and alternative coding may yield the same results as equal intervals scoring, in this analysis ordinal probit regressions predicting intervals for each scale item for dependent and intervening variables reveals some substantial deviation from equal intervals (Daykin and Moffatt 2002). In other words coding the variables with 0 to represent strongly disagree, 25 somewhat disagree, 50 neutral, 75 somewhat agree, and 100 strongly disagree does not capture the differences in respondents' attitudes between response categories. This divergence warrants the use of predicted intervals, i.e. optimal intervals, as opposed to equal intervals (Jacoby 1999) (see Table 28, Table 29, Table 30, Table 31, and Table 32 in Technical Appendix One). As discussed earlier, the public tend to be supportive of social policies and looking at Table 5 the respective means for government control of social services, price controls, and subsidies are 57.6 (neutral coded at 39), 49.8 (no logical midpoint, some price controlling coded at 10 and total controlling coded at 100) and 54.1 (neutral coded at 30). These numbers show that the public tend to be on the *favoring* side for each social policy; i.e. the average response being greater than "neutral" or in the middle, based on relative scoring intervals. Also for each scale item high alpha reliabilities suggest strong construct

validity. Not shown are the appropriately large inter-item correlations, similar correlations with other variables and factor analyses confirming one underlying factor per concept, in total and holding within each country, further demonstrating appropriate construction of each scale (see Table 33, Technical Appendix One).

Table 5. Measurement and Descriptives for All Variables used in Modeling Public Opinion toward various Social Policies

Variable	Measurement	N	Mean ^a	s.d.	Reliability
Education	Years of school completed	13,182	11.2	3.3	0.87
Occupational Status	Scored from 0 (farm laborer) to 100 (higher professional)	12,272	46.1	28.0	0.88
Family Income	Ratio to average wages of semi-skilled, full-time male workers in respondent's	11,727	1.6	1.5	0.71
Male	Male = 1; Female = 0	13,152	0.5	0.5	0.99
Age	In years	13,294	46.7	16.1	1.00
Church Attendance	Natural log of days per year; "never" scored at .5 days	13,050	1.5	1.8	0.84
Former Communist	Bulgaria and Poland = 1; Other = 0	13,294	0.4	0.5	1.00
Economic Egalitarianism	Multi-item, see Table 6	n/a	57.3(29)	28.6	0.90
Government Effectiveness	Multi-item, see Table 7	n/a	30.3(50)	22.9	0.80
Social Services (gov't. control of)	Multi-item, see Table 8	n/a	57.6(10)	29.6	0.89
Price Controls (for basic needs)	Multi-item, see Table 9	n/a	49.8(39)	24.8	0.82
Subsidies (for basic needs)	Multi-item, see Table 10	n/a	54.1(30)	25.7	0.79

^aMeans for multi-item scales calculated from unequal interval scoring see Technical Appendix One, and numbers in parentheses represent unequal interval midpoint for all scale variables except government control of social services where 10 equals some government control and 100 equals total control. Test retest reliability for single-item variables calculated from the Australian survey and alpha reliabilities calculated for multi-item variables. By country descriptive statistics for latent variables available in Table 34 Technical Appendix One.

Table 6 shows measurement of egalitarianism based on answers to five questions: "Do you agree or disagree..." that: "Differences in income in [respondent's country] are

too large”; “It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes”; “There is too much of a difference between rich and poor in this country”; “Income and wealth should be redistributed toward ordinary people”; and “One of the most important aims in this country over the next ten years should be to reduce the differences between rich and poor.” Based on predicted probit modeling, if the respondent strongly disagrees with the statement I code it a 0, somewhat disagree 7, neutral 29, somewhat agree 53, and strongly agree scored 100. As the first row of numbers in the table demonstrates, 1% of respondents strongly disagreed that differences in income in their country were too large, while 10% somewhat disagreed, 13% neutral, 37% somewhat agreed, and 39% strongly agreed. The average response for the question was 63, or just above somewhat agree. Similarly the average response to the government’s responsibility to reduce differences in income was 51, too much difference between rich and poor 65, income and wealth should be redistributed 52, and the most important aim over the next 10 years is to reduce differences 56. Overall, these numbers show that the public on average are somewhat or strongly in favor of reducing economic inequality.

Table 6. Measurement of Economic Egalitarian Ideology

Do you agree or disagree...	Answer choices, interval coding, and frequencies(%)						
	<i>No!!</i>	<i>No</i>	<i>??</i>	<i>Yes</i>	<i>Yes!!</i>	Total	Mean
	(0)	(7)	(29)	(53)	(100)	%	
Differences in income in {country} are too large.	1	10	13	37	39	100	63
It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes.	5	17	17	34	28	100	51
There is too much of a difference between rich and poor in this country.	2	9	12	36	41	100	65
Income and wealth should be redistributed toward ordinary people.	4	15	22	33	26	100	52
One of the most important aims in this country over the next ten years should be to reduce differences between rich and poor.	4	11	17	37	31	100	56

Note: N=13,294 with minor variation in response rates. Mean non-response 5%. Table presented verbatim in English, translated for non-English speaking countries. Interval coding derived from ordinal probit regression (details in Technical Appendix One).

I measure opinions about government effectiveness. Although, I do not hypothesize about the effects here, I contend that this is a critical control for public opinion toward social policy. I assume that those who see their government as inefficient or ineffective will be less likely to support it in general, and this includes social policy. I measure this variable as a control to ensure that any findings related to self-interest, ideology or institutions are robust. The measurement of government effectiveness in Table 7 comes from responses to the question “Government and private enterprises both have their good points and bad ones. Which do you think is...” and includes the items “Most efficient, most productive?”, “Most flexible, responds quickly to new opportunities and new conditions?”, and “Most profitable?” I recoded responses into predicted unequal intervals so that if the respondent says that private enterprise is extremely more effective than the government it is coded 0, somewhat more 24, both are equally effective 50, government is somewhat more effective 85, and government extremely more effective 100. In the first row for example, when asked about which is “Most efficient, most

productive?”, 23% of respondents said private is most effective, 49% felt it somewhat more effective, 15% thought private and government enterprise were equally effective, 10% said that government was somewhat more effective, and 4% government most effective. The average score is a 31 suggesting that most members of the public see government as somewhat less effective than private enterprise. Similarly the average for flexibility was 26, and for profitability 32, demonstrating an overall tendency to favor private enterprise amongst those surveyed.

Table 7. Measurement of Government Effectiveness

	Answer choices, coding, and frequencies(%)					Total%	Mean
	<i>Priv!!</i>	<i>Priv</i>	=	<i>Govt</i>	<i>Govt!</i>		
	(0)	(24)	(50)	(85)	(100)		
Government and private enterprises: Which do you think is...							
Most efficient, most productive?	23	49	15	10	4	100	31
Most flexible, responds quickly to new opportunities and new conditions?	27	53	11	7	3	100	26
Most profitable?	23	47	15	11	4	100	32

Note: N=13,294 with minor variation in response rates. Mean non-response 4%. Table presented verbatim in English, translated for non-English speaking countries. Interval coding derived from ordinal probit regression (details in Technical Appendix One)

The measurement of the dependent variable government control of social services in Table 8 comes from responses to the question: “What part should the government play in running companies in these industries...” and includes items “hospitals”, “doctors and dentists”, “schools”, “universities”, “day-care centers for children”, and “old age homes”. I recoded responses into predicted intervals so that if the respondent says that the government should have no role it is coded 0, some role 10, regulate important aspects but leave the day-to-day alone 12, and regulate all aspects 100. In the first row for example, when asked about hospitals, 2% of respondents say no role, 21% some, 39% important aspects, and 39% all aspects. The average score is a 67, in other words, the

public tend to believe that the government should run some or all aspects of social services. Similarly the average for doctors and dentists is 52, schools 63, universities 57, day-care 50, and old age homes 57. Overall, the public support some degree, if not full, government provision of social services.

Table 8. Dependent Variable, Measurement of Government Control of Social Services

What part should the government play in running companies in these industries...

	<i>Answer choices, coding, and frequencies(%)</i>					
	<i>None</i>	<i>Some</i>	<i>Imp.</i>	<i>All</i>	<i>Total</i>	<i>Mean</i>
	<i>(0)</i>	<i>(10)</i>	<i>(12)</i>	<i>(100)</i>	<i>%</i>	
Hospitals	2	21	39	39	100	67
Doctors and dentists	7	34	32	27	100	52
Schools	2	24	40	34	100	63
Universities	5	29	35	31	100	57
Day-care centers for children	8	37	30	26	100	50
Old age homes	4	32	33	32	100	57

Note: N=13,294 with minor variation in response rates. Mean non-response 5%. Table presented verbatim in English, translated for non-English speaking countries. Interval coding derived from ordinal probit regression (details in Technical Appendix One)

The measurement of price controls in Table 9 comes from answers to this four item question battery: “Should the government regulate prices or should they be set by the free market?” for “electricity”, “basic foods”, “rent for houses and flats”, and “doctor’s fee and hospital charges”. I recode questions into unequal intervals. If the respondent says prices should be set entirely by the free market it is a score of 0, if they say mostly set by the free market it is 16, if they are neutral 39, mostly by the government 52, and if they should be set entirely by the government 100. In the first row for example, when asked about price controls for electricity, 5% of respondents say that it should be set entirely by the free market, 16% mostly by the free market, 19% neutral, 35% mostly by the government, and 26% entirely by the government. The average score is a 54, in other words, there is more overall support of the government regulating the price of

electricity than not. The means of the other items show a similar pattern with average support for basic foods at 43, rents for houses and flats 43, and doctor's fee and hospital charges 59. Overall the public tend to favor price controls for basic needs.

Table 9. Dependent Variable, Measurement of Price Controls for Basic Needs

Should the government regulate prices or should they be set by the free market...							
<i>Answer choices, coding, and frequencies(%)</i>							
	<i>Free!!</i>	<i>Free</i>	<i>=</i>	<i>Govt</i>	<i>Govt!!</i>	<i>Total</i>	
	<i>(0)</i>	<i>(16)</i>	<i>(39)</i>	<i>(52)</i>	<i>(100)</i>	<i>%</i>	<i>Mean</i>
Electricity	5	16	19	35	26	100	54
Basic foods	9	28	21	25	17	100	43
Rents for houses and flats	8	27	23	27	16	100	43
Doctor's fee and hospital charges	3	9	17	42	30	100	59

Note: N=13,294 with minor variation in response rates. Mean non-response 4%. Table presented verbatim in English, translated for non-English speaking countries. Interval coding derived from ordinal probit regression (details in Technical Appendix One)

The measurement of subsidies in Table 10 comes from the results of this question: "To keep prices low, should the government subsidize the production of..." and it asks for "electricity", "basic foods", "construction of houses and flats", and "doctors and hospitals". Here again I recoded responses based on probit scores so that if the respondent says government should definitely not subsidize it is a 0, probably should not 11, neutral 30, government probably should 57, and if the government definitely should 100. In the first row for example, when asked about subsidies for electricity, 6% of respondents say that the government should not subsidize, 17% probably should not, 16% neutral, 35% probably should, and 26% definitely should. The average score is a 51, in other words, there is more support of the government subsidizing electricity than not. Similarly the average for basic foods is 46, construction of houses and flats 48, and doctors and hospitals 70. Overall the public tend to favor government subsidies for basic needs.

Table 10. Dependent Variable, Measurement of Subsidies for Basic Needs

To keep prices low, should the government subsidize the production of...							
<i>Answer choices, coding, and frequencies(%)</i>							
	<i>No!!</i>	<i>No</i>	<i>??</i>	<i>Yes</i>	<i>Yes!!</i>	<i>Total</i>	
	<i>(0)</i>	<i>(11)</i>	<i>(30)</i>	<i>(57)</i>	<i>(100)</i>	<i>%</i>	<i>Mean</i>
Electricity	6	17	16	37	23	100	51
Basic foods	8	23	17	33	20	100	46
Construction of houses and flats	6	20	19	34	21	100	48
Doctors and hospitals	2	6	8	39	45	100	70

Note: N=13,294 with minor variation in response rates. Mean non-response 4%. Table presented verbatim in English, translated for non-English speaking countries. Interval coding derived from ordinal probit regression (details in Technical Appendix One)

I test the hypothetical causal relationships of ideology to various public opinions using structural equation modeling (SEM). This modeling gives results similar in style to OLS regression and factor analytic techniques, but offers improvements in measurement modeling and the reduction of errors (Jöreskog and Sörbom 1982; Wolfle 2003). Empirically I model ideology in its intervening position, based on Weber's theoretical model in Chapter 2.2 and Figure 2. I do this through a first test of the influence of egalitarianism on public opinion independently, and a second test while controlling for self-interest and institutional effects on the DVs and ideology. In other words, I operationalize egalitarian values as an intervening variable between SES and institutions on the left, and policy preference variables on the right side of my path model. If self-interest or institutional regime have important effects on egalitarianism, then the second model will show a large increase in the explained variance (r-squared) and a large decrease in the effects of egalitarian values on policy preferences (standardized coefficients); conversely, if the proposed influence of self-interest and institutions on egalitarianism is small then the variance will not change much and the effects of egalitarianism will remain robust.

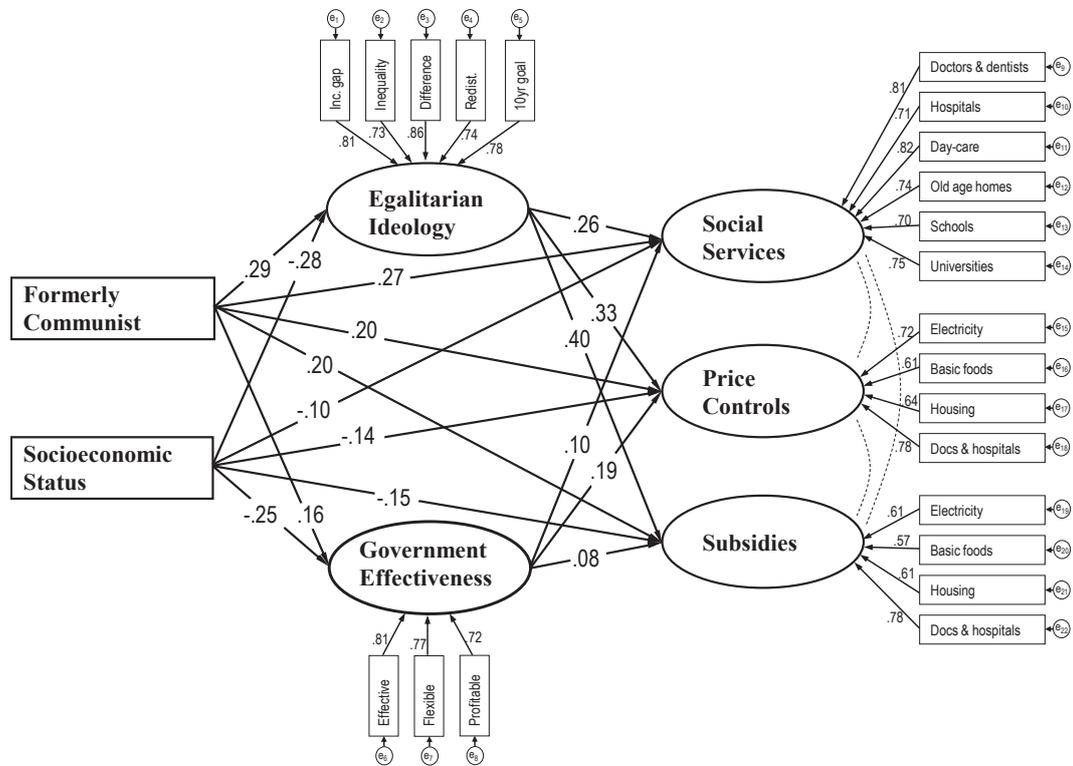
4.1.2 Model Results

I present standardized coefficients in the following model to demonstrate the relative impact of the causal variables on the dependent variables. Figure 4 presents evidence that economic egalitarianism exerts a large influence on support for government control of social services, price controls, and subsidies. This influence is of magnitude 0.26, 0.33, 0.40 respectively out of 1.00 (for those not used to SEM these offer the same information as standardized OLS coefficients). This large influence is present after accounting for demographics, SES, national institutions, and opinions toward the effectiveness of government provisions.

Figure 3 also presents evidence that being from a formerly Communist country influences support for all three social policies albeit slightly less so than egalitarian ideology; 0.27 for government control of social services, 0.20 for price controls and 0.20 for subsidies. Socioeconomic factors play a smaller part. SES measures have an overall combined influence on government control of social services, price controls and subsidies equal to or less than a third the influence of egalitarian values at -0.10, -0.14, and -0.15 respectively. The negative sign shows that those higher in SES have lower levels of welfare policy support. There is a relationship between education, income, and status of occupation, but these do not measure one underlying concept. This model should be understood *only* as a representation of the combined effect of all three, also known as a sheaf coefficient, while keeping in mind that they do not measure one common underlying factor. The sheaf represents self-interest overall for ease of comparison with institutionalism and instrumental rationality. To help deal with this issue, I create a baseline structural model to test the influence of each SES measure individually (see Table 13). As shown in these tables the individual influences of the SES variables are much smaller than institutional and especially ideological influences. The model in

Figure 4 includes the demographic variables age, sex, and church attendance, but they are not shown as they have little to no influence on policy preferences, the results for these variables and all independent variables presented in Table 13.

Figure 4. Structural Equation Estimates Predicting Public Opinion toward Social Policies



Note: Data from the *International Survey of Economic Attitudes, 1994-1999*; Figure source: Breznau (2010:473)

Also shown in Figure 4 are the relatively large effects that institutions and SES exert on egalitarian values (0.29 and -0.28 out of 1.00). Therefore I decompose the model in two stages to test the extent, if at all, that these two variables explain the relationship between egalitarianism and public opinion. Table 11 shows the first results which are estimates of the direct impact of SES and institutions on the intervening variables of ideology and government effectiveness, and Table 12 shows the first results of the direct effects of egalitarian ideology controlling only for attitudes toward government effectiveness and demographics (without SES or institutions). The full model is shown in Table 13 and this demonstrates the added influence of SES and Communist institutions in addition to egalitarianism on all three DVs. The large influence of SES and demographics on egalitarian ideology (0.29 and -0.28) does little to change the explanatory power of egalitarianism in influencing public opinion, evidenced by a fractional or nominal r-squared change between the first and second stages; from 0.18 to 0.24 for social services, from 0.31 to 0.35 for price controls, and 0.33 to 0.36 for subsidies (note that "r-squared" here is used to represent the squared multiple correlation which is the equivalent measure in SEM). Furthermore, the influence of egalitarianism on public opinion measured by standardized coefficients remains large after controlling for SES and institutions; 0.26 for social services, 0.33 for price controls, and 0.40 for subsidies. The significant effects of institutions and SES on egalitarian ideology and the DVs represent only a fraction of the modeled effects in Figure 4 lending the most weight to ideology as a predictor of public opinion.

Table 11. Structural Equation Estimates Correcting for Measurement Error for Intervening Variables

	<i>Egalitarian values</i>			<i>Government effective</i>		
	<i>Metric</i>	<i>s.e.</i>	<i>Std.</i>	<i>Metric</i>	<i>s.e.</i>	<i>Std.</i>
Former Communist	13.42	0.46	0.29***	6.66	0.48	0.16***
Family income	-2.73	0.20	-0.16***	-1.84	0.21	-0.12***
Education	-1.06	0.12	-0.15***	-1.27	0.13	-0.19***
Occupational status	-0.07	0.01	-0.08***	-0.04	0.01	-0.05**
SES sheaf ^a	-	-	-0.28***	-	-	-0.29***
Age	0.03	0.02	0.02*	0.03	0.02	0.02*
Male	-2.09	0.39	-0.05***	-4.19	0.40	-0.10***
Church Attendance	-0.04	0.14	ns	-0.46	0.15	-0.04**
r-squared	0.22			0.14		

^aStandardized regression estimates taken from separate SEM where income, occupational status and education are estimated with their individual effects combined into a sheaf variable.

Table 12. Structural Equation Estimates Correcting for Measurement Error for Dependent Variables without SES and Institutional Variables

	<i>Social Services</i>			<i>Price Controls</i>			<i>Subsidies</i>		
	<i>Metric</i>	<i>s.e.</i>	<i>Std.</i>	<i>Metric</i>	<i>s.e.</i>	<i>Std.</i>	<i>Metric</i>	<i>s.e.</i>	<i>Std.</i>
Egalitarian Ideology	0.31	0.01	0.36***	0.34	0.01	0.43***	0.36	0.01	0.52***
Government Effectiveness	0.15	0.01	0.13***	0.24	0.01	0.23***	0.10	0.01	0.11***
Age	-0.01	0.02	ns	0.07	0.01	0.05***	-0.06	0.01	-0.04***
Male	2.74	0.36	0.06***	-0.90	0.43	-0.02*	-2.38	0.38	-0.06***
Church Attendance	0.14	0.16	ns	0.48	0.15	0.03**	0.69	0.13	0.05***
r-squared	0.18			0.31			0.33		

Note: N=13,294. "Std." refers to standardized coefficients.

Table 13. Full Model of Structural Equation Estimates, Identical Model with Figure 3.

	<i>Social Services</i>			<i>Price Controls</i>			<i>Subsidies</i>		
	<i>Metric</i>	<i>s.e.</i>	<i>Std.</i>	<i>Metric</i>	<i>s.e.</i>	<i>Std.</i>	<i>Metric</i>	<i>s.e.</i>	<i>Std.</i>
Egalitarian ideology	0.24	0.01	0.26***	0.30	0.01	0.33***	0.32	0.01	0.40***
Government Effectiveness	0.09	0.01	0.10***	0.19	0.01	0.19***	0.07	0.01	0.08***
Former Communist	11.19	0.44	0.27***	8.79	0.46	0.20***	7.46	0.40	0.20***
Family Income	-0.34	0.19	-0.02*	-1.45	0.19	-0.09***	-0.27	0.17	ns
Education	-0.60	0.12	-0.09***	-0.44	0.12	-0.07***	-0.37	0.10	-0.06***
Occupational Status	0.01	0.01	ns	-0.01	0.01	ns	-0.04	0.01	-0.06***
SES sheaf ^a	-	-	-0.10***	-	-	-0.13***	-	-	-0.15***
Age	-0.04	0.01	-0.03**	0.03	0.01	0.02*	-0.09	0.01	-0.08***
Male	1.64	0.36	0.04***	-1.80	0.37	-0.04***	-3.02	0.32	-0.08***
Church Attendance	-0.89	0.13	-0.07***	-0.62	0.14	-0.05***	-0.36	0.12	-0.03**
r-squared		0.24			0.35			0.36	

^aStandardized regression for separate SEM where income, occupational status and education are estimated with their individual effects combined into a sheaf variable

Note: N=13,294. "Std." refers to standardized coefficients.

In order to test the overall goodness-of-fit (GOF) of the model I impute missing data instead of losing almost half of the cases to incomplete information. Therefore, I utilize single imputation, with 5 repeated imputations allowing randomly generated error. I average the 5 datasets containing predicted values for the missing cases and make one final imputed dataset. The averaging 5 repeated predictions smoothes the outliers and helps reduce random noise without eliminating it completely (see Technical Appendix One). In some cases there was not enough information to successfully impute missing values and preserve the integrity of the data leaving a total of $N=11,589$ (out of a possible $N=13,294$). The model achieves a RMSEA of 0.072 (for all other GOF measures see Table 35, Technical Appendix One). Note that the RMSEA (and all other GOF measures) show that my model is an improvement from the independence model, and within generally accepted ranges in the literature as representing a decent fitting model (Byrne 2001).

4.1.3 Country Comparisons

In order to test for country-level differences, and to rule out the possibility that the findings are dominated by the Australian sample, I run separate models for each country. This reveals a consistent influence of egalitarian values on support of social policies across all five countries. Table 14 shows metric coefficients, significance tests, and slope tests for all independent variables on dependent variables government control of social services, price controls and subsidies. Slope tests (see Paternoster et al. 1998) using Australia as the comparison case confirm that for each dependent variable only one country differs significantly in the relationship of egalitarian ideology to social policy. For government control of social services and subsidies, Finland has slightly smaller strength coefficients (0.13 and 0.13 respectively) albeit in the same direction as Australia

and the other countries. For price controls, Poland differs from Australia but again the coefficient goes in the expected direction, this time representative of a slightly stronger relationship (0.31).

Table 14. Metric Coefficients from SEM by Country with Slope Tests for Differences

Government Control of Social Services					
	<i>Australia</i>	<i>Bulgaria</i>	<i>Finland</i>	<i>Netherlands</i>	<i>Poland</i>
Egalitarian Ideology	0.17	0.23	<i>0.13</i>	0.18	0.22
Effectiveness	0.16	0.14	ns	ns	0.14
Family Income	ns	-2.55	ns	ns	-1.32
Education	ns	ns	ns	ns	<i>-1.70</i>
Occupational Status	ns	ns	ns	ns	ns
Age	-0.07	ns	ns	ns	ns
Male	3.93	ns	3.12	4.27	ns
Church Attendance	-0.80	ns	n/a	ns	ns
Price Controls for Basic Needs					
	<i>Australia</i>	<i>Bulgaria</i>	<i>Finland</i>	<i>Netherlands</i>	<i>Poland</i>
Egalitarian Ideology	0.24	0.28	0.23	0.27	<i>0.31</i>
Effectiveness	0.21	0.15	<i>0.16</i>	ns	0.19
Family Income	-1.68	ns	ns	-2.38	-1.14
Education	ns	<i>-1.71</i>	ns	ns	<i>-1.26</i>
Occupational Status	ns	ns	ns	ns	ns
Age	ns	ns	ns	ns	ns
Male	-1.81	1.53	-2.80	ns	ns
Church Attendance	ns	ns	n/a	ns	ns
Subsidies for Basic Needs					
	<i>Australia</i>	<i>Bulgaria</i>	<i>Finland</i>	<i>Netherlands</i>	<i>Poland</i>
Egalitarian Ideology	0.28	0.29	<i>0.13</i>	0.23	0.29
Effectiveness	0.10	0.12	<i>0.07</i>	ns	0.05
Family Income	-1.77	<i>2.41</i>	-0.90	-2.06	ns
Education	ns	<i>-1.62</i>	ns	ns	-0.80
Occupational Status	ns	ns	ns	ns	ns
Age	-0.12	ns	ns	ns	ns
Male	-3.78	ns	-2.78	-3.49	-1.86
Church Attendance	ns	ns	n/a	-1.03	ns

Note: Coefficients in italics significantly different from Australia in slope test; $p < .01$. Coefficients listed in table are significant in structural model; $p > .01$. Church attendance not measured in Finland.

In Australia, Bulgaria and Poland those who see government as more effective tend to support each of the 3 policies similarly, whereas in Finland and the Netherlands the relationship is different and small or insignificant in each case. As for the IVs, SES and demographics vary widely across all five nations and in most cases the relationships are not significant. The exception is education in Bulgaria and Poland. In support of price controls and subsidies those Bulgarians who are more educated are more likely to oppose the policies. For all three policies, the Poles who are more educated are more likely to oppose the policy. These relationships vary markedly from the other three nations where education has no significant effect on policy preferences in any of the models. The important fact remains that egalitarian ideology functions similarly in all five countries in its relationship to public opinion toward social policy.

4.1.4 Discussion

Those with ideological egalitarianism are most likely to support social policies of social service provision of health, education and welfare; and price controls and subsidies for basic needs of electricity, food, housing, and health care. This relationship holds true in Australia, Bulgaria, Finland, the Netherlands and Poland. The strength of the relationship does not vary substantially in magnitude.

Citizens of formerly Communist countries are more likely to support all social policies than their traditionally free market counterparts. The publics in Bulgaria and Poland are far more supportive of all three policies than those in Australia, The Netherlands, and Finland. Socioeconomic-status (SES) and demographic characteristics including income, education, occupational status, sex, age, and church attendance show little to no importance in explaining support for welfare policies. Put another way, what an individual stands to gain or lose from these policies matters only slightly in

comparison to institutions and ideology. Egalitarian ideology is 2 to 3 times more powerful in its capacity to predict policy preferences than three SES factors *combined*, and exponentially more than each individually.

A side finding emerged in this analysis that education in five out of six instances in Bulgaria and Poland proved extremely important in addition to egalitarian ideology in shaping opinion. This was not true in the other three countries where it mattered little to none. I discuss these findings in further detail in Chapter 7.

4.2 *Second Study: "Group Dynamics, Social Policy and Public Opinion in Western Europe"*

Comparative analyses of European countries struggle to find evidence of a relationship between ethnic diversity and reduced public support of social policy. Most of the evidence of a relationship comes from comparisons of countries. The theory of in-group bias suggests that the impact of diversity should occur in local social settings, as opposed to at the country-level. In-group bias should lead native inhabitants of a given country to reduce their support for social policy in the presence of greater immigration generated diversity. Greater numbers of foreign-born in a region create more visibility of immigrants and this will activate in-group bias which is a preference to share collective resources only with the native in-group. This should reduce public opinion supporting social policy. This second study tests this hypothesis by looking at the percentage of foreign-born residents of regions within countries of Western Europe using data from the *ESS* and three-level regression models. With the collaborative work of Maureen A. Eger, this study shows that immigration-generated ethnic diversity reduces support for social policy including universal health care and old-age welfare.

4.2.1 *Data and Methods*

In this second study, Eger and I investigate public opinion in 14 Western European countries. Individual-level data come from the *European Social Survey (ESS)*, a comprehensive, biennial multi-country survey covering over 30 countries in Europe from 2002 to 2010. The determinants of public opinion are tested in the 4th round of the *ESS* (2008) because it includes a special module on social welfare policy. This survey has representative random samples at the regional-level. The regions sampled in the *ESS* correspond to the European Union's *Nomenclature of Territorial Units for Statistics*

(NUTS). These geographical units represent administratively, and often historically distinct political areas in each country. NUTS-level designation (1, 2, or 3) is based on population size (see Technical Appendix Two, Table 36 for more details).

Our research examines how the presence of immigrants impacts native-born public opinion towards social policy; thus, we include only native-born individuals in our sample. We drop all individuals with missing data on any of the variables in our model (about 5%). Our main sample includes all Western European countries in the survey except Portugal due to a lack of compatibility between NUTS regions and Portuguese census regions. In total we analyze 22,835 native-born individuals at the micro-level, nested in 112 regions at the meso-level, in 14 countries at the macro-level; these are Belgium, Denmark, Finland, France, Eastern Germany, Western Germany, Greece, Ireland, the Netherlands, Norway, Sweden, Switzerland, Spain, and Great Britain. Table 15 provides descriptive statistics on the individual-level and regional-level data employed in the current analyses. We split Germany into East and West because public opinion and socioeconomics differs between these two former countries (Roller 1994). We also split Berlin into former East and West in terms of individuals, although measurement limitations force us to capture *all* of Berlin when measuring meso-level data.

Table 15. Summary Statistics, *ESS* 2008

Individual-level	N	Mean	S.D.	Minimum	Maximum	Measure
Redistribution	22,835	69.0	26.1	0 strongly disagree	100 strongly agree	The government should take measures to reduce differences in income levels.
Health Care	23,005	85.8	15.5	0 none	100 fully responsible	How much responsibility governments should have to ...ensure adequate health care for the sick?
Old-Age Welfare	23,003	82.5	16.4	0 none	100 fully responsible	How much responsibility governments should have to ...ensure a reasonable standard of living for the old?
Education	23,049	12.6	4.01	0	23	In years
Age	23,049	48.1	18.3	15	85	In years
Female	23,049	0.52	0.50	0	1	Female = 1
At Risk	23,049	0.29	0.46	0	1	Retired, sick, disabled or unemployed past 7 days = 1
Union	23,049	0.44	0.50	0	1	Currently/formerly in a union = 1
Suburban	23,049	0.14	0.35	0	1	Suburban dwelling = 1
Anti-immigrant	23,049	47.8	20.8	0	100	Three items immigrants: bad/good, undermine/enrich cultural life, make country worse/better place to live.
Regional-level	N	Mean	S.D.	Minimum	Maximum	Measure
Foreign-born	112	11.1	7.15	1.98	37.2	% of population born in a foreign country
Tertiary Degree	112	28.8	6.28	14.5	48.3	% of population with tertiary degree
GDP Per Capita	112	33.9	16.8	14.9	120.6	GDP per capita in k Euros
Vote Left	112	43.6	11.7	12.3	67.5	% of population that voted for traditional left parties in most recent national election
Vote Neo-National	112	6.66	8.78	0.00	37.9	% of population that voted for anti-immigrant parties in most recent national election

Our DVs come from *ESS* questions about the provision of social policy. We use three questions to measure different public opinions. The first question measures income *redistribution* asking how much the respondent agrees with the following statement: “The government should take measures to reduce differences in income levels.” Answer choices range from “strongly disagree” through “strongly agree.” The next two questions

are from the special welfare state module (to date only asked in 2008) and measure public opinion toward government provision of *health care* and *old-age welfare*. The questions are worded similarly and capture attitudes regarding the level of responsibility the government should take to either “...ensure adequate health care for the sick?” or “...ensure a reasonable standard of living for the old?” A 10-response Likert-scale, ranging from 0, “no responsibility,” to 10, “fully responsible,” captures respondents’ attitudes. For ease of interpretation, all three variables are transformed into equal intervals ranging from 0-100.

Regional-level data come from a unique dataset compiled from *Eurostat*, the *European Election Database*, and national censuses. Although information on the foreign-born population is available for the nation-state in *Eurostat* and other comparative databases, at the regional level there is no comprehensive source. Therefore, between 2011-2012, we searched national censuses’ databases in order to locate this measurement. Further details on regional data collection are available in Technical Appendix Three, Table 36 and Table 37.

We argue that immigration-generated ethnic diversity reduces public support of social policy. To test this hypothesis we utilize the variable percent foreign-born by region. In general, immigrants are more likely to differ linguistically, culturally, and phenotypically from native-born populations. We argue that these differences are perceptible and thus likely to focus attention on group boundaries and activate in-group bias. Although it is true that other types of ethnic diversity exist in each of these countries (e.g. historic, linguistic, or religious minority populations), our goal is to measure the impact of the ethnic diversity created by immigration across all of the countries. Thus, we use a standard measure that is comparable across Europe. The percentage of the population that is born-abroad captures the proportion of the population that is a first-

generation immigrant, regardless of country of origin, naturalization status, length of stay, or any other way that the immigrant population could be sub-divided. It is important to note that this is the *only* measure of immigration that is available at the regional-level across these 14 countries.

To test a hypothesis about the effect of a regional variable on an individual-level outcome, we rely on multilevel linear regression modeling. The structure of our dataset is nested, with individuals residing in regions that make up countries. A three-level model takes into account the clustered nature of the data and the repeated observations of characteristics specific to each of the 112 regions. Moreover, this approach assigns a random intercept for each country and region to capture the effects of unobserved heterogeneity. These random intercepts include any unobserved characteristics⁴, but in particular they allow us to implicitly control for any qualitative features of national social policy systems that structure respective public opinion and might otherwise bias our results (see Rothstein 1998; C. Brooks and Manza 2007; Larsen 2006). Allowing a random intercept uses up only one degree of freedom per level whereas adding a dummy variable for each region and country would use up 112 plus 14 degrees of freedom. Also our method clusters regional-level and country-level standard errors so as not to bias the results by producing significant effects where there are none (DiPrete and Forristal 1994).

In order to test our hypotheses, we use a step-by-step approach to modeling the data (Hox 1995). For each of the three DVs we first run an empty model (1) with no independent variables to test for individual variance at the regional and national levels. This provides a baseline for comparing subsequent models and model fits. Next in model

⁴ For example, the regional impact of percent foreign-born on support for health care might be similar in Denmark and Germany; however, overall support is higher in Denmark and lower in Germany (difference in country-level intercepts), all else being equal. Within the Netherlands, individuals in Noord-Holland are more supportive of income redistribution than individuals in Zeeland for example (difference in regional-level intercepts), all else being equal.

(2) we add only the individual control variables to give a baseline effect and to reset the model fit statistics for subsequent comparisons. The next model (3) adds the regional-level control variables to check how they impact the dependent variable and to see if their impact improves the overall GOF. In (4), we add regional percent foreign-born to test our in-group bias hypothesis. To support the hypothesis we expect to find significant negative coefficients for percent foreign-born as well as an improvement in the GOF. To ensure that we are capturing in-group bias and not racism or prejudice, we include individual-level anti-immigrant sentiment in model (5). We expect to find that the effect of in-group bias remains significant while controlling for anti-immigrant sentiment. Finally, we calculate predicted marginal effects to demonstrate the size of the effects for our key independent variables at the different levels.

4.2.2 *Model Results*

We start with a descriptive picture. Figure 5, Figure 6, and Figure 7 graph the relationship between percent foreign-born and average public opinion toward three different social policy provisions by region. This gives a first look at the general pattern of these measures. In each figure we distinguish data points by country and include an overall fitted line and list the correlation between the two variables in a box attached to the figure.

Figure 5. Average Public Support of Redistribution by Region, Western Europe 2008

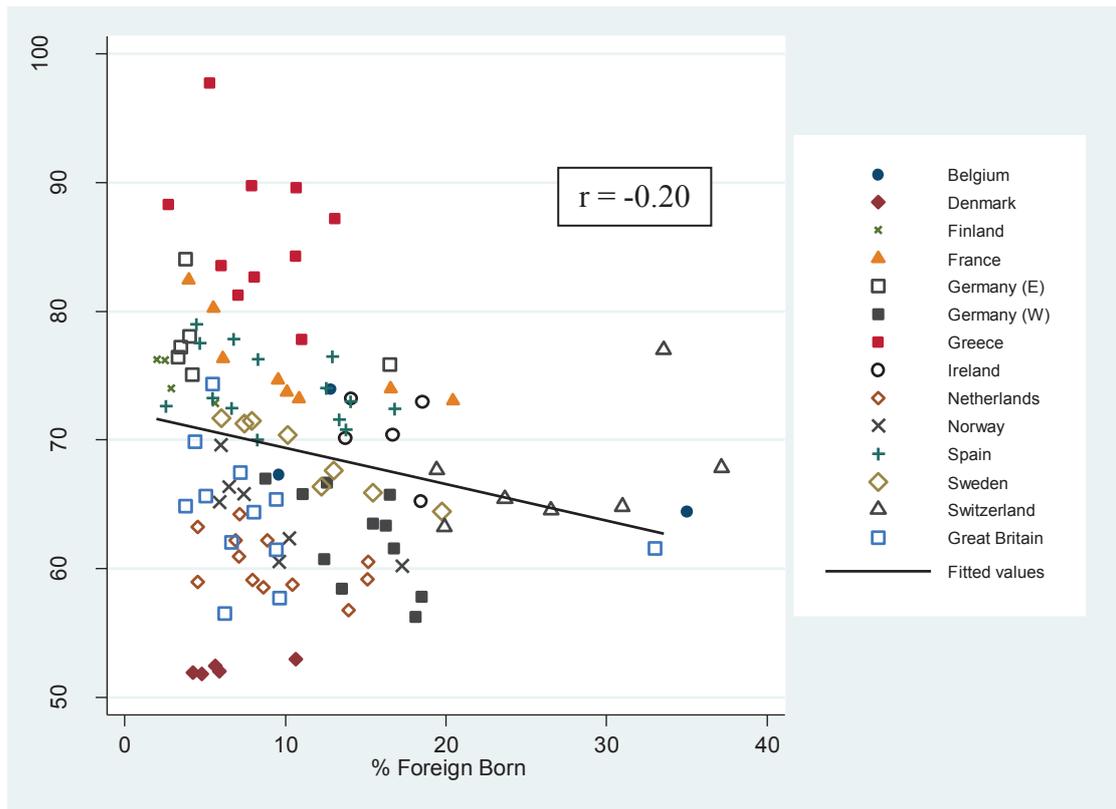


Figure 6. Average Public Support of Health Care, Western Europe 2008

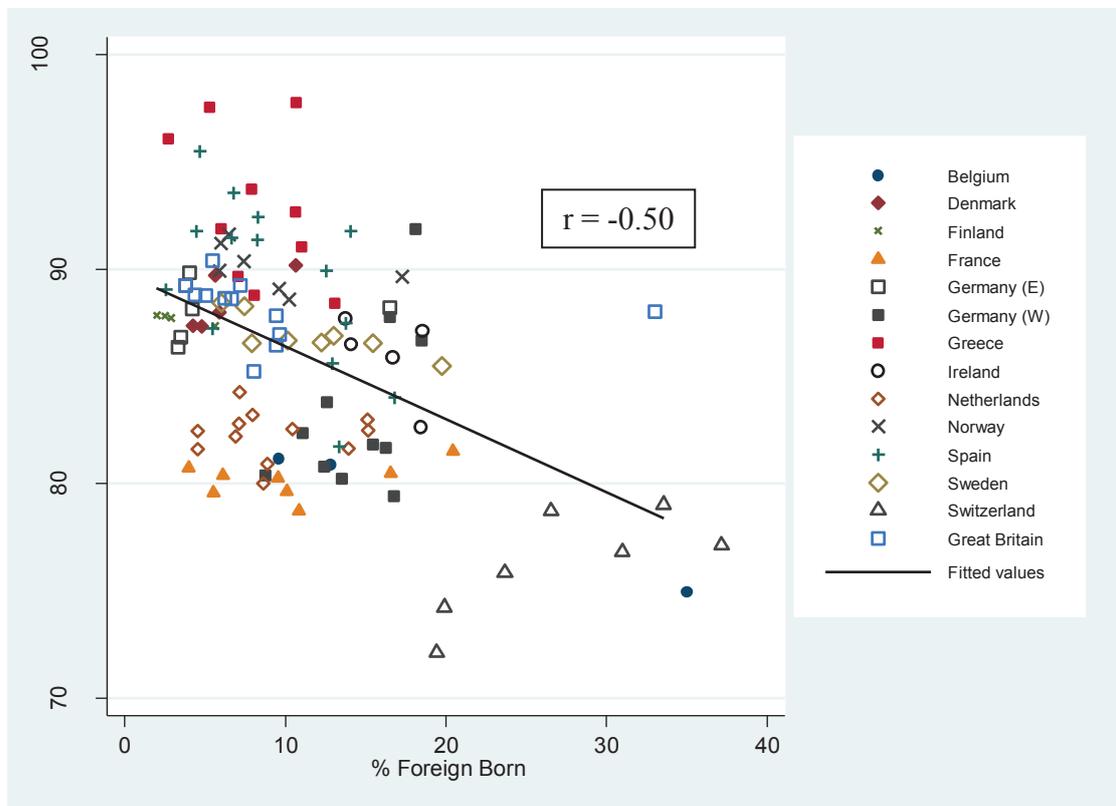


Figure 7. Average Public Support of Old-Age Welfare, Western Europe 2008

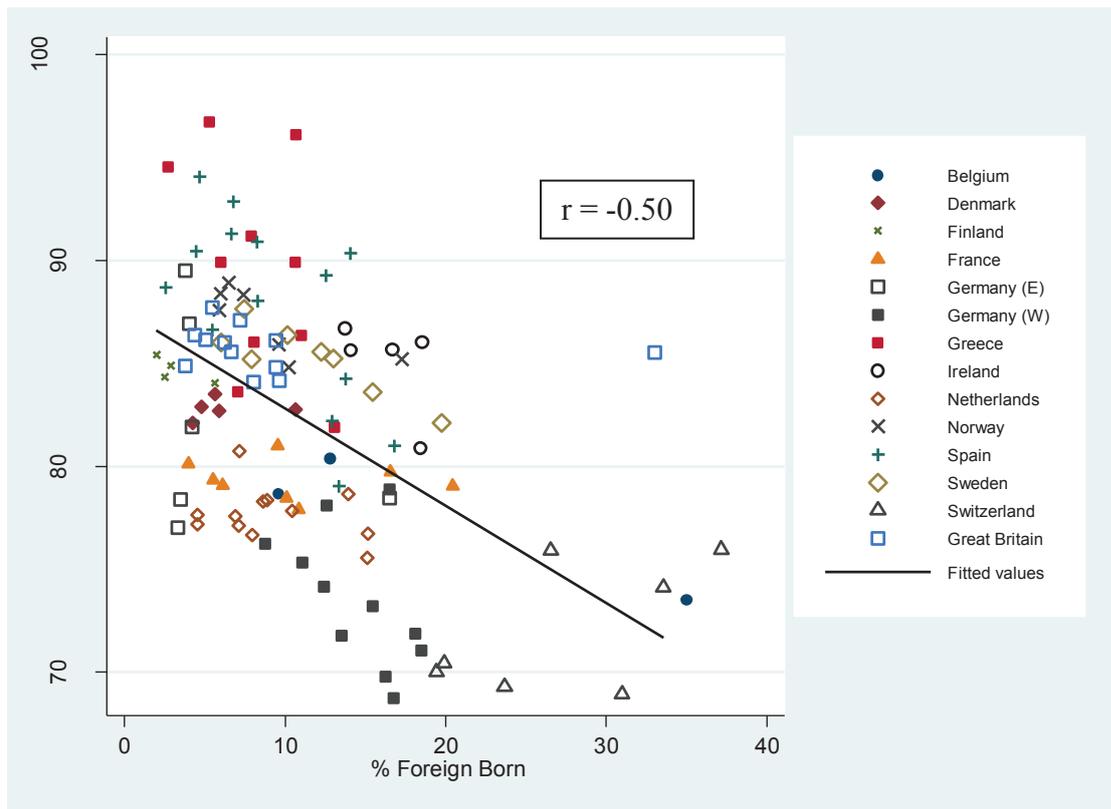


Figure 5 shows a splattering of data points without a clear linear relationship between foreign-born and income redistribution. The fitted line reveals that there is a slight negative pattern such that regions with higher percentages of foreign-born are on average less supportive of redistribution, and the regional-level correlation is modest at -0.20 (micro- and meso-level correlations for all variables available in Technical Appendix Two, Table 38 and Table 39). Figure 6 shows a stronger relationship visually so that regions with larger foreign-born populations clearly have less public support of health care, with a strong correlation of -0.50. Figure 7 shows the strongest visual negative relationship with public opinion toward old-age welfare, although the correlation is identically strong as opinion toward health care at -0.50.

All three figures demonstrate that there is great variation in rates of support by country. For example, Greece has some of the highest support for all three forms of social policy; Denmark has the lowest average support for redistribution and average support for

health care and old-age welfare; and in West Germany support for old-age welfare is relatively low. Opinions tend to cluster by country. However, Figure 6 and Figure 7 show that within countries there is often a negative visual relationship between immigration and public opinion. Thus, these figures offer initial support of the in-group bias hypothesis.

Our multilevel modeling allows us to determine how much of the visual relationship in the figures is driven by percent foreign-born by region, or instead by other factors expected to influence public opinion at the micro-, meso- and macro- levels. Table 16 reports results from our models for income redistribution.

Table 16. Multilevel Linear Models of Public Opinion toward Redistribution

	Level ^a	(1) ^b	(2)	(3)	(4)	(5)
Intercept	I	69.00***	73.23***	75.54***	75.19***	75.87***
Education (years)	I		-0.69***	-0.69***	-0.69***	-0.70***
Age (years)	I		-0.01	-0.01	-0.01	-0.01
Female	I		4.06***	4.06***	4.06***	4.07***
At Risk	I		2.83***	2.82***	2.83***	2.85***
Union	I		4.99***	4.96***	4.95***	4.94***
Suburban	I		-1.34**	-1.23*	-1.22*	-1.23*
Tertiary Degrees (%)	R			0.00	0.00	0.00
GDP (Euros)	R			0.00	-0.05	-0.05
Vote Left (%)	R			0.08*	0.09*	0.09*
Vote Neo-National (%)	R			-0.32**	-0.33**	-0.33**
Foreign Born (%)	R				-0.11	-0.11
Anti-Immigrant	I					0.01
AIC ^c		0	-672	-687	-688	-687
Intercept (variance)	C	64.58	66.74	56.16	59.05	59.37
Intercept (variance)	R	7.78	7.09	4.63	4.32	4.36
Residual (variance)	I	608.30	590.42	590.51	590.53	590.48

^aI = individual; R = region; C = country / N = 22,835 individuals; 112 regions; 14 countries.

^bMetric coefficients reported in models (1) through (5).

^cAIC value calculated as the change from Model 1 which has an AIC of 211,380.

Note: Western Europe, 2008; Sources: *ESS*; *Eurostat*; and national statistical bureaus.

In Table 16, model (1) reports the grand intercept for the empty model, which is the mean of income redistribution (see Table 15). Results indicate that the variance in the intercept is roughly 8 at the regional-level, 65 at the country-level, and 608 at the

individual-level. The ratio of these variances to the total individual variance (also known as rho or intra-class correlation) suggests that 9.5% of the individual variance can be explained by country-level differences and 1.2% by regional differences. This model sets the baseline Akaike's Information Criterion (AIC) value at 211,380. The AIC value is calculated to represent the distance between the modeled relationships and the distribution of the data in the matrix (i.e. the difference between the model and empirically observed reality). It is not useful as a direct measurement of model fit but may be used as a point of comparison of fit for subsequent models. If additional variables reduce the value of AIC by 10, the model is substantially improved, and if the value of AIC decreases by 7, the model fit can be considered moderately improved (Burnham and Anderson 2004). In (2), we add individual-level control variables, and, in (3), we include control variables at the regional-level. We test the in-group hypothesis in (4) by adding percent foreign-born by region and then see if this has an effect that is independent of anti-immigrant sentiment in model (5).

Results from model (2) reveal that education significantly affects public opinion towards income redistribution. Females, individuals "at-risk," and current/former union members are also more supportive. Age does not have a significant effect on attitudes. Finally, those living in suburban dwellings are less supportive than those in rural and urban dwellings. When compared to the empty model, the decrease in AIC indicates an improvement in model fit.

The coefficients in (3) indicate that regional development does not affect public opinion. Neither the percentage of the population with a tertiary degree nor regional GDP per capita has significant effects. However, the political climate of the region does matter with the percentage of the population that voted for a traditional left party in the previous national election positively affecting support for redistribution, while the percentage of

the population that voted for a neo-national party reduces support. The decrease in AIC again demonstrates an increase in model fitness.

Contrary to our expectations, percent foreign-born in model (4) does not have a significant effect on public opinion, and its addition does not improve the model's fit. Thus the test in model (5) is largely irrelevant for our purposes; however we find that negative attitudes towards immigrants do not impact public opinion towards redistribution, nor does the inclusion of this variable in the model alter the non-existent relationship between percent foreign-born and support for redistribution.

Table 17 next reports results from our analysis of support for government provision of health care. This second analysis follows the same pattern as the first. Results from (2) and (3) are somewhat similar to results reported in Table 16 except that neither being at-risk nor the regional proportion of neo-national voters has an effect on support for health care. On the other hand, the percentage of the population that holds a tertiary degree does. These variables are primarily included to ensure that the findings are robust. Results from (4) diverge from the model of public opinion toward redistribution in that they indicate a significant impact of foreign-born on support for health care and AIC values indicate a moderate improvement in model fit. Model (5) shows that anti-immigrant sentiment negatively impacts support for health care, but the statistically significant effect of foreign-born at the meso-level does not disappear while controlling for anti-immigrant sentiment at the micro-level. This model conforms to our expectations.

Table 17. Multilevel Linear Models of Public Opinion toward Health Care

	Level ^a	(1) ^b	(2)	(3)	(4)	(5)
Intercept	I	85.59***	83.50***	78.23***	77.97***	80.38***
Education (years)	I		0.07**	0.07*	0.07*	0.02
Age (years)	I		0.00	0.00	0.00	0.00
Female	I		0.85***	0.86***	0.85***	0.88***
At Risk	I		-0.26	-0.27	-0.26	-0.17
Union	I		1.95***	1.95***	1.94***	1.89***
Suburban	I		-1.09***	-1.15***	-1.14***	-1.16***
Tertiary Degrees (%)	R			0.14**	0.17***	0.17***
GDP (Euros)	R			-0.05	-0.02	-0.02
Vote Left (%)	R			0.08**	0.08**	0.09**
Vote Neo-National (%)	R			-0.08	-0.10	-0.10
Foreign Born (%)	R				-0.13**	-0.13**
Anti-Immigrant	I					-0.04***
AIC ^c		0	-103	-116	-123	-165
Intercept (variance)	C	20.21	19.22	16.32	12.38	13.28
Intercept (variance)	R	2.43	2.48	1.96	1.86	1.92
Residual (variance)	I	218.48	217.38	217.33	217.31	216.87

^aI = individual; R = region; C = country / N = 23,005 individuals; 112 regions; 14 countries.

^bMetric coefficients reported in models (1) through (5).

^cAIC value calculated as the change from Model 1 which has an AIC of 189,386.

Note: Western Europe, 2008; Sources: *ESS*; *Eurostat*; and national statistical bureaus.

Table 18 reports results from our analysis of attitudes about government provision of old-age welfare. Results from (2) and (3) are somewhat similar to results reported from the previous two analyses. A noteworthy, but unsurprising difference is that age is a significant predictor of old-age welfare. Model (4) shows that an increase in percent foreign-born by region leads to a decrease in public opinion toward old-age welfare. AIC values indicate that the inclusion of this variable substantially improves the model fit. Model (5) shows that anti-immigrant sentiment does not significantly impact attitudes towards old-age welfare nor improve the model fit.

Table 18. Multilevel Linear Models of Public Opinion toward Old-Age Welfare

	Level ^a	(1) ^b	(2)	(3)	(4)	(5)
Intercept	I	82.15***	82.70***	79.60***	79.33***	79.53***
Education (years)	I		-0.24***	-0.24***	-0.24***	-0.24***
Age (years)	I		0.01*	0.01*	0.01*	0.01*
Female	I		1.57***	1.57***	1.57***	1.57***
At Risk	I		0.16	0.15	0.15	0.16
Union	I		2.17***	2.16***	2.15***	2.15***
Suburban	I		-0.83**	-0.85**	-0.84**	-0.84**
Tertiary Degrees (%)	R			0.15*	0.19**	0.19**
GDP (Euros)	R			-0.08*	-0.04	-0.04
Vote Left (%)	R			0.07*	0.07*	0.07*
Vote Neo-National (%)	R			-0.19*	-0.20*	-0.20*
Foreign Born (%)	R				-0.20***	-0.21***
Anti-Immigrant	I					0.00
AIC ^c		0	-242	-250	-260	-258
Intercept (variance)	C	26.24	24.62	24.03	18.44	18.50
Intercept (variance)	R	6.40	6.39	5.17	4.71	4.72
Residual (variance)	I	235.79	233.20	233.20	233.19	233.18

^aI = individual; R = region; C = country / N = 23,003 individuals; 112 regions; 14 countries.

^bMetric coefficients reported in models (1) through (5).

^cAIC value calculated as the change from Model 1 which has an AIC of 191,187.

Note: Western Europe, 2008; Sources: *ESS*; *Eurostat*; and national statistical bureaus.

In order to check the robustness of the findings on the negative impact of foreign-born on health care and old age welfare we engage in a series of sensitivity analyses. These are alternative model specifications that utilize subsets of our main sample with the inclusion of individual level variables of occupational status, household income and subjective political affiliation from left-to-right. Additionally we add a country-level measure to the main model of percent foreign-born, and regional level measures of population and population density. The results of these are available in Technical Appendix Two (Table 40, Table 41, and Table 42). Although some of these additional variables have significant effects on public opinion, there is only one case where the coefficient for the effect of foreign-born changes, otherwise it remains consistent in direction, significance and size across the sensitivity analyses. The one change is in a model predicting health care that includes population and population density by region.

The effect of foreign-born shifts from a significant -0.11 to an insignificant -0.09. This may be a problem of multicollinearity, because the model fit does not improve at all and population density and percent foreign-born by region correlate at 0.42 (see Technical Appendix Two, Table 39), hopefully further research may sort this out. Nonetheless, I conclude that our findings are robust to a variety of sensitivity analyses. Public opinion toward health care and old-age welfare is decreased by immigration generated ethnic diversity.

In order to determine how large of a significant impact foreign-born has on public opinion we construct predicted marginal means for all variables. Table 19 lists these means which may be understood as similar to first differences. The first two columns show the variables and level of measurement. The 3rd and 4th columns reveal a low and a high score for each variable. These are calculated as one half of a standard deviation from the overall mean in each direction, and thus represent a full standard deviation of the spread of each given variable. For dichotomous variables we simply use 0 and 1. The standard deviation of the variance is listed in the bottom three rows of the table for the empty-model (without IVs) along with a percent of the total deviation listed in italics. Then the next columns are divided by results for each of the three dependent variables. Starting with income redistribution, the columns low and high indicate average marginal means for support of income redistribution again at one standard deviation around the mean. These predicted means are calculated by holding the effect of all other independent variables constant in addition to the constant average impact of regional and country-level random-intercepts. The column labeled β is a measure of how much opinion changes between the low and high scores in comparison to how much opinion and income redistribution deviate at each level. They may be understood in the same way as

standardized coefficients and the bold numbers indicate that the metric coefficient used for their calculation was significant at least at $p < .05$.

Table 19. Predicted Marginal Effects of Independent Variables on Public Opinion toward Social Policy

	Level ^a	Margins		Redistribution			Health Care			Old-Age Welfare		
		low	high	low	high	β^b	low	high	β^b	low	high	β^b
Education (years)	I	10.7	14.5	70.31	67.65	-0.11	85.58	85.67	0.01	82.74	81.83	-0.06
Age (years)	I	39.0	57.2	69.05	68.85	-0.01	85.62	85.64	0.00	82.14	82.41	0.02
Female	I	0	1	66.83	70.90	0.17	85.17	86.05	0.06	81.46	83.03	0.10
At Risk	I	0	1	68.11	70.96	0.12	85.68	85.51	-0.01	82.23	82.39	0.01
Union	I	0	1	66.77	71.71	0.20	84.80	86.69	0.13	81.33	83.48	0.14
Suburban	I	0	1	69.12	67.89	-0.05	85.79	84.63	-0.08	82.40	81.55	-0.06
Tertiary Degrees (%)	R	26.2	31.5	68.94	68.95	0.00	84.97	85.86	0.57	81.54	82.53	0.39
GDP (Euros)	R	29.1	38.7	69.35	68.86	-0.18	85.81	85.59	-0.14	82.56	82.22	-0.13
Vote Left (%)	R	39.9	47.2	68.82	69.45	0.23	85.50	86.13	0.40	82.17	82.70	0.21
Vote Neo-National (%)	R	5.4	7.9	69.71	68.88	-0.30	85.85	85.61	-0.15	82.74	82.23	-0.20
Foreign Born (%)	R	8.5	13.6	69.20	68.64	-0.20	85.93	85.25	-0.44	82.74	81.70	-0.41
Anti-Immigrant	I	38.3	57.4	69.04	68.85	-0.01	85.96	85.29	-0.05	82.31	82.25	0.00
Empty-model SD	I			24.66	69.5%		14.78	70.9%		15.36	66.8%	
Percent of deviance	R			2.79	7.9%		1.56	7.5%		2.53	11.0%	
	C			8.04	22.7%		4.50	21.6%		5.12	22.3%	

^aI = individual; R = region; C = country

^bColumn "B" equals the predicted marginal change in an individual opinion (from low to high scoring on each independent variable with all others held at their means including the random-intercepts by region and country) expressed as a standard deviation in the variance of the DV at that level (taken from the empty-model standard deviations at the bottom of the table). These may be interpreted similarly to standardized coefficients in OLS regression. Values in **bold** are significant at $p < .05$.

The most important values are those calculated for the impact of foreign-born. For income redistribution, the original metric coefficient resulting from the multilevel regression modeling is not significant, thus the standardized effect of -0.20 may be disregarded as potential random measurement error. For health care we see that the average marginal change in public opinion is roughly -0.7 (calculated by taking the low margin of 85.93 and subtracting it from the high margin of 85.25). Although this number appears small when the scale is potentially calculated out of 100, it is in fact quite large. The regional standard deviation of public opinion (all else equal) is 1.56 as listed in the bottom rows under the label "Empty-model SD". Most of the standard deviation from the overall variance may be explained at the individual and country-levels. However, -0.7 is 44% of the regional standard deviation in public opinion toward health care. And this represents a *very large* effect at the regional level, the second largest in the model behind tertiary degrees, all else equal. A similar story is told for the effect of foreign-born on public opinion toward old-age welfare. The marginal average change is roughly -1 (82.75 subtracted from 81.70) and this is a change of about 41% of the variation at the regional level and is the largest standardized effect in the model for old-age welfare.

4.2.3 Discussion

Section 4.2 of this chapter presented tests of the in-group bias hypothesis that immigration generated ethnic diversity reduces public opinion in support of social policy. Using a comparative strategy and multilevel modeling, my research collaborator Eger and I find that the proportion of a region's population that is foreign-born has a negative effect on support for government provision of health care and old-age welfare. These results hold up against a variety of robustness checks and after controlling for the impact of anti-immigrant sentiment. When all else is equal, foreign-born is the largest

standardized effect in the model predicting old-age welfare and second largest in predicting health care. In both cases the addition of foreign-born by region improved the model fit compared with models that were otherwise identical. These results are consistent with previous research that demonstrates a negative relationship between the size of region's immigrant population and support for universal spending programs in Sweden (Eger 2010b), although they are the first of their kind to look at all of Western Europe. Finally, individuals who are higher in SES measured by years of education are less supportive of redistribution and old-age welfare consistent with self-interest theory. I discuss these findings further in Chapter 7. Having tested for the determinants of individual-level public opinions in this chapter, I shift my focus to the relationship of public opinion to social policy next.

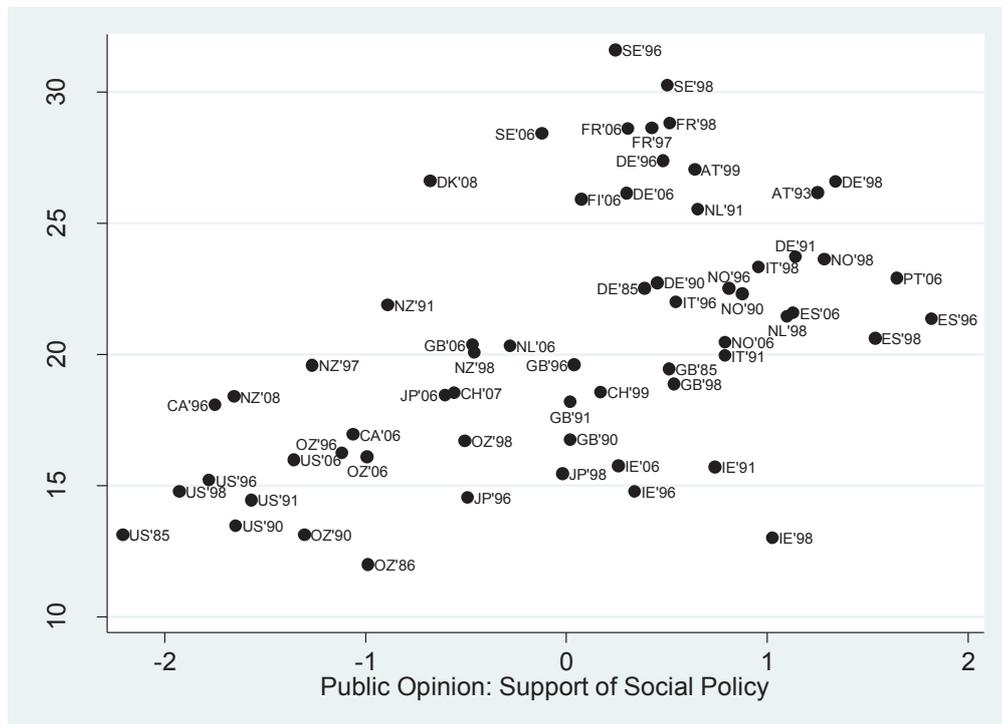
5 CHAPTER FIVE CAUSALITY OF PUBLIC OPINION AND SOCIAL POLICY

This chapter picks up on the arguments presented in Chapter 2.4 on the importance of individualism, corporatism and the differences between English-speaking and European historical institutions. I present two competing arguments to explain the cross-national alignment of opinion and policy. One is a feedback loop between opinion and policy the other is an institutional co-determination of opinion and policy. Using data from the *ISSP* and various country-level sources I provide tentative answers to the questions: *Is this cross-national patterning of public opinion and social policy the result of opinion-policy causality? Or is it the result of an institutional factor that brings them into alignment? Or, are both true?*

What is known from research in the social, economic and political sciences is that sometimes opinion appears to shape policy and sometimes policy to shape opinion. On the one hand, *opinion feedback* occurs when various democratic processes facilitate opinion to cause policy-makers to alter or introduce new policies; and on the other, *policy feedback* occurs when policies shape opinions through creation of public clienteles reliant on social policies and publics who normatively support these policies. When both exist, the relationship of opinion and policy exists in a *feedback loop*, where each exerts an influence on the other over time leading them towards equilibrium with each other.

Looking at the advanced democratic nation-states of the world reveals a pattern that looks like equilibrium. Where public opinion is low, social policy spending is also low and vice-versa. Figure 8 plots opinion and social policy using data from the *ISSP* and *OECD*. It shows a clear patterning of data with a positive linear relationship; greater public support equates with greater spending.

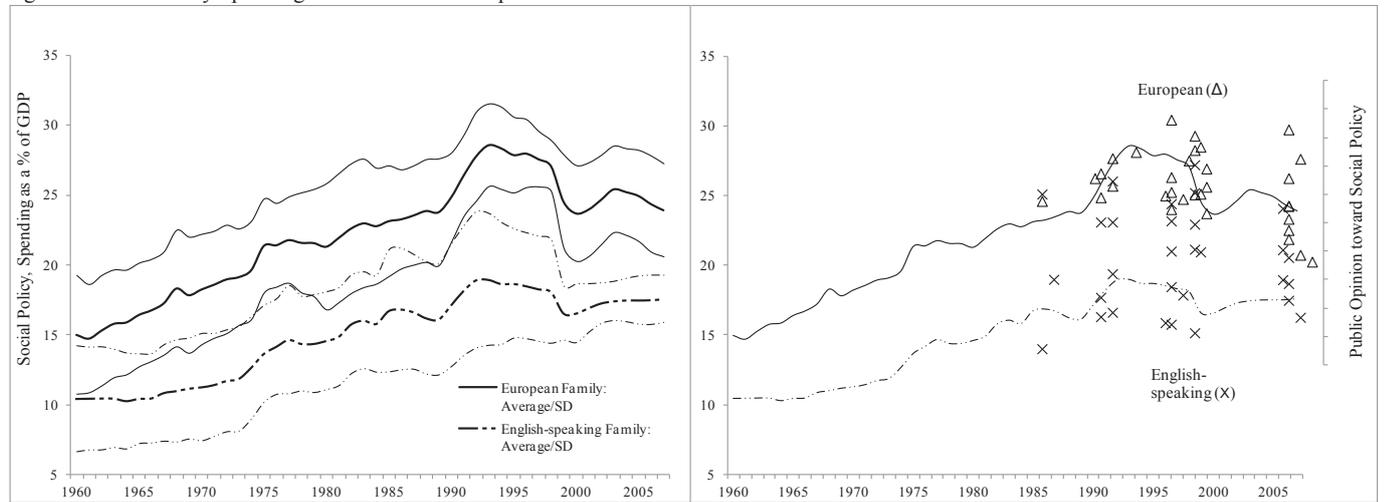
Figure 8. Public Opinion and Social Policy in 19 Advanced Democracies



Note: Data from *ISSP* and *OECD*; Two-letter country codes found on p. vii.

The relationship in Figure 8 could be a product of a feedback loop between opinion and policy, or it could be the result of some external forces that simultaneously impact both opinion and policy in a similar manner leading them towards alignment. Figure 9 plots public opinion and social policy in a different way by dividing these same countries into English-speaking and European groups. In the left panel, the average spending on social policy is plotted for each group of countries from 1960 to 2008; the thick solid line represents the average for European countries and the thick dot-dash line for the English-speaking. Standard deviation bands are presented for each as corresponding thin lines. In the right panel, public opinion by country and year is plotted in triangles for European countries and crosses for the English-speaking countries.

Figure 9. Social Policy Spending and Recent Public Opinion Data in Two Families of Institutions



Note: Figure adapted from (Breznau 2011), data from *OECD*, *ILO* and *ISSP*. Countries included are the 16 from Brooks and Manza (2007).

Figure 9 demonstrates how stable the social policy differences are between the two groups of countries over time. It also shows a pattern of opinion between the two in the right panel, albeit with more variation. As discussed in Chapter 2.3, each of these groups has institutional similarities such as individualistic social norms and corporatist political institutions. In this chapter I provide theoretical explanations for the cross-national patterning of public opinion and social policy.

5.1 Feedback Loop: A General Theory of Opinion-Policy Causality

There is a standing debate over causality between public opinion and social policy (Burstein and Freudenburg 1978; Burstein 1998, 2003, 2006). According to democratic theory public opinion should shape policy in what may be labeled *policy responsiveness* or *policy feedback* (Downs 1957; Dahl et al. 2003; C. Brooks and Manza 2006a). Burstein's review of opinion-policy research (1998, 2003), much of it covering social welfare, suggests that opinion probably shapes policy. Amidst Burstein's rank of reviewed studies, some show consistency between public opinion toward a policy change preceding an actual change (c.f. Monroe 1998) while others demonstrate a significant co-variation of opinion and welfare policy in the presence of other predictor variables (c.f. Erikson, McIver, and G. C. Wright 1987).

On the other hand, the literature on increasing returns and institutions offers strong evidence that social policy shapes opinion, i.e. *institutional feedback* or *opinion feedback* (Key 1961; Pierson 2000; Hacker and Pierson 2010). One of Key's foundational claims about democratic governments is that they create and maintain public opinion in the first place (Mettler and Soss 2004). Furthermore, self-interest drives public opinion to adapt to social policy, for example where there are more individuals benefitting from

social policies and greater levels of benefits, more individuals will express support of social policy or greater strengths of support. If each causes the other, then the logical conclusion is that opinion and policy operate in a *feedback loop* (Soroka and Wlezien 2005b, 2005a).

For a feedback loop to exist, *public opinion must shape policy*. Furthermore, if the opinion-policy relationship is to be placed into a generally applicable theory for all democracies, then opinion must exert a ubiquitous impact on policy, not just at specific historical moments such as elections, social movements, or debates in the public sphere. Otherwise it is not a loop. To date the evidence of a permanent or general loop is sketchy. There is strong evidence of specific moments of opinion impacting policy but there are also many moments when it does not. This suggests that each case is unique and that opinion might shape policy, but not that opinion continuously or generally shapes policy. Without a continuous link of opinion with policy, the feedback loop is not complete.

There are researchers who find evidence of a *specific* impact of opinion on policy, i.e. the occasional link. For example, evidence can be found in the late 1980s and early 90s in New Zealand where the public became so fed up with policy makers pursuing their own neoliberal agendas, that they fought to change the country's constitution and electoral structure to a proportional electorate democracy (Vowles 1995). Another specific example in the US was the public debate to offer minimum income protection in the 1960s and 70s which ended up without the passing of a guaranteed income policy because public opinion, mired in deservingness and cultural categorizations, tended toward opposition (Steensland 2006). Another two examples are when policy-makers followed public opinion instead of special interest elites in the 1940s with the formation of the British National Health Service and in the 1960s with the American Medicare act (Jacobs 1992). Or more recently in the US when the Obama administration was able to

introduce a comprehensive health coverage plan despite the pressures of private health care lobbies, thanks to a public majority of around 60% in favor of universal care in the preceding years (Saad 2008). Studies of this nature are evidence of context-specific historical moments where opinion impacted policy.

On the other hand there is evidence that sometimes opinion is disregarded or is not taken into account in policy making. There is evidence within Great Britain, Canada, the US, France and Germany that opinion and policy (including social policy) are only sporadically correlated (J. E. Brooks 1985, 1987, 1990). A closer inspection of the heavily referenced findings of Page and R.Y. Shapiro reveals that opinion is only correlated with welfare (i.e. "social issues") and becomes insignificant in a predictive model (1983: Table 7). Finally, a review by Papadakis (1992) brings up a similar argument as the normative distinction made by Wegener and Liebig (1995) by suggesting that individuals from various publics often supporting expanding social policy *and* privatization of welfare.

As the specific evidence of an occasional impact and an occasional non-impact suggests, scholars have struggled to show a *general* impact of opinion on policy across countries and over time, i.e. they cannot connect the occasional links to form a feedback loop. The idea of a general theory of opinion shaping policy is thus lacking. It is an argument that is based on correlation, not causal evidence. Many scholars show that in countries where opinion is highly in favor of redistribution, redistributive spending is also high as shown in the previous Figures (Coughlin 1980; Esping-Andersen 1990; Andreß and Heien 2001; Gilbert and Terrell 2002). Also in countries with more universally accessible social policy provisions (in lieu of means-testing) public support is more universal (Larsen 2008; Castles 2009; Crepaz and Damron 2009).

In some ground-breaking research, Brooks and Manza (2006a, 2006b) use pooled cross-sections to identify a significant linear relationship of one year lagged public opinion with social welfare spending. They find this relationship across most *OECD* countries in the presence of controls for other policy causing factors, and their study was a first of its kind in attempting to empirically substantiate the impact of opinion on policy. They make a theoretical argument that despite recent (neo)liberal shifts from the 1970s onward and mounting pressures of competition in a global economy pushing an agenda of welfare retrenchment, all advanced *OECD* nations have increased welfare spending as a percentage of GDP until the turn of the millennium (OECD 2012), which is where their data ends. Brooks and Manza argue that public opinion, due to its embeddedness in social policy in general, is the reason for this.

Soroka and Wlezien (2010) offer some alternative and ostensibly supportive evidence for Brooks and Manza and the general theory of opinion causing policy. They model a step-wise, opinion-policy feedback process in the US, Great Britain, and Canada. Using pooled time series, they show that a change in social policy almost always leads to a change in public opinion which in turn is a significant predictor of a change in the policy (Wlezien 1995, 2004; Soroka and Wlezien 2005b, 2005a). This is a two-stage process. First policy changes, then opinion responds (like a "thermostat" in their analogy), then the policy corrects taking on account the new level of public opinion. What happens in their data is that when social policy spending decreases, public opinion supporting it increases until the spending level 'recovers'. Although this is evidence that opinion shapes policy (i.e. prevents retrenchment) and appears to support Brooks and Manza, a crucial step is that the opinion itself is primed or triggered first by policy change. However, Soroka and Wlezien observe the same pattern in the reverse direction. When social policy begins to expand and spending increases, public opinion then decreases until the policy

spending is corrected downwards. This negates the idea that the public are embedded in welfare states tend to expand over great lengths of time. This is instead evidence that the public merely reacts to policy change in *either* direction, i.e. that policy causes opinion, and not so much the other way around. I am aware of no methodological attempts to model this relationship reciprocally except for the step-by-step formulation of Soroka and Wlezien and therefore the idea of a feedback loop is thus far un-tested in empirical social science work.

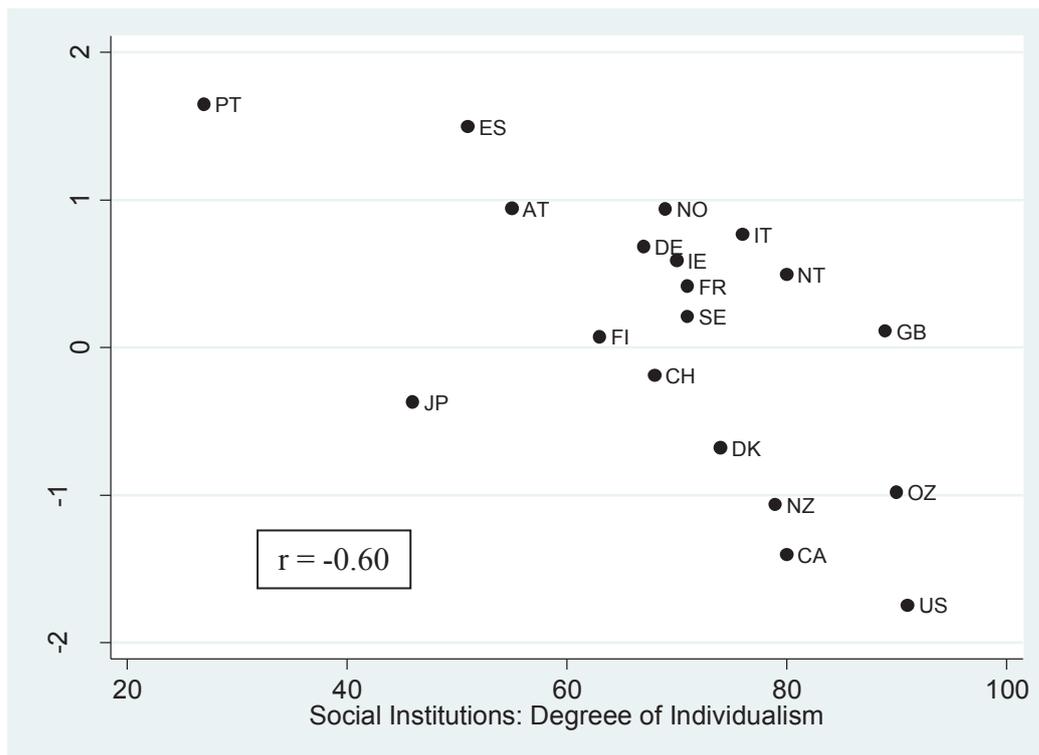
5.2 *Institutional Alignment: Institutional Determinants of Opinion-Policy*

Although the evidence of a general feedback loop between opinion and policy is scarce, the alignment of the two by country is strong. Institutional theory suggests that social and political institutions exert a causal impact on both public opinion and social policy, and if the impact is similar then this should explain alignment cross-nationally. The arguments outlined in Chapter 2.4 suggest that social and political institutions and their promotion of norms shape public opinion and a similar theoretical relationship may be derived that institutions also shape social policy. I suggest that opinion and policy may be simultaneously shaped by institutional norms, leading to a theory of *institutional alignment*. In this section I look again at individualism, corporatism and the historical differences between the English-speaking and European societies in order to derive hypotheses about institutional alignment.

As discussed in Chapter 2.4.1, societies that have stronger individualism norms should have public opinions less supportive of social policy. Individualism should discourage governments from getting involved with individuals in their socioeconomic actions, except to guarantee safety in pursuing their interests. To quote Sniderman and

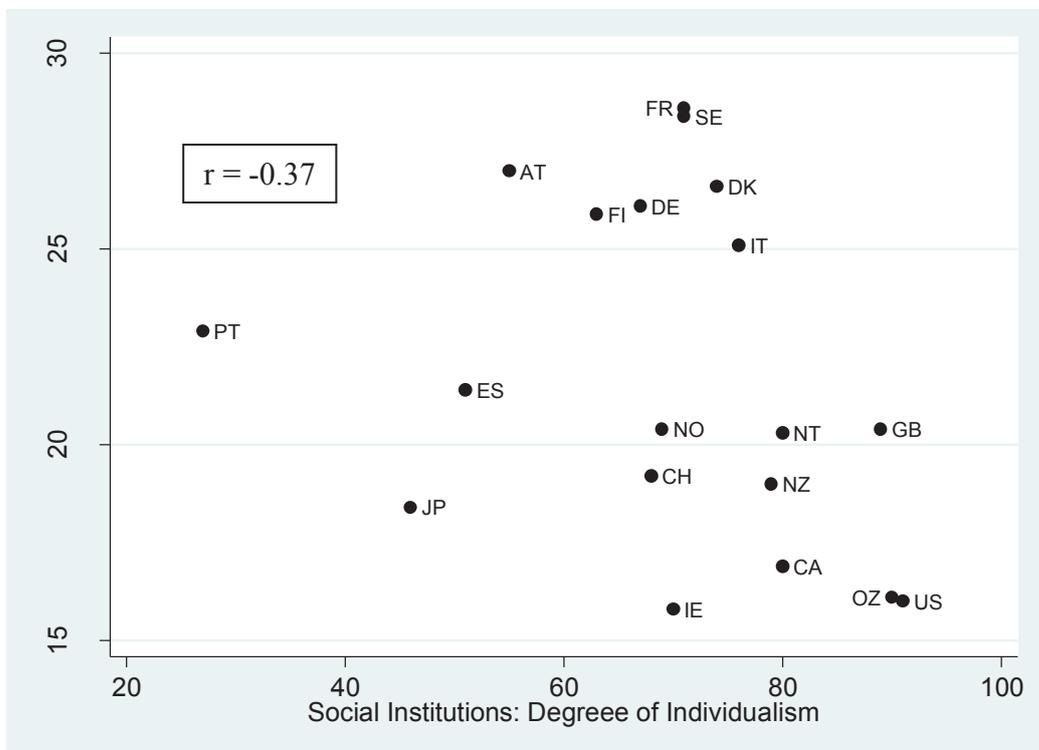
Hagen (1985), individualism "is a bedrock belief in an ethic of self-reliance. Individuals must take care of themselves" (quoted in Fine 1992:316). Norms guide the framing of issues, such that more individualistic societies should be less likely to develop social policy agendas related to poverty or health problems because these are seen as individual rather than collective issues (Burstein 1991). Also, individuals who live in a society with greater norms of individualism (i.e. blame the individual) may feel psychological distress when obtaining welfare or redistribution (Ensminger 1995) and this may reduce overall usage of social policy. With this norm pressing upon the repeated activities of individuals seeking welfare, policy makers, and bureaucratic organizations distributing social policy provisions, social policy should be shaped over time by individualism. Conversely, the lack of individualism should have the impact of bolstering government intervention and promote the idea of collective responsibility of a society for its members. Figure 10 shows the relationship of individualism to public opinion and Figure 11 shows individualism with social policy.

Figure 10. Individualism and Average Public Opinion, 1985-2008



Note: Data from Hofstede (1984) and *ISSP*. Country labels found on p. vii.

Figure 11. Individualism and Social Policy, 2006

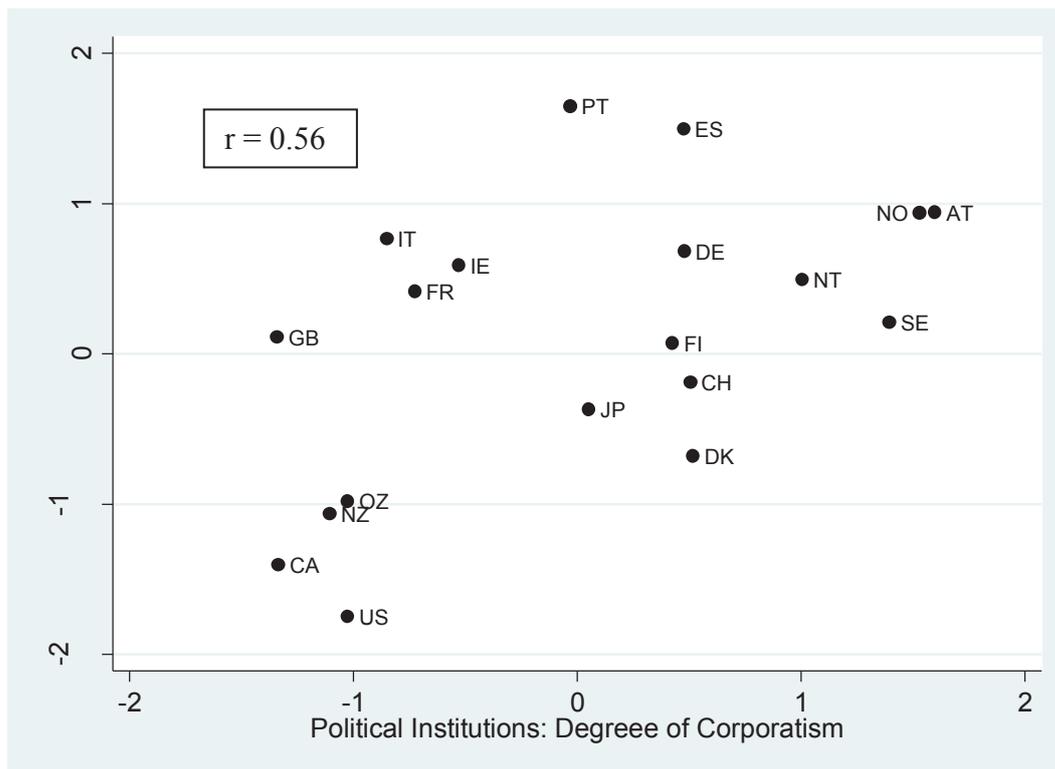


Note: Data from Hofstede (1984) and *OECD* 2006. Country labels found on p. vii.

Although I will analyze the data presented above in more detail in Chapter 6, it is useful here to see the patterns. There is a relatively clear relationship of individualism to public opinion and a somewhat clear one with social policy, where more individualism is associated with less public support and less social policy spending. For example, individualistic countries such as the US and Australia are the least supportive of social policy, also they happen to be the lowest spenders on social policy, whereas the less individualistic (i.e. more collectivistic) countries such as Portugal and Austria have highly supportive publics and moderate to large commitments to social policy.

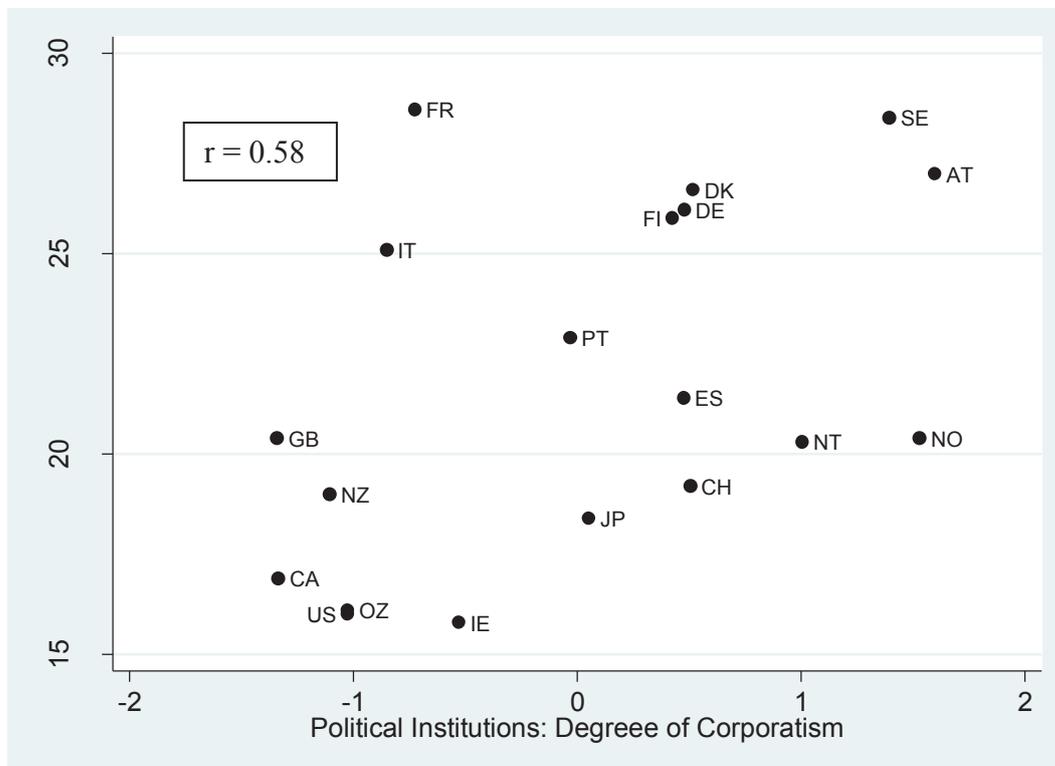
Corporatist political institutions also should shape social policy in a manner similar to their hypothesized impact on public opinion. A typical strong corporatist system includes aspects of business and labor incorporated in formal state institutions. In this setting the state has a heavy hand in market and social organization (Hicks and Swank 1992). There is a strong amount of (coerced) cooperation between the various interests of market and society and this includes employee organizations that vie for strong unemployment, pensions and other forms of protection for lower status jobs (Lijphart and Crepaz 1991). This cooperative (or 'collective') political system is institutionalized in the norms of repeated political activities, such as a regular presence of unions and employee organizations in policy making. On the other hand, more pluralist systems have norms where the winners of competition outside of the state's formal institutions earn more exclusive interests in setting social policy. Labor and employee organizations rarely have enough power to be the winners when competing against powerful private firms. Consider the US for example. Without the state imposing reconciliation of labor and owner/manager interests, labor tends to lose as it lacks access to power, capital and organization (Marx 1887). Figure 12 plots the relationship of corporatism with public opinion and Figure 13 the same for social policy.

Figure 12. Corporatism and Average Public Opinion, 1985-2008



Note: Data from Lijphart and Crepaz (1991) and *ISSP*. Country labels found on p. vii.

Figure 13. Corporatism and Social Policy Spending, 2006



Note: Data from Lijphart and Crepaz (1991) and *OECD* 2006. Country labels found on p. vii.

With corporatist political institutional norms, as with individualistic social norms, there is an apparent cross-national pattern where more corporatist and less individualistic countries such as Sweden and Austria have greater public opinion in favor of social policy *and* greater spending on social policy.

Institutions pattern cross-nationally. The norms embedded in social and political institutions should help to repeat what was before into what is to come. I argue that this is due to the historical similarities of institutions across certain societies. Corporatism as we know it today in Europe stems from the collective problems of societies enduring repeated destructive wars, the various attempts at unifying different regional systems of government such as fiefdoms and kingdoms, and efforts to develop a socialist solution to the conflicts generated by markets (Briggs 1961). Societies and their markets achieved peace only through collective cooperation and social controls. After the lessons of devastating wars, Europe formally united economically and eventually socially with the Economic Community and then EU. Many social, economic and political practices were spread from European societies to one another, welfare systems for example spread from small localities to ever larger welfare societies, and eventually welfare nation-states (King 2011); centralized government regulation to prevent fraud resulted after many cases of local mismanagement (Collier and Messick 1975); and pension systems harmonized out of necessity amongst the earliest European states and continued through present times in an expanding Europe (Cornelisse and Goudswaard 2002). Today we see the prospect for a future of collectivized welfare societies with the EU attempting to legislate on social policy, although it has not much footing thus far (Taylor-Gooby 2005). Nonetheless, there is a uniquely European family of institutions with anti-individualistic norms, a historical institutional path dating back to the Carolingian Empire and the Latin language (if not

before), which result in similarities in social policy when compared to the pluralistic English-speaking institutions.

Politically speaking, Europe also includes Christendom. Political parties often have religious components and church and state are mixed together (Evelyne Huber et al. 1993). Although the United Kingdom has church intertwined in politics, its former colonies boast the greatest levels of church and state separation in the world (J. Fox 2004). More importantly, different forms of democracy emerged between these two groups. Europe is home to more left-leaning politics with labor unions and social democratic parties having significant power. There are the Protestant social democracies of the Scandinavian north and conservative Protestant and Catholic democracies of the middle and south. Both of these types of political systems have strong government roles in providing welfare for citizens. Also, these societies are some of the earliest adopters of social security, except for Great Britain, and they are consensus-based democracies with power sharing across parties based on electoral results (Collier and Messick 1975; Esping-Andersen 1990; Hicks and Swank 1992).

The European case is that of a welfare project which gave rise to welfare systems that followed a 'natural' European course toward universal protections and large welfare states. However, the British case deviated from this universal European welfare project, perhaps due to industrial revolution and the rise of individualistic norms, and exported its' institutions to the New World (Feagin 1975). The English language represents a shared social institution of the English-speaking nations. The school systems of these nations reflect the British system. Many of the social customs and power structures are a product of liberal influences, and ideas move freely amongst the educational and political institutions of the English-speaking nations (Ashford 1987). For example liberalism surged in the US at the turn of the 19th Century (re)infusing Britain with liberal market

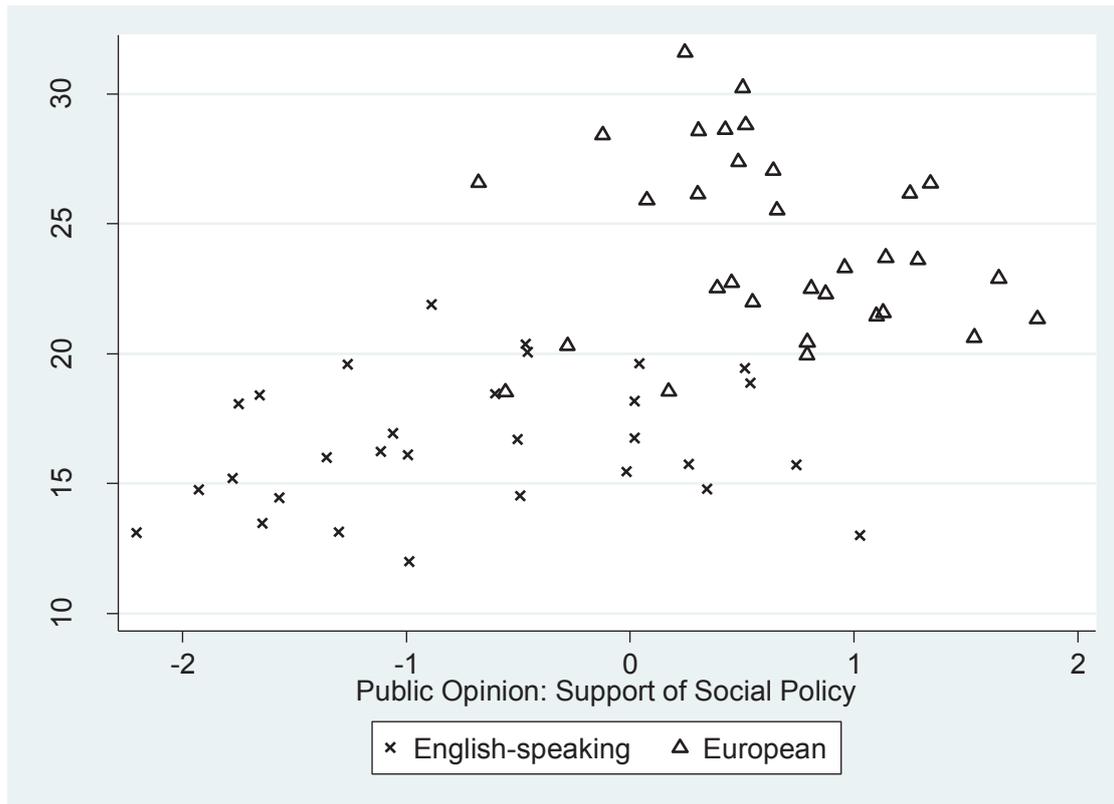
values, and resulting in political backlashes against proposals to provide and expand social policy in both nations (Orloff and Skocpol 1984). For these reasons, the English-speaking societies have institutional similarities that diffuse amongst each other and are a collective departure from those of Europe.

It is presumptuous to simply group the countries in these two clusters without acknowledging that each country follows a unique path throughout history, in some cases having opposing political and economic trajectories. I merely suggest that there are institutional features that distinguish these two, and this is a common argument of scholars who cross-nationally compare welfare states (see review in Arts and Gelissen 2002). Descriptively this dichotomy achieves what is impossible to measure, namely the simultaneity of a horde of underlying institutional norms that appear to work together to align opinion and policy. I acknowledge that some of the within-group similarities of institutions were arrived at via divergent or even conflicting paths (Dore et al. 1999; Hall and Soskice 2001). But I assert that although there is convergence, diffusion and learning across the institutions of both groups, there is more taking place within the two due to geographic closeness (i.e. Europe) or isolation (i.e. British diasporas), and historical similarities (European history and British colonialism) (Collier and Messick 1975; Castles 1993; Dobbin, Simmons, and Garrett 2007; Hu and Manning 2010)

Timing is important in my institutional framework. The social construction of welfare after the Great Depression and massive, destructive wars marks the great expansion and bureaucratization of welfare in the history of human societies, ultimately reaching an apex of growth in the ‘Golden Age’ of welfare in the 1960s and 70s (Esping-Andersen 1996; Bonoli 2007). Also, it is the era where the nation-state came to prominence as the primary unit of political organization and this deeply embedded social welfare institutions, norms and repeated precedents into national societies; thus

guaranteeing path dependency for welfare institutions, policy and public opinion (Weir and Skocpol 1985; Pierson 2000). Figure 14 is a reproduction of Figure 8 showing the relationship of public opinion and social policy; however, this time I strip away the country labels and simply present English-speaking countries with crosses and European countries with triangles.

Figure 14. Public Opinion and Social Policy by Family of Institutions, 1985-2008



Note: Data from *ISSP* and *OECD*.

In the above figure there are two institutional families. The distinction is not mutually exclusive in terms of policy and opinion as some countries overlap. But the pattern reveals two mostly distinct groups. The picture in Figure 14 is a visual guide to my theory of institutional alignment.

I identified two mechanisms for the institutional alignment of public opinion and social policy in this section: individualism and corporatism should shape public opinion and social policy in similar directions. More individualistic and pluralistic societies

should have public opinion less in favor of, and spend less on social policy. Meanwhile, less individualistic and more corporatist countries should have public opinion more in favor of, and more spending on, social policy. I attach a third way of measuring institutions by grouping them into two families of institutions. In this scheme I admit that there is no mechanism at play (i.e. Europe is not a cause), but offer this approach because it is useful for identifying macro-level phenomena that have clear historical institutional patterns. Even though the mechanisms are not clear, it is useful to think about these two types of societies as two black-boxes of distinct institutional norms.

6 CHAPTER SIX TESTING FOR FEEDBACK AND ALIGNMENT

In this chapter I engage in an analysis of public opinion and social policy at the country-level. First I use linear regression models to look at the uni-directional relationships between opinion and policy. Then, I utilize non-linear models to test for a feedback loop and institutional alignment as hypothesized in Chapter 5. The work in this chapter is from my third empirical study and the dataset I utilize for this purpose contains 62 observations of 19 countries at different time points. This data has many limitations due to its small size. Therefore this work is provisional and should be handled with kid gloves both in the sense that the findings are delicate and that other researchers' conclusions based on this work may be fragile. However, this work represents a breakthrough in testing what has been a theoretical relationship arguably as long as democracy has existed as a political system, but not a demonstrable empirical relationship. At the time of the completion of this book, it is what I know to be the only test of cross-national simultaneous causality between public opinion and social policy ever published.

6.1 Third Study: "Alignment or Feedback? The Relationship of Public Opinion and Social Policy in Advanced Democracies"

This study looks at aggregated public opinion data and analyzes it in comparison to *OECD* data and measures of individualism and corporatism that each captures social and political institutional norms at the country-level.

6.1.1 Data and Methods

In order to investigate the relationship of public opinion and social policy, I created a cross-national data set from individual-level pooled cross-sections and country-level data.

As the dataset is quite small I publish it in its entirety in Technical Appendix Three (Table 43 and Table 44). The construction of the data using *ISSP* individual-level data is similar to the practice used by Brooks and Manza (2006a) in their groundbreaking work, although they had a smaller dataset and did not measure individualism or corporatism. I list my measurements and descriptive statistics in section 6.1.3, Table 21. My reciprocal DVs are public opinion and social policy.

I measure *public opinion* toward social policy from two questions in the *International Social Survey Program (ISSP)* that were fielded in the "Role of Government" and "Religion" rotating modules during period 1985-2008. The first question relates to the role of the government in reducing income inequality. The second relates to government provision of employment. These questions measure preferences ranging from "definitely should not be" and "probably should not be" to "probably should be" and "definitely should be" the government's responsibility to do these things. These questions are a subset of a larger group of questions found only in the "Role of Government" module which ask about unemployment, price and industry controls, and pensions and health care, and all seven questions together form one latent variable (see Technical Appendix Three, Table 46). I use these two questions as proxies for this latent variable of general support of social policy. I aggregate the factor scoring of the two questions at the individual-level into country-time observations.

I measure *social policy* as the amount of spending by each country in a given year as a percentage of GDP at PPP on welfare and redistribution, as outlined in Chapter 3, and I measure *English-speaking* countries and institutions of *individualism* and *corporatism* also as defined in Chapter 3.4. As social policy tends to expand over time, I utilize a measure of *year* that is centered for each country. For example, the US is measured at various periods from 1985-2006, a 21 year window. I take the midpoint of

this 21 year window and code it zero and then take the distance in years of each observation from this midpoint. Three countries are measured only once during this timeframe and these are thus coded to zero. Unfortunately there is no ideal solution to having an unbalanced set of cross-sections as the *ISSP* was only fielded in a handful of countries in its earliest iterations.

Testing for reciprocal causation between two DVs requires a non-linear approach to identification of regression parameters. Essentially there are two regression equations, one predicting the first DV using the second DV as an IV along with other predictors, and another one predicting the second DV using the first DV as an IV. Running these two equations separately will not take into account the possible relationship of each DV to the other, i.e. the non-recursive nature of their equations. SEM is a process allowing for simultaneous estimation of each DVs impact on the other while estimating parameters from both equations (Bollen 1989). There is a caveat that the simultaneous equations aim to identify two effects (i.e. coefficients) where there is only one correlation between public opinion and social policy. This is not possible mathematically, the system is not recursive. The addition of instrumental variables is my way of solving this problem. I utilize SEM software of *MPlus 6* to construct non-recursive, instrumental variables models.

In order to utilize an instrumental variables approach, the two DVs must be relatively stable and the model must be identifiable. First, the two variables must be in a state of stable equilibrium when they are measured. Public opinion is measured via sampling over the course of roughly a year (with minor variation by country). Therefore the public opinion measure may be said to be a general measure of one year. The social policy measure is the amount of spending over the same fiscal year. This is beneficial, because both measures cover a similar time period, and include events throughout the

same time period within each. Even though they may fluctuate within the year, there are opportunities to recover and to stabilize over the course of sampling; they may be said to at least be in a yearly equilibrium. There are of course problems if public opinion changes policy so that it has a long term effect on spending (i.e. taking it out of equilibrium due to growth over time), and this model will miss the direct effect of public opinion on policy many years later in case there is one. However, as the main thrust of this work is testing for a general theory of a feedback loop between opinion and policy I proceed in this exploratory endeavor, and admit that capturing the exact nature of effects (i.e. timing and duration) is not possible here. Causality is helped by the fact that all but two countries in the analysis are observed at more than one time point. This gives the opportunity for different opinions and different policy measurements. If opinion is higher, then the expectation is that spending will be higher, within the same country, although the main focus here is on cross-national comparison.

Second, the model must be identifiable. Identification is possible only when there are more variables with correlations than unknown parameters being estimated. For example, when there is only one IV and two DVs (i.e. x causes y and z , and y and z are reciprocally related), then there are four parameters and only three correlations and the model is underidentified. An instrumental variable is one that is causally linked (and correlated) with one of the DVs, but not the other. Adding one instrumental variable will create a fourth unknown parameter but it will add *two* more correlations to the matrix, one with its respective DV and one with the other IV leading to a model with 5 unknown parameters and 5 correlations, which is just identified. However, just identified models have only one solution so they fit the data 'perfectly' and cannot differentiate covariance structures into different possible outcomes. Thus adding a second instrumental variable leads to an overidentified model, the preferred kind, with 8 correlations and 6 unknown

parameters. This comes down to the matrix algebra, estimation algorithms and operationalization of equations in SEM which is discussed elsewhere (Jöreskog and Sörbom 1982; B. O. Muthén and Satorra 1995; Schaubroeck 1990; Byrne 2001). The purpose of this dissertation is to use SEM to test for causality and thus I do not discuss the mathematics in further detail here.

There are a range of possible techniques for modeling reciprocal causation with instrumental variables. I do not use cross-lagged variables because I already face a small-N situation and cross-lagging would reduce the dataset by one observation per country, thus I would go from 62 to 43 cases. Also, I choose maximum likelihood estimation (ML) over two-stage (or three-stage) least squares estimation (2SLS) because the ML estimator uses more information and simultaneously estimates all relationships. Finally, I cluster the standard errors by country to account for the non-independence of observations in different years from the same country.

There is an issue with applying SEM techniques to a sample of countries, versus a sample of individuals. In fact, the countries I use to test my hypotheses are not a sample at all, and instead they are selected due to their status as advanced democracies and with available *ISSP* data. Thus, they are not statistically representative of the larger population of countries of the world. This brings up an issue of generalizing the findings to other countries, because countries are not as similar as humans (or other living things). Each country is a unique mix of history, size, composition, etc. Thus, the results of this research are mostly only applicable to the countries included in the sample. Additionally, this lack of sampling from a larger population brings up some issues in calculation of significance values. The theory behind the calculation of t-statistics and p-values is intended to rule out luck (i.e. probability) as a cause of linear relationships (i.e. non-zero coefficients). However, this assumes that a random sample were drawn from a larger

population of cases, and the statistics may be interpreted as the likelihood that the finding exists empirically, as opposed to being a product of the potential distribution of traits in a random draw from the larger population. This is not the case with these countries. I propose two points to help in dealing with these issues. The first is that the significance statistics should be a focus of the research herein. I relax the statistical assumptions such that I focus on results where $p < .25$. This is due to the small number of cases, and the lack of sampling. I merely want to identify strong patterns in the available data. Using a p-statistic of less than .25 allows for a relationship that seems to fit roughly %75 of the cases (to put it in rough non-technical terms). This would suggest that about 47 out of 65 countries are fit the linear patterns identified by the coefficients.

6.1.2 Modeling

Selection of instrumental variables is a difficult process due to theoretical and empirical constraints. The choice of instruments should be driven first by theory and then confirmed with measurement. There must be logical, causal reasoning to employ an instrumental variable. Otherwise the assumptions of the model will break down and the results are prone to being un-interpretable random noise. However, instruments must be empirically valid, and strongly correlated with a corresponding DV while mostly uncorrelated with the other DV in the model. Data limitations limit what variables may be selected to utilize as instruments due to my reliance on secondary data. I select here instrumental variables that fit both theoretical and empirical requirements. For the public opinion instrument I choose female labor force participation (FLP) and for the social policy instrument I choose the percentage of individuals who are currently married or

cohabitating in a country⁵.

Female labor force participation theoretically causes a reduction in support of social policy across the advanced democratic welfare states. This occurs for three primary reasons. The first is that individual SES (i.e. self-interest as outlined in Chapter 2.1) is directly related to public opinion, with higher SES leading to less support of social policy. Women tend to be lower in SES as individuals, regardless of their family SES. Working women, although facing status discrimination, still have higher SES than non-working women on average. Most importantly, countries with higher rates of working women have less of a traditional male breadwinner model and fewer single parents, thus women are less likely to be in roles where they rely on others for their welfare, arguably leading them to be less welfare oriented in opinions. Second, the exposure of women to the institutional features of employment may also shape opinions of those working towards less support of social policy. Therefore, a greater share of women in employment means a greater share of women influenced by institutional norms outside of the household that may lead them to be less supportive of social policy. The data from the *ISSP* confirm this descriptively at the individual level seen in Table 20. In all but three countries, women who are working full-time are less supportive of social policy than women who are full-time housewives according to *ISSP* data for 2006.

⁵ Married is not appropriate/wrong. At the publication of this dissertation the author became aware of a 'Scandinavian' problem where the percentage of people cohabitating skews the marriage figures and renders this instrument irrational. This will be corrected when this chapter is published as an article.

Table 20. Female Public Opinion by Housewife Status, 2006

	Housewife	Full-time emp.	Difference
Australia	-0.28	-0.41	-0.13
Canada	-0.45	-0.42	0.03
Denmark	-0.16	-0.31	-0.14
Finland	0.72	-0.19	-0.91
France	-0.02	-0.03	-0.02
Germany	0.00	-0.05	-0.05
Ireland	0.04	-0.09	-0.13
Japan	-0.23	-0.35	-0.11
Netherlands	-0.03	-0.25	-0.22
New Zealand	-0.56	-0.46	0.11
Norway	0.09	0.10	0.01
Portugal	0.37	0.26	-0.10
Spain	0.23	0.16	-0.07
Sweden	-0.13	-0.22	-0.09
Switzerland	-0.18	-0.31	-0.12
Great Britain	-0.18	-0.28	-0.11
United States	-0.38	-0.46	-0.08

Note: Calculated by author from individual level *ISSP*, average public opinion of full-time employed female minus average of housewife by country.

This is a descriptive picture for illustrative purposes and further research is necessary to better identify the mechanisms that lead to lower support; however, it sheds a positive light on the usage of FLP as an instrument for public opinion because the measure of FLP is independent from *ISSP* data, yet conforms to the preferred correlations regarding the usage of instrumental variables (as shown later by correlations in Table 22).

The third reason for usage of FLP comes from what is known about welfare regimes. FLP is highest in the English-speaking countries and also high in the Nordic countries, and these two are nearly polar opposites in terms of spending on social policy. On the other hand, FLP is lowest in Germany, France and the Mediterranean countries where spending is middle to high in range (Esping-Andersen 1990). Public opinion is highest in the Mediterranean countries, followed by the Nordic countries and the lowest support is in the English-speaking countries, as discussed in Chapter 5.1. At the same

time, social policy spending is highest in the Nordic countries where FLP is relatively high, but spending is also highest in France and Germany where FLP is very low. Furthermore, spending is the lowest in the Mediterranean countries where FLP is lowest. There is evidence that FLP is indirectly related to policy, but this might only be through public opinion, for example higher levels of FLP leads to greater political enfranchisement of women (and thus their opinions) (Iversen and Rosenbluth 2008), and as opinion is a variable in the model this indirect relationship should be controlled for. There is also evidence that social policy that encourages traditional family structures and traditional child support discourages FLP, but this is causality in the other direction (Esping-Andersen 1990; Iversen, Rosenbluth, and Soskice 2005). Therefore, I argue that FLP is not directly causally related to social policy spending because there is no logical pattern across countries.

I choose marriage as a best-available instrument for social policy although it is less ideal than FLP. Countries with more generous maternity leave policies (i.e. more spending by the state on social policy) and with policies that require women to be dependent on men in order to receive benefits, have larger shares of the population in marriage or cohabitation, as seen in much of Europe when compared to the English-speaking countries. Although this may or may not be a causal relationship of marriage on spending, it seems that they might at least be reciprocal; and certainly their relationship is empirical with a correlation of 0.28 (Esping-Andersen 1990 and Table 22). Importantly, higher rates of marriage should lead to greater spending on social policy in advanced welfare societies through dependent and survivor benefits, although this is heavily moderated by the nature of these benefits and the shaping of interests by the policies that

distribute these benefits (Orloff 1993). Thus marriage theoretically shapes social policy⁶ spending through a demographic component, married women receiving funding as tied to male workers; again this is moderated by how traditional family norms are and whether women tend to be in the labor market or not. I do not have good cause to expect marriage to shape public opinion; however the correlations shown later in Table 22 show that marriage has a moderate relationship with public opinion (0.19). On the other hand, there is some evidence that married persons are less supportive of social policy, but these effects are very small, for example the difference between married versus single in marginal public opinion is found to be smaller than the difference for *each* year of education (Linos and West 2003:402).

It is also plausible that marriage is a proxy for something else. Therefore, I choose two alternative instruments to run robustness checks. I consider the percentage of GDP that is collected in *taxes* by the federal government and the amount of *military spending* per capita in a given year. Taxes should be related to social policy directly, because social policy is measured as a percentage of GDP. Thus, both are anchored by GDP. In fact, given no changes in social policy or tax policy, both should be perfectly correlated within each country for each year. However, this is not the case because GDP is a measure of the total value of goods and services produced in a given country-year, but does not exactly measure the full range of wealth creation or more importantly the movement of taxable capital, e.g. taxes on housing and retail purchasing for example. The availability of funds in a national government's coffer should increase the possibility for spending on social policy. This is true given a balanced budget, which nation-states generally do not operate within, but nonetheless they strive towards.

⁶ See footnote 5.

The correlation between taxes collected and social policy is very high (0.87), while the correlation with public opinion is high (0.49), and this is empirically problematic. The amount of tax revenue should only impact public opinion when there is a change in tax policy, otherwise the public should not notice how much the government is collecting in taxes in total thus it should not impact public opinion directly. Yet, the main reason I do not employ taxes collected as my primary instrumental variable is because of the endogeneity of this measure with social policy. Although different levels of tax collection provide different amounts to spend on social policy all else equal, the actual measure of taxes collected directly reflects the tax rates of a country which are a key part of the social policy process. Nation-states wishing to spend more on social policy must tax more. Thus, there is problem where countries that tax more should lead to public opinions in favor of social policy, as they expect to see returns on their high taxes.

Military spending is an alternative instrumental variable derived from the work of Wilensky (1975), who demonstrates that countries that use more of their wealth for military spending use less of it for social policy. Ironically, Wilensky's finding does not hold whatsoever in the case of advanced democratic countries today. There is the US which spends more than most other countries combined on its military, and then there are the rest. When the outlier of the US is removed from the list of developed countries, the association between military spending and social policy spending becomes positive, i.e. those who spend more on one also spend more on the other (correlation of 0.23, see Table 47 in Technical Appendix Three). Despite the fundamental nature Wilensky's work on social policy, the contradictory direction of this association that I find is not surprising. This harks back to the rise of nation-states over 100 years ago. Those who sought to unite the Germans or the French for example, into one coherent political entity needed to create allegiance to a nation-state across the many regional vassals of power. One way of

accomplishing this was to guarantee the safety of those within the state. This was accomplished through the production of a large military. The history of Europe is a history of struggle between political entities. Those states that were the most successful had the most powerful centralized structures; this may remain true today due to path dependency. Or at least it seems that states that are more centralized spend more on all forms of policy per capita. The exception is of course the US whose role as global military superpower is entirely exceptional when compared with all other advanced democracies. Therefore, in an analysis using the instrumental variable military spending, the US cases must be left out.

Figure 15. Theoretical Path Diagram Modeling an Instrumental Approach to the Relationship of Public Opinion and Social Policy

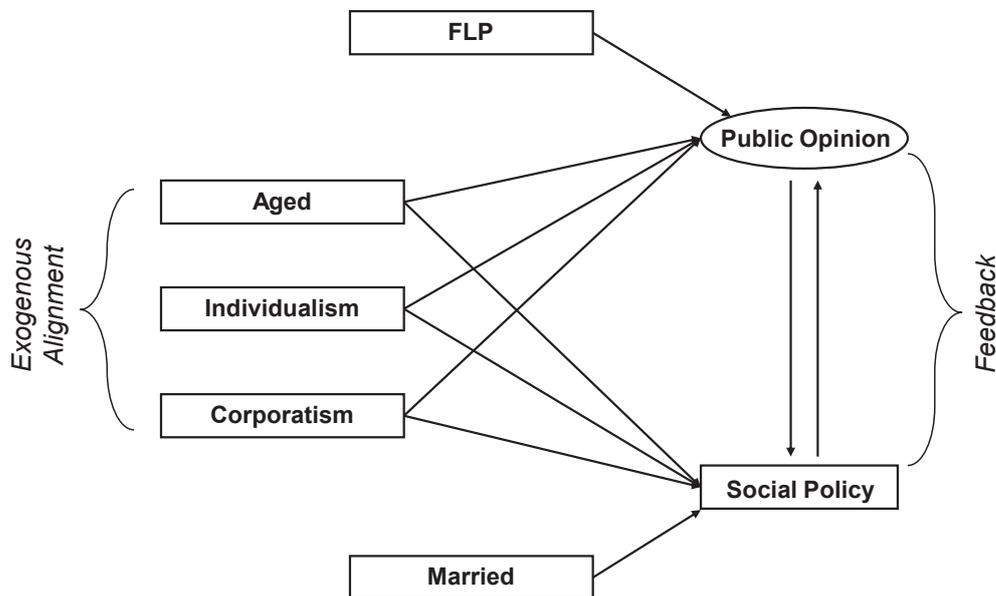


Figure 15 presents a path diagram of the theoretical relationship among public opinion and social policy. The text within boxes represents observed variables. The boxes on the left hand side of the diagram for *aged*, *individualism* and *corporatism* all represent

potential IVs that might demographically or institutionally align public opinion and social policy. The solid arrows represent causal paths. These are unknown parameters that I will estimate using SEM. Identifying the effects of these arrowed relationships will test the hypothesis of institutional alignment. The top and bottom boxes with *FLP* and *married* represent the two instruments⁷. The box for married may be substituted with taxes collected and military spending as theoretical linkages to employ for alternative sensitivity models. There is no arrow connecting FLP to social policy or married to public opinion. These two paths are specifically theorized to be non-causal as is required by an instrumental variables approach. Finally the oval with *public opinion* in it is a latent variable. It is not observed directly, but based on an aggregated average factor score of the two questions from the *ISSP*, and along with *social policy* these two variables are the dependent variables in the model. The floating solid arrows that point between them are the reciprocal causal paths. The estimation of these will test the hypothesis of a feedback loop.

6.1.3 Results

The descriptive statistics by country-time and country are available in Table 21. Measurements of variables are discussed in Chapter 3. Table 22 gives correlations for all the variables utilized in this analysis by country-time observation.

⁷ See footnote 5

Table 21. Descriptive Statistics for Public Opinion and Social Policy Dataset

Dependent Variables	Concept	Measurement	Data Source	Mean	S.D.	Min	Max	By Country Mean
Public Opinion	DV: Aggregate attitudes toward social policy	Two-item factor collapsed to country-time means. Government (1) reduce income differences and (2) provide jobs; Cronbach's alpha at the individual level = 0.65.	<i>ISSP</i> . Religion I & II, Role of Government I, II, III & IV	0.00	1.00	-2.21	1.82	0.10
Social Policy	DV: A country's commitment to welfare and redistribution	Social welfare spending as a % of GDP at PPP	<i>OECD</i> . Social Expenditures Database	20.53	4.92	11.99	31.59	21.49
FLP	Instrument for public opinion; social institution, traditional breadwinner norms	Working age women active in the labor force as a % of total working age women	<i>OECD</i> . Annual Labor Force Surveys	63.75	9.49	38.00	80.19	64.89
Married	Instrument for social policy	Percent of persons currently married or a cohabiting partner	<i>ISSP</i> . Aggregated from individual-level data	73.01	5.45	57.55	82.10	73.26
Taxes Collected	Alternative instrumental variable to married	Tax monies collected as a percent of GDP for that fiscal year	<i>OECD</i> . Tax Statistics Data	35.76	6.54	25.49	51.07	49.64
Military Spending	Alternative instrumental variable to married	Per capita spending on the military, measured at PPP/1,000	<i>SIPRI</i>	0.45	0.18	0.18	0.84	0.42
Aged	Demographic structure, health and pensions	Population aged 65 and over as a % of the total population	<i>OECD</i> . Social Indicators.	14.77	2.36	10.69	21.50	15.18
Individualism	Social institution	Individualistic norms	Hofstede (1984)	73.53	14.15	27	91	69.32
Corporatism	Political institution	Degree of coordination of social, state and market interests	Lipjhart and Crepaz (1991)	-0.17	0.99	-1.34	1.60	0
English-speaking	Historical institutions	English-speaking countries =1; European =0		0.48	0.50	0	1	0.37

Note: N=62 cases, By country N=19, except for the military spending descriptives which exclude the US, thus N=56 and country N=18

Table 22. Correlations of Variables by Country-Time Point, N=62

Variable	Public Opinion	Social Policy	FLP	Married	Taxes Collected	Military Spend	Aged	Individualism	Corporatism	English-speaking	Year	Education	GDP at PPP
Public Opinion	1.00												
Social Policy (spending)	0.53	1.00											
FLP	-0.42	0.08	1.00										
Married (%)	0.19	0.28	0.10	1.00									
Taxes Collected	0.49	0.87	0.06	0.18	1.00								
Military Spending per capita	-0.42	-0.22	0.28	-0.44	-0.16	1.00							
Aged (% ≥65)	0.47	0.59	0.10	0.17	0.42	-0.16	1.00						
Individualism (Hofstede)	-0.60	-0.37	0.18	-0.20	-0.16	0.58	-0.53	1.00					
Corporatism (Crepaz & Lijphart)	0.56	0.58	0.10	0.17	0.54	-0.26	0.44	-0.57	1.00				
English-speaking	-0.67	-0.79	0.09	-0.15	-0.69	0.21	-0.58	0.50	-0.76	1.00			
Year (centered)	-0.05	0.08	0.35	0.03	0.02	-0.11	0.22	-0.03	0.03	-0.04	1.00		
Education (Years)	0.19	0.05	0.04	-0.13	0.11	-0.14	0.27	-0.24	0.20	-0.21	0.19	1.00	
GDP at PPP	-0.22	-0.04	0.57	-0.27	0.05	0.30	0.06	0.14	0.27	-0.09	0.63	0.34	1.00

Before testing reciprocal models I first engage in linear regressions predicting public opinion using social policy as an IV, and then alternatively predicting social policy using public opinion as an IV. This helps to identify important variables and tests whether this data confirms previous research that suggests that social policy shapes public opinion and that public opinion shapes social policy (see Chapters 1, 2 and 5). As this is not the main focus of my analysis I present the results of these linear regressions in a simple format in Table 23 and Table 24 that show only standardized coefficients and significance indicators.

Table 23. Linear Regression Models Predicting Public Opinion toward Social Policy

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Social Policy	--	0.38***	--	0.37**	0.42***	0.22 [†]	0.33**	--	0.11	--	0.24 [†]	0.16
Aged	0.52***	0.28*	0.32**	0.12	--	0.22 [†]	--	0.21 [†]	0.19 [†]	0.26 [†]	0.15	0.12
Married	0.16	0.09	--	--	--	--	--	--	--	--	--	--
FLP	-0.48***	-0.49***	-0.39***	-0.41***	-0.39***	-0.50***	-0.49***	-0.40***	-0.41***	-0.47***	-0.46***	-0.42***
Individualism	--	--	-0.36*	-0.33*	-0.37**	--	--	--	--	-0.14	-0.18	-0.19
Corporatism	--	--	--	--	--	0.39**	0.42**	--	--	0.41**	0.30*	0.20 [†]
English-Speaking	--	--	--	--	--	--	--	-0.51***	-0.44*	--	--	-0.19
r-squared	0.47	0.56	0.53	0.62	0.61	0.65	0.62	0.61	0.61	0.63	0.66	0.67

Note: N=62, clustered in 19 countries; preferred model shaded in grey; standardized regression coefficients; [†]p<.25 *p<.10 **p<.05 ***p<.01

Table 24. Linear Regression Models Predicting Social Policy in Spending as a % of GDP

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
Public Opinion	--	0.44**	0.30*	0.35*	0.46***	--	0.27 [†]	0.16	--	-0.05	--	0.24 [†]	0.01
Aged	0.56***	0.34*	0.42**	0.46**	--	0.40**	--	0.35*	0.18 [†]	0.18 [†]	0.45***	0.41***	0.22*
Married	0.18 [†]	0.11	0.15 [†]	0.16 [†]	0.18 [†]	0.15 [†]	0.16 [†]	0.14 [†]	0.15 [†]	0.15 [†]	0.16 [†]	0.15 [†]	0.16
FLP	0.01	0.23*	--	--	--	--	--	--	--	--	--	--	--
Individualism	--	--	--	0.12	-0.06	--	--	--	--	--	0.16	0.24	0.13
Corporatism	--	--	--	--	--	0.38***	0.40**	0.31*	--	--	0.45**	0.38*	-0.01
English-Speaking	--	--	--	--	--	--	--	--	-0.66***	-0.69***	--	--	-0.70***
r-squared	0.38	0.48	0.45	0.46	0.31	0.50	0.42	0.51	0.67	0.67	0.51	0.54	0.68

Note: N=62, clustered in 19 countries; preferred model shaded in grey; standardized regression coefficients; [†]p<.25 *p<.10 **p<.05 ***p<.01

As there are only 62 observations in 19 countries I am limited in degrees of freedom to work with. Thus, I test 12 different configurations of variables in the first model predicting public opinion in Table 23. In column 1, I test a basic model with a demographic independent variable, aged, and the two instruments. Then model 2 adds social policy to see if overall spending predicts public opinion with these three controls. The results from columns 1 and 2 suggest that social policy is a strong predictor of public opinion with a significant standardized coefficient of 0.38. They also point out that FLP is a strong predictor of public opinion giving evidence of its utility as an instrument, meanwhile married is not significant in the model. Finally, in both 1 and 2 the effect of aged is very strong in both models with a standardized coefficient of 0.52 and 0.28 respectively. This suggests countries with more persons aged 65 and older have higher support of social policy. Columns 3 through 5 give results of regressions with the addition of the variable individualism. In all 3 models individualism is a strong predictor of public opinion (-0.36, -0.33 and -0.37), with more individualistic social institutions predicting lower support of social policy. Columns 6 and 7 add corporatism instead of individualism and demonstrate that more corporatist political institutions predict greater support of social policy (0.39 and 0.42). Models 8 and 9 show that English-speaking countries have much lower support of social policy than their European counterparts. Finally, columns 10 through 12 mostly show that there are not enough degrees of freedom compared with high correlations to allow all independent variables into the model. The effects all collapse into each other, although the sustained significance of FLP and corporatism suggest these may be the strongest predictor IVs. I shaded column 6 because it is the preferred model here. It has only three variables and a high r-squared of 0.62. The only other models achieving an r-squared that is higher have too many variables or have the

variable English-speaking which is useful descriptively but lacks a mechanism to use as a causal variable.

Turning to the liner predictions in the other direction, predicting social policy listed in Table 24, I show in columns 1 and 2 that aged population (standardized coefficients of 0.56 and 0.34) is also a strong predictor of social policy as is public opinion (0.44). Married has trouble staying significant in column 2. This may be due to such a small number of cases compared to the number of variables and is also probably due to the fact that married is not an ideal instrument. Furthermore, I get a surprising effect of FLP on social policy despite the correlation shown in Table 22 which is very small. This modeling technique suffers from case number restrictions and no instrument is expected to be perfect. Looking at column 3 helps to solve some of the mystery about FLP and married. Removing FLP drops the r-squared only slightly (from 0.48 to 0.45) and returns married to significance. This suggests that there is some endogeneity between married and FLP despite the fact that the correlation is only 0.10; however, the significant impact of FLP on social policy is very small in explained variance terms so again I proceed cautiously toward the reciprocal model. Columns 4 and 5 show that individualism is not a predictor of social policy. Columns 6 through 7 show that corporatism is a significant predictor (at 0.38, 0.40 and 0.31) and that more corporatist political institutions lead to greater levels of social policy spending, and this effect is similar in size and direction on public opinion. This suggests that individualism is not a strong candidate for institutional alignment, but corporatism is. Models 9 and 10 again descriptively offer the picture of English-speaking nations as qualitatively different from European ones due to far less spending on social policy. Finally, models 11 through 13 show that too many variables crash significance values. In almost all models aged has a significant positive effect suggesting that demographics also leads to opinion-policy

alignment as societies with more persons at 65 and older are more supportive of social policy and spend more on it. I highlight model 6 because it parsimoniously predicts social policy with only 3 variables and the highest r-squared except for models with English-speaking as an IV.

The results from the linear regressions suggest that feedback and alignment are possible given that public opinion and social policy are both significant predictors of each other as shown in the somewhat consistent effects across all models, and that corporatism is a strong and similarly sized predictor of each as seen in the preferred models (columns shaded in grey in Table 23 and Table 24). In order to further test these hypotheses I turn to the results of models that test for reciprocal causation between public opinion and social policy while allowing for institutional alignment from corporatism and other possible institutional variables. The results of these non-recursive structural equation models are presented in Table 25.

Table 25. Instrumental Variables Models Predicting Reciprocal Causation between Public Opinion and Social Policy

-> Public Opinion	Demographics		Social Institutions		Political Institutions		Historical Institutions		Demographic/Political	
	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)
Social Policy	0.46 ***	0.09 (0.03)	0.55 ***	0.11 (0.02)	0.37 **	0.37 (0.19)	0.44 †	0.09 (0.05)	0.24 †	0.05 (0.03)
FLP (instrument)	- 0.51 ***	- 0.05 (0.01)	- 0.42 ***	- 0.04 (0.01)	- 0.50 ***	- 0.50 (0.11)	- 0.45 ***	- 0.05 (0.01)	- 0.50 ***	- 0.05 (0.01)
Aged	0.28 *	0.11 (0.06)							0.22 †	0.09 (0.07)
Individualism			- 0.33 **	- 0.02 (0.01)						
Corporatism					0.41 **	0.41 (0.18)			0.38 **	0.38 (0.18)
English-Speaking							- 0.31	- 0.59 (0.54)		
intercept		- 10.07		17.92		1.71		0.35		1.12

-> Social Policy	Demographics		Social Institutions		Political Institutions		Historical Institutions		Demographic/Political	
	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)
Public Opinion	- 0.06	- 0.29 (0.64)	- 0.31	- 1.53 (1.82)	- 0.07	- 0.07 (0.21)	- 0.29 †	- 1.46 (0.89)	- 0.03	- 0.14 (0.78)
Married (instrument)	0.19 †	0.17 (0.11)	0.24 †	0.21 (0.17)	0.19 †	0.19 (0.16)	0.19 †	0.17 (0.11)	0.15 †	0.14 (0.10)
Aged	0.58 ***	1.22 (0.45)							0.40 **	0.84 (0.39)
Individualism			- 0.51 †	- 0.18 (0.14)						
Corporatism					0.59 ***	0.59 (0.21)			0.39 **	1.95 (0.85)
English-Speaking							- 0.96 ***	- 9.34 (2.19)		
intercept		- 0.18		2.21		8.37		9.42		- 1.44

†p<.25 *p<.10 **p<.05 ***p<.01

Note: N=62, clustered in 19 countries. Data sources in Table 21. Non-recursive SEMs predicting simultaneous effects for both DVs. The variable public opinion estimated as a latent variable of itself with a reliability of 0.35 calculated from the individual level data.

Table 26. Goodness-of-Fit Statistics for Instrumental Variables Models shown in Table 25.

GOF indices	<u>Demographics</u>	<u>Social Institutions</u>	<u>Political Institutions</u>	<u>Historical Institutions</u>	<u>Demographic/Political</u>
CFI	0.89	1.00	1.00	0.89	1.00
r ² Public Opinion	0.61***	0.63***	0.63***	0.62***	0.65***
r ² Social Policy	0.35*	<i>Undetermined</i>	0.34**	0.61***	0.49***
AIC	1,606	1,831	1,489	1,369	1,741
free parameters	9	9	9	9	11
RMSEA	0.18 (0.02/0.36)	0.00 (0.00/0.18)	0.00 (0.00/0.21)	0.23 (0.09/0.40)	0.00 (0.00/0.20)
SRMR	0.03	0.01	0.02	0.03	0.02

Note: an undetermined r-squared is a result of a standardized residual variance greater than 1, meaning the model is unstable.

The top panel of Table 25 presents the results predicting public opinion, the lower panel presents them for social policy and Table 26 presents GOF measures. The five headings across the top of the table correspond to different models each with a different IV configuration and always the same two instrumental variables of FLP and married. The first heading is a demographics model with aged as an IV. In the first column under this heading the standardized coefficients are presented. These results show that social policy is a large and significant predictor of public opinion, while controlling for any effect of public opinion on social policy, with a score of 0.46. Furthermore, aged is also a strong standardized predictor at 0.28. In the second column under the demographic heading I present metric coefficients. These are not important for my hypothesis testing⁸. Finally in the effects on public opinion, the instrument of FLP also has a strong significant standardized effect of -0.51. These effects are very large, but given that I am dealing with countries and there are only 62 cases they should not be understood in the same way as individual level data. They are utilized here for the purpose of comparing effect sizes. Looking down at the results of the demographic model for social policy reveals that public opinion is not a significant predictor of social policy. If it were significant, the effect is negative and very small (-0.06) which goes against the logic of greater opinion leading to greater social policy. In this model, aged also has an even larger significant effect at 0.58, and the instrument married is just significant with a moderate sized effect of 0.19.

Next the model results for social institutions show a similar story to the demographics model. Social policy is a strong predictor of public opinion at 0.55, but public opinion is not a significant predictor of social policy at -0.31. In this model public

⁸ They reveal what the standardized coefficients translate into. Thus, the metric coefficient of 0.09 for social policy suggests that for every percentage point more of GDP that a country spends on social policy, public opinion increases by 0.09 of one standard deviation (as the public opinion variable is a standardized factor score). I will not discuss the metric coefficients further in this section.

opinion appears to have a larger negative effect, but again it is highly insignificant and cannot be trusted as a real effect. The impact of individualism is strong for public opinion at -0.33 and just significant but very large for social policy at -0.51. Thus, countries with more individualistic norms have lower public opinion and less social policy. The instruments do not deviate much from the demographic model. Next the political institutions model shows again similar results relating to opinion-policy as the demographics and social institutions models. Social policy is a major predictor of public opinion at 0.37 while public opinion is an insignificant predictor of social policy. Consistent with the preferred models in the linear regressions, corporatism performs very well as a predictor of both public opinion (0.41) and social policy (0.59). Societies that have more corporatist political institutions have greater public support and less social policy. The instruments again behave as expected.

I run a model with the English-speaking family of institutions IV and results are similar to the other models with social policy being a strong predictor of public opinion at 0.44, except that public opinion turns out to be a significant predictor of social policy in this model at -0.29. Both of these coefficients are arguably significant at $p < .25$. The impact of English-speaking is insignificant for public opinion and massive for social policy at -0.96; and the instruments behave as expected. This model explains almost all of social policy. English-speaking is not understood as a causal variable but the difference in social policy across societies may be explained almost entirely by being in the English-speaking or European group along with public opinion and percent married.

The final model includes two IVs of aged and corporatism. This model is derived from the linear models which suggest that corporatism is important for both DVs and aged is important for social policy. This model has the same results as the others with respect to reciprocal effects between the DVs. Social policy is a predictor of public

opinion (0.24) but not vice-versa (-0.03). The effects of aged and the instruments are not surprising. What is important is that institutional alignment appears again in this model with corporatism exerting a significant, large and similarly sized effect on both public opinion (0.38) and social policy (0.39). Aged also has a demographic alignment effect with 0.22 for public opinion and 0.40 for social policy, although the effects favor social policy all else equal.

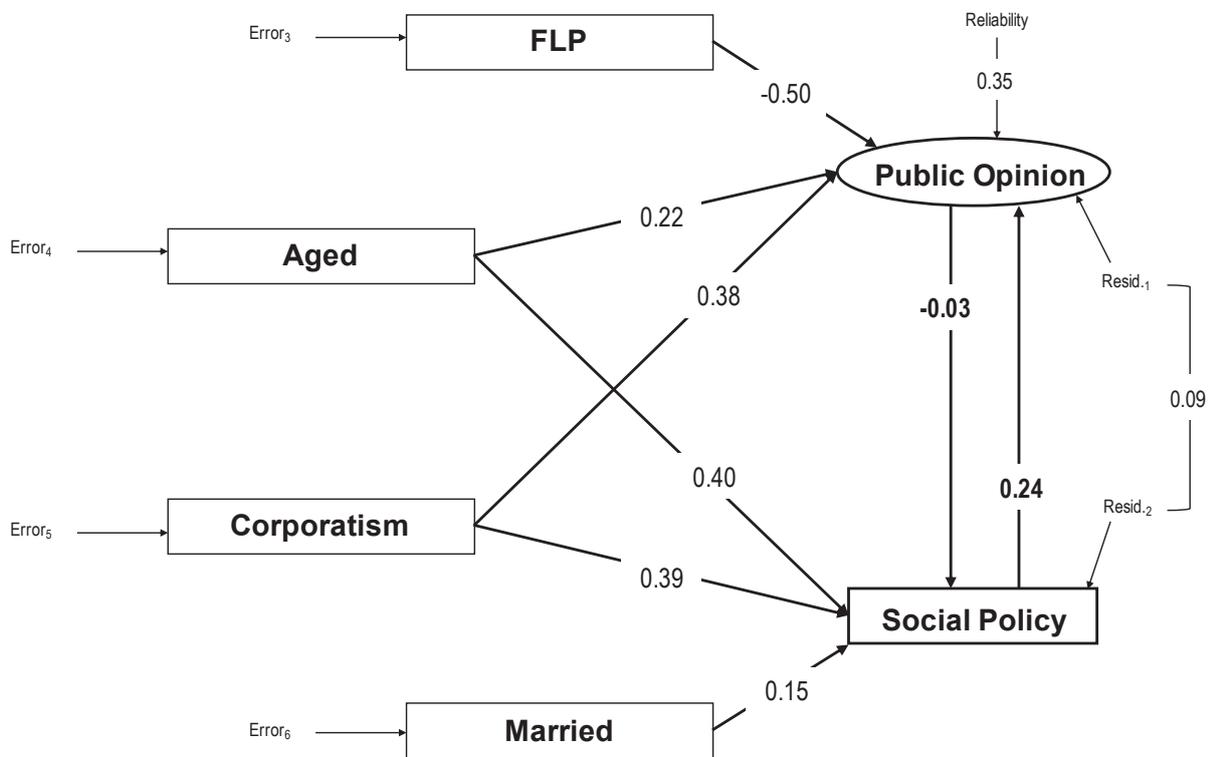
Looking at the bottom of Table 26 the GOF indices show that all models are at or near 1.0 in the CFI (which compares the proposed model to a null model without the proposed correlations). Models over 0.93 are considered good fitting. It is not so surprising that all the models fit well given the small number of cases because each specified path in the model greatly reduces overall residual error (Byrne 2001). Furthermore, all have RMSEA within confidence intervals below 0.5, and all have low SRMR close to 0.1. The models diverge with respect to the r-squared measures and the AIC scores. I do not prefer the English-speaking model because it is far away from any theoretically causal assumptions. The social institutions model is not preferable because the r-squared for social policy is undetermined. This means that the model reached equilibrium between the two equations with a result that does not explain any variance in social policy⁹. In other words the 'reciprocal' model explains only public opinion, not social policy. Therefore demographics, political institutions and the final combined model are the only reasonable models. The political institutions model is a better model than the demographics model with a lower AIC (1,489 as opposed to 1,606) and an RMSEA of 0.00 as opposed to 0.18; however both explain nearly the same amount of variance in public opinion (r-squared of 0.61 and 0.63 respectively) and social policy (0.35 and 0.34).

⁹ In fact it does the opposite and introduces variance into social policy where the residual variance from the equation is larger than the observed variance in the social policy variable, i.e. a standardized residual greater than 1 (see Technical Appendix Three).

The AIC in the combined demographic and political institutions model is higher, but this is due to 11 estimated parameters as opposed to 9 in the other model fitting into only 62 cases. The final model explains the most in the data without raising any red flags in its convergence. Therefore this is the preferred model and it explains the most variance in terms of the r-square value in both public opinion (0.65) and social policy (0.49).

All models are identified and converged and therefore offer some useful information about the opinion-policy relationship; however, I focus on the demographic and political institutions model. Figure 16 presents the results from this model in a path diagram to aid in interpretation.

Figure 16. Instrumental Variables Reciprocal Causation Structural Path Diagram



The diagram does not present any new information compared with Table 25.

Although the GOF statistics are highly acceptable and the preferred model converged normally, I check the residual correlations to determine if there are any major problems with these results.

Table 27. Residual Correlations of SEM Models

<i>Standardized Residual Correlations</i>										
Variable	<u>Demographic</u>		<u>Social Institutions</u>		<u>Political Institutions</u>		<u>Historical Institutions</u>		<u>Demographic/Political</u>	
	PO	SP	PO	SP	PO	SP	PO	SP	PO	SP
Public Opinion (PO)	0.88		0.40		0.47		0.62		0.04	
Social Policy (SP)	0.07	-0.05	-0.70	999	0.11	999	-0.08	-0.02	0.09	-0.01
FLP	999	-0.17	0.11	0.19	-0.09	-0.62	999	999	999	-0.34
Married	0.26	-0.03	0.07	-0.04	0.25	-0.03	0.24	-0.23	0.29	-0.02
Aged	0.00	999	--	--	--	--	--	--	0.00	999
Individualism	--	--	0.00	999	--	--	--	--	--	--
Corporatism	--	--	--	--	0.00	0.00	--	--	0.00	0.00
English-speaking	--	--	--	--	--	--	0.00	0.00	--	--
<i>Normalized Residual Correlations</i>										
Public Opinion	0.40		0.14		0.16		0.27		0.03	
Social Policy	0.04	-0.01	-0.04	0.01	0.05	-0.01	-0.04	0.00	0.05	0.00
FLP	-0.04	-0.10	0.06	0.12	-0.04	-0.14	0.05	0.12	-0.03	-0.13
Married	0.21	-0.02	0.05	-0.02	0.20	-0.02	0.18	-0.07	0.22	-0.01
Aged	0.00	0.00	--	--	--	--	--	--	0.00	0.00
Individualism	--	--	0.00	0.00	--	--	--	--	--	--
Corporatism	--	--	--	--	0.00	0.00	--	--	0.00	0.00
English-speaking	--	--	--	--	--	--	0.00	0.00	--	--

The standardized and normalized residuals provide information about the correlations between residual variances in the model for each variable. This is another way of interpreting how well the model fits. The larger the number in each table, the greater the amount of unexplained variance is correlated with other unexplained variance (Hausman 1978). The larger the number the more cause for concern that there are either omitted variables or omitted pathways that might warrant introduction into the model. As I have a model that lacks degrees of freedom I cannot easily add variables or pathways,

without removing some. Looking at the first four models (i.e. demographic, social, political and historical), it is clear that there is disconcerting unexplained variance in the relationship of public opinion and social policy. This is shown in the first row of both standardized and normalized results which are 0.88, 0.40, 0.47, and 0.62 standardized and 0.40, 0.14, 0.16, and 0.27 normalized. Taken by themselves, these values show in the standardized case (interpret as possible scores out of 1) that there are strong correlations between the unexplained variance for each dependent variable. This is highly problematic because the goal of the model is to explain the relationship of the two DVs to each other. These first four models have largely failed to do this. Secondly, in comparison to the other correlations in each respective model, the one between the residuals of the DVs is the largest or nearly the largest. This means that the main problems with unexplained variance lie with the DVs, again this is what the models hope to avoid and this is not desirable. The fifth model (demographic/political institutions) does not have this problem. The standardized and normalized residual correlations in the model are low at 0.04 and 0.03 respectively. This means that the model has successfully predicted most of the variance in the DVs. And this is conclusive evidence that this is the preferred model out of those tested.

The next concern is with the residual correlations among the IVs and DVs and the IVs with each other. Focusing now only on the preferred model, there are two numbers that stand out. These are the residual correlations between FLP and social policy and married and public opinion. These numbers are directly a product of the instrumental variables modeling approach. The paths between FLP and social policy and married and public opinion are specifically set to 0. This is problematic because there are actually correlations between each (as shown in Table 22), and these correlations cannot be explained by other covariates. Regardless of the theoretical arguments over the

appropriateness of the instrumental variables, they are not perfect. Perfection is not the goal here, and the residual correlations are moderate but not large. Finally, the 999 values in the standardized residual correlations are a product negative variance, in this case the normalized residual correlations are appropriate to use as a means of comparison (B. O. Muthén and L. K. Muthén 2007).

6.1.4 Sensitivity Results

The instrumental variable of married has some questionable theoretical links to social policy as discussed in section 6.1.2, also these SEM models are delicate due to a small number of cases. Therefore in order to validate the robustness of my SEM results, I engage in two alternative modeling strategies utilizing different instrumental variables in the place of married. In the first instance I employ taxes collected and in the second military spending, results presented in Technical Appendix Three, Table 48 and Table 49. These models are identical to those in the main models except for the variable married is swapped out. The results of these models are best utilized as a test of the feedback loop hypothesis. There is a large endogeneity problem with taxes collected and corporatism both theoretically (more centralization of societies' interests requires levying more taxes) and empirically ($r=0.54$). Also, military spending requires dropping the US as an outlier and this brings down the generalizability of the model. Looking only at results for the reciprocal part of the models demonstrates findings supportive of those in the main model, in 3 out of 5 models social policy has a significant impact on public opinion while in only 1 out of 5 public opinion has a significant impact on social policy. The coefficient of public opinion in this one model is negative and therefore contradicts the idea that greater public opinion toward social policy increases social policy.

In the models using the instrumental variable of military spending both the feedback loop and institutional alignment hypotheses are tested. Results support the main model suggesting that there is not a feedback loop, as all five models show a significant impact of social policy on public opinion while only 2 out of 5 show an impact of public opinion on social policy. As with the previous models, the significant coefficients for public opinion are negative thus flying in the face of the feedback loop and the idea that public opinion shapes policy. Turning to the institutional alignment hypothesis, the preferred model of institutions and demographics shows that corporatism has a significant and somewhat similarly sized impact on both public opinion (0.39) and social policy (0.49). This supports the main model findings that corporatist institutional norms align opinion and policy.

6.2 Discussion

I do not find evidence of a feedback loop between public opinion and social policy. What happens in these 19 countries in various years from 1985 through 2008 is that social policy predicts public opinion. It appears that social policy tends to attract opinion toward it. Meanwhile, public opinion has no impact on social policy after controlling for the impact of social policy on public opinion. The largest effects in the model are due to the alignment of public opinion and social policy by political institutions. Corporatism exerts a large and similarly sized effect on both. This supports the institutional alignment hypothesis. Finally, the percentage of the population aged 65 and over has a large impact on social policy and a moderate impact on public opinion consistent with previous studies. These conclusions are based on the preferred model which is the demographics/political institutions model. This model is preferable due to the best GOF

statistics, highest r-squared for both DVs, and minimal problems with residual correlations. Individualism may have an impact on reducing both public opinion and social policy, but modeling its causal influence leads to a less preferable model. Overall, the black-box of norms contained in English-speaking versus European families of institutions is a powerful predictor of both public opinion and social policy. The grouping of these two countries is mostly a descriptive exercise as it is not possible to isolate the mechanisms that lead to their distinct opinion and policy levels. The main findings are supported in two sets of sensitivity analyses that suggest that there is no feedback loop and that corporatism aligns opinion and policy. These findings should be interpreted as a first step in sorting out the opinion-policy relationship but should be taken lightly as there are a small number of cases and an unbalanced dataset.

7 CHAPTER SEVEN PERSPECTIVES ON PUBLIC OPINION AND SOCIAL POLICY

In this chapter I review the results of my three empirical studies which I then use to draw some theoretical conclusions. I discuss the findings, their interpretation and limitations in 7.1. This is organized by study under the sub-headings *First Study* (7.1.1), *Second Study* (7.1.2) and *Third Study* (7.1.3). Next I relate my findings to the theoretical perspectives motivating this research in 7.2. This is organized by sub-headings *Self-Interest* (7.2.1), *Ideology* (7.2.2), *In-Group Bias* (7.2.3), *Institutions* (7.2.4), and *Opinion-Policy* (7.2.5). I conclude with some remarks on my own perspectives on democracy, public opinion and social policy.

7.1 *Empirical Discussion*

The three empirical works in this dissertation take on a diverse and broad range of hypotheses related to public opinion and social policy. In this section I first discuss some general limitations with cross-sectional data analysis, and then I will summarize each work and discuss each of the findings along with specific limitations.

Empirical analysis provides no confirmation of causality. Furthermore, cross-sectional studies like those contained in this dissertation are especially prone to problems making arguments about changes over time. Causality remains a theoretical undertaking. This work identifies patterns and correlates that lend evidence to causal theories. The patterns themselves also contain uncertainty. The data are limited because surveys have measurement errors associated with the sampling framework and the questions. Also, unobserved factors may exert simultaneous impacts on both IVs and DVs and potentially bias the results. I have attempted to control for or rule out as many of these factors as possible in the first two studies. I try to control for factors and measurement issues that

might blur the relationships between micro-level SES and ideology, meso-level development, politics and group dynamics, and macro-level institutions and demographics. Much further research is necessary to validate my findings. Although comparative longitudinal data analysis also does not guarantee causality, the possibility of expanding this work using panel data sets should grow in the future with the continued work done in cross-national surveys done in the *European Community Household Panel* and the *Survey of Health, Aging and Retirement in Europe*.

7.1.1 First Study

In the first study using *ISEA* data (*timeframe mid-1990s; N=13,294; country N=5*) I show that economic egalitarian ideology is a major predictor of public opinion toward social policy. Furthermore, self-interest plays a smaller role with those higher in SES being less supportive of social policy. Finally, in formerly Communist Poland and Bulgaria the public are much more supportive of social policy than their peers in Australia, Finland and the Netherlands, all else equal. These findings highlight the importance of ideology, structural position and institutions in shaping public opinion.

The findings of this study are robust. They hold up when analyzing each country separately. This demonstrates that the findings are not driven by Australian data which accounts for about one-third of all cases analyzed. There is only miniscule variation by country in the ideology-public opinion link by country. Finland shows a smaller impact of ideology on public opinion toward social services and subsidies compared with the other countries, and Poland shows a larger impact on price controls in comparison with the others. These differences are slight and overall the relationship is positive and large in all countries for all three DVs where greater egalitarianism leads to more support of social

policy in the form of price controls, subsidies and government provision of welfare and redistribution.

Further research might look at reasons for these minor across-country differences. For example, the rapid transition of Poland to a market economy after 1990 (as opposed to the slow progress of Bulgaria) may have contributed to a larger gap between individuals who were elites with market preferences (as in presumably anti-egalitarian and anti-price controls) compared with those who were faring worse under the new competitive market and held on to egalitarian ideology and pro-price control opinions. Also, in Finland, the smaller impact of egalitarian ideology on social services and subsidies might be a product of the social democratic system where social services and subsidies benefit all levels of the population, and are seen as part of a defining feature of citizenship. Thus, whether egalitarian or not, individuals may support social services and subsidies as a social right. Moreover, Finland faced an economic recession after the collapse of the Soviet Union which also brought a small wave of Russian immigrants who were more likely to be in low paying jobs and in need of welfare, therefore group bias may have lead native Finns to be less supportive of social services and subsidies despite being ideologically egalitarian. More research should consider these issues, and seek to determine how long the institutional impact of Communism lasts after formal dissolution.

Although it has a diverse range of countries, this study remains limited by only 5 cases at the country-level. It is not clear that Finland and the Netherlands are adequate proxies for all of Western Europe nor that Bulgaria and Poland are for all formerly Communist countries. Also, assessing the impact of Communist institutions is limited by the fact that Poland and Bulgaria had lower GDP and higher corruption in the 1990s than Western European countries, and these features could explain the lower support of social policy instead of their formerly Communist institutional norms.

7.1.2 *Second Study*

In the second study using *ESS* data plus a unique regional database constructed with my colleague Maureen A. Eger (2007-2009; $N=22,049$; regional $N=112$; country $N=14$) we find that a greater percentage of foreign-born persons in a region leads to a reduction in native-born public opinion toward social policy. This effect is found throughout Western Europe offering general support of the in-group bias hypothesis. This finding is the first of its kind to demonstrate this effect consistently across many countries. Percent foreign-born by region has a negative and significant effect on support for health care and old age care, and this effect can explain more than 40% of the variation in public opinion at the regional level (predicted marginal change of 0.44 and 0.41 of a standard deviation, see Table 19). Furthermore, the impact of foreign-born is distinct from anti-immigrant sentiment lending support to the idea that in-group bias is a general mechanism operating across individuals regardless of racism or prejudice toward immigrants.

This research has some limitations. It is not comparative across all welfare states. It cannot compare Western Europe with the English-speaking countries other than Great Britain because of data limitations; the *ESS* was not fielded in the US or Australia for example. The questions on health care and old-age welfare were only asked in 2008 with the special welfare module of the *ESS*, thus longitudinal comparison which might give better information about the causal mechanisms is not possible. Furthermore, the models explain a large portion of the variance in individual attitudes toward health care and old-age care at the regional level, but the regional level has the *least* amount of variance of all three levels for each DV. The individual-level has the most variance followed by the country-level. Thus, it is important to place limitations on the conclusions I draw. Percent foreign-born must be taken as a factor that operates in addition to the many that are

already known to shape public opinion. Alone it cannot explain massive shifts in individual attitudes or public opinion, only smaller trends.

Further research should address two empirical points. The first is that foreign-born as a general measure has some problems. It does not distinguish country of origin. This is a benefit when conceptualizing in-group bias as a very general phenomenon, but a hindrance when looking for more detailed mechanisms. Much of the immigration discussion revolves around immigrants from Muslim countries. However, percent foreign-born is the only measure that is truly comparable across Western Europe so we cannot capture Muslim immigration or other specific effects by group of immigrant. Nevertheless, if we had a variable that did measure the impact of the most salient immigrant group(s) in a region we believe our results would be even stronger. On a related note, measuring the impact of immigration-generated ethnic diversity at the city-level or neighborhood-level on public opinion would also benefit this type of research, because some of the NUTS regions are geographically quite large and contain more than one city. Unfortunately, cross-national survey data and census data do not yet measure this comparatively.

The second point is that these DVs are taken from single questions in the *ESS*. Multiple-item scales are always preferable for reducing measurement error; however, this is not possible as each question is distinct as a construct. This is evidenced by the face validity of the questions which suggests that they are different due to their phrasing about social policy areas of redistribution, health, and old-age. It is also evidenced in the findings which show that the effects of IVs on each of these are *different* across the models, which violates a criterion of measurement validity where all IVs should have similar effects on (i.e. correlations with) the variables that would otherwise make a scale. If anything, this research points out that others should exercise caution when lumping

opinions toward income redistribution with health care to form a 'welfare attitudes' scale as is often practiced.

7.1.3 *Third Study*

In the third study using *ISEA* data (1985-2008; *country* $N=18$; *country-time* $N=61$) I find no evidence of a feedback loop between public opinion and social policy at the country-level. In other words, no evidence of reciprocal causation. Instead I find support of what is often identified in the literature, of an effect of social policy on public opinion, otherwise known as institutional feedback, institutional logic, or opinion responsiveness. Furthermore, I find strong predictive power of corporatism and the percent of the population over 64 on both social policy and public opinion in similar directions and sizes, and these factors lead to alignment of public opinion and social policy cross-nationally.

This research is exploratory. It is a first-of-a-kind test of the possibility of a simultaneous reciprocal relationship between public opinion and social policy. The conclusion must be taken lightly. For example, the social institution of individualism had an effect on public opinion and social policy but this effect came in a model that did not have as strong of a GOF as the model with corporatism and aged population. Furthermore, many other variables have been shown to influence social policy and public opinion such as the amount of left party control of various parts of the government, the history of religious ties to politics, number of veto players, working class disruption and lobbying, level of federalism, globalization, activities of the power elite in shaping persuasive media, and many more (Zaller 1992; Hicks and Misra 1993; Evelyne Huber et al. 1993; Brady, Beckfield, and Seeleib-Kaiser 2005; C. Brooks and Manza 2007). These variables are all highly interrelated, and thus placing faith in any one of them is to miss

the point (Lijphart and Crepaz 1991; Lijphart 1999). There are not enough countries to accurately sort out what-causes-what in the complicated array of social and political institutions that comprise advanced democratic societies. The samples size is small but it is still a large improvement upon much of the previous work at the country-level which has major findings based on less than 20 cases, and sometimes as few as 8 (for examples see: Hicks and Swank 1992; Evelyne Huber et al. 1993; Swank 1998; Kenworthy 1999; Iversen and Cusack 2000; Castles 2002; Hicks and Kenworthy 2003; Bradley et al. 2003; Mehrtens III 2004; Brady et al. 2005; Castles and Obinger 2007; Iversen and Stephens 2008).

The primary purpose of this study was to test for a reciprocal relationship between public opinion and social policy while allowing for the effects of institutions as IVs. Thus, it was less important to know exactly what was explaining the most variance out of the selected IVs, and more important to have some control for the institutional and demographic landscapes of different countries. As more and more data becomes available in the *ISSP* and other cross-national surveys, further research may benefit from a reduction in the small-N problem that plagues comparative social policy research (Shalev 2007). There is also a case selection issue. The countries with available data on the *ISSP* were not randomly sampled, and instead reflect a research agenda from each country with researchers who are willing and able to participate. This brings up issues when attempting to generalize these findings to countries outside of the sample.

There is also a measurement issue with the individual-level data. I was unable to utilize a measurement model to capture public opinion, again due to lack of cases. Thus I had to take the mean public opinion constructed from a factor model at the individual level and treat it as an observed variable with a known measurement error. It would be preferable to allow the SEM software to interpret measurement error by allowing the two

variables that form the public opinion scale to be in the data and designating them as measures of a latent variable. Unfortunately this is not possible. It is possible with 62 cases in uni-directional modeling, but with my non-recursive models, having a second dependent variable quickly uses up all the degrees of freedom given that the data are clustered into 19 countries. Thus, I was only able to allow the measurement error from the two variables tapping public opinion based on their Cronbach's alpha, and even this introduces a degree of freedom restriction by having an extra error path that is known in the model.

Finally, there are potential problems with the instrumental variables. Female labor force participation is a compelling variable due to its high correlations and especially the theoretical relationship it has with public opinion. Also, it does not seem to have a direct link with social policy. For example, it is a difficult argument to make that female public opinion toward welfare and redistribution cause them to enter the labor market; however, it is possible that causality exists in reverse where the nature of social policy shapes public opinion in women, and they may be compelled to work where social policy is low as in the English-speaking countries, or where the cost of living is exceedingly high and the state helps deal with this by creating jobs for women in the public sector as in the Nordic countries. But these are indirect theoretical linkages so are only a small concern.

The argument that percent married in a country shapes social policy spending is much harder to make. This also shows in the moderate correlations of married with social policy. Also the correlation drops to 0.04 when the US cases are removed from the dataset (see Table 47). Thus, married may be proxying American exceptionalism. Furthermore, social policy provisions that are weak or not family-oriented may create unfavorable conditions for married persons leading to greater divorce rates, and this would turn the causal arrow in reverse. Thus, I employ two second sets of models with

two different instrumental variables. One is the amount of taxes collected and the other is the military spending of a country in a given year. These models offer similar results as the preferred model. They suggest that there is not a feedback loop, that policy shapes opinion, and that institutional corporatism aligns opinion and policy. I thus conclude that there is a valuable empirical contribution to social science in the main models. This is furthered by the statistics shown in the GOF and normalized residual correlations, which suggest that the preferred model is the best possible of all utilized, and not a bad fit in general.

7.2 Theoretical Implications

The results of my cumulative work offer support to various theoretical perspectives on public opinion and social policy. These findings about public opinion provide insights into human nature and the social construction of reality. They show that ideology, in-group bias and institutions are all associated with public opinion and the nature of societies in general. This contributes to a multilevel understanding of social worlds. Individuals are bound in regions which are bound in nation-states. Individuals are ideologically motivated and these ideologies are interrelated with regional and country-level characteristics. These influence socialization and opportunities for the individuals. Individuals also perceive themselves to belong in groups, and are cautious about sharing with other groups. This in-group bias probably has an impact on socialization of ideologies. I report the theories and hypotheses that I considered in my three studies and how my results relate to these in the following sections. The final section 7.2.5 discusses new theoretical ground and how these findings implicate the opinion-policy relationship in a democratic framework.

7.2.1 *Self-Interest*

The theory of self-interest is one of the more general theories tossed around in social science discussions, and there are many variants of what constitutes self-interest. Therefore, I narrow the field by focusing on material self-interest. As discussed in Chapter 2.1, those who have more to gain should support social policy and those who have more to lose should oppose it.

My only study that was explicitly testing this theoretical perspective was the first one. I showed that those higher in income, education and occupational status were less supportive of social policy. I did this in two ways, first by measuring income, education and occupational status individually and then by taking all three and constructing an SES sheaf. This allowed for seeing individual determinants and getting some sense of what was driving the self-interest on the one hand, and it allowed for a larger picture of class as a pseudo-latent measure constructed from these three SES measures. The results shown in 4.1.2, Table 13 indicate that education is the most consistent factor driving the negative effect of SES on support for social services, and price controls and subsidies for basic needs. It is the largest predictor of support of social services and subsidies and second to income in the prediction of price controls. Income is a larger negative predictor of price controls and a very small negative predictor of social services, and occupational status is a moderate predictor of subsidies but insignificant for social services and price controls.

The 'material' gains to be had from social services include the provision of education by the government (see Table 8) which makes it somewhat surprising that those who are highly educated would be less supportive of social policy. However, keeping in mind that those higher in education have greater levels of wealth at their disposal, it is possible that they are self-interested in guarding that wealth against redistribution as tax monies converted into social services. This argument is weakened because I measure

income directly and the effect is small (i.e. the income effect is parsed out from education) and income taxes are a major source of tax redistribution. However, property, consumption and estate taxes may hit the highly educated (i.e. higher class) even when they do not have high incomes. Occupational status has no effect on support for social services. This is surprising because those in higher status occupations are better suited to take care of themselves and their families. Thus they are not in need of the social services that the government provides. However, this is all conflated with the fact that high status individuals *are* paying higher taxes no matter what their preferences are toward social policy. Thus, an argument could easily be made that taxation as a given, leads the high class to support spending on education, health care and old-age care as consistent with the status quo, just like all the other classes, i.e. path dependency of what the current system provides shaping what people want. Or, they are expecting returns on their tax monies.

Support of price controls is most highly discouraged by those who are higher in income and moderately so by those who are more highly educated. This is very consistent with material self-interest. Presumably those who have high incomes do not need price controls. Furthermore, those who have high incomes and work in the private sector are likely to be aware of the risk of profit loss or inefficiency that results from government imposed price ceilings.

Unlike price controls which are likely to be a product of legislation alone, subsidies require government spending. This spending is likely to be redistributive using the tax dollars from the well-off and moving it to funding basic needs, i.e. that which is consumed by those in need. However, looking at the question on subsidies in Table 10, electricity and food are included in this measurement as targets of subsidization. Those with high incomes presumably utilize more electricity with larger sized houses or greater quantities of houses. Furthermore they presumably spend more on food with more

expensive tastes. Thus, they may see government subsidies as benefitting them although this is at a more specific level than measuring general opinion on subsidies. As for occupational status, I do not have a theoretical argument why it matters for subsidies specifically, but none of the other DVs.

In all the models of the first study, SES as a whole (taken as a sheaf coefficient) had an impact that was roughly one-third the size of egalitarian ideology and half that of institutions. Therefore, I conclude that self-interest in general is an important process for public opinion formation, but there are other things that matter much more. Also, I do not have the mechanism pinned down here. Those with higher SES have greater access to materials. They are also less supportive of material redistribution. But redistribution is only one part of what social policy does. For example, social policy leads to greater trust amongst citizens and is a kind of citizen and state-building activity (Skocpol and Amenta 1986; Rothstein 1998), and it pools risks across a population (Barr 2000). By providing measures of security and trust for individuals in a population, social policy can prevent revolution, revolt and crime, and all of these things could risk the status and wealth of those higher in SES. Furthermore, testing this model in Australia, Bulgaria, Finland, the Netherlands and Poland may not provide a model suitable to conclude something about self-interest in the rest of the world. Finally, the Communist experience may have rearranged the assumed association of class with public opinion toward social policy. As shown in the results by country in Table 14, there is a different impact of education in Bulgaria and Poland. This may be blurring the general sheaf coefficient and its components in the pooled model. Thus, the mechanisms are difficult to sort out and lay beyond the scope of this dissertation.

In the second and third studies I did not explicitly aim to tackle an impact of self-interest. I wanted merely to provide a control of it at a basic level in my models. I will not

discuss the third study here as it controlled only for age. Although it is important to note that those higher in age have self-interest in social policy, such as pensions and health care, as they are the ones that are at a much higher risk of needing pension income or experiencing declining health. The second study shows that those who are higher in education are less supportive of redistribution and old-age welfare, but not health care in all of Western Europe. I only tested for an impact of income and occupational status in sensitivity models run on a sub-sample of the data. In these models (Table 40, Table 41, and Table 42) I find that income and occupational status have significant negative effects on redistribution and old-age welfare but not health care. This supports self-interest as discussed above. The SES variables may not have an impact on public opinion toward health care because it is such a fundamental component of the Western European universal welfare states. Regardless of status, in all of Western Europe, health care is offered by the government. This varies by country and there are private markets connected with or even within the public markets, but health care is mandatory in these countries and it is not difficult to get, because it is either universally provided, provided in large part by employers, or it is means-tested and those with little or no income can afford it. Finally, age is a significant positive predictor of opinions toward old-age welfare following the logic of self interest.

I also found in the second study that regional structural characteristics shaped individual public opinion. These results were somewhat unexpected. Regions with greater percentages of tertiary education completion are more supportive of health care and old-age welfare all else equal. Simultaneously, regions with greater wealth, measured as regional GDP per capita, appear less supportive of all three DVs although the effects are not significant and face a colinearity problem with regional education (see correlations Table 38). Thus individual education reduces support in some cases while regional, meso-

level education levels increase it. This regional effect may be a product of modernization instead of self-interest, with support of social policy increasing with contextual 'post-materialism' (Inglehart and Welzel 2005). But this is both outside the scope of self-interest and this book.

In general, it was not the focus of this dissertation to test if people are materially self-interested. I merely aim to confirm that self-interest is in place in these models as expected, and that I want to allow for self-interest to be part of the opinion formation process so that it does not interfere with the testing of other theoretical perspectives. What I want to add to the self-interest literature is confirmation that self-interest alone does not explain much (see Rothstein 1998:123-127). Individuals make tradeoffs in their attitudes between self-interest and ideological 'interests', and sometimes they have opinions that fit with larger institutional contexts or meso-level group contexts. All of these things shape public opinion simultaneously. Thus self-interest, like the other theoretical determinants of public opinion and social policy are only pieces of a larger puzzle

7.2.2 Ideology

In my first study, I took an explicit approach to testing Weber's theory of action with respect to value and instrumental rationality. I found that those with more economically egalitarian ideologies (i.e. believing that resources should be shared or more equally distributed in society) were more supportive of social services, and price controls and subsidies of basic needs. This is strong support of Weber's theory, but the mechanisms are blurred. As discussed in Chapter 2.2, value-rationality would be one where individuals have ideologies that have nothing to do with the likelihood of potential outcomes, whereas instrumental-rationality places the mechanism in positions that are focused entirely on achieving goals for society, and require rational calculation of the possibility

of achieving them. The question is then: What is egalitarian ideology, a value or a goal? A careful re-reading of the questions utilized to construct the latent measure of ideology listed in Table 6 reveals that both appear to be true, i.e. have face-validity. On the one hand, the questions that ask about government responsibility to reduce income differences and the notion that income and wealth should be redistributed appear to be ideological 'values', while the questions that ask about the reduction of differences in the respondent's country, whether there is too much difference in that country, and asking about the goals of society to reduce income inequality over the next 10 years appear to be ideological 'goals'. Therefore, I cannot differentiate between them. I assert that both probably function simultaneously. Those who have ideological 'values' (unrelated to outcomes) about redistribution in general should be more supportive of social policy because it redistributes and therefore aligns with their ideologies. Whereas those who see income redistribution as a goal should support social policy because it achieves this. Although over a hundred years of work exists since Weber's theorizing, I attempt to add to the discussion by bringing instrumental rationality to bear on public opinion toward social policy. Furthermore, I find that in my first study, it is by far the largest effect on public opinion in the model.

There is a theoretical concern with predicting an attitude with another attitude. The measurement of ideology was taken from the *ISEA* survey just like the measures of the DVs. I concede that there may be some endogeneity between attitudes toward egalitarian distributions of resources and attitudes toward social policy. But using measurement theory I show that each is a separate construct (see factor analysis results in Table 33), and most importantly the items in the scale for egalitarian ideology are mostly ideological as opposed to operational (Free and Cantril 1968). In other words they have a level of abstraction from policy outcomes because they focus more on whether

redistribution is good or bad, as opposed to what specific policies the government should engage in. Thus further research is necessary that takes a longitudinal perspective. This would be the only way to be sure that the egalitarian ideologies of individuals are stable while the political attitudes are more erratic, as stability versus change is a primary distinction I draw between ideology and public opinions (as discussed in Chapters 1.1 and 2).

I did not focus on ideology in the second and third studies. However, a theory of the relationship between ideology and public opinion is implicitly tested in the third study. Both ideologies and social institutions are normative, the ideologies of individuals and the norms of social institutions are reflections of each other. As I discussed in Chapter 3.4, sometimes measuring a collective phenomenon is only possible through individual observations and vice-versa. Therefore, I argue that my test of the norm of individualism as a social institution is a way of assessing the impact of individualistic ideology on public opinion across levels. I argue this, but I have no way of distinguishing effects at the individual level. In the linear modeling I utilized to inform my reciprocal model, I found that individualism had a significant negative impact on public opinion while controlling for the effect of social policy (see Table 23). When I moved to a reciprocal model the effect of individualism was inconclusive. The problem is that the social institutions model shown in Table 25 has some mathematical problems. It is not clear that these problems arise from the measurement of individualism or its inclusion as the only IV or from other unrelated model identification issues, but the model did not fit as well as the preferred model and therefore it was rejected. But individualism did have a significant negative impact on public opinion despite this model's rejection.

What all this points toward is that Weber's theory of rationality is still relevant. Clear hypotheses may be tested, and in this dissertation they are found to be in strong

support. It brings a new layer to welfare state research which is often focused on politics, measurement, typological distinctions and predictive models. Social theory is often missing. This research crosses disciplines and suggests that value and instrumental rationality models should be included in attitude research. Furthermore it has implications for policy-makers and opinion polling agencies that should look for ideological orientations when deciding what to measure as public opinion.

7.2.3 *In-Group Bias*

The second study was the only one out of the three to address in-group bias. In regions with a greater percentage of foreign-born residents, native-born individuals are less supportive of health care and old-age welfare (i.e. pensions) provided by the government. This finding is not a product of regional development, as it holds with controls for regional education and regional wealth. Also, the finding is robust to the inclusion of anti-immigrant sentiment, suggesting that in-group/out-group distinctions exist despite racial prejudices. In other words, Germans might have a preference to provide welfare only for other native Germans, a preference which is intensified or activated with the presence of more Turkish or more Italian immigrants for example. The measure of foreign-born used in the analysis is blind to immigrant countries of origin, as should be the effect of in-group bias in general. When country of origin comes into play, in-group bias may be intensified or may be altered but I argue that this is a combination of in-group bias *and* prejudice, which are two distinct things. The finding supporting in-group bias is the first time immigration has been shown to reduce support for public opinion toward social policy systematically in almost all of Western Europe (14 countries), at least as much as I am aware of. This is a large step forward in the research in this area.

Interestingly, percent foreign-born does not have a significant effect on support for income redistribution. While this finding is inconsistent with the in-group bias hypothesis and contrary to research on American welfare attitudes which shows that diversity undermines support for means-tested social welfare (Luttmer 2001; C. Fox 2004), it is not overly surprising when considering the history of social policy in Europe. Class politics fueled the rise of the European welfare states (Evelyne Huber and Stephens 2001; Hechter 2004) while historic racial and ethnic diversity of the American working class served as an obstacle to class-consciousness and ultimately to welfare state development (Lipset and Marks 2000). European welfare states developed during a period of time when countries were relatively ethnically homogenous, and class tended to be the most salient societal division (Hammar 1985). Unlike “welfare” in the US redistribution in the European context was not racialized (e.g., Gilens 1995). Social policy in Europe historically redistributed resources to the poor and working class but not necessarily to ethnic minorities. I conclude that redistribution today in Western Europe remains associated with class differences as opposed to ethnicity. Yet, these distinctions are often difficult to disentangle because they are part of a larger multi-categorical matrix of status (Collins 2007), and future research should focus on group boundaries based on ethnicity, class, religion, and gender in order to understand when, where and which group boundaries are most important for public opinion.

My research with Eger makes several important contributions to social science. Diversity generated by immigration makes ethnic and national in-group/out-group boundaries salient and affects attitudes towards the universal components of the welfare state. The universality of these spending programs implies that *everyone* in the population benefits. Immigration calls into question who is part of the nation and who deserves these benefits. Furthermore, most of the research on European welfare state attitudes has

focused on differences between countries, generated ostensibly contradictory findings, and led scholars to different conclusions about the effect of diversity on public opinion. We argue that measuring ethnic diversity at the country-level is not the best way of capturing in-group/out-group dynamics. Social categorization is an automatic response to one's environment (Festinger 1954). Environment is a local phenomenon. Trips to the market, social responses to climate changes, and local social interactions should be where group boundaries are drawn. What happens in other parts of a country should be of little importance in the social experience of an individual, other than talking about it with individuals in the area. Our research also provides evidence that this phenomenon is not limited to the US or Sweden as others have shown.

We also show in-group bias, i.e. a preference for allocation of resources to one's in-group versus an out-group, is not the same as believing that immigrants make one's country a worse place to live, i.e. anti-immigrant prejudice. We conclude that foreign-born is not proxying racism or prejudice. Thus, we argue that immigration to a region makes ethno-national group boundaries salient, triggers in-group bias, and affects public opinion regardless of the respondents' attitudes towards immigrants.

This research improves significantly upon previous comparative work and sheds light on the relationship between contemporary immigration-generated ethnic diversity and welfare state attitudes in Europe. Given different histories of welfare state development and historic levels of ethnic diversity, public opinion in the American and European contexts are not exactly the same. Nevertheless, these results suggest that the negative effect of ethnic diversity on support for social welfare policy is not an example of exceptionalism in the US but instead a general phenomenon, visible at the regional-level across the advanced welfare states of the world.

7.2.4 *Institutions*

Institutions exist through their norms, organizing structures, laws, and especially in the activities of their members which tend to uphold the institutions as discussed in Chapter 2.4. This means that the institutions exist. Members are aware of the institutions, and outsiders can identify the institutions in a vague or concrete sense. This is true of social and political institutions. An English-speaking person can speak English and will have some knowledge of how to speak (i.e. the rules of the institution of the English language), or a politician knows how to make policy in her system for example what parties to work with or fight against (i.e. the rules of the political institution). Furthermore, the institutions, whether upheld through law or custom, provide the necessary information to enable individual actions. Second, if an institution acts on its own somehow (I might call it a 'synergy of individuals over time') then it still requires individuals to transmit the institutional 'actions' to one another. So regardless of whether the institution is acting or is just a bunch of individuals acting with similar interests, the institution *exists* and it is thus an interesting phenomenon to study with respect to social outcomes. The logic behind institutional theory that I investigate will hold whether or not the institution is an 'actor'.

I am interested in the normative content reproduced in institutions as the mechanism that leads institutions to shape policy. I found evidence of this in two of my studies. The first study showed that Communism (a total institution) left a lasting impact on the ideologies and the public opinions of the societies formerly under its regime. This finding is consistent with the work of Sikora and Kelley (1999) who point out that the public still tended to favor centrally planned economies after the fall of Communism and into the mid 90s. The third study demonstrated that corporatist political institutions have a powerful association with both public opinion and social policy. This all suggests that institutions shape outcomes of public opinion and social policy. These findings contribute

to the neo-institutional thrust of social science over the last 50 years or so which is filled with arguments that institutions structure the attitudes and behaviors of individuals (Meyer 2008). What is important is that institutions matter, and they matter a lot. I argue that institutions consist of norms that dictate how the collective should solve its welfare and redistribution issues. The impact of formerly Communist institutions on public opinion was nearly as large as individual ideology which was the largest factor in the results of the first study (see Figure 4). Also, corporatist political institutions have the largest impact on public opinion in the third study (see Figure 16). Their impact in the third study is so powerful, that they explain social policy and indirectly have an impact on public opinion through social policy.

These findings call for a closer examination of public opinion from an institutional perspective, but with better measurements of institutions. Much of the thrust of the "institutional logic" argument with respect to public opinion toward social policy has failed to produce clear results, because measurement of "institutions" has been restricted to different regime types (for example Arts and Gelissen 2002; Jæger 2006a; Larsen 2008). Although there are some patterns of attitudes across regime types, this appears to be a Cul-de-sac in the study of public opinion. That is because the regime typology is largely based on measurement and there is massive disagreement over this. Researchers cannot agree on how many types of welfare states there are, much less how to define welfare states in general. Furthermore, some studies show that disaggregating overall social spending into domains renders the typical 'three worlds' approach useless (Castles 2009), and especially confounding are the studies that expand the scope beyond employment and health related measures to including family policy and gender (Jane Lewis 1997).

Utilizing measures of individualism and corporatism allow for interpretation of differences between societies in general (not just welfare states) that are expected to relate to welfare and redistribution, but get around the pertinacious typological debates. These differences are not imposed by social scientists and are instead based on empirical observations as with Hofstede or observations of empirical observations as is the case with Lijphart and Crepaz. These measures get at real institutional differences in terms of norms of individualism and the organization of interests in a nation-state. These are the "institutions" of social science, not of political economy. They come from a social constructivist perspective and operationalize institution as an action word, as empirically observed repeated activities and the norms that uphold these repeated activities (Berger and Luckmann 1967; Jepperson 1991). This contrasts with organizational 'institutionalism' that operationalizes only formal institutions and their political and economic functions. Thus, these 'organizationalists' offer a narrow and almost brick-and-mortar definition of an institution

No single measure can capture an institution. For example, measuring language is impossible with only one measure. It could be any number of normative contents in the words of a language, how the language is utilized in any number of social activities, or how the language differs between different social groups. The same is true of my concept of social and political institutions. Individualism is a cultural norm, but it does not cover all sense of individualism in a society. Different parts of society have different individualisms, and individualism may be conceived upon various axes. I offer one measurement in the interest of parsimony and as a proxy for that which is immeasurable, namely the norm of the institution of individualism in a given society. The same is true of corporatism. This is not directly measurable. However, I use a measure that was constructed from various other measures to try and get at this latent idea of corporatism

which has to do with how much the state organizes various interests that exist in the market, in the state, and across individuals, and to get at norms of collective cooperation.

Due to the measurement problems I also offer a historical perspective. I split the advanced democracies into two institutional families, one English-speaking and one European. This does not measure any kind of institution directly but it attempts to capture, with a very large net, the similarities found in the histories of these countries as their various institutions evolved over the past two hundred years and more. This has a distinct advantage over the regime typology distinctions which spend most of their time disagreeing over which country is in which regime. Whereas British colonialism is a clear historical force with which to be reckoned and the English language is a proxy for English culture and customs. Also European history through ravaging wars and struggles to create peace and economically integrate is a clearly distinct process from the unbridled British Empire which was put to rest arguably by its own hand via one of its colonies, as opposed to centuries of geopolitical strife in a contained area in Europe.

My attempts at capturing a simple historical institution nonetheless have one problem. That is Japan. Japan is not English-speaking or European. But it has a social policy system that is as advanced as most of the other countries I investigate. As I discussed in detail, I end up categorizing it in the English-speaking family of institutions due to the close ties of the US and Japan after the atomic bombs were let fly as discussed in Chapter 3.4.

I offer my historical institutional dichotomy to serve as a model for future typological debates. There is a great deal of interest in typologies and my simple distinction gets historical institutions in line. It gets the causal ordering right, unlike the varieties of capitalism or worlds of welfare approaches which focus more on what is happening in recent times after the formation of nation-states (Hall and Soskice 2001;

Esping-Andersen 1990). Of course I do not mean to suggest that these approaches are not useful, but I seek to point out that the greater course of history is often overlooked when building typologies as noted by Castles (1993). I argue that regardless of whether Sweden remains an ideal 'social democratic' state, or if New Zealand goes back to being a universal welfare state as opposed to liberal one; the historical rise of English individualism and the collective struggles in Europe will remain salient to social policy and public opinion for many decades if not centuries to come.

Turning back to Communism, I face some challenges when interpreting the impact of formerly Communist institutions. Instead of the total institution of Communism infiltrating social, economic and political norms and shaping public opinion, one plausible alternative explanation is that after the break-up of the USSR most formerly Communist nations found their economies toppled and unstable and this made citizens desperate for government help. In other words: *Was it Communism or economic strife that drove public opinion?* Five cases does not allow for strong empirical claims here. However, taking the historical institutional argument and adding the fact that greater support of social policy in formerly Communist countries exists while controlling for SES, it seems that institutional theory is highly plausible. Thus, people who were not hit by the painful transition, or not hit as hard and could take care of themselves still tended to favor social policy more than their counterparts in the market societies of Europe and Australia. This lends further credence to the claims that institutions shape opinions and leave behind a legacy after dissolution as these surveys were conducted after the 1990 formal dissolution of the Communist institutions. The salience of this finding rests in the fact that the instillation and disintegration of Communism in Poland and Bulgaria provides a 'natural' experiment as both of these countries did not elect Communism; rather it arrived via Soviet tanks.

One other interesting finding that might help make sense of the Communist institutional experience is that in Poland and Bulgaria, the well-educated tended to be more opposed to the three forms of social policy. I suggest that the well-educated in formerly Communist countries more easily adopted free-market ideology, and saw price controls and subsidies as simply reverting back to Communism. Hence, this is an institutional argument in reverse where the institution of Communism may never have been preferred by the intelligentsia because they were far more likely to be educated in Western institutional settings (i.e. schools) and capable of seeing the greater progress made in the non-Communist, developed world (Arts and Gijsberts 1998; Firebaugh and Sandu 1998). They were aware of the Communist norms and perhaps tried to escape them.

Overall my country-level findings should ignite institutional theory in a modern public opinion context. Institutional theory is focused on what institutions do, and public opinion shaping is one area that should be added to the list. I do not want to suggest that institutions are a tautology of explaining everything, but from a social constructivist standpoint they are vastly important. In this dissertation I show that institutions are important for opinion and social policy. Further research should look beyond social policy in all forms of public policy and concomitant public opinions. The evidence here suggests that institutions should matter in other contexts. Finally individuals and policy-makers should be painfully aware that their efforts are highly restricted by institutional settings. Unless they intend to overthrow the institution and change the norms, individual actions are limited to working within a controlled institutional framework.

7.2.5 *A Theory of Opinion-Policy*

One of the most important contributions that I hope this dissertation makes is to dispel the myth that public opinion is a general reason for social policy to maintain its levels cross-nationally. In other words, public opinion in general is not the answer to the question of why welfare states persist as suggested by Brooks and Manza (C. Brooks and Manza 2006a, 2007). Like them and others, I show that when modeled in a linear fashion, public opinion appears to have a significant impact on social policy (see Table 24 and review in Burstein 1998, 2003) this is a common technique used to explain the strong cross-national correlation of opinion-policy. These types of analysis model a world where policy is only a product of opinion and other factors. However, when modeled in way that allows policy to also impact opinion, something that is known to take place, the effect of public opinion disappears. As Kenworthy (2009) points out, public opinion in the 1980s may be accurately predicted with spending on social policy measured in the 1960s. This stability of social policy suggests that something else is at play in the apparent cross-national correlation of opinion-policy. My first response to this is that social policy attracts opinion and this leads to opinion responsiveness (i.e. institutional feedback or logic) as a general pattern of democratic nation-states, and a large literature explains this via path dependency, increasing returns and the creation of social policy clientele (Pierson 2000; Larsen 2008; Jordan 2010). However, for these fluid features of society to find equilibrium, each must either cause each other, or must be shaped by similar forces leading to alignment. These models do not explain what shapes social policy. Clearly I show that it is not opinion in general.

I offer the preliminary explanation of institutional alignment. Corporatism exerts a similarly sized effect on social policy and public opinion. Corporatism is only one measure of institution, but it is strongly associated with left politics and weak veto power

for example which area also features of the political institutional landscape. Most importantly, I see the corporatist norms as those that lead individuals to seek collective solutions to social problems. These are similar to social norms of collectivism, which are also shown to be good predictors of opinion and policy (measured in reverse as individualism), although not as strong as corporatism. Thus, I argue that the norms generated in repeated activities of social and political institutions lead to social policy and public opinion that are in agreement. Public opinion is erratic but it is anchored to social policy and social policy and public opinion in a given society are in turn anchored to institutional norms.

My two institutional measures of individualism and corporatism do not capture the diverse range of institutions that make up modern democratic societies. However, I have shown that there are broad differences in the characteristics of English-speaking versus European countries and that these associate with public opinion and social policy. The English-speaking societies through some shared institutional histories of British colonialism, the English language, and social and political systems, all have lower support of and spending on social policy. The European democracies also share some common institutional histories with repeated geopolitical conflicts, a history of Latin and roots in the Carolingian Empire, and collectivistic solutions to social problems. This suggests that taken as institutional black-boxes which contain the sum of norms relating to welfare and redistribution, societies divide along historical lines.

7.3 *Conclusion: Democracy, Public Opinion and Social Policy*

My findings implicate democratic processes. I argue that advanced democracies do not lead public opinion to have a general impact on policy, despite the humongous attempts of collecting public opinion data on a regular basis undertaken by political and independent organizations (i.e. Gallup). Although, politicians are regularly consulting this opinion data (Converse 1987), it seems to matter only at certain historical moments when a policy is up for changing or the public are particularly aggravated over an issue. This may also reflect the fact that policymakers often defer to their own ideological positions or to the will of power elites and special interests instead of public opinions (Korpi 1989; Burstein and Linton 2002; Druckman and Jacobs 2006). If policy makers and their institutional practices cannot be relied on to translate public opinion into policy then it is up to the public to take action. This is unfortunately not the case and in general public opinion is passive. This means that democracy does not enable or guarantee political participation, and instead only offers the opportunity to participate. Without informed and engaged citizens, public opinion is like the shared reality of prisoners in Plato's cave. They may agree about what they see as it appears to them in shadows, but unless they can free themselves from bondage and interact with the social world; their opinions have no impact on others. The opinions remain in the cave, regardless of how they were formed. I see their imprisonment as analogous to the apathy or lack of action behind public opinion in modern democracies.

Freedom House and others measure democracy and conclude that most advanced nations score 10 out of 10. I would like to see an organization that measures public opinion in its effectiveness in shaping policy. Then we would know something about democracy as it is practiced by citizens, instead of what Freedom House measures which is more akin to its namesake as opposed to democratic self-rule. Thus, it is possible that a

country is a Freedom House 'perfect ten' yet has no citizens participating in the political process. The US is a scary example of a democracy that behaves partially in this way with some of the lowest voter turnout rates of all democracies in the world. The problem is that those who do not choose to vote impact the results (Franklin 1999). As Neil Peart (1980) points out: "If you choose not to decide, you still have made a choice". So a country that scores a 10 out of 10 on democraticness must have motivated citizens in order that public opinion has an impact on policy, otherwise democracy is an empty shell where policy makers may do as they please to the public trapped inside. Perhaps compulsory voting and a stronger focus on education are some of the best recommendations I can make based on the findings of my third study. The idea of a democratic society that is open to growth and change hinges on the ability of its members to participate in democracy.

Attempts to normalize democratic action should take into consideration the findings of my three studies. As individuals are ideologically and normatively motivated, political elites should try to push an agenda of political participation and informed citizenship as social norms. This will lead to a public that engages in the political process on its own, without priming, issue salience, or coercion. Furthermore, the public of a given society should be united as one in-group blind to ethnic and diverse dividing lines and can operate as a public instead of publics in shaping policy. This may require socially constructing an out-group to be other countries' citizens, yet this carries with it the danger of nationalism or war. Those who would improve their democratic systems beyond Freedom (House) should be mindful of self-interest, perhaps finding ways to check this motivating force amongst individuals, or force cooperation between competing interests such as those found between rich and poor, men and women, black and white, and native and immigrant. Although social policy is a way to motivate public opinion, public opinion will not motivate social policy until it is infused with actions and intentions.

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9 TECHNICAL APPENDIX ONE: FIRST STUDY

9.1 Tables

Table 28. Predicted Interval Scoring: Egalitarian Ideology

Variable	N	Predicted mean ^a	Anchor to 0	Rescale 0 to 100	Avg. score
Income gap					
0	186 ^b	-0.31		0.00	0
25	1,214	-0.41	0.00	0.00	7
50	1,721	-0.34	0.07	14.46	29
75	4,750	-0.21	0.20	39.51	53
100	4,975	0.09	0.50	100.00	100
Inequality					
0	192 ^b	-0.64		0.00	
25	1,150	-0.65	0.00	0.00	
50	1,585	-0.53	0.12	17.58	
75	4,592	-0.31	0.34	49.65	
100	5,302	0.04	0.69	100.00	
Difference					
0	510	-0.90	0.00	0.00	
25	1,843	-0.86	0.04	7.24	
50	2,784	-0.73	0.16	32.97	
75	4,169	-0.62	0.28	56.59	
100	3,290	-0.40	0.50	100.00	
Redistribute					
0	481	-0.83	0.00	0.00	
25	1,428	-0.76	0.07	15.97	
50	2,155	-0.65	0.18	39.83	
75	4,685	-0.56	0.26	59.61	
100	3,913	-0.39	0.44	100.00	
10yr Goal					
0	632	-0.84	0.00	0.00	
25	2,160	-0.77	0.07	14.04	
50	2,097	-0.65	0.20	39.23	
75	4,273	-0.55	0.30	59.65	
100	3,575	-0.35	0.50	100.00	

^aTaken from ordinal probit regression predicted values which are averaged for each answer category.

^bToo few cases for reliable estimation.

Table 29. Predicted Interval Scoring: Government Effectiveness

Variable	N	Predicted mean ^a	Anchor to 0	Rescale 0 to 100	Avg. score
Effective					
0	2,789	-0.46	0.00	0.00	0
25	6,032	-0.41	0.06	12.70	24
50	1,864	-0.31	0.15	33.07	50
75	1,171	-0.14	0.32	72.05	85
100	520	-0.02	0.44	100.00	100
Flexible					
0	3,314	-0.70	0.00	0.00	
25	6,559	-0.62	0.08	33.04	
50	1,330	-0.54	0.16	65.45	
75	826	-0.46	0.24	100.00	
100	326	-0.40	0.30	100.00	
Profitable					
0	2,733	-0.79	0.00	0.00	
25	5,719	-0.74	0.05	25.87	
50	1,787	-0.69	0.10	52.63	
75	1,353	-0.63	0.16	82.78	
100	522	-0.60	0.19	100.00	

^aTaken from ordinal probit regression predicted values which are averaged for each answer category.

Table 30. Predicted Interval Scoring: Social Services

Variable	N	Predicted mean ^a	Anchor to 0	Rescale 0 to 100	Avg. score
Doctors & dentists					
0	838	0.56	0.00	0.00	0
33.3	4,238	0.66	0.09	14.64	10
66.6	4,059	0.72	0.15	23.78	12
100	3,447	1.20	0.64	100.00	100
Hospitals					
0	256	0.53		0.00	
33.3	2,591	0.53	0.04	10.44	
66.6	4,891	0.50	0.00	0.00	
100	4,852	0.84	0.34	100.00	
Day-care					
0	962	0.50	0.00	0.00	
33.3	4,602	0.57	0.07	11.98	
66.6	3,701	0.64	0.14	23.41	
100	3,288	1.09	0.59	100.00	
Old-age homes					
0	484	0.66	0.00	0.00	
33.3	3,964	0.66	0.00	0.24	
66.6	4,092	0.68	0.02	4.94	
100	3,997	1.11	0.45	100.00	
Schools					
0	257	0.62		0.00	
33.3	3,026	0.57	0.03	8.21	
66.6	5,048	0.54	0.00	0.00	
100	4,234	0.90	0.36	100.00	
Universities					
0	624	0.65	0.00	0.00	
33.3	3,661	0.73	0.08	17.05	
66.6	4,344	0.75	0.10	21.37	
100	3,894	1.13	0.48	100.00	

^aTaken from ordinal probit regression predicted values which are averaged for each answer category.

Table 31. Predicted Interval Scoring: Price Controls

Variable	N	Predicted mean ^a	Anchor to 0	Rescale 0 to 100	Avg. score
Electricity					
0	575	0.62	0.00	0.00	0
25	2,004	0.71	0.09	13.44	16
50	2,422	0.85	0.24	34.95	39
75	4,486	0.92	0.30	44.54	52
100	3,279	1.29	0.67	100.00	100
Basic foods					
0	1,168	0.50	0.00	0.00	
25	3,566	0.59	0.09	13.31	
50	2,738	0.78	0.28	40.73	
75	3,213	0.86	0.36	52.93	
100	2,147	1.19	0.69	100.00	
Housing					
0	955	0.52	0.00	0.00	
25	3,375	0.66	0.14	14.47	
50	2,935	0.94	0.42	42.38	
75	3,349	1.13	0.61	61.42	
100	2,002	1.51	0.99	100.00	
Doctors & hospitals					
0	338	0.60	0.00	0.00	
25	1,169	0.75	0.15	22.31	
50	2,174	0.85	0.25	38.79	
75	5,349	0.93	0.33	50.86	
100	3,798	1.25	0.65	100.00	

^aTaken from ordinal probit regression predicted values which are averaged for each answer category.

Table 32. Predicted Interval Scoring: Subsidies

Variable	N	Predicted mean ^a	Anchor to 0	Rescale 0 to 100	Avg. score
Electricity					
0	814	0.32	0.00	0.00	0
25	2,189	0.37	0.05	7.64	11
50	2,073	0.49	0.17	25.64	30
75	4,663	0.67	0.35	51.54	57
100	2,972	1.00	0.68	100.00	100
Basic foods					
0	972	0.16	0.00	0.00	
25	2,971	0.24	0.07	12.81	
50	2,140	0.38	0.21	36.54	
75	4,162	0.52	0.36	62.10	
100	2,556	0.75	0.58	100.00	
Housing					
0	776	0.40	0.00	0.00	
25	2,588	0.48	0.08	10.11	
50	2,364	0.66	0.25	33.38	
75	4,324	0.87	0.46	60.73	
100	2,627	1.17	0.76	100.00	
Doctors & hospitals					
0	309	0.32	0.00	0.00	
25	724	0.40	0.08	12.43	
50	1,035	0.48	0.17	26.21	
75	5,026	0.65	0.33	52.33	
100	5,809	0.95	0.64	100.00	

^aTaken from ordinal probit regression predicted values which are averaged for each answer category.

Table 33. Correlations and Factor Analysis for All Variables

	Egalitarian Ideology				Gov. Effectiveness			Social Services				Price Controls				Subsidies							
	Income gap	Inequality	Difference	Redistribute	10 yr goal	Effective	Flexible	Profitable	Doctors & dentists	Hospitals	Day-care	Old-age	Schools	Universities	Electricity	Basic foods	Housing	Doctors & hospitals	Electricity	Basic foods	Housing	Doctors & hospitals	
Income gap	1.00																						
Inequality	0.59	1.00																					
Difference	0.70	0.63	1.00																				
Redistribute	0.61	0.54	0.64	1.00																			
10 yr goal	0.64	0.57	0.67	0.58	1.00																		
Effective	0.21	0.19	0.22	0.19	0.20	1.00																	
Flexible	0.20	0.18	0.21	0.18	0.19	0.63	1.00																
Profitable	0.19	0.17	0.20	0.17	0.18	0.58	0.55	1.00															
Hospitals	0.23	0.20	0.24	0.21	0.22	0.14	0.13	0.12	1.00														
Doctors & dentists	0.26	0.23	0.28	0.24	0.25	0.16	0.16	0.14	0.56	1.00													
Schools	0.23	0.20	0.24	0.21	0.22	0.14	0.13	0.12	0.48	0.56	1.00												
Universities	0.25	0.22	0.26	0.23	0.24	0.15	0.15	0.14	0.53	0.61	0.53	1.00											
Day-care	0.27	0.24	0.28	0.24	0.26	0.17	0.16	0.15	0.57	0.66	0.57	0.62	1.00										
Old age homes	0.24	0.21	0.25	0.22	0.23	0.15	0.14	0.13	0.51	0.60	0.51	0.56	0.60	1.00									
P.C. Electricity	0.30	0.26	0.31	0.27	0.28	0.22	0.21	0.19	0.27	0.32	0.27	0.30	0.32	0.29	1.00								
P.C. Basic Foods	0.25	0.22	0.26	0.23	0.24	0.19	0.18	0.16	0.23	0.26	0.23	0.25	0.27	0.24	0.44	1.00							
P.C. Housing	0.26	0.23	0.28	0.24	0.25	0.20	0.19	0.17	0.24	0.28	0.24	0.26	0.28	0.25	0.46	0.39	1.00						
P.C. Doctors & hospitals	0.32	0.29	0.34	0.29	0.31	0.24	0.23	0.21	0.29	0.34	0.29	0.32	0.35	0.31	0.57	0.48	0.50	1.00					
Sub. Electricity	0.27	0.24	0.28	0.24	0.26	0.14	0.13	0.12	0.19	0.22	0.19	0.21	0.23	0.21	0.28	0.23	0.25	0.30	1.00				
Sub. Basic Foods	0.25	0.22	0.26	0.22	0.24	0.13	0.12	0.11	0.18	0.21	0.18	0.20	0.21	0.19	0.26	0.22	0.23	0.28	0.35	1.00			
Sub. Housing	0.27	0.24	0.28	0.24	0.26	0.14	0.13	0.12	0.19	0.22	0.19	0.21	0.23	0.21	0.28	0.23	0.25	0.30	0.37	0.35	1.00		
Sub. Doctors & hospitals	0.34	0.30	0.36	0.31	0.33	0.18	0.17	0.16	0.25	0.29	0.25	0.27	0.29	0.26	0.36	0.30	0.31	0.39	0.48	0.45	0.48	1.00	
Former Communist	0.29	0.26	0.31	0.26	0.28	0.17	0.16	0.15	0.25	0.29	0.25	0.27	0.30	0.27	0.26	0.22	0.23	0.28	0.23	0.22	0.23	0.30	
Family income	-0.16	-0.14	-0.17	-0.15	-0.16	-0.14	-0.13	-0.12	-0.07	-0.08	-0.07	-0.08	-0.08	-0.08	-0.14	-0.12	-0.13	-0.15	-0.08	-0.08	-0.08	-0.11	
Education	-0.25	-0.23	-0.27	-0.23	-0.24	-0.23	-0.22	-0.20	-0.16	-0.18	-0.16	-0.17	-0.19	-0.17	-0.21	-0.18	-0.19	-0.23	-0.16	-0.15	-0.16	-0.21	
Occupational status	-0.24	-0.21	-0.25	-0.22	-0.23	-0.19	-0.19	-0.17	-0.15	-0.17	-0.15	-0.16	-0.17	-0.16	-0.19	-0.16	-0.17	-0.21	-0.18	-0.16	-0.18	-0.23	
Age	0.12	0.11	0.13	0.11	0.12	0.11	0.11	0.10	0.06	0.07	0.06	0.06	0.07	0.06	0.11	0.09	0.10	0.12	0.03	0.03	0.03	0.04	
Male	-0.07	-0.06	-0.07	-0.06	-0.06	-0.10	-0.09	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	-0.08	-0.06	-0.07	-0.08	-0.08	-0.08	-0.08	-0.11	
Church attendance	0.12	0.10	0.12	0.11	0.11	0.05	0.05	0.05	0.06	0.07	0.06	0.06	0.07	0.06	0.08	0.07	0.07	0.09	0.08	0.07	0.08	0.10	
Factor 1	0.81	0.73	0.86	0.74	0.78	0.26	0.25	0.23	0.32	0.28	0.33	0.29	0.28	0.30	0.36	0.30	0.32	0.39	0.33	0.30	0.33	0.42	
Factor 2	0.26	0.23	0.28	0.24	0.25	0.81	0.77	0.72	0.20	0.18	0.21	0.19	0.18	0.19	0.27	0.23	0.24	0.30	0.17	0.16	0.17	0.22	
Factor 3	0.32	0.29	0.34	0.30	0.31	0.20	0.19	0.18	0.81	0.71	0.82	0.74	0.70	0.76	0.39	0.33	0.34	0.42	0.28	0.26	0.28	0.36	
Factor 4	0.41	0.36	0.43	0.37	0.39	0.31	0.29	0.27	0.38	0.44	0.37	0.41	0.44	0.40	0.72	0.61	0.64	0.78	0.38	0.36	0.38	0.49	
Factor 5	0.43	0.39	0.46	0.40	0.42	0.23	0.22	0.20	0.32	0.37	0.31	0.34	0.37	0.34	0.45	0.38	0.40	0.49	0.61	0.57	0.61	0.78	

Note: Approximately 13,294 cases, varying somewhat from item to item. Shading denotes inter-item correlations and factor loadings among items in a single scale.

Table 34. Descriptive Statistics by Country for Latent Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
<i>Australia</i>					
Gov. effectiveness	5,337	28.28	16.37	0	100
Egalitarian ideology	5,394	60.96	21.27	0	100
Social services	5,357	53.26	18.42	0	100
Price controls	5,370	53.92	19.97	0	100
Subsidies	5,404	55.26	21.00	0	100
<i>Bulgaria</i>					
Gov. effectiveness	1,148	37.02	28.39	0	100
Egalitarian ideology	1,254	84.13	16.79	5	100
Social services	1,155	81.22	22.42	0	100
Price controls	1,241	77.20	21.22	0	100
Subsidies	1,212	75.95	23.47	0	100
<i>Finland</i>					
Gov. effectiveness	1,685	28.00	20.31	0	100
Egalitarian ideology	1,713	77.56	24.33	0	100
Social services	1,685	69.88	20.38	0	100
Price controls	1,714	57.99	24.40	0	100
Subsidies	1,713	71.98	18.57	0	100
<i>The Netherlands</i>					
Gov. effectiveness	887	18.65	17.23	0	100
Egalitarian ideology	876	63.26	22.67	0	100
Social services	889	64.44	19.92	0	100
Price controls	899	56.84	20.29	0	100
Subsidies	909	63.34	23.54	0	100
<i>Poland</i>					
Gov. effectiveness	3,625	33.92	25.58	0	100
Egalitarian ideology	3,753	78.87	20.44	0	100
Social services	3,604	73.12	25.15	0	100
Price controls	3,715	68.81	23.78	0	100
Subsidies	3,741	75.32	19.72	0	100

Table 35. Goodness-of-Fit Indices for SEM Full Model

<i>Chi-square</i>	<i>NPAR</i>	<i>CMIN</i>	<i>DF</i>	<i>P</i>	<i>CMIN/DF</i>
Default	129	20,532	335	0	61
Independence	58	146,777	406	0	362

<i>NCP model</i>	<i>NCP</i>	<i>LO 90</i>	<i>HI 90</i>
Default	20,197	19,730	20,669
Independence	146,371	145,115	147,634

<i>FMIN model</i>	<i>FMIN</i>	<i>F0</i>	<i>LO 90</i>	<i>HI 90</i>
Default	1.8	1.7	1.7	1.8
Independence	12.7	12.6	12.5	12.7

<i>RMSEA model</i>	<i>RMSEA</i>	<i>LO 90</i>	<i>HI 90</i>	<i>PCLO</i>
Default	0.072	0.071	0.073	0
Independence	0.176	0.176	0.177	0

<i>AIC model</i>	<i>AIC</i>	<i>BCC</i>
Default	20,790	20,790
Independence	146,893	146,894

<i>ECVI model</i>	<i>ECVI</i>	<i>LO 90</i>	<i>HI 90</i>	<i>MECV</i>
Default	1.8	1.8	1.8	1.8
Independence	12.7	12.6	12.8	12.7

<i>HOELTER</i>	<i>0.05</i>	<i>0.01</i>
Default	214	225
Independence	36	38

Note: Modeled with imputed data (results in Table 13 and Figure 4); N=11,589

9.2 *Stata Syntax*

9.2.1 **Data Prep and Recodes*

**Data available upon request from the author*

```
version 10
clear
set mem 500m
*use "C:\Data\3isea_c.dta" , clear
set more off, permanently
set varlabelpos 12
set scrollbufsize 250000
numlabel, add mask("#.") force
```

***SES and Demographics**

```
recode occs4x (-1=.), copy gen(occstatus)
label var occstatus "Occupational Status Kelley (1990)"
tab occstatus
```

```
recode malex(-1=.), copy gen(sexm)
label define sexm 1 male 2 female
tab sexm
```

```
tab agem
*age imputed by the principals
```

```
recode edyrx (-1=.), copy gen(educ)
label var educ "Education in Years"
tab educ
```

```
recode famincrx (-1=.)(-9=.), copy gen(famincome)
label var famincome "Family Income: ratio of semi-skilled full-time worker in r
country"
tab famincome
*calculated by the principals as a ratio of semi-skilled full-time male wages in
respondents' countries
```

```
recode countryx (36=0) (100=1) (246=0) (528=0) (616=1), gen(east)
tab east
```

```
recode countryx (36=1) (100=0) (246=0) (528=0) (616=0), gen(liberaldem)
tab liberaldem
*liberal democracy variable not used in analysis as it does not contribute and
is only one country, however it is useful for more accurate maximum
likelihood imputation
```

***Government Effectiveness**

```
tab gpeffc
tab gpflex
tab gpproftz
recode gpeffc gpflex gpproftz (-1=.) (1=100) (2=75) (3=50) (4=25) (5=0), gen
(gvpeff gvpflex gvpprofit)
tab gvpeff
tab gvpflex
tab gvpprofit
```

```
pwcorr gvpeff gvpflex gvpprofit
factor gvpeff gvpflex gvpprofit
alpha gvpeff gvpflex gvpprofit
```

***Egalitarian Ideology**

```

tab lessineq
*lessineq already recoded by the principals
tab lessinex
tab igapbigx
tab richpoox
tab redwlthx
tab rich10yx
recode igapbigx richpoox redwlthx rich10yx (-1
      0=.)(1=100)(2=75)(3=50)(4=25)(5=0), gen(incgap richpoor redistinc
      planreduce)
tab incgap
tab richpoor
tab redistinc
tab planreduce
pwcorr incgap richpoor redistinc planreduce lessineq
factor incgap richpoor redistinc planreduce lessineq
alpha incgap richpoor redistinc planreduce lessineq

```

***Government Control of Social Services (DV)**

```

tab gdoctz
tab gchospz
tab gckidcz
tab gcoldcz
tab gcschlz
tab gcuniz
recode gdoctz gchospz gckidcz gcoldcz gcschlz gcuniz (-
      1=.)(1=100)(2=66.7)(3=33.3)(4=0), gen(regdoctor reghosp regdaycare regold
      regschool reguni)
tab regdoctor
tab reghosp
tab regdaycare
tab regold
tab regschool
tab reguni
pwcorr regdoctor reghosp regdaycare regold regschool reguni
factor regdoctor reghosp regdaycare regold regschool reguni
alpha regdoctor reghosp regdaycare regold regschool reguni

```

***Price Controls Basic Needs (DV)**

```

recode regdoctz regelec regfoodz reghousz
      (1=100)(2=75)(3=50)(4=25)(5=0)(else=.), gen(regdoct regelec regfood
      reghous)
pwcorr regdoct regelec regfood reghous
factor regdoct regelec regfood reghous
alpha regdoct regelec regfood reghous

```

***Subsidies Basic Needs (DV)**

```

recode subelec subfoodz subhospz subhousz
      (1=100)(2=75)(3=50)(4=25)(5=0)(else=.), gen(govsubelec govsubfood
      govsubhealth govsubhouse)
pwcorr govsubelec govsubfood govsubhealth govsubhouse
factor govsubelec govsubfood govsubhealth govsubhouse
alpha govsubelec govsubfood govsubhealth govsubhouse

```

9.2.2 *Ordinal Probit for Unequal Interval Scoring

*needed to predict interval values

```
egen egal=rowmean( incgap richpoor redistinc planreduce lessineq)
tab egal

egen goveff=rowmean( gvpflex gvpprofit gvpeff)
tab goveff

egen pc=rowmean( regelec regfood reghous regdoct)
tab pc

egen subs=rowmean( govsubelec govsubfood govsubhouse govsubhealth)
tab subs

egen gss = rowmean( regdoctor reghosp regdaycare regold regschool reguni)
```

*Sex

```
uvis logit sexm goveff egal pc subs, seed(12345) gen(sexmean)
```

*Egalitarian Ideology

```
oprobit incgap famincome educ agem sexm occstatus east
predict incgapo, xb
oprobit richpoor famincome educ agem sexm occstatus east
predict richpooro, xb
oprobit redistinc famincome educ agem sexm occstatus east
predict redistinco, xb
oprobit planreduce famincome educ agem sexm occstatus east
predict planreduceo, xb
oprobit lessineq famincome educ agem sexm occstatus east
predict lessineqo, xb

table incgap, c(m incgapo)
table richpoor, c(m richpooro)
table redistinc, c(m redistinco)
table planreduce, c(m planreduceo)
table lessineq, c(m lessineqo)

tab incgap
tab richpoor
tab redistinc
tab planreduce
tab lessineq

recode incgap (25=7) (50=29) (75=53), gen(incgapp)
corr incgap incgapp
recode richpoor (25=7) (50=29) (75=53), gen(richpoorp)
corr richpoor richpoorp
recode redistinc (25=7) (50=29) (75=53), gen(redistincp)
corr redistinc redistincp
recode planreduce (25=7) (50=29) (75=53), gen(planreducep)
corr planreduce planreducep
recode lessineq (25=7) (50=29) (75=53), gen(lessineqp)
corr lessineq lessineqp

egen egalpp=rowmean( incgapp richpoorp redistincp planreducep lessineqp)
corr egalp egalpp
```

*Government Effectiveness

```
oprobit gvpflex famincome educ agem sexm occstatus east
```

```

predict gvpflexo, xb
oprobit gvpeff famincome educ agem sexm occstatus east
predict gvpeffo, xb
oprobit gvpprofit famincome educ agem sexm occstatus east
predict gvpprofito, xb

table gvpflex, c(m gvpflexo)
table gvpeff, c(m gvpeffo)
table gvpprofit, c(m gvpprofito)

tab gvpflex
tab gvpeff
tab gvpprofit

recode gvpflex (25=24) (50=50) (75=84), gen(gvpflexp)
corr gvpflex gvpflexp
recode gvpeff (25=24) (50=50) (75=84), gen(gvpeffp)
corr gvpeff gvpeffp
recode gvpprofit (25=24) (50=50) (75=84), gen(gvpprofitp)
corr gvpprofit gvpprofitp
egen goveffp=rowmean( gvpflexp gvpeffp gvpprofitp)
corr goveff goveffp

```

*Government Control of Social Services

```

oprobit regdoctor egalp goveff famincome educ agem sexm occstatus east
predict regdoctoro, xb
oprobit reghosp egalp goveff famincome educ agem sexm occstatus east
predict reghospo, xb
oprobit regdaycare egalp goveff famincome educ agem sexm occstatus east
predict regdaycareo, xb
oprobit regold egalp goveff famincome educ agem sexm occstatus east
predict regoldo, xb
oprobit regschool egalp goveff famincome educ agem sexm occstatus east
predict regschoolo, xb
oprobit reguni egalp goveff famincome educ agem sexm occstatus east
predict regunio, xb

table regdoctor, c(m regdoctoro)
table reghosp, c(m reghospo)
table regdaycare, c(m regdaycareo)
table regold, c(m regoldo)
table regschool, c(m regschoolo)
table reguni, c(m regunio)

tab regdoctor
tab reghosp
tab regdaycare
tab regold
tab regschool
tab reguni

recode regdoctor (33.3=10) (66.6=12), gen(regdoctorp)
corr regdoctor regdoctorp
recode reghosp (33.3=10) (66.6=12), gen(reghospp)
corr reghosp reghospp
recode regdaycare (33.3=10) (66.6=12), gen(regdaycarep)
corr regdaycare regdaycarep
recode regold (33.3=10) (66.6=12), gen(regoldp)
corr regold regoldp
recode regschool (33.3=10) (66.6=12), gen(regschoolp)
corr regschool regschoolp
recode reguni (33.3=10) (66.6=12), gen(regunip)
corr reguni regunip

egen regssp=rowmean( regdoctorp reghospp regdaycarep regoldp regschoolp regunip)

```

*Price Controls for Basic Needs

```

oprobit regelec egalp goveff famincome educ agem sexm occstatus east
predict regeleco, xb
oprobit regfood egalp goveff famincome educ agem sexm occstatus east
predict regfoodo, xb
oprobit reghous egalp goveff famincome educ agem sexm occstatus east
predict reghouso, xb
oprobit regdoct egalp goveff famincome educ agem sexm occstatus east
predict regdocto, xb

table regelec, c(m regeleco)
table regfood, c(m regfoodo)
table reghous, c(m reghouso)
table regdoct, c(m regdocto)

tab regelec
tab regfood
tab reghous
tab regdoct

recode regelec (25=16) (50=39) (75=52), gen(regelecp)
recode regfood (25=16) (50=39) (75=52), gen(regfoodp)
recode reghous (25=16) (50=39) (75=52), gen(reghousp)
recode regdoct (25=16) (50=39) (75=52), gen(regdoctp)
corr regelec regfood reghous regdoct regelecp regfoodp reghousp regdoctp

egen pcpr=rowmean(regelecp regfoodp reghousp regdoctp)

```

*Subsidies for Basic Needs

```

oprobit govsubelec egalp goveff famincome educ agem sexm occstatus east
predict govsubeleco, xb
oprobit govsubfood egalp goveff famincome educ agem sexm occstatus east
predict govsubfoodo, xb

oprobit govsubhouse egalp goveff famincome educ agem sexm occstatus east
predict govsubhouseo, xb
oprobit govsubhealth egalp goveff famincome educ agem sexm occstatus east
predict govsubhealtho, xb

table govsubelec, c(m govsubeleco)
table govsubfood, c(m govsubfoodo)
table govsubhouse, c(m govsubhouseo)
table govsubhealth, c(m govsubhealtho)

tab govsubelec
tab govsubfood
tab govsubhouse
tab govsubhealth

recode govsubelec (25=11) (50=30) (75=57), gen(govsubelecp)
recode govsubfood (25=11) (50=30) (75=57), gen(govsubfoodp)
recode govsubhouse (25=11) (50=30) (75=57), gen(govsubhousep)
recode govsubhealth (25=11) (50=30) (75=57), gen(govsubhealthp)
corr govsubelec govsubfood govsubhouse govsubhealth govsubelecp govsubfoodp
govsubhousep govsubhealthp

egen subsp=rowmean(govsubelecp govsubfoodp govsubhousep govsubhealthp)

```

*SEM values

```

sum incgapp richpoorp redistincp planreducep lessineqp gvpflexp gvpeffp
gvpprofitp regdoctorp reghospp regdaycarep regoldp regschooldp regunip
regelecp regfoodp reghousp regdoctp govsubelecp govsubfoodp govsubhousep
govsubhealthp egalp goveffp regssp pcpr subsp

```

```
save "C:\data\iseat.dta", replace
```

9.2.3 *Imputation

**The full imputation syntax is available from the author. It is omitted to save space. The following is an example of how the imputation works. It starts with a regression using all variables to predict income. Then it uses a subset of variables based on the more significant predictors to obtain extra cases, and then a subset of that, and so on. This process is repeated five times for each variable using a different random error generator, and then the results are averaged.*

```
uvis regress famincome educ agem sexm occstatus goveff egalp liberaldem east,
      seed(12345) gen(inc1)
uvis regress inc1 educ agem sexm occstatus liberaldem east, seed(12345)
      gen(inc2)
uvis regress inc2 educ agem sexm liberaldem east, seed(12345) gen(inc3)
```

**can't take out any more variables or will lose effective predictive value
now do this 5 times and then average the results

```
uvis regress famincome educ agem sexm occstatus goveff liberaldem egalp east,
      seed(23456) gen(inc11)
uvis regress inc11 educ agem sexm occstatus liberaldem east, seed(23456)
      gen(inc12)
uvis regress inc12 educ agem sexm liberaldem east, seed(23456) gen(inc13)
```

```
uvis regress famincome educ agem sexm occstatus goveff liberaldem egalp east,
      seed(34567) gen(inc21)
uvis regress inc21 educ agem sexm occstatus liberaldem east, seed(34567)
      gen(inc22)
uvis regress inc22 educ agem sexm liberaldem east, seed(34567) gen(inc23)
```

```
uvis regress famincome educ agem sexm occstatus goveff liberaldem egalp east,
      seed(45678) gen(inc31)
uvis regress inc31 educ agem sexm occstatus liberaldem east, seed(45678)
      gen(inc32)
uvis regress inc32 educ agem sexm liberaldem east, seed(45678) gen(inc33)
```

```
uvis regress famincome educ agem sexm occstatus goveff liberaldem egalp east,
      seed(56789) gen(inc41)
uvis regress inc41 educ agem sexm occstatus liberaldem east, seed(56789)
      gen(inc42)
uvis regress inc42 educ agem sexm liberaldem east, seed(56789) gen(inc43)
```

```
egen incmean = rowmean(inc3 inc13 inc23 inc33 inc43)
```

**incmean is now the average of 5 imputations and contains no extreme values, negatives or exceedingly high values; however, for some variables this is not the case and recoding of outliers was necessary, for example when they exceed the maximum or minimum possible value of a variable.*

9.2.4 *Sheaf Coefficients

**These are calculated based on the regression coefficients for these variables in a regression predicting each of the two intervening variables and each of the three DVs. The resulting sheaf variable captures the total effect of all three combined.*

```

gen sesegal = 2.817*famincome + 1.27*educ + .091*occstatus
gen sesgoveff = 1.92*famincome + 1.363*educ + .042*occstatus
gen sesgovss = .528*famincome + .682*educ + .009*occstatus
gen sespc = 1.434*famincome + .534*educ + .002*occstatus
gen sessub = .239*famincome + .411*educ + .049*occstatus

```

```
sum sesegal sesgoveff sesgovss sespc sessub
```

```

*this is a Stata add-on and must be installed first
stata2mplus using isea_sem

```

9.2.5 *Decomposition of Effects

*This needs to be done in SEM, but for now it gets at the point

```

use "C:\data\iseat.dta", clear
gen sesegal = 2.817*famincome + 1.27*educ + .091*occstatus
gen sesgoveff = 1.92*famincome + 1.363*educ + .042*occstatus
gen sesgovss = .528*famincome + .682*educ + .009*occstatus
gen sespc = 1.434*famincome + .534*educ + .002*occstatus
gen sessub = .239*famincome + .411*educ + .049*occstatus
sum sesegal sesgoveff sesgovss sespc sessub
reg regssp sesgovss agem sexm lnchgoq, beta
reg regssp sesgovss egalpp agem sexm lnchgoq, beta
reg regssp sesgovss egalpp east agem sexm lnchgoq, beta
reg regssp sesgovss egalpp east goveff agem sexm lnchgoq, beta
reg pcp sespc agem sexm lnchgoq, beta
reg pcp sespc egalp agem sexm lnchgoq, beta
reg pcp sespc egalp east agem sexm lnchgoq, beta
reg pcp sespc egalp east goveffp agem sexm lnchgoq, beta
reg subsp sessub agem sexm lnchgoq, beta
reg subsp sessub egalp agem sexm lnchgoq, beta
reg subsp sessub egalp east agem sexm lnchgoq, beta
reg subsp sessub egalp east goveffp agem sexm lnchgoq, beta

```

9.3 AMOS Syntax

'Original Syntax run in AMOS 9. This syntax generates the primary pooled model. Model within each country programmed similarly but with the means and standard deviations of the by country variables replacing those shown here. Data files generated and Stat-Transferred to .sav files to run with AMOS.

```

Sem.AllImpliedMoments()
Sem.Smc()
Sem.Standardized()
Sem.TextOutput()
Sem.TotalEffects()

'----- Data & group name.
Sem.BeginGroup("C:\data\isea_sem.sav")
Sem.GroupName("FullModel")
'----- Measurement equations: observed = TRUE + random_error
Sem.AStructure(" east = t_east (1) + e_east (1) ")
Sem.AStructure(" incmean = t_incmean (1) + e_incmean (1) ")
Sem.AStructure(" educ = t_educ (1) + e_educ (1) ")
Sem.AStructure(" occmean = t_occmean (1) + e_occmean (1) ")
Sem.AStructure(" agem = t_agem (1) + e_agem (1) ")
Sem.AStructure(" sexmean = t_sexmean (1) + e_sexmean (1) ")

```

```

Sem.AStructure( " chgomean = t_chgomean (1) + e_chgomean (1)" )
Sem.AStructure( " incgap1 = t_egal2 (1) + e_incgap1 (1)" )
Sem.AStructure( " lessineq1 = t_egal2 + e_lessineq1 (1)" )
Sem.AStructure( " richpoor1 = t_egal2 + e_richpoor1 (1)" )
Sem.AStructure( " redistincl = t_egal2 + e_redistincl (1)" )
Sem.AStructure( " planreduce1 = t_egal2 + e_planreduce1 (1)" )
Sem.AStructure( " gvpeff1 = t_goveff (1) + e_gvpeff1 (1)" )
Sem.AStructure( " gvpflex1 = t_goveff + e_gvpflex1 (1)" )
Sem.AStructure( " gvpprofit1 = t_goveff + e_gvpprofit1 (1)" )
Sem.AStructure( " regdoctor1 = t_govss (1) + e_regdoctor1 (1)" )
Sem.AStructure( " reghosp1 = t_govss + e_reghosp1 (1)" )
Sem.AStructure( " regdaycare1 = t_govss + e_regdaycare1 (1)" )
Sem.AStructure( " regold1 = t_govss + e_regold1 (1)" )
Sem.AStructure( " regschooll = t_govss + e_regschooll (1)" )
Sem.AStructure( " regunil = t_govss + e_regunil (1)" )
Sem.AStructure( " regelecl = t_pricecontrols (1) + e_regelecl (1)" )
Sem.AStructure( " regfood1 = t_pricecontrols + e_regfood1 (1)" )
Sem.AStructure( " reghous1 = t_pricecontrols + e_reghous1 (1)" )
Sem.AStructure( " regdoct1 = t_pricecontrols + e_regdoct1 (1)" )
Sem.AStructure( " govsubelec1 = t_subsidies (1) + e_govsubelec1 (1)" )
Sem.AStructure( " govsubfood1 = t_subsidies + e_govsubfood1 (1)" )
Sem.AStructure( " govsubhouse1 = t_subsidies + e_govsubhouse1 (1)" )
Sem.AStructure( " govsubhealth1 = t_subsidies + e_govsubhealth1 (1)" )

'----- Constraints, if any, on the variance of errors to observed
variables
Sem.AStructure( " e_east (0)" )
Sem.AStructure( " e_incmean (0.650062175)" )
Sem.AStructure( " e_educ (1.4462052)" )
Sem.AStructure( " e_occmean (92.8226304)" )
Sem.AStructure( " e_agem (0.4885938)" )
Sem.AStructure( " e_sexmean (3.00027738849585E-03)" )
Sem.AStructure( " e_chgomean (0.523373565)" )

'----- Means & error variances for true "X" [independent, exogenous,
causal order=1] variables
Sem.AStructure( " t_east = () + v_east (1)" )
Sem.AStructure( " t_incmean = () + v_incmean (1)" )
Sem.AStructure( " t_educ = () + v_educ (1)" )
Sem.AStructure( " t_occmean = () + v_occmean (1)" )
Sem.AStructure( " t_agem = () + v_agem (1)" )
Sem.AStructure( " t_sexmean = () + v_sexmean (1)" )
Sem.AStructure( " t_chgomean = () + v_chgomean (1)" )

'----- Covariances among true "X" independent [causal order=1] variables
(unless there is only 1 such)
Sem.AStructure( " v_east <--> v_incmean " )
Sem.AStructure( " v_east <--> v_educ " )
Sem.AStructure( " v_east <--> v_occmean " )
Sem.AStructure( " v_east <--> v_agem " )
Sem.AStructure( " v_east <--> v_sexmean " )
Sem.AStructure( " v_east <--> v_chgomean " )
Sem.AStructure( " v_incmean <--> v_educ " )
Sem.AStructure( " v_incmean <--> v_occmean " )
Sem.AStructure( " v_incmean <--> v_agem " )
Sem.AStructure( " v_incmean <--> v_sexmean " )
Sem.AStructure( " v_incmean <--> v_chgomean " )
Sem.AStructure( " v_educ <--> v_occmean " )
Sem.AStructure( " v_educ <--> v_agem " )
Sem.AStructure( " v_educ <--> v_sexmean " )
Sem.AStructure( " v_educ <--> v_chgomean " )
Sem.AStructure( " v_occmean <--> v_agem " )
Sem.AStructure( " v_occmean <--> v_sexmean " )
Sem.AStructure( " v_occmean <--> v_chgomean " )
Sem.AStructure( " v_agem <--> v_sexmean " )
Sem.AStructure( " v_agem <--> v_chgomean " )
Sem.AStructure( " v_sexmean <--> v_chgomean " )

```

```

'----- Covariances among true variables of the same causal order (if
any)
Sem.AStructure( " v_egal2 <--> v_goveff " )
Sem.AStructure( " v_govss <--> v_pricecontrols " )
Sem.AStructure( " v_govss <--> v_subsidies " )
Sem.AStructure( " v_pricecontrols <--> v_subsidies " )

'----- Regression equations [among true X and true Y variables]
Sem.AStructure( " t_egal2 = t_east + t_incmean + t_educ + t_occmean + t_agem
+ t_sexmean + t_chgomean + () + v_egal2(1)" )
Sem.AStructure( " t_goveff = t_east + t_incmean + t_educ + t_occmean +
t_agem + t_sexmean + t_chgomean + () + v_goveff(1)" )
Sem.AStructure( " t_govss = t_east + t_incmean + t_educ + t_occmean + t_agem
+ t_sexmean + t_chgomean + t_egal2 + t_goveff + () + v_govss(1)" )
Sem.AStructure( " t_pricecontrols = t_east + t_incmean + t_educ + t_occmean
+ t_agem + t_sexmean + t_chgomean + t_egal2 + t_goveff + () +
v_pricecontrols(1)" )
Sem.AStructure( " t_subsidies = t_east + t_incmean + t_educ + t_occmean +
t_agem + t_sexmean + t_chgomean + t_egal2 + t_goveff + () +
v_subsidies(1)" )

'----- End

```

10 TECHNICAL APPENDIX TWO: SECOND STUDY

10.1 Tables

Table 36. Data Sources for Measurement of Percent Foreign-Born by Region

Country	NUTS ^a	Geo Unit	Count	Year	Source	Accessed	Mean	SD
Belgium	1	Gewesten/ Régions	3	2007	Stat Bel: http://statbel.fgov.be	Apr-11	20.55	18.38
Denmark	2	Regioner	5	2008	Statistics Denmark: http://www.dst.dk	May-11	6.23	2.54
Finland	2	Suuralueet	4	2008	Statistics Finland: http://www.stat.fi	Jun-11	3.24	1.63
France	1	ZEAT	8	2005	National Institute of Statistics and Economic Studies: http://www.insee.fr	Apr-11	10.38	5.65
Germany (East)	1	Länder	6	2007	German Microcensus: https://www.regionalstatistik.de/	Apr-11	5.89	5.20
Germany (West)	1	Länder	11	2007		Apr-11	14.53	3.10
Greece	2	Perifereies	10	2001 ^c	Hellenic Statistical Authority: http://www.statistics.gr	Jun-11	6.52	2.40
Ireland	3 ^b	Regional Authorities	5	2005	Central Statistics Office: http://www.cso.ie	Apr-11	16.30	2.31
Netherlands	2	Provincies	12	2007	Centraal Bureau voor de Statistiek: http://statline.cbs.nl	Apr-11	9.20	3.74
Norway	2	Regioner	7	2008	Stat Nord: https://www.h2.scb.se/grs/	Jun-11	8.97	4.05
Spain	3	Comunidades y ciudades autónomas	18	2007	Instituto Nacional de Estadística: http://www.ine.es	Jun-11	9.45	4.75
Sweden	2	Riksområden	8	2007	Statistics Sweden: http://www.ssd.scb.se/	Apr-11	11.50	4.59
Switzerland	2	Regionen	7	2010	Federal Swiss Statistics: http://www.pxweb.bfs.admin.ch	Apr-12	27.32	6.84
UK	1	Regions	12	2007	Office for National Statistics: http://www.statistics.gov.uk	Apr-11	9.02	7.81

^aNUTS 1: Pop = 3-7 million; NUTS 2: Pop = 800,000-2.99 million; NUTS 3: Pop = 150,000-799,999

^bIreland's 8 regions collapsed into 5 in *ESS*.

^cGreece only published percent foreign citizen, which is the proportion of the population born abroad excluding immigrants who have naturalized thus we use imputation based on the *ESS* sampling to calculate foreign-born, see Technical Appendix Two, section 10.2.3.

Table 37. Sources of Other Regional Variables

Variable	Description	Year	Source	Accessed
Tertiary Degree	Percentage of population with tertiary degree	2008	Eurostat	May-11
		2008	Ireland's Central Statistics Office	Apr-11
GDP Per Capita	GDP per capita in Euros, current mkt. prices	2008	Eurostat	May-11
		2005	Swiss Federal Statistics Office	Apr-12
		2008	Ireland's Central Statistics Office	Apr-11
		2008	Statistics Norway	Jun-12
Vote Left	% of population that voted for traditional left parties in most recent national election	2002-2007	The European Election Database; Authors' calculations	May-11
Vote Neo-National	% of population that voted for anti-immigrant parties in most recent national election	2002-2007	The European Election Database; Authors' calculations	May-11

Note: GDP per capita for Ireland's regions imputed, see Technical Appendix Two, section 10.2.3.

Table 38. Individual-Level Correlations for All Variables

Variable	Level	Redistribution	Health Care	Old-Age Welf.	Education	Occ. Status	H. Income	Age	Female	At Risk	Union	Suburban	Anti-Immigrant	Left-Right	Tertiary	GDP	Vote Left	Vote N-N	Foreign-Born	Population	Pop. Density	Foreign-Born	
Redistribution (DV)	I	1.00																					
Health Care (DV)	I	0.14	1.00																				
Old-Age Welfare (DV)	I	0.22	0.64	1.00																			
Education (years)	I	-0.14	0.01	-0.08	1.00																		
Occupational Status	I	-0.16	-0.02	-0.10	0.54	1.00																	
Household Income	I	-0.16	-0.02	-0.07	0.31	0.33	1.00																
Age (years)	I	0.06	-0.01	0.03	-0.28	0.00	-0.18	1.00															
Female	I	0.08	0.02	0.05	-0.03	-0.03	-0.10	0.02	1.00														
At Risk	I	0.08	-0.01	0.03	-0.28	-0.11	-0.32	0.59	-0.02	1.00													
Union	I	0.00	0.08	0.07	0.12	0.13	0.12	0.18	-0.09	0.07	1.00												
Suburban	I	-0.05	-0.02	-0.02	0.08	0.09	0.05	0.00	0.01	-0.01	0.05	1.00											
Anti-Immigrant	I	0.09	0.00	0.07	-0.28	-0.28	-0.18	0.08	0.03	0.13	-0.14	-0.05	1.00										
Subjective Left-Right	I	-0.24	-0.09	-0.08	-0.05	0.01	0.06	0.10	-0.04	0.05	-0.04	-0.01	0.13	1.00									
Tertiary Degrees (%)	R	-0.11	-0.01	-0.02	0.12	0.14	0.13	-0.02	0.00	-0.04	0.17	0.16	-0.22	0.03	1.00								
GDP (Euros)	R	-0.10	0.03	0.02	0.13	0.09	0.11	-0.02	-0.02	-0.04	0.22	0.13	-0.17	0.09	0.63	1.00							
Vote Left (%)	R	0.07	0.13	0.08	-0.04	-0.02	-0.04	-0.03	-0.02	-0.03	-0.02	-0.01	0.06	-0.07	-0.17	-0.11	1.00						
Vote Neo-National (%)	R	-0.09	-0.14	-0.15	-0.05	0.07	0.10	0.00	0.00	-0.02	0.03	-0.03	-0.09	0.03	0.21	0.26	-0.16	1.00					
Foreign-Born	R	-0.06	-0.15	-0.17	0.03	0.09	0.03	-0.02	0.01	-0.04	-0.14	0.10	-0.09	-0.03	0.26	0.14	-0.23	0.35	1.00				
Population	R	-0.01	-0.08	-0.10	0.05	0.02	-0.01	-0.01	0.00	0.00	-0.18	0.02	0.05	-0.07	-0.17	-0.22	0.03	-0.18	0.08	1.00			
Population Density	R	-0.03	-0.03	-0.04	0.08	0.05	0.01	-0.02	0.01	0.00	-0.03	0.20	-0.01	-0.03	0.23	0.11	-0.09	-0.09	0.34	0.01	1.00		
Foreign-Born	C	-0.06	-0.20	-0.19	-0.04	0.04	-0.01	0.01	0.01	-0.02	-0.17	0.01	-0.06	-0.04	-0.04	-0.11	-0.35	0.48	0.76	0.04	0.10	1.00	

Table 39. Regional-Level Correlations for All Variables

Variable	Level ^a	Redistribution	Health Care	Old-Age Welf.	Education	Occ. Status	H. Income	Age	Female	At Risk	Union	Suburban	Anti-Immigrant	Left-Right	Tertiary	GDP	Vote Left	Vote N-N	Foreign-Born	Population	Pop. Density	Foreign-Born	
Redistribution (DV)	I	1.00																					
Health Care (DV)	I	0.36	1.00																				
Old-Age Welfare (DV)	I	0.48	0.86	1.00																			
Education (years)	I	-0.50	-0.13	-0.31	1.00																		
Occupational Status	I	-0.66	-0.46	-0.57	0.71	1.00																	
Household Income	I	-0.34	-0.14	-0.09	0.20	0.48	1.00																
Age (years)	I	-0.22	-0.17	-0.20	0.01	0.03	-0.26	1.00															
Female	I	0.22	-0.04	0.15	-0.29	-0.15	-0.18	-0.07	1.00														
At Risk	I	0.19	-0.07	0.00	-0.05	-0.28	-0.41	0.47	-0.01	1.00													
Union	I	-0.37	0.17	0.14	0.35	0.28	0.36	0.10	-0.33	0.10	1.00												
Suburban	I	-0.36	0.03	-0.13	0.51	0.44	0.15	-0.05	-0.09	-0.03	0.16	1.00											
Anti-Immigrant	I	0.56	0.38	0.44	-0.34	-0.58	-0.35	-0.07	0.22	0.25	-0.38	-0.26	1.00										
Subjective Left-Right	I	-0.26	-0.08	-0.03	-0.05	0.08	0.41	-0.04	-0.02	-0.15	0.22	-0.07	0.02	1.00									
Tertiary Degrees (%)	R	-0.38	-0.08	-0.06	0.39	0.57	0.32	-0.12	0.09	-0.22	0.30	0.44	-0.52	-0.10	1.00								
GDP (Euros)	R	-0.41	0.00	-0.03	0.43	0.42	0.43	-0.18	-0.22	-0.29	0.45	0.36	-0.39	0.28	0.55	1.00							
Vote Left (%)	R	0.19	0.37	0.13	-0.02	-0.09	-0.09	-0.10	-0.37	-0.10	0.02	-0.05	0.08	-0.32	-0.24	-0.15	1.00						
Vote Neo-National (%)	R	-0.23	-0.44	-0.37	-0.12	0.30	0.25	-0.05	0.04	-0.18	0.07	-0.10	-0.23	0.21	0.24	0.38	-0.20	1.00					
Foreign-Born (%)	R	-0.20	-0.50	-0.50	0.14	0.40	0.14	-0.16	0.09	-0.24	-0.25	0.25	-0.28	-0.07	0.31	0.23	-0.27	0.36	1.00				
Population	R	-0.06	-0.23	-0.22	0.22	0.15	-0.06	-0.03	0.01	0.10	-0.24	0.14	0.05	-0.19	0.00	-0.13	-0.05	-0.15	0.07	1.00			
Population Density	R	-0.15	-0.14	-0.19	0.37	0.27	0.06	-0.19	-0.02	0.00	-0.01	0.51	-0.11	-0.16	0.32	0.21	-0.04	-0.09	0.42	0.03	1.00		
Foreign-Born	C	-0.19	-0.60	-0.53	-0.08	0.28	0.01	0.09	0.14	-0.16	-0.28	0.05	-0.29	-0.04	0.10	0.04	-0.35	0.51	0.72	0.00	0.09	1.00	

^aIndividual measures collapsed to their regional means

Table 40. Public Support of Redistribution, Sensitivity Analyses with Alternative Variables

<i>Original Variables:</i>	Level	(main model)	(S1)	(S2)	(S3)	(S4)	(S5)	(S6)	(S6)
Intercept	I	75.87***	77.10***	79.31***	91.05***	92.30***	73.91***	75.88***	75.76***
Education (years)	I	-0.70***	-0.74***	-0.28***	-0.70***	-0.30***	-0.74***	-0.74***	-0.74***
Age (years)	I	-0.01	-0.01	0.02	0.03**	0.06***	-0.01	-0.01	-0.01
Female	I	4.07***	4.17***	3.62***	3.42***	2.99***	4.17***	4.18***	4.17***
At Risk	I	2.85***	3.11***	1.22*	2.59***	1.04*	3.11***	3.11***	3.11***
Union	I	4.94***	4.99***	5.38***	3.34***	3.72***	4.99***	5.00***	4.99***
Suburban	I	-1.23*	-1.15*	-0.81	-1.17*	-0.88	-1.15*	-1.16*	-1.10*
Tertiary Degrees (%)	R	0.00	-0.03	-0.02	-0.08	-0.06	-0.03	-0.06	0.00
GDP (Euros)	R	-0.05	-0.04	-0.04	-0.02	-0.02	-0.04	-0.06	-0.05
Vote Left (%)	R	0.09*	0.09*	0.08	0.04	0.04	0.09*	0.08*	0.10*
Vote Neo-National (%)	R	-0.33**	-0.33**	-0.32**	-0.28**	-0.27**	-0.34**	-0.33**	-0.31**
Foreign-Born (%)	R	-0.11	-0.1	-0.08	-0.1	-0.09	-0.11	<i>omitted</i>	-0.06
Anti-Immigrant	I	0.01	-0.01	-0.04***	0.04***	0.02*	-0.01	-0.01	-0.01
<i>Alternative Variables:</i>									
Occupational Status ^a	I			-0.09***		-0.08***			
Household Income ^b	I			-0.09***		-0.07***			
Subjective Left-Right ^c	I				-0.32***	-0.31***			
Foreign-Born	C						0.28	0.15	
Population	R								0.00
Population Density	R								0.00
Individual N		22,835	21,391	21,391	21,391	21,391	21,391	21,391	21,391
AIC		n/a	0.0	-358.4	-1,348.9	-1,621.2	1.5	1.8	1.4

^aLinear score from ISCO (Kelley 1990), missing imputed; ^bIn deciles based on respondents country, missing imputed; ^cSelf-placement on left to right political scale, higher score=more right, missing imputed.

Note: I = individual, R = region, C = country; AIC value calculated as the change from Model (S1) which has an AIC of 197,599; restricted sample AIC is not directly comparable to the original sample; sources: ESS, Eurostat, and national statistical bureaus.

Table 41. Public Support of Health Care, Sensitivity Analyses with Alternative Variables

<i>Original Variables:</i>	Level	(main model)	(S1)	(S2)	(S3)	(S4)	(S5)	(S6)	(S6)
Intercept	I	80.38***	80.53***	80.78***	83.39***	83.51***	84.88***	86.66***	79.22***
Education (years)	I	0.02	0.04	0.06	0.04	0.06	0.04	0.03	0.04
Age (years)	I	0.00	-0.01	0.00	0.00	0.01	0.00	0.00	-0.01
Female	I	0.88***	0.95***	0.90***	0.80***	0.77***	0.95***	0.96***	0.95***
At Risk	I	-0.17	-0.08	-0.24	-0.18	-0.27	-0.08	-0.08	-0.08
Union	I	1.89***	2.03***	2.06***	1.69***	1.71***	2.02***	2.03***	2.03***
Suburban	I	-1.16***	-1.15***	-1.13***	-1.15***	-1.14***	-1.15***	-1.16***	-1.10***
Tertiary Degrees (%)	R	0.17***	0.18***	0.18***	0.17**	0.17***	0.17***	0.14**	0.20***
GDP (Euros)	R	-0.02	-0.03	-0.03	-0.02	-0.02	-0.03	-0.05*	-0.03
Vote Left (%)	R	0.09**	0.07**	0.07**	0.07*	0.06*	0.07**	0.07**	0.08**
Vote Neo-National (%)	R	-0.1	-0.08	-0.08	-0.06	-0.06	-0.05	-0.03	-0.06
Foreign-Born (%)	R	-0.13**	-0.13**	-0.13**	-0.13**	-0.13**	-0.11*	<i>omitted</i>	-0.09
Anti-Immigrant	I	-0.04***	-0.04***	-0.04***	-0.02***	-0.03***	-0.04***	-0.04***	-0.04***
<i>Alternative Variables:</i>									
Occupational Status ^a	I			0.00		0.00			
Household Income ^b	I			-0.01*		0.00			
Subjective Left-Right ^c	I				-0.06***	-0.06***			
Foreign-Born	C						-0.37*	-0.50**	
Population	R								0.00
Population Density	R								-0.00*
Individual N		23,005	21,429	21,429	21,429	21,429	21,429	21,429	21,429
AIC		n/a	0.0	-1.4	-149.9	-147.6	-1.6	1.8	-1.8

^aLinear score from ISCO (Kelley 1990), missing imputed; ^bIn deciles based on respondents country, missing imputed; ^cSelf-placement on left to right political scale, higher score=more right, missing imputed.

Note: I = individual, R = region, C = country; AIC value calculated as the change from Model (S1) which has an AIC of 177,874; restricted sample AIC is not directly comparable to the original sample; sources: ESS, Eurostat, and national statistical bureaus.

Table 42. Public Support of Old-Age Welfare, Sensitivity Analyses with Alternative Variables

<i>Original Variables:</i>	Level	(main model)	(S1)	(S2)	(S3)	(S4)	(S5)	(S6)	(S6)
Intercept	I	79.53***	79.69***	80.14***	82.79***	83.02***	81.47***	84.55***	78.50***
Education (years)	I	-0.24***	-0.23***	-0.10**	-0.23***	-0.11**	-0.23***	-0.23***	-0.23***
Age (years)	I	0.01*	0.01	0.02*	0.02**	0.03***	0.01	0.01	0.01
Female	I	1.57***	1.53***	1.39***	1.36***	1.25***	1.53***	1.53***	1.52***
At Risk	I	0.16	0.23	-0.25	0.11	-0.29	0.23	0.23	0.23
Union	I	2.15***	2.29***	2.39***	1.92***	2.02***	2.29***	2.30***	2.29***
Suburban	I	-0.84**	-0.81*	-0.72*	-0.82**	-0.73*	-0.81*	-0.82**	-0.79*
Tertiary Degrees (%)	R	0.19**	0.19**	0.20**	0.18*	0.19**	0.19**	0.14*	0.22**
GDP (Euros)	R	-0.04	-0.03	-0.03	-0.03	-0.03	-0.04	-0.07*	-0.04
Vote Left (%)	R	0.07*	0.06	0.06	0.05	0.05	0.06	0.06	0.07
Vote Neo-National (%)	R	-0.20*	-0.19*	-0.19*	-0.18*	-0.18*	-0.17*	-0.14	-0.19*
Foreign-Born (%)	R	-0.21***	-0.21***	-0.21***	-0.21***	-0.21***	-0.20**	<i>omitted</i>	-0.17*
Anti-Immigrant	I	0.00	0.00	-0.01	0.01	0.00	0.00	0.00	0.00
<i>Alternative Variables:</i>									
Occupational Status ^a	I			-0.03***		-0.03***			
Household Income ^b	I			-0.02***		-0.02***			
Subjective Left-Right ^c	I				-0.07***	-0.07***			
Foreign-Born	C						-0.15	-0.39	
Population	R								0.00
Population Density	R								0.00
Individual N		23,003	21,426	21,426	21,426	21,426	21,426	21,426	21,426
AIC		n/a	0.0	-63.3	-165.8	-214.0	1.6	8.3	1.5

^aLinear score from ISCO (Kelley 1990), missing imputed; ^bIn deciles based on respondents country, missing imputed; ^cSelf-placement on left to right political scale, higher score=more right, missing imputed.

Note: I = individual, R = region, C = country; AIC value calculated as the change from Model (S1) which has an AIC of 176,066; restricted sample AIC is not directly comparable to the original sample; sources: ESS, Eurostat, and national statistical bureaus.

10.2 Stata Syntax

10.2.1 *Data Prep and Recodes

```
version 10
clear
*set mem 500m
```

**The data utilized for this study come from the ESS fourth wave, available at www.europeansocialsurvey.org, downloaded in April, 2010. The file utilized for this work was downloaded with the title "ess4e04.dta".*

```
*Convert ESS country string labels to ISO (International Standards Organization)
  3-digit coding. Make variable countryx for merging the data in the 3
  datafiles.
```

```
tab cntry
gen countryx = .
replace countryx=56 if cntry=="BE"
replace countryx=100 if cntry=="BG"
replace countryx=756 if cntry=="CH"
replace countryx=196 if cntry=="CY"
replace countryx=203 if cntry=="CZ"
replace countryx=276 if cntry=="DE"
replace countryx=208 if cntry=="DK"
replace countryx=233 if cntry=="EE"
replace countryx=724 if cntry=="ES"
replace countryx=246 if cntry=="FI"
replace countryx=250 if cntry=="FR"
replace countryx=826 if cntry=="GB"
replace countryx=300 if cntry=="GR"
replace countryx=191 if cntry=="HR"
replace countryx=348 if cntry=="HU"
replace countryx=372 if cntry=="IE"
replace countryx=376 if cntry=="IL"
replace countryx=428 if cntry=="LV"
replace countryx=528 if cntry=="NL"
replace countryx=578 if cntry=="NO"
replace countryx=616 if cntry=="PL"
replace countryx=620 if cntry=="PT"
replace countryx=642 if cntry=="RO"
replace countryx=643 if cntry=="RU"
replace countryx=752 if cntry=="SE"
replace countryx=705 if cntry=="SI"
replace countryx=703 if cntry=="SK"
replace countryx=792 if cntry=="TR"
replace countryx=804 if cntry=="UA"
sort countryx
```

```
*E and W Germany
replace countryx=278 if intewde==1
replace countryx=280 if intewde==0
label define c 56 "Belgium" 100 "Bulgaria" 756 "Switzerland" 372 "Ireland" 203
  "Czech Rep" 275 "E.Germany" 276 "W.Germany" 208 "Denmark" 233 "Estonia"
  300 "Greece" 191 "Croatia" 348 "Hungary" 428 "Latvia" 578 "Norway" 620
  "Portugal" 703 "Slovakia" 250 "France" 826 "Britain" 376 "Israel" 528
  "Netherlands" 752 "Sweden" 246 "Finland" 616 "Poland" 705 "Slovenia" 642
  "Romania" 792 "Turkey" 804 "Ukraine" 643 "Russia" 196 "Cyprus" 724
  "Spain"
label values countryx c
```

```
numlabel c, add mask ("#. ")
```

*Region Codes

```
*Cyprus is an outlier, it is Turkish, lacks OECD data, has conflict, data
  limitations, etc.
drop if countryx == 196
gen regionx = (countryx*100)+ regionbe
replace regionx = (countryx*100)+ regioach if countryx==756
replace regionx = (countryx*100)+ regionde if countryx==276
replace regionx = (countryx*100)+ regionde if countryx==275
replace regionx = (countryx*100)+ regioadk if countryx==208
replace regionx = (countryx*100)+ regioaes if countryx==724
replace regionx = (countryx*100)+ regioafi if countryx==246
replace regionx = (countryx*100)+ regionfr if countryx==250
replace regionx = (countryx*100)+ regiongb if countryx==826
replace regionx = (countryx*100)+ regioagr if countryx==300
replace regionx = (countryx*100)+ regiobie if countryx==372
replace regionx = (countryx*1000)+ regionnl if countryx==528
replace regionx = (countryx*100)+ regionno if countryx==578
replace regionx = (countryx*100)+ regionse if countryx==752
*France regions 2 and 3 are the same in the NUTS data. Save the following
  regional label syntax for later use when we study E. Europe.
recode regionx (25003=25002)
*Netherlands individual data in the ESS measured at NUTS 3, collapse to NUTS 2
  for consistency and larger N by region.
recode regionx (528111 528112 528113 = 52801) (528121 528122 528123 =
  52802) (528131 528132 528133 = 52803) (528211 528212 528213 = 52804) (528221
  528222 528223 528224 = 52805) (528230 = 52806) (528310 = 52807) (528321
  528322 528323 528324 528325 528326 528327 = 52808) (528331 528332 528333
  528334 528335 528336 = 52809) (528341 528342 = 52810) (528411 528412 528413
  528414 = 52811) (528421 528422 528423 = 52812)

label var regionx "Unique Region ID = (countryx*100)+ESSregionID"

label define regionx 5601 "Flemish Region" 5602 "Brussels Region" 5603 "Walloon
  Region" 20801 "Hovedstaden" 20802 "Sjælland" 20803 "Syddanmark" 20804
  "Midjylland" 20805 "Nordjylland" 27601 "Schleswig-Holstein" 27602
  "Hamburg" 27603 "Niedersachsen" 27604 "Bremen" 27605 "Nordrhein-
  Westfalen" 27606 "Hessen" 27607 "Rheinland-Pfalz" 27608 "Baden-
  Württemberg" 27609 "Bayern" 27610 "Saarland" 27511 "Berlin EAST" 27611
  "Berlin WEST" 27512 "Brandenburg" 27513 "Mecklenburg-Vorpommern" 27514
  "Sachsen" 27515 "Sachsen-Anhalt" 27516 "Thüringen" 37201 "Connaught"
  37202 "Dublin" 37203 "Munster" 37204 "Rest of Leinster" 37205 "Ulster"
  37201 "[NUTS] Border, Midlands & Western" 37202 "[NUTS] Southern &
  Eastern" 30001 "East Macedonia & Thrace" 30002 "Central
  Macedonia/Thessaloniki" 30003 "West Macedonia & Epirus" 30004 "Thessalia"
  30005 "West Greece & Ionian Islands" 30006 "Central Greece" 30007
  "Peloponnese" 30008 "Attica/Athens" 30009 "Aegean Islands" 30010 "Crete"
  72411 "Galicia" 72412 "Principado de Asturias" 72413 "Cantabria" 72421
  "País Vasco" 72422 "Comunidad Floral de Navarra" 72423 "La Rioja" 72424
  "Aragón" 72430 "Comunidad de Madrid" 72441 "Catilla y Leon" 72442
  "Castilla-La Mancha" 72443 "Extremadura" 72451 "Cataluña" 72452
  "Comunidad Valenciana" 72453 "Illes Balears" 72461 "Andalucía" 72462
  "Región de Murcia" 72464 "Ciudad Autónoma de Melilla" 72470 "Canarias"
  25001 "Région Parisienne" 25002 "Bassin Parisien Est and Ouest" 25004
  "Nord " 25005 "Est" 25006 "Ouest" 25007 "Sud Ouest" 25008 "Sud Est" 25009
  "Méditerranée" 52801 "Groningen" 52802 "Friesland" 52803 "Drenthe" 52804
  "Overijssel" 52805 "Gelderland" 52806 "Flevoland" 52807 "Utrecht" 52808
  "N.Holland" 52809 "S.Holland" 52810 "Zeeland" 52811 "N.Brabant" 52812
  "Limburg" 24603 "Eastern (fi13)" 24601 "Southern (fi18) and Åland(fi20)"
  24602 "Western (fi19)" 24604 "Northern (fi1a)" 75201 "Stockholm" 75202
  "Östra mellansverige" 75203 "Sydsverige" 75204 "Norra mellansverige"
  75205 "Mellersta norrland" 75206 "Övre norrland" 75207 "Småland med
  Öarna" 75208 "Västsverige" 82601 "North East" 82602 "North West" 82603
```

"Yorkshire and the Humber" 82604 "East Midlands" 82605 "West Midlands"
 82606 "South West" 82607 "East of England" 82608 "London" 82609 "South
 East" 82610 "Wales" 82611 "Scotland" 82612 "Northern Ireland" 57801 "Oslo
 and Akershus" 57802 "Hedmark and Oppland" 57803 "South Eastern Norway"
 57804 "Agder and Rogaland" 57805 "Western Norway" 57806 "Trøndelag" 57807
 "Northern Norway" 75601 "Région Lémanique" 75602 "Espace Mittelland"
 75603 "Nordwestschweiz" 75604 "Zürich" 75605 "Ostschweiz" 75606
 "Zentralschweiz" 75607 "Ticino"

*There are a handful of cases in E.Germany that seem to be miscoded. The
 possibility is that they were interviewed in former E Ger. but they
 actually live in former W Ger. Recode countryx to match their stated
 region of residence

```
replace regionx=27603 if regionx==27503
replace regionx=27605 if regionx==27505
replace regionx=27606 if regionx==27506
replace regionx=27608 if regionx==27508
replace regionx=27609 if regionx==27509
replace countryx = 276 if regionx==27603
replace countryx = 276 if regionx==27605
replace countryx = 276 if regionx==27606
replace countryx = 276 if regionx==27608
replace countryx = 276 if regionx==27609
```

```
label val regionx regionx
sort regionx
```

*Merge Regional Database

**Collaborating with Maureen A. Eger, we compiled a regional database with percent foreign-born by region to match the regional sampling framework of the ESS. We do not share the data here as the database took six-months and considerable funding to construct, researchers interested in obtaining the data must wait until our first results are published and then would be required to share the data costs consistent with the American Sociological Association's Code of Ethics (ASA 1999). All sources of the data are public and are listed in Table 36 and Table 37.*

*Independent Variables

**Occupational Status*

*Kelley's world-wide status scoring for occupation recode of ISCO88 scores in the ESS. See Kelley (1990).

```
recode iscoco (2000/2229=100) (2300 2310 2320=100) (2340/2352=100) (2411 2420 2421
2422 2429=100) (2440/ 445=100) ( 2460 3140 3141 3142 3143 2321 =100) ( 1000
1110 1120 1130 1140 1210=75) (1220 / 1229=75) (1230 / 1239=75) (1310 1312
1313 1316 1317 1319 1142 1240 1250 2322 1143 1100 1200 =75) ( 2230 2330
2331 2332 2359 2400 2410 2412 2419 2430 2431 2432 2446=70) (2450 /
2455=70) (3000 3100=70) ( 3110 / 3119=70) (3120 3121 3123=70) (3130 /
3139=70) (3144 3145=70) ( 3200 / 3229=70) (3300 / 3340=70) (3460=70) (3470 /
3475=70) (3480 =70) ( 3150 / 3152=60) (3432=60) (3440 / 3449=60) (4000 /
4122=60) (4132 4190 4212 = 60) ( 1314=51) (3400 / 3413=51) (3415 /
3419=51) (3420 / 3429=51) (3430 3431=51) (3433 / 3439 = 51) (3414 4130 4131
4133=38) (4140 / 4144=38) (4200 / 4211=38) (4215=38) ( 4220 / 4223 = 38) (
110=37) (7200 / 7213=37) (7216=37) (7220 / 7243=37) (7310 / 7313=37) (7340 /
7344=37) (7346 7433 7435=37) (8120 / 8124=37) (8160 8161=37) (8170 /
8172=37) (8210 / 8212=37) (8220 / 8229=37) (8251=37) (8310 / 8312=37) (8333
7510 7520 = 37) ( 1315 1318=33) (3230 / 3242=33) (3450 4213 4214 5122=33) (
5130 / 5139=33) (5141 5143=33) (5160 / 5163=33) (5164 3451 3452 =33) (
5000=32) (5200 / 5230=32) (9110 / 9113=32) (9150 9151=32) (9153 = 32) (
7000=24) (7100 / 7143=24) (7214 7215 7244 7245 7300 7320 7322 7323 7324
7345=24) ( 7400 / 7416=24) (7420 / 7424=24) (7430 7431 7432 7434=24) ( 7436 /
```

```

7442=24) (8000 8100=24) (8110 / 8113=24) (8130 / 8143=24) (8150 /
8159=24) (8162 8163 8200=24) (8230 / 8232=24) (8240 8250 8252 8253=24) (8260
/ 8269=24) (8270 / 8279=24) (8280 / 8286=24) (8290 8300 8320 8322=24) (8320 /
8324=24) (8330 8332 8334 8340 9300 9312 9313 9321 =24) ( 5100 5111 5112
5113 5120 5121 5123 5140 5142 5149=18) (5150 / 5152=18) (5169=18) (9120 /
9142=18) (9152 =18) (7321=18) (7330 / 7332=14) (9000 9100=14) (9160 /
9162=14) (9310 9311 9320 9322=14) (9330 / 9333 =14) (1311=14) (6000 / 6999
=10) ( 8331=0) ( 9200 / 9213 =0) (*=.), gen(occstat)

```

```
tab occstat,m
```

RECODE of iscoco (occupation , isco88 (com))	Freq.	Percent	Cum.
0	168	0.62	0.62
10	876	3.21	3.82
14	617	2.26	6.08
18	2,084	7.63	13.71
24	3,380	12.38	26.09
32	1,533	5.61	31.70
33	2,480	9.08	40.79
37	1,318	4.83	45.61
38	949	3.48	49.09
51	1,896	6.94	56.03
60	2,046	7.49	63.52
70	3,143	11.51	75.03
75	1,795	6.57	81.61
100	2,093	7.66	89.27
.	2,930	10.73	100.00
Total	27,308	100.00	

```
label var occstat "Kelley (1990) Linear Occupational Status 0 to 100"
```

**Education & Income*

```

recode eduyrs (23/50=23), gen(edyr)
label var edyr "Education in years; clipped at 23"
recode edulvla (5=1) (*=0), gen(ed3)
label var ed3 "Tertiary education completed"

```

*Income is not given as a quantity. A show card is given and it is by country deciles and only the decile is recorded.

```

gen hinc=(hinctnta-1)*11.11
label var hinc "Household income in deciles, 100 is highest level"

```

**Demographics*

```

recode agea (86/123=85), gen(ageyr)
recode ageyr (15/25=1) (26/30=2) (31/35=3) (36/40=4) (41/45=5)
(46/50=6) (51/55=7) (56/60=8) (61/65=9) (66/85=10), gen(ageco5)
recode gndr (2=1) (1=0), gen(female)
recode partner (2=0) (1=1), gen(cohabit)

```

**Left-Right Scale*

```

tab lrscale
*impute missing values later

```

**Born Abroad*

```

recode brncntr (2=1)(1=0), gen(immigrant)
label var immigrant "Foreign born"
*The ESS did a surprisingly good job of sampling the actual level of foreign-
  born by region as evidenced in the following correlation.
. pwcorr immigrant pfb_ctx

```

	immigr~t	pfb_ctx
immigrant	1.0000	
pfb_ctx	0.8846	1.0000

**At Risk (Welfare Need)*

```

recode mnactic (3 4 5 6=1)(1 2 7 8 9=0), gen(vulnerable)
label var vulnerable "Retired, sick/disabled, unemployed past 7-days"

```

**Union Membership*

```

*Recode yes so that current and previous = 1
recode mbtru (1 2 = 1)(3=0), gen(union)
label var union "Currently or formerly in a union"

```

**Anti-Immigrant Sentiment*

```

sum imsmetn imdfetn impcntr imbgeco imueclt imwbcnt
factor imsmetn imdfetn impcntr imbgeco imueclt imwbcnt
rotate
alpha imsmetn imdfetn impcntr imbgeco imueclt imwbcnt

```

**Although there is a detectable 2nd factor with heavy cross-loadings, these 6 also go as a latent factor, $\alpha=0.84$. But all 6 together lack face validity. One is immigration and one is immigrants. Running a SEM in MPlus favors the 2-factor solution.*

B38 CARD 15 Would you say it is generally bad or good for [country]'s economy that people come to live here from other countries? Please use this card.

Bad for the economy		Good for the economy		(Don't know)
00	01 02 03 04 05 06 07 08 09	10	88	

B39 CARD 16 And, using this card, would you say that [country]'s cultural life is generally undermined or enriched by people coming to live here from other countries?

Cultural life undermined		Cultural life enriched		(Don't know)
00	01 02 03 04 05 06 07 08 09	10	88	

B40 CARD 17 Is [country] made a worse or a better place to live by people coming to live here from other countries? Please use this card.

Worse place to live		Better place to live		(Don't know)
00	01 02 03 04 05 06 07 08 09	10	88	

```
egen antiE = rowmean(imbgeco imueclt imwbcnt)
label var antiE "Anti-immigrants in principle scale, 3-item"
```

**Country-dummies*

```
recode countryx (56=1) (*=0), gen (belgium)
recode countryx (208=1) (*=0), gen (denmark)
recode countryx (246=1) (*=0), gen (finland)
recode countryx (250=1) (*=0), gen (france)
recode countryx (275=1) (*=0), gen (germanye)
recode countryx (276=1) (*=0), gen (germanyw)
recode countryx (300=1) (*=0), gen (greece)
recode countryx (372=1) (*=0), gen (ireland)
recode countryx (528=1) (*=0), gen (netherlands)
recode countryx (578=1) (*=0), gen (norway)
recode countryx (724=1) (*=0), gen (spain)
recode countryx (752=1) (*=0), gen (sweden)
recode countryx (756=1) (*=0), gen (switzerland)
recode countryx (826=1) (*=0), gen (britain)
```

***Dependent Variables – Public Opinion in Three Social Policy Areas**

**Government Reduce Income Differences*

```
recode gincdif (1=100) (2=75) (3=50) (4=25) (5=0), gen (dvincdif)
label var dvincdif "Gov. Reduce Income Diff (100=strongly agree)"
```

		Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly	(Don't know)
B30	The government should take measures to reduce differences in income levels.	1	2	3	4	5	8

**Government Provide Health Care*

```
gen dvhlthc = gvhlthc*10
label var dvhlthc "Gov Health Care (100=entirely responsilbe)"
```

CARD 29 People have different views on what the responsibilities of governments⁴⁵ should or should not be. For each of the tasks I read out please tell me on a score of 0-10 how much responsibility you think governments should have. 0 means it should not be governments' responsibility at all and 10 means it should be entirely governments' responsibility. Firstly to...**READ OUT...**

		Should not be governments' responsibility at all										Should be entirely governments' responsibility	(Don't know)
D15	...ensure a job for everyone who wants one?	00	01	02	03	04	05	06	07	08	09	10	88
D16	...ensure adequate health care for the sick?	00	01	02	03	04	05	06	07	08	09	10	88
D17	...ensure a reasonable standard of living ⁴⁶ for the old ⁴⁷ ?	00	01	02	03	04	05	06	07	08	09	10	88

STILL CARD 29 And how much responsibility do you think governments should have to...**READ OUT...**

		Should not be governments' responsibility at all										Should be entirely governments' responsibility	(Don't know)
D18	...ensure a reasonable standard of living for the unemployed ⁴⁸ ?	00	01	02	03	04	05	06	07	08	09	10	88
D19	...ensure sufficient child care services ⁴⁹ for working parents?	00	01	02	03	04	05	06	07	08	09	10	88
D20	...provide paid leave from work for people who temporarily have to care for sick family members?	00	01	02	03	04	05	06	07	08	09	10	88

**Government Provision of Old-Aged Welfare*

```
gen dvslvol = gvslvol*10
label var dvslvol "Gov Standard of Living for Old (100=entirely responsible)"
```

*10.2.2 *The Latent Factor Myth*

**These three DVs do not make a satisfactory latent factor. The first point is that they do not have similar correlations with criterion variables. In some cases the different DVs have different signs on the same criterion variables, see Table 38. Also, in the following I run correlations by country and find dramatically different correlational patterns. Together these are confirmatory evidence that the three dependent variables should be treated separately.*

```

sort countryx
by countryx: pworth gincedif gvhlthc gvslvol edyr hinc occstat union
-> countryx = 56.Belgium

```

	gincedif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincedif	1.0000						
gvhlthc	-0.0847	1.0000					
gvslvol	-0.1394	0.6203	1.0000				
edyr	0.1238	0.0737	-0.0368	1.0000			
hinc	0.1298	0.0134	-0.0410	0.3982	1.0000		
occstat	0.1238	0.0332	-0.0532	0.5295	0.3645	1.0000	
union	-0.1081	0.0500	0.0835	-0.0177	-0.0277	-0.1098	1.0000

```

-> countryx = 208.Denmark

```

	gincedif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincedif	1.0000						
gvhlthc	-0.1378	1.0000					
gvslvol	-0.2446	0.5251	1.0000				
edyr	0.0295	0.0868	-0.0130	1.0000			
hinc	0.1086	0.0396	-0.0473	0.3223	1.0000		
occstat	0.0751	0.0697	-0.0672	0.4434	0.3177	1.0000	
union	-0.0928	0.1722	0.0924	0.1614	0.0711	0.1386	1.0000

```

-> countryx = 246.Finland

```

	gincedif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincedif	1.0000						
gvhlthc	-0.1364	1.0000					
gvslvol	-0.1988	0.6393	1.0000				
edyr	0.1353	0.0778	-0.0279	1.0000			
hinc	0.1661	0.0194	-0.0430	0.3801	1.0000		
occstat	0.1345	0.0159	-0.0707	0.5368	0.3705	1.0000	
union	-0.1246	0.0889	0.0878	0.1892	0.1604	0.1454	1.0000

```

-> countryx = 250.France

```

	gincedif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincedif	1.0000						
gvhlthc	-0.1608	1.0000					
gvslvol	-0.2257	0.6376	1.0000				
edyr	0.1291	0.0157	-0.1296	1.0000			
hinc	0.1415	-0.0381	-0.1289	0.3815	1.0000		
occstat	0.1386	-0.0029	-0.1070	0.5161	0.4234	1.0000	
union	-0.0645	0.0685	0.0449	0.0665	0.1325	0.1599	1.0000

-> countryx = 275.E.Germany

	gincdif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincdif	1.0000						
gvhlthc	-0.1384	1.0000					
gvslvol	-0.2215	0.5304	1.0000				
edyr	0.1119	-0.0754	-0.1861	1.0000			
hinc	0.1760	-0.0639	-0.0860	0.3306	1.0000		
occstat	0.1658	-0.0839	-0.1659	0.5747	0.3762	1.0000	
union	-0.0597	0.0375	0.0278	0.0090	0.0038	0.1022	1.0000

-> countryx = 276.W.Germany

	gincdif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincdif	1.0000						
gvhlthc	-0.1823	1.0000					
gvslvol	-0.2654	0.4983	1.0000				
edyr	0.1265	-0.0136	-0.1079	1.0000			
hinc	0.2127	-0.0305	-0.1300	0.3191	1.0000		
occstat	0.1663	-0.0551	-0.1348	0.5287	0.3924	1.0000	
union	-0.0733	0.0290	0.0481	-0.0006	0.0215	-0.0002	1.0000

-> countryx = 300.Greece

	gincdif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincdif	1.0000						
gvhlthc	-0.1348	1.0000					
gvslvol	-0.1720	0.7721	1.0000				
edyr	0.0537	0.0432	0.0145	1.0000			
hinc	0.0497	0.0185	-0.0242	0.3722	1.0000		
occstat	0.0977	0.0659	0.0402	0.5748	0.3394	1.0000	
union	-0.0186	0.0132	-0.0141	0.0070	0.1371	0.0801	1.0000

-> countryx = 372.Ireland

	gincdif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincdif	1.0000						
gvhlthc	-0.0898	1.0000					
gvslvol	-0.1039	0.7598	1.0000				
edyr	0.1330	0.0473	0.0097	1.0000			
hinc	0.1632	0.0430	-0.0150	0.3979	1.0000		
occstat	0.0768	0.0591	0.0433	0.5275	0.3737	1.0000	
union	-0.0159	0.0804	0.0920	0.0859	0.1116	0.1041	1.0000

-> countryx = 528.Netherlands

	gincdif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincdif	1.0000						
gvhlthc	-0.0205	1.0000					
gvslvol	-0.1464	0.5183	1.0000				
edyr	0.1283	-0.0161	-0.1087	1.0000			
hinc	0.2625	-0.0254	-0.1116	0.3705	1.0000		
occstat	0.1381	-0.0072	-0.0907	0.4668	0.3667	1.0000	
union	-0.0821	0.0115	0.0096	0.1005	0.0541	0.0921	1.0000

-> countryx = 578.Norway

	gincdif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincdif	1.0000						
gvhlthc	-0.1584	1.0000					
gvslvol	-0.1641	0.5582	1.0000				
edyr	0.1243	0.0167	-0.0795	1.0000			
hinc	0.1850	-0.0191	-0.0704	0.2854	1.0000		
occstat	0.1085	-0.0249	-0.0913	0.5122	0.2910	1.0000	
union	-0.0963	0.1236	0.0974	0.1527	0.0806	0.1641	1.0000

-> countryx = 724.Spain

	gincdif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincdif	1.0000						
gvhlthc	-0.1535	1.0000					
gvslvol	-0.1941	0.7262	1.0000				
edyr	0.0944	-0.0153	-0.0626	1.0000			
hinc	0.1180	-0.0383	-0.0884	0.4728	1.0000		
occstat	0.1034	0.0072	-0.0144	0.5808	0.3940	1.0000	
union	0.0253	0.0704	0.0695	0.1115	0.0830	0.0723	1.0000

-> countryx = 752.Sweden

	gincdif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincdif	1.0000						
gvhlthc	-0.1159	1.0000					
gvslvol	-0.1929	0.6503	1.0000				
edyr	0.1395	0.0217	-0.0345	1.0000			
hinc	0.1328	0.0071	-0.0259	0.3372	1.0000		
occstat	0.1188	0.0731	0.0023	0.5506	0.3234	1.0000	
union	-0.1621	0.0830	0.1457	0.0922	0.0950	0.1182	1.0000

```
-> countryx = 756.Switzerland
```

	gincdif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincdif	1.0000						
gvhlthc	-0.1617	1.0000					
gvslvol	-0.2500	0.5536	1.0000				
edyr	0.1694	0.0187	-0.0228	1.0000			
hinc	0.2637	-0.0081	-0.1278	0.2487	1.0000		
occstat	0.1896	0.0416	-0.0671	0.5485	0.3728	1.0000	
union	-0.0389	-0.0312	0.0159	0.0482	0.0535	0.0746	1.0000

```
-> countryx = 826.Britain
```

	gincdif	gvhlthc	gvslvol	edyr	hinc	occstat	union
gincdif	1.0000						
gvhlthc	-0.1180	1.0000					
gvslvol	-0.1674	0.5631	1.0000				
edyr	0.1287	-0.0023	-0.1084	1.0000			
hinc	0.2388	-0.0042	-0.0938	0.3802	1.0000		
occstat	0.1558	0.0073	-0.0840	0.4471	0.3832	1.0000	
union	-0.0952	0.0960	0.0624	0.0594	0.0620	0.0622	1.0000

*Suburban

```
tab domicil
table domicil, c(m dvincdif m dvhlthc m gvslvol)
```

description	mean (dvincdif)	mean (dvhlthc)	m (gvslvol)
a big city	72.14558	87.70333	8.34577
suburbs or o	65.5789	84.88718	8.14781
town or sm city	68.2028	85.35133	8.2215
country village	69.68831	84.62968	8.16817
farm or home in co	69.01007	85.75402	8.40749

*The linear pattern is not so clear, but it looks like there is lowest support in the suburbs or outskirts of a big city.

```
gen urban = domicil
gen suburban = domicil
gen rural = domicil
gen town = domicil
recode urban (2 3 4 5 = 0)
recode suburban (2=1) (1 3 4 5=0)
recode rural (4 5=1) (1 2 3=0)
recode town (3=1) (1 2 4 5=0)
```

10.2.3 *Regional Imputation

*Foreign-Born in Greece

**We do not have pfb_ctx for Greece so we can impute it relying on the ESS sampling of foreign-born at NUTS 2 level which is very accurate as shown above. Stepwise regressions at the regional level to eliminate variables that are not significant in predicting percent foreign-born. Note that immigrant measured in the ESS has by far the greatest t statistic, so the imputation is mostly based on that.*

```
regress pfb_ctx dvh1thc dvslvol dvinclif lrscaler p3d_ctx immigrant_ctx edyr_ctx
      gdp_ctx female hinc occstat ageyr urban suburban
regress pfb_ctx dvh1thc lrscaler immigrant_ctx female hinc ageyr urban suburban
regress pfb_ctx dvh1thc immigrant_ctx female ageyr urban suburban
```

Source	SS	df	MS	Number of obs =	100
Model	3233.34357	6	538.890595	F(6, 93) =	72.74
Residual	688.975971	93	7.40834377	Prob > F =	0.0000
				R-squared =	0.8243
				Adj R-squared =	0.8130
Total	3922.31954	99	39.6193893	Root MSE =	2.7218

pfb_ctx	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dvh1thc	-.3185588	.0718684	-4.43	0.000	-.4612752	-.1758423
immigrant~x	.6405886	.0453996	14.11	0.000	.5504341	.7307432
female	-9.056634	5.184827	-1.75	0.084	-19.35267	1.239406
ageyr	-.2605824	.1363416	-1.91	0.059	-.5313298	.010165
urban	5.917731	2.056209	2.88	0.005	1.834508	10.00096
suburban	6.221762	2.336974	2.66	0.009	1.580995	10.86253
_cons	47.04737	11.00579	4.27	0.000	25.19205	68.90268

*Greece measures percent foreign-citizen, which is not the same measure as foreign-born. A comparison between the imputed measure of foreign-born and actual foreign-citizen reveals an ok fit with some deviations. As we do not have a better measure, we must take this one for now.

	IMPUTED	%FORCIT
30001.East Macedonia & Thrace	2.705673	2.56
30002.Central Macedonia/Thess	5.982453	5.64
30003.West Macedonia & Epirus	10.99181	4.05
30004.Thessalia	7.89647	4.51
30005.West Greece & Ionian Isl.	7.063745	6.23
30006.Central Greece	13.05693	7.59
30007.Peloponnese	8.059787	8.71
30008.Attica/Athens	10.62179	10.50
30009.Aegean Islands	10.67716	8.12
30010.Crete	5.267737	7.30

```
replace pfb_ctx = 9.57 if regionx==5601
replace pfb_ctx = 35 if regionx==5602
replace pfb_ctx = 12.79 if regionx==5603
replace pfb_ctx = 2.71 if regionx==30001
replace pfb_ctx = 5.98 if regionx==30002
replace pfb_ctx = 10.99 if regionx==30003
replace pfb_ctx = 7.90 if regionx==30004
replace pfb_ctx = 7.06 if regionx==30005
replace pfb_ctx = 13.06 if regionx==30006
replace pfb_ctx = 8.06 if regionx==30007
replace pfb_ctx = 10.62 if regionx==30008
replace pfb_ctx = 10.68 if regionx==30009
replace pfb_ctx = 5.27 if regionx==30010
```

***GDP in Ireland**

**GDP for the sampled regions in Ireland was unavailable in any of our statistical sources. Therefore we impute it here.*

```
preserve
collapse dvh1thc dvslvol dvinclif lrscaler pfb_ctx p3d_ctx gdp_ctx gdp08
      immigrant_ctx edyr_ctx female hinc occstat ageyr urban suburban countryx,
      by(regionx)
xtreg gdp_ctx dvh1thc dvslvol dvinclif lrscaler pfb_ctx p3d_ctx gdp08
      immigrant_ctx edyr_ctx female hinc occstat ageyr urban suburban,
      i(countryx)
xtreg gdp_ctx lrscaler pfb_ctx p3d_ctx gdp08 edyr_ctx female hinc occstat ageyr
      urban suburban, i(countryx)
xtreg gdp_ctx lrscaler pfb_ctx p3d_ctx gdp08 female occstat ageyr, i(countryx)
xtreg gdp_ctx lrscaler pfb_ctx p3d_ctx gdp08, i(countryx)
predict gdp_imp
numlabel regionx, add mask("#.")
```

```

Random-effects GLS regression           Number of obs   =   101
Group variable: countryx             Number of groups =    12

R-sq:  within = 0.5428                Obs per group:  min =    3
        between = 0.7905              avg   =   8.4
        overall = 0.7014              max   =   15

Random effects u_i ~ Gaussian         Wald chi2(4)    =   137.48
corr(u_i, X) = 0 (assumed)           Prob > chi2     =   0.0000

```

gdp_ctx	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lrscale	3729.124	2169.254	1.72	0.086	-522.5364	7980.784
pfb_ctx	656.5572	154.0703	4.26	0.000	354.5848	958.5295
p3d_ctx	955.036	154.4183	6.18	0.000	652.3818	1257.69
gdp08	2551.995	565.7272	4.51	0.000	1443.19	3660.8
_cons	-94404.84	18771.27	-5.03	0.000	-131195.9	-57613.82
sigma_u	7611.1172					
sigma_e	6793.9729					
rho	.55654414	(fraction of variance due to u_i)				

```

table regionx if countryx==372, c(m gdp_imp)
37201.[NUTS] Border, Midlands & Western |    49677.5
      37202.[NUTS] Southern & Eastern |    59493.59
              37203.Munster |    48819.63
      37204.Rest of Leinster |    47791.59
              37205.Ulster |    46191.05

```

```

replace gdp_ctx = 49677.5 if regionx ==37201
replace gdp_ctx = 59493.59 if regionx ==37202
replace gdp_ctx = 48819.63 if regionx ==37203
replace gdp_ctx = 47791.59 if regionx ==37204
replace gdp_ctx = 46191.05 if regionx ==37205

```

10.2.4 *Save Point/Variable Selection

```
save "/Data/ESS_t.dta", replace
```

```
use "/Data/ESS_t.dta", replace
```

```
*Fix direction of coding so that anti-immigrant has higher scores for those who
are more opposed to immigrants and think they are bad, etc
```

```
*tab1 imbgeco imueclt imwbcnt
clonevar anti0 = antiE
replace anti0=anti0*-1
replace anti0=(anti0+10)*10
```

```
keep belgium denmark finland france germanye germanyw greece ireland netherlands
norway spain sweden switzerland britain idno occstat occstat_imp edyr
hinc ageyr urban suburban female cohabit union vulnerable sfborn
immigrant gvjbevn gvhlthc gvslvol gvslvue gvclcdr gvpldwk gincdif imsmetn
imdfetn impcntr imbgeco imueclt imwbcnt antiE anti0 sfborn dvinclif
dvhlthc dvslvol lrscale countryx socprot gdp08 regionx pfb_ctx gdp_ctx
p3d_ctx p65_ctx pop08_ctx popd_ctx pvote_1 pvote_nn pweight dweight
```

10.2.5 *Individual Imputation

*Education Imputation

```
xtmixed edyr dvhlthc dvslvol dvincdif occstat_imp female vulnerable ageyr antiE
suburban gdp_ctx p3d_ctx pvote_1 || regionx:, var cov(un)
```

*Use these coefficients to chose variables that BEST predict edyrs (marked with blue highlights) and then drop the others in order to preserve missing cases.

edyr	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
dvhlthc	.0084442	.0016291	5.18	0.000	.0052511	.0116372
dvslvol	-.0073291	.0015764	-4.65	0.000	-.0104188	-.0042394
dvincdif	-.0042231	.0008007	-5.27	0.000	-.0057924	-.0026539
occstat_imp	.0777035	.0008234	94.36	0.000	.0760896	.0793174
female	.0018747	.0387085	0.05	0.961	-.0739926	.077742
vulnerable	-.7087354	.0533301	-13.29	0.000	-.8132605	-.6042103
ageyr	-.0476588	.0013267	-35.92	0.000	-.0502591	-.0450585
antiE	.237471	.0103104	23.03	0.000	.217263	.257679
suburban	.1423419	.0588489	2.42	0.016	.0270001	.2576836
gdp_ctx	.0000144	6.40e-06	2.25	0.024	1.87e-06	.000027
p3d_ctx	-.0045103	.0176717	-0.26	0.799	-.0391461	.0301255
pvote_1	.0008346	.0079969	0.10	0.917	-.014839	.0165082
_cons	10.07493	.6347747	15.87	0.000	8.830792	11.31906

```
predict edyrs_imp
```

*Generate a random variable that has a mean near zero but a standard deviation roughly equal to the original edyrs variable. Then add this to the imputed variable to generate 'random noise'.

```
gen rnd1 = (((runiform()-.5)*2)*5.26)
sum rnd1
replace edyrs_imp = edyrs_imp+rnd1
replace edyrs_imp = edyr if edyr!=.
```

Variable	Obs	Mean	Std. Dev.	Min	Max
edyr	25896	12.64427	4.05003	0	23
edyrs_imp	26010	12.64083	4.050056	0	23
Variable	Obs	Mean	Std. Dev.	Min	Max

*Income Imputation

```
xtmixed hinc edyrs_imp dvhlthc dvslvol dvincdif occstat_imp female vulnerable
ageyr antiE suburban gdp_ctx p3d_ctx pvote_1 || regionx:, var cov(un)
```

hinc	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
edysr_imp	.896585	.0508163	17.64	0.000	.7969869	.9961831
dvhlthc	.0330416	.0131313	2.52	0.012	.0073048	.0587784
dvslvol	-.0458235	.0127089	-3.61	0.000	-.0707326	-.0209145
dvincdif	-.0950512	.0063679	-14.93	0.000	-.107532	-.0825704
occstat_imp	.2379789	.0075632	31.47	0.000	.2231552	.2528026
female	-4.778183	.3099824	-15.41	0.000	-5.385738	-4.170629
vulnerable	-16.91156	.4306254	-39.27	0.000	-17.75557	-16.06755
ageyr	.0482032	.0112844	4.27	0.000	.0260862	.0703202
antiE	.362423	.0844632	4.29	0.000	.1968782	.5279678
suburban	2.102737	.4670542	4.50	0.000	1.187327	3.018146
gdp_ctx	.0000903	.0000557	1.62	0.105	-.0000188	.0001994
p3d_ctx	-.0747763	.1549724	-0.48	0.629	-.3785167	.228964
pvote_1	-.0397163	.0695326	-0.57	0.568	-.1759977	.096565
_cons	44.26699	5.573016	7.94	0.000	33.34408	55.1899

```

xtmixed hinc edysr_imp dvincdif occstat_imp female vulnerable ageyr || regionx:,
    var cov(un)
predict hinc_imp, fit
set seed 2222
gen rnd2 = (((runiform()-).5)*2)*54
replace hinc_imp = hinc_imp + rnd2
replace hinc_imp = hinc if hinc!=.
sum hinc hinc_imp
recode hinc_imp (-60/0=0) (100/160=0)
sum hinc hinc_imp

```

***That's 4000 cases**

Variable	Obs	Mean	Std. Dev.	Min	Max
hinc	21694	52.50082	30.71619	0	99.99
hinc_imp	25829	50.73735	31.00005	0	99.99179

*One region in Spain is missing data: Castilla y Leon

***Occupational Status Imputation**

```

xtmixed occstat dvincdif edyr ageyr female immigrant vulnerable union urban
    suburban lr_imp antiE || countryx: || regionx:, var cov(un)
predict occstat_imp
replace occstat_imp = occstat if occstat !=.
recode occstat_imp (-20/0=0) (100/120=100)
label var occstat_imp "Imputed single"

drop if female==.
drop if vulnerable==.
drop if immigrant==.
drop if ageyr==.
drop if antiE==.
drop if suburban==.
drop if immigrant==1
drop if union==.
drop if pvote_1==.
drop if dvhlthc==. & dvslvol==. & dvincdif==.
replace gdp_ctx = gdp_ctx/1000

```

***Left-Right Scale**

```

xtmixed lrscale dvincdif edysr_imp occstat_imp hinc_imp ageyr female vulnerable
    antiE suburban union gdp_ctx p3d_ctx pvote_1 || regionx:, var cov(un)

```

lrscale	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
dvincdif	-.0184566	.0005335	-34.59	0.000	-.0195023	-.0174109
edysr_imp	-.0136242	.0043448	-3.14	0.002	-.02214	-.0051085
occstat_imp	.0012394	.0006556	1.89	0.059	-.0000457	.0025244
hinc_imp	.0037023	.0004987	7.42	0.000	.0027248	.0046797
ageyr	.0132634	.0009481	13.99	0.000	.0114052	.0151217
female	-.1296131	.0263722	-4.91	0.000	-.1813017	-.0779246
vulnerable	-.0249069	.0375019	-0.66	0.507	-.0984092	.0485954
antiE	-.1665853	.0071872	-23.18	0.000	-.1806719	-.1524988
suburban	-.0566269	.0395953	-1.43	0.153	-.1342323	.0209785
union	-.4236638	.0304396	-13.92	0.000	-.4833243	-.3640034
gdp_ctx	.013172	.0026484	4.97	0.000	.0079812	.0183628
p3d_ctx	-.0238322	.0074709	-3.19	0.001	-.0384749	-.0091895
pvote_1	-.0102356	.003355	-3.05	0.002	-.0168114	-.0036598
_cons	7.34079	.2723129	26.96	0.000	6.807067	7.874514

```
xtmixed lrscale dvincdif hinc_imp ageyr female antiE union gdp_ctx pvote_1 ||
    regionx:, var cov(un)
predict lr_imp, fit
sum lr_imp if lrscale==.
set seed 2223
gen rnd3 = (((runiform()-).5)*2)*.699
replace lr_imp = lr_imp + rnd3
replace lr_imp = lrscale if lrscale!=.
sum lr_imp lrscale
```

Variable	Obs	Mean	Std. Dev.	Min	Max
lr_imp	23084	5.050839	1.98811	0	10
lrscale	21525	5.054681	2.047029	0	10

```
*This number is still really low, our sensitivity analysis will have to 'bite
the bullet' in case numbers for this one
replace lr_imp = lr_imp*10
```

```
save "/Data/ESS_recode.dta", replace
```

10.2.6 *Analyses

```
use "/Data/ESS_recode.dta", clear
*Non-immigrants only

*If not already installed use this .ado to output rho for multilevel models.
*ssc install xtmrho

drop if edyr==.
numlabel regionx c, add mask("#.")

*Don't use weights, they are not available for all countries
```

*Summary Statistics

```
sum dvincdif dvhlthc dvslvol edyr ageyr female vulnerable union suburban antiO
    p3d_ctx gdp_ctx pvote_1 pvote_nn pfb_ctx

*Regional
preserve
collapse p3d_ctx gdp_ctx pvote_1 pvote_nn pfb_ctx, by(regionx)
sum p3d_ctx gdp_ctx pvote_1 pvote_nn pfb_ctx
restore
```

```

*Variance by Level (all vars)
xtmixed dvinclif || countryx: || regionx:
xtmixed dvhlthc || countryx: || regionx:
xtmixed dvslvol || countryx: || regionx:
xtmixed edyr || countryx: || regionx:
xtmixed ageyr || countryx: || regionx:
xtmixed female || countryx: || regionx:
xtmixed vulnerable || countryx: || regionx:
xtmixed union || countryx: || regionx:
xtmixed suburban || countryx: || regionx:
xtmixed antiO || countryx: || regionx:
*Collapse to report these
preserve
collapse p3d_ctx gdp_ctx pvote_1 pvote_nn pfb_ctx countryx, by(regionx)
xtmixed p3d_ctx || countryx:
xtmixed gdp_ctx || countryx:
xtmixed pvote_1 || countryx:
xtmixed pvote_nn || countryx:
xtmixed pfb_ctx || countryx:
restore

```

*Generate Figures

```

restore, not
preserve
collapse pfb_ctx sfborn dvinclif dvhlthc dvslvol countryx, by(regionx)
corr gincdif gvhlthc gvslvol pfb_ctx

```

	gincdif	gvhlthc	gvslvol	pfb_ctx
gincdif	1.0000			
gvhlthc	-0.3536	1.0000		
gvslvol	-0.4869	0.8440	1.0000	
pfb_ctx	0.1747	-0.5046	-0.4968	1.0000

```

recode countryx (56=1) (*=.), gen (belgiumDV1)
recode countryx (208=1) (*=.), gen (denmarkDV1)
recode countryx (246=1) (*=.), gen (finlandDV1)
recode countryx (250=1) (*=.), gen (franceDV1)
recode countryx (275=1) (*=.), gen (germanyDV1)
recode countryx (276=1) (*=.), gen (germanywDV1)
recode countryx (300=1) (*=.), gen (greeceDV1)
recode countryx (372=1) (*=.), gen (irelandDV1)
recode countryx (528=1) (*=.), gen (netherlandsDV1)
recode countryx (578=1) (*=.), gen (norwayDV1)
recode countryx (724=1) (*=.), gen (spainDV1)
recode countryx (752=1) (*=.), gen (swedenDV1)
recode countryx (756=1) (*=.), gen (switzerlandDV1)
recode countryx (826=1) (*=.), gen (britainDV1)

```

```

gen belgiumDV2 = belgiumDV1*dvhlthc
gen denmarkDV2 = denmarkDV1*dvhlthc
gen finlandDV2 = finlandDV1*dvhlthc
gen franceDV2 = franceDV1*dvhlthc
gen germanyDV2= germanyDV1*dvhlthc
gen germanywDV2 = germanywDV1*dvhlthc
gen greeceDV2 = greeceDV1*dvhlthc
gen irelandDV2 = irelandDV1*dvhlthc
gen netherlandsDV2 = netherlandsDV1*dvhlthc
gen norwayDV2 = norwayDV1*dvhlthc
gen spainDV2 = spainDV1*dvhlthc
gen swedenDV2 = swedenDV1*dvhlthc
gen switzerlandDV2 = switzerlandDV1*dvhlthc
gen britainDV2 = britainDV1*dvhlthc

```

```

gen belgiumDV3 = belgiumDV1*dvslvol
gen denmarkDV3 = denmarkDV1*dvslvol

```

```

gen finlandDV3 = finlandDV1*dvslvol
gen franceDV3 = franceDV1*dvslvol
gen germanyDV3= germanyDV1*dvslvol
gen germanywDV3 = germanywDV1*dvslvol
gen greeceDV3 = greeceDV1*dvslvol
gen irelandDV3 = irelandDV1*dvslvol
gen netherlandsDV3 = netherlandsDV1*dvslvol
gen norwayDV3 = norwayDV1*dvslvol
gen spainDV3 = spainDV1*dvslvol
gen swedenDV3 = swedenDV1*dvslvol
gen switzerlandDV3 = switzerlandDV1*dvslvol
gen britainDV3 = britainDV1*dvslvol

replace belgiumDV1 = belgiumDV1*dvincdif
replace denmarkDV1 = denmarkDV1*dvincdif
replace finlandDV1 = finlandDV1*dvincdif
replace franceDV1 = franceDV1*dvincdif
replace germanyDV1= germanyDV1*dvincdif
replace germanywDV1 = germanywDV1*dvincdif
replace greeceDV1 = greeceDV1*dvincdif
replace irelandDV1 = irelandDV1*dvincdif
replace netherlandsDV1 = netherlandsDV1*dvincdif
replace norwayDV1 = norwayDV1*dvincdif
replace spainDV1 = spainDV1*dvincdif
replace swedenDV1 = swedenDV1*dvincdif
replace switzerlandDV1 = switzerlandDV1*dvincdif
replace britainDV1 = britainDV1*dvincdif

label var pfb_ctx "% Foreign Born"
label var sfborn "Subjective % Foreign Born"
label var belgiumDV1 "Belgium"
label var denmarkDV1 "Denmark"
label var finlandDV1 "Finland"
label var franceDV1 "France"
label var germanyDV1 "Germany (E)"
label var germanywDV1 "Germany (W)"
label var greeceDV1 "Greece"
label var irelandDV1 "Ireland"
label var netherlandsDV1 "Netherlands"
label var norwayDV1 "Norway"
label var spainDV1 "Spain"
label var swedenDV1 "Sweden"
label var switzerlandDV1 "Switzerland"
label var britainDV1 "Great Britain"

label var belgiumDV2 "Belgium"
label var denmarkDV2 "Denmark"
label var finlandDV2 "Finland"
label var franceDV2 "France"
label var germanyDV2 "Germany (E)"
label var germanywDV2 "Germany (W)"
label var greeceDV2 "Greece"
label var irelandDV2 "Ireland"
label var netherlandsDV2 "Netherlands"
label var norwayDV2 "Norway"
label var spainDV2 "Spain"
label var swedenDV2 "Sweden"
label var switzerlandDV2 "Switzerland"
label var britainDV2 "Great Britain"

label var belgiumDV3 "Belgium"
label var denmarkDV3 "Denmark"
label var finlandDV3 "Finland"
label var franceDV3 "France"
label var germanyDV3 "Germany (E)"
label var germanywDV3 "Germany (W)"
label var greeceDV3 "Greece"
label var irelandDV3 "Ireland"

```

```

label var netherlandsDV3 "Netherlands"
label var norwayDV3      "Norway"
label var spainDV3       "Spain"
label var swedenDV3      "Sweden"
label var switzerlandDV3 "Switzerland"
label var britainDV3     "Great Britain"

graph twoway (scatter belgiumDV1 pfb_ctx, msymbol(circle)) (scatter denmarkDV1
pfb_ctx, msymbol(diamond)) (scatter finlandDV1 pfb_ctx, msymbol(smx))
(scatter franceDV1 pfb_ctx, msymbol(triangle)) (scatter germanyDV1
pfb_ctx, msymbol(lgx)) (scatter germanywDV1 pfb_ctx, msymbol(square))
(scatter greeceDV1 pfb_ctx, msymbol(smsquare)) (scatter irelandDV1
pfb_ctx, msymbol(plus)) (scatter netherlandsDV1 pfb_ctx,
msymbol(smdiamond_hollow)) (scatter norwayDV1 pfb_ctx,
msymbol(circle_hollow)) (scatter spainDV1 pfb_ctx, msymbol(plus))
(scatter swedenDV1 pfb_ctx, msymbol(diamond_hollow)) (scatter
switzerlandDV1 pfb_ctx, msymbol(triangle_hollow)) (scatter britainDV1
pfb_ctx, msymbol(square_hollow)) (lfit dvinclif pfb_ctx if pfb_ctx < 35,
color(black)), ytitle("Average Public Support, 100=Strongly agree",
size(small)) legend(size(small) cols(1) pos(3))

graph twoway (scatter belgiumDV2 pfb_ctx, msymbol(circle)) (scatter denmarkDV2
pfb_ctx, msymbol(diamond)) (scatter finlandDV2 pfb_ctx, msymbol(smx))
(scatter franceDV2 pfb_ctx, msymbol(triangle)) (scatter germanyDV2
pfb_ctx, msymbol(lgx)) (scatter germanywDV2 pfb_ctx, msymbol(square))
(scatter greeceDV2 pfb_ctx, msymbol(smsquare)) (scatter irelandDV2
pfb_ctx, msymbol(plus)) (scatter netherlandsDV2 pfb_ctx,
msymbol(smdiamond_hollow)) (scatter norwayDV2 pfb_ctx,
msymbol(circle_hollow)) (scatter spainDV2 pfb_ctx, msymbol(plus))
(scatter swedenDV2 pfb_ctx, msymbol(diamond_hollow)) (scatter
switzerlandDV2 pfb_ctx, msymbol(triangle_hollow)) (scatter britainDV2
pfb_ctx, msymbol(square_hollow)) (lfit dvhlthc pfb_ctx if pfb_ctx < 35,
color(black)), ytitle("Average Public Support, 100=Strongly agree",
size(small)) legend(size(small) cols(1) pos(3))

graph twoway (scatter belgiumDV3 pfb_ctx, msymbol(circle)) (scatter denmarkDV3
pfb_ctx, msymbol(diamond)) (scatter finlandDV3 pfb_ctx, msymbol(smx))
(scatter franceDV3 pfb_ctx, msymbol(triangle)) (scatter germanyDV3
pfb_ctx, msymbol(lgx)) (scatter germanywDV3 pfb_ctx, msymbol(square))
(scatter greeceDV3 pfb_ctx, msymbol(smsquare)) (scatter irelandDV3
pfb_ctx, msymbol(plus)) (scatter netherlandsDV3 pfb_ctx,
msymbol(smdiamond_hollow)) (scatter norwayDV3 pfb_ctx,
msymbol(circle_hollow)) (scatter spainDV3 pfb_ctx, msymbol(plus))
(scatter swedenDV3 pfb_ctx, msymbol(diamond_hollow)) (scatter
switzerlandDV3 pfb_ctx, msymbol(triangle_hollow)) (scatter britainDV3
pfb_ctx, msymbol(square_hollow)) (lfit dvslvol pfb_ctx if pfb_ctx < 35,
color(black)), ytitle("Average Public Support, 100=Strongly agree",
size(small)) legend(size(small) cols(1) pos(3))

restore

```

*Variance

**A majority of the higher level variance occurs at the country-level. This makes a lot of sense as welfare is a national legislation for the most part (especially pensions and health care). We are not really interested in what takes place at the country-level, but we do not want it to bias our findings at the regional-level. Three-level xtmixed does not use up the degrees of freedom and it controls for unobserved heterogeneity of country-level characteristics (i.e. the qualitative differences in social policies).*

```

use "/Data/ESS_recode.dta", clear
drop if edyr==.

```

*also test for an interaction of anti-immigrant with percetn foreign-born. The results below show that this is not of interest for our present analysis

```
gen antiXpfb = anti0*pfbc_ctx
numlabel regionx c, add mask("#.")
```

```
*Variance, Pooled Data
xtmixed dvinclif || countryx: || regionx: || , var mle
xtmrho
level 1
Intraclass correlation (ICC): rho1 = 0.09534
```

```
level 2
Intraclass correlation (ICC): rho2 = 0.01159
xtmixed dvhlthc || countryx: || regionx: ||, var mle
xtmrho
level 1
Intraclass correlation (ICC): rho1 = 0.08319
```

```
level 2
Intraclass correlation (ICC): rho2 = 0.01047
```

```
xtmixed dvslvol || countryx: || regionx: ||, var mle
xtmrho
level 1
Intraclass correlation (ICC): rho1 = 0.09722
```

```
level 2
Intraclass correlation (ICC): rho2 = 0.02388
```

*Redistribution

```
xtmixed dvinclif || countryx: || regionx: , var cov(un)
estimates store dv11
```

```
xtmixed dvinclif edyr ageyr female vulnerable union suburban || countryx: ||
regionx: if immigrant==0 , var cov(un)
estimates store dv12
```

```
xtmixed dvinclif edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
pvote_1 pvote_nn pfb_ctx || countryx: || regionx: if immigrant==0 , var
cov(un)
estimates store dv13
```

```
xtmixed dvinclif edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
pvote_1 pvote_nn || countryx: || regionx: if immigrant==0 , var cov(un)
estimates store dv13a
```

```
*preferred model
xtmixed dvinclif edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
pvote_1 pvote_nn pfb_ctx anti0 || countryx: || regionx: if immigrant==0 ,
var cov(un)
estimates store dv14
```

```
xtmixed dvinclif edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
pvote_1 pvote_nn pfb_ctx anti0 || countryx: || regionx: anti0 if
immigrant==0 , var cov(un)
estimates store dv15
```

```
predict anti1 anti2 anti3, reffects
table regionx, c(m anti1 m anti2 m anti3)
```

```
gen reantiN = anti2+.00891
label var reantiN "DV1: Random effects of anti by region(antiB+fixed effect"
table regionx, c(m reantiN)
```

```
xtmixed dvincl dif edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
    pvote_1 pvote_nn pfb_ctx antiO antiXpfb || countryx: || regionx: if
    immigrant==0 , var cov(un)
estimates store dv16
```

```
est table dv11 dv12 dv13a dv13 dv14 dv15 dv16, star(.05 .01 .001) b(%9.2f)
    stats(aic)
```

*Health Care

```
xtmixed dvhlthc || countryx: || regionx: , var cov(un)
estimates store dv21
```

```
xtmixed dvhlthc edyr ageyr female vulnerable union suburban || countryx: ||
    regionx: if immigrant==0 , var cov(un)
estimates store dv22
```

```
xtmixed dvhlthc edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
    pvote_1 pvote_nn pfb_ctx || countryx: || regionx: if immigrant==0 , var
    cov(un)
estimates store dv23
```

```
xtmixed dvhlthc edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
    pvote_1 pvote_nn || countryx: || regionx: if immigrant==0 , var cov(un)
estimates store dv23a
```

*Preferred model

```
xtmixed dvhlthc edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
    pvote_1 pvote_nn pfb_ctx antiO || countryx: || regionx: if immigrant==0 ,
    var cov(un)
estimates store dv24
```

```
xtmixed dvhlthc edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
    pvote_1 pvote_nn pfb_ctx antiO || countryx: || regionx: antiO if
    immigrant==0 , var cov(un)
estimates store dv25
```

```
predict antiA antiB antiC, reffects
table regionx, c(m antiA m antiB m antiC)
gen reantiO = antiB-.12
label var reantiO "DV2: Random effects of anti by region anti+fixed effect"
table regionx, c(m reantiO)
sum reantiO
```

```
xtmixed dvhlthc edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
    pvote_1 pvote_nn pfb_ctx antiO antiXpfb || countryx: || regionx: if
    immigrant==0 , var cov(un)
estimates store dv26
est table dv21 dv22 dv23a dv23 dv24 dv25 dv26, star(.05 .01 .001) b(%9.2f)
    stats(aic)
```

*Old-Age Welfare

```
xtmixed dvslvol || countryx: || regionx: , var cov(un)
estimates store dv31
```

```
xtmixed dvslvol edyr ageyr female vulnerable union suburban || countryx: ||
    regionx: if immigrant==0 , var cov(un)
```

```

estimates store dv32

xtmixed dvslvol edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_1 pvote_nn pfb_ctx || countryx: || regionx: if immigrant==0 , var
  cov(un)
estimates store dv33

xtmixed dvslvol edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_1 pvote_nn || countryx: || regionx: if immigrant==0 , var cov(un)
estimates store dv33a

xtmixed dvslvol edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_1 pvote_nn pfb_ctx anti0 || countryx: || regionx: if immigrant==0 ,
  var cov(un)
estimates store dv34

xtmixed dvslvol edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_1 pvote_nn pfb_ctx anti0 || countryx: || regionx: anti0 if
  immigrant==0 , var cov(un)
estimates store dv35

predict antiX antiY antiZ, reffects
table regionx, c(m antiX m antiY m antiZ)
gen reantiP = antiY-.182
label var reantiP "DV3: Random effects of anti by region anti+fixed effect"
table regionx, c(m reantiP)
sum reantiP

xtmixed dvslvol edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_1 pvote_nn pfb_ctx anti0 antiXpfb|| countryx: || regionx: if
  immigrant==0 , var cov(un)
estimates store dv36

xtmixed dvslvol edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_1 pvote_nn pfb_ctx || countryx: || regionx: anti0 if immigrant==0 ,
  var cov(un)
estimates store dv37

est table dv31 dv32 dv33a dv33 dv34 dv35 dv36 dv37, star(.05 .01 .001) b(%9.2f)
  stats(aic)

```

10.2.7 *Results

*Coefficients

```

est table dv11 dv12 dv13a dv13 dv14, star(.05 .01 .001) b(%9.2f) stats(aic)

est table dv21 dv22 dv23a dv23 dv24, star(.05 .01 .001) b(%9.2f) stats(aic)

est table dv31 dv32 dv33a dv33 dv34, star(.05 .01 .001) b(%9.2f) stats(aic)

```

*Margins

*These were the preferred models from above. We also run an empty model in order to parse out the variance at each level. By comparing coefficients to the variance at each level we can get standardized predicted margins which are comparable to standardized coefficients but in a multilevel context.

```

xtmixed dvincl dif edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_1 pvote_nn pfb_ctx anti0 || countryx: || regionx: if immigrant==0
estimates store dv14

```

```
xtmixed dvhlthc edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_1 pvote_nn pfb_ctx antiO || countryx: || regionx: if immigrant==0 ,
  var cov(un)
estimates store dv24
xtmixed dvslvol edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_1 pvote_nn pfb_ctx antiO || countryx: || regionx: if immigrant==0 ,
  var cov(un)
estimates store dv34
```

```
xtmixed dvincdif || countryx: || regionx:
  Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]
-----+-----
countryx: Identity |
      sd(_cons) | 8.036144 1.555791 5.498646 11.74464
-----+-----
regionx: Identity |
      sd(_cons) | 2.788662 .3135653 2.237094 3.476221
-----+-----
      sd(Residual) | 24.66369 .1156962 24.43797 24.89149
-----+-----
```

```
xtmixed dvhlthc || countryx: || regionx:
  Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]
-----+-----
countryx: Identity |
      sd(_cons) | 4.495459 .872594 3.072918 6.576534
-----+-----
regionx: Identity |
      sd(_cons) | 1.559772 .1983377 1.215693 2.001236
-----+-----
      sd(Residual) | 14.78116 .0691054 14.64633 14.91723
-----+-----
```

```
xtmixed dvslvol || countryx: || regionx:
  Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]
-----+-----
countryx: Identity |
      sd(_cons) | 5.122324 1.005694 3.486149 7.526416
-----+-----
regionx: Identity |
      sd(_cons) | 2.530685 .2442211 2.094564 3.057612
-----+-----
      sd(Residual) | 15.35543 .0717803 15.21539 15.49676
-----+-----
```

```
est restore dv14
sum dvincdif dvhlthc dvslvol edyr ageyr female vulnerable union suburban p3d_ctx
  gdp_ctx pvote_1 pvote_nn pfb_ctx
```

*Reminder, use summary statistics to find first differences or standard margins.

Variable	Obs	Mean	Std. Dev.	Min	Max
dvincdif	22835	69.0497	26.05476	0	100
dvhlthc	23005	85.7757	15.49856	0	100
dvslvol	23003	82.51489	16.36337	0	100
edyr	23049	12.61916	4.01087	0	23
ageyr	23049	48.13506	18.31796	15	85
female	23049	.5215411	.4995466	0	1
vulnerable	23049	.2949803	.4560438	0	1
union	23049	.4390212	.4962784	0	1
suburban	23049	.139095	.3460531	0	1
p3d_ctx	23049	30.13403	6.006125	14.5	48.3
gdp_ctx	23049	36.98999	19.46617	14.9	120.5983
pvote_1	23049	41.37262	11.27942	12.27	67.51
pvote_nn	23049	7.683917	9.017221	0	37.92
pfb_ctx	23049	10.76446	6.489633	1.98	37.16

```
margins, at(edyr =(10.7 14.5))
margins, at(ageyr =(39 57.2))
```

```

margins, at(female = (0 1))
margins, at(vulnerable = (0 1))
margins, at(union = (0 1))
margins, at(suburban = (0 1))
margins, at(p3d_ctx = (26.2 31.5))
margins, at(gdp_ctx = (29.1 38.7))
margins, at(pvote_l = (39.9 47.2))
margins, at(pvote_nn = (5.4 7.9))
margins, at(pfb_ctx = (8.5 13.6))
margins, at(antiO = (38.3 57.4))

```

```

est restore dv24
margins, at(edyr =(10.7 14.5))
margins, at(ageyr =(39 57.2))
margins, at(female = (0 1))
margins, at(vulnerable = (0 1))
margins, at(union = (0 1))
margins, at(suburban = (0 1))
margins, at(p3d_ctx = (26.2 31.5))
margins, at(gdp_ctx = (29.1 38.7))
margins, at(pvote_l = (39.9 47.2))
margins, at(pvote_nn = (5.4 7.9))
margins, at(pfb_ctx = (8.5 13.6))
margins, at(antiO = (38.3 57.4))

```

```

est restore dv34
margins, at(edyr =(10.7 14.5))
margins, at(ageyr =(39 57.2))
margins, at(female = (0 1))
margins, at(vulnerable = (0 1))
margins, at(union = (0 1))
margins, at(suburban = (0 1))
margins, at(p3d_ctx = (26.2 31.5))
margins, at(gdp_ctx = (29.1 38.7))
margins, at(pvote_l = (39.9 47.2))
margins, at(pvote_nn = (5.4 7.9))
margins, at(pfb_ctx = (8.5 13.6))
margins, at(antiO = (38.3 57.4))

```

10.2.8 *Sensitivity Analyses

**We need to run the sensitivity analyses on a smaller sample to make the model fit statistics comparable. There is some missing data on the alternative variables after imputation, and without imputation we lose something over 5,000 cases.*

```

*restrict sample
drop if sfborn==.
drop if occstat_imp==.
drop if hinc_imp==.
drop if lr_imp==.

```

*Main Models

```

*Rerun preferred models with the restricted sample
xtmixed dvincl dif edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
      pvote_l pvote_nn pfb_ctx antiO || countryx: || regionx: if immigrant==0 ,
      var cov(un)
estimates store dv14str

```

```

xtmixed dvhlthc edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 || countryx: || regionx: if immigrant==0 ,
  var cov(un)
estimates store dv24str
xtmixed dvslvol edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 || countryx: || regionx: if immigrant==0 ,
  var cov(un)
estimates store dv34str

```

*Alternative SES

```

xtmixed dvinclif edyr occstat_imp hinc_imp ageyr female vulnerable union
  suburban p3d_ctx gdp_ctx pvote_l pvote_nn pfb_ctx anti0 || countryx: ||
  regionx: if immigrant==0 , var cov(un)
estimates store dv1ses

xtmixed dvhlthc edyr occstat_imp hinc_imp ageyr female vulnerable union suburban
  p3d_ctx gdp_ctx pvote_l pvote_nn pfb_ctx anti0 || countryx: || regionx:
  if immigrant==0 , var cov(un)
estimates store dv2ses

xtmixed dvslvol edyr occstat_imp hinc_imp ageyr female vulnerable union suburban
  p3d_ctx gdp_ctx pvote_l pvote_nn pfb_ctx anti0 || countryx: || regionx:
  if immigrant==0 , var cov(un)
estimates store dv3ses

```

*Subjective Left-Right

```

xtmixed dvinclif edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 lr_imp || countryx: || regionx: if
  immigrant==0 , var cov(un)
estimates store dv1lr

xtmixed dvhlthc edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 lr_imp || countryx: || regionx: if
  immigrant==0 , var cov(un)
estimates store dv2lr

xtmixed dvslvol edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 lr_imp || countryx: || regionx: if
  immigrant==0 , var cov(un)
estimates store dv3lr

*Mixed model SES and lr, as these have significant effects
xtmixed dvinclif edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 occstat_imp hinc_imp lr_imp || countryx:
  || regionx: if immigrant==0 , var cov(un)
estimates store dv1lrm

xtmixed dvhlthc edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 occstat_imp hinc_imp lr_imp || countryx:
  || regionx: if immigrant==0 , var cov(un)
estimates store dv2lrm

xtmixed dvslvol edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 occstat_imp hinc_imp lr_imp || countryx:
  || regionx: if immigrant==0 , var cov(un)
estimates store dv3lrm

```

*Country-Level Foreign-Born

```

*with regional level control
xtmixed dvinclif edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 pfb_cntry || countryx: || regionx: if
  immigrant==0 , var cov(un)

```

```

estimates store dv1fc

xtmixed dvhlthc edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 pfb_centry || countryx: || regionx: if
  immigrant==0 , var cov(un)
estimates store dv2fc

xtmixed dvslvol edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 pfb_centry || countryx: || regionx: if
  immigrant==0 , var cov(un)
estimates store dv3fc

*without regional level control
xtmixed dvincdif edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn anti0 pfb_centry || countryx: || regionx: if immigrant==0
  , var cov(un)
estimates store dv1fco

xtmixed dvhlthc edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn anti0 pfb_centry || countryx: || regionx: if immigrant==0
  , var cov(un)
estimates store dv2fco

xtmixed dvslvol edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn anti0 pfb_centry || countryx: || regionx: if immigrant==0
  , var cov(un)
estimates store dv3fco

```

*Population

```

xtmixed dvincdif edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 pop08_ctx popd_ctx || countryx: ||
  regionx: if immigrant==0 , var cov(un)
estimates store dv1pop

xtmixed dvhlthc edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 pop08_ctx popd_ctx || countryx: ||
  regionx: if immigrant==0 , var cov(un)
estimates store dv2pop

xtmixed dvslvol edyr ageyr female vulnerable union suburban p3d_ctx gdp_ctx
  pvote_l pvote_nn pfb_ctx anti0 pop08_ctx popd_ctx || countryx: ||
  regionx: if immigrant==0 , var cov(un)
estimates store dv3fpop

```

*Results

```

est table dv14 dv14str dv1ses dv1lr dv1lr_m dv1fc dv1fco dv1pop, star(.05 .01
  .001) b(%9.2f) stats(aic N)
est table dv24 dv24str dv2ses dv2lr dv2lr_m dv2fc dv2fco dv2pop, star(.05 .01
  .001) b(%9.2f) stats(aic N)
est table dv34 dv34str dv3ses dv3lr dv3lr_m dv3fc dv3fco dv3fpop, star(.05 .01
  .001) b(%9.2f) stats(aic N)

```

*Correlations All Vars

```

pwcorr dvincdif dvhlthc dvslvol edyr occstat_imp hinc_imp ageyr female
  vulnerable union suburban anti0 lr_imp p3d_ctx gdp_ctx pvote_l pvote_nn
  pfb_ctx pop08_ctx popd_ctx pfb_centry

collapse dvincdif dvhlthc dvslvol edyr occstat_imp hinc_imp ageyr female
  vulnerable union suburban anti0 lr_imp p3d_ctx gdp_ctx pvote_l pvote_nn
  pfb_ctx pop08_ctx popd_ctx pfb_centry, by(regionx)

```

pwcorr dvincdif dvhlthc dvslvol edyr occstat_imp hinc_imp ageyr female
vulnerable union suburban anti0 lr_imp p3d_ctx gdp_ctx pvote_1 pvote_nn
pfb_ctx pop08_ctx popd_ctx pfb_centry

11 TECHNICAL APPENDIX THREE: THIRD STUDY

11.1 Tables

Table 43. Full Dataset Utilized in Study Three

Country-Year ^a	Public Opinion	Social Policy (spending 1-year lag)	FLP	Aged (% ≥65)	Corporatism (Crepaz & Lijphart)	Individualism (Hofstede)	Married (%)	Taxes Collected	English-speaking	Year (centered)	Education (Years)	GDP at ppp
3606	-0.99	16.09	69.87	13.20	-1.02	90	77.74	29.43	1	10	13.99	32.40
3686	-0.99	11.99	56.64	10.69	-1.02	90	78.09	28.30	1	-10	10.63	21.74
3690	-1.30	13.13	62.10	11.29	-1.02	90	78.86	26.37	1	-6	10.83	21.92
3696	-1.12	16.24	63.60	12.14	-1.02	90	80.99	28.50	1	0	12.59	26.05
3698	-0.51	16.69	64.32	12.34	-1.02	90	76.49	29.69	1	2	11.77	27.84
4093	1.25	26.17	60.78	15.01	1.60	55	74.39	41.90	0	-3.5	10.56	24.45
4099	0.64	27.04	61.25	15.50	1.60	55	76.95	43.04	0	2.5	10.58	28.77
12406	-1.06	16.94	73.49	13.40	-1.34	80	75.57	32.97	1	5	13.88	31.70
12496	-1.75	18.06	66.80	12.20	-1.34	80	71.75	36.73	1	-5	15.52	25.28
20806	-0.68	26.59	76.75	16.30	0.52	74	78.49	48.09	0	0	20.67	29.40
24606	0.07	25.91	73.83	16.50	0.43	63	69.82	42.97	0	0	25.59	31.30
25006	0.31	28.59	65.35	16.50	-0.73	71	78.89	43.67	0	4.5	16.22	27.30
25097	0.42	28.62	61.42	15.80	-0.73	71	73.87	44.29	0	-4.5	13.35	23.81
25098	0.52	28.80	62.27	15.95	-0.73	71	69.81	45.16	0	-3.5	13.32	24.49
27606	0.30	26.15	69.01	19.90	0.48	67	79.22	36.05	0	10.5	14.79	28.20
27685	0.39	22.52	51.84	15.06	0.48	67	71.63	35.83	0	-10.5	10.14	19.39
27690	0.45	22.73	56.68	14.96	0.48	67	80.79	36.04	0	-5.5	11.28	22.76
27691	1.14	23.70	60.50	15.01	0.48	67	82.10	36.92	0	-4.5	10.80	23.10
27696	0.48	27.38	59.31	15.74	0.48	67	78.96	36.25	0	0.5	11.61	24.20
27698	1.34	26.56	60.55	16.09	0.48	67	75.02	37.33	0	2.5	13.23	25.18
37206	0.26	15.75	62.03	10.80	-0.53	70	67.20	30.96	1	7.5	15.49	36.40
37291	0.74	15.71	42.49	11.41	-0.53	70	66.77	34.01	1	-7.5	10.60	16.27
37296	0.34	14.78	48.74	11.38	-0.53	70	70.42	31.76	1	-2.5	12.28	22.67
37298	1.03	13.00	51.85	11.24	-0.53	70	68.68	31.54	1	-0.5	19.65	26.52
38091	0.79	19.95	46.40	15.27	-0.85	76	68.87	38.23	0	-3.5	17.63	22.27
38096	0.55	21.99	43.02	17.28	-0.85	76	69.38	43.30	0	1.5	10.66	24.02
38098	0.96	23.32	45.48	18.11	-0.85	76	70.41	42.24	0	3.5	19.21	25.60
39206	-0.60	18.44	66.25	21.50	0.05	46	75.45	28.33	1	5	17.56	28.40

^aCountry-year measured as ISO 3-digit country code * 100 + 2-digit year

Table 44. Full Dataset Utilized in Study Three, Continued

Country-Year ^a	Public Opinion	Social Policy (spending 1-year lag)	FLP	Aged (% ≥65)	Corporatism (Crepaz & Lijphart)	Individualism (Hofstede)	Married (%)	Taxes Collected	English-speaking	Year (centered)	Education (Years)	GDP at ppp
39296	-0.49	14.53	62.12	15.66	0.05	46	77.55	27.16	1	-5	16.01	25.61
39298	-0.02	15.46	63.41	16.72	0.05	46	75.37	26.31	1	-3	17.33	24.95
52806	-0.28	20.30	70.99	14.60	1.01	80	81.97	38.72	0	7.5	13.78	32.70
52891	0.66	25.51	52.81	12.99	1.01	80	67.34	44.79	0	-7.5	12.29	23.53
52898	1.10	21.45	60.91	13.55	1.01	80	74.65	40.06	0	-0.5	18.82	28.50
55406	-1.66	18.39	72.11	12.80	-1.11	79	77.23	33.57	1	8	13.63	23.80
55491	-0.89	21.88	62.49	11.33	-1.11	79	80.11	35.51	1	-8	12.18	17.19
55497	-1.26	19.59	68.05	11.58	-1.11	79	72.19	32.91	1	-2	12.48	19.77
55498	-0.46	20.06	68.10	11.68	-1.11	79	79.51	32.92	1	-1	13.05	20.52
57806	0.79	20.44	76.04	14.60	1.53	69	74.66	43.59	0	8	13.67	40.40
57890	0.87	22.31	71.24	16.28	1.53	69	72.21	41.12	0	-8	11.17	27.28
57896	0.81	22.51	71.49	15.73	1.53	69	72.10	41.50	0	-2	24.47	34.05
57898	1.29	23.61	73.75	15.35	1.53	69	74.54	42.71	0	0	20.65	35.22
62006	1.65	22.90	71.70	17.20	-0.03	27	76.09	31.90	0	0	10.51	17.77
72406	1.13	21.58	61.54	17.00	0.48	51	73.04	33.32	0	5.5	15.80	24.00
72496	1.82	21.34	38.00	16.00	0.48	51	70.00	32.89	0	-5.5	19.00	18.87
72498	1.54	20.62	40.00	16.60	0.48	51	69.59	34.14	0	-3.5	19.24	20.47
75206	-0.12	28.41	76.06	17.40	1.40	71	74.33	47.36	0	5.5	12.34	32.70
75296	0.25	31.59	73.51	17.44	1.40	71	74.06	50.48	0	-5.5	11.89	24.56
75298	0.50	30.24	71.90	17.33	1.40	71	72.22	51.07	0	-3.5	12.34	26.63
75606	-0.56	18.52	80.19	16.60	0.50	68	67.48	29.09	0	4	14.84	34.30
75699	0.17	18.54	69.92	17.27	0.50	68	68.73	30.02	0	-4	18.83	31.62
82606	-0.47	20.36	70.04	16.00	-1.34	89	66.31	36.00	1	10	14.93	30.00
82685	0.51	19.44	61.65	15.17	-1.34	89	76.05	37.45	1	-11	12.14	18.63
82690	0.02	16.75	67.36	15.77	-1.34	89	79.03	34.30	1	-6	13.00	20.52
82691	0.02	18.18	65.55	15.81	-1.34	89	74.38	33.39	1	-5	12.58	20.50
82696	0.04	19.61	67.67	15.87	-1.34	89	72.67	34.25	1	0	12.73	23.64
82698	0.54	18.86	68.59	15.84	-1.34	89	72.26	35.77	1	2	12.77	25.18
84006	-1.36	15.99	70.04	12.60	-1.02	91	63.98	27.86	1	10	13.18	38.60
84085	-2.21	13.11	64.52	12.08	-1.02	91	66.91	25.49	1	-11	12.55	25.91
84090	-1.65	13.46	69.22	12.57	-1.02	91	64.67	27.10	1	-6	12.92	27.79
84091	-1.57	14.44	69.57	12.61	-1.02	91	63.65	26.91	1	-5	12.87	28.36
84096	-1.78	15.20	69.72	12.61	-1.02	91	57.81	28.66	1	0	13.34	31.80
84098	-1.93	14.77	69.41	12.47	-1.02	91	57.55	29.15	1	2	13.33	34.02

^aCountry-year measured as ISO 3-digit country code * 100 + 2-digit year

Table 45. Regression Parameters
Predicting Corporatism Utilized
for Imputation

Variables	Coef.	SE
Social Policy	0.07 *	0.03
Public Opinion	0.53 **	0.15
Aged	-0.02	0.05
GDP_PPP	0.06 *	0.02
FLP	0.02	0.02
intercept	-4.03	0.84
N	58	
r2	0.57	
<i>Predicted scores:</i>		
Portugal	0.477	
Spain	-0.030	

Table 46. Pairwise Correlations and Factor Loadings for Public Opinion Scale

	Jobs	Redist.	Prices	Health	Old-Age	Ind.	Unemp.
Variable (<i>government should provide ...</i>):							
Jobs	1.00						
Redistribute Incomes	0.48	1.00					
Price Controls	0.48	0.42	1.00				
Health Care	0.39	0.33	0.38	1.00			
Old-Age Welfare	0.39	0.36	0.38	0.62	1.00		
Industry Support	0.37	0.30	0.34	0.34	0.38	1.00	
Unemployment	0.42	0.45	0.32	0.34	0.40	0.37	1.00
Sex	0.09	0.08	0.10	0.05	0.07	0.05	0.06
Age	0.01	0.06	0.07	0.03	0.08	0.02	0.03
Education	-0.03	-0.04	-0.04	-0.01	-0.03	-0.03	-0.01
Factor Loadings	0.67	0.62	0.62	0.66	0.69	0.54	0.60

Note: Data are from ISSP Role of Government Module, 1996, N=29,802. All seven items loaded on one factor with the first eigenvalue of 2.79, followed by 0.27 and 0.04. Loadings rotated using varimax.

Table 47. Correlations for All Variables in Study Three excluding the United States, N=56 Country-Time Points

Variable	Public Opinion	Social Policy	FLP	Married	Taxes Collected	Military Spend	Aged	Individualism	Corporatism	English-speaking	Year	Education	GDP at PPP
Public Opinion	1.00												
Social Policy (spending)	0.39	1.00											
FLP	-0.41	0.17	1.00										
Married (%)	-0.29	0.04	0.30	1.00									
Taxes Collected	0.34	0.84	0.14	-0.11	1.00								
Military Spending per capita	0.10	0.23	0.26	0.11	0.38	1.00							
Aged (% ≥65)	0.37	0.53	0.17	-0.05	0.33	0.20	1.00						
Individualism (Hofstede)	-0.49	-0.24	0.13	0.10	0.01	0.49	-0.46	1.00					
Corporatism (Crepaz & Lijphart)	0.51	0.53	0.16	-0.02	0.49	-0.04	0.38	-0.52	1.00				
English-speaking	-0.62	-0.76	0.03	0.10	-0.65	-0.13	-0.53	0.42	-0.74	1.00			
Year (centered)	-0.13	0.05	0.38	0.05	-0.01	-0.12	0.22	-0.01	0.02	-0.03	1.00		
Education (Years)	0.15	0.00	0.06	-0.28	0.07	-0.07	0.25	-0.21	0.17	-0.19	0.19	1.00	
GDP at PPP	-0.08	0.08	0.56	-0.08	0.20	0.12	0.17	0.03	0.40	-0.22	0.64	0.41	1.00

Table 48. Instrumental Variables Models with Taxes as an Alternative Instrument for Social Policy

-> Public Opinion	Demographics		Social Institutions		Political Institutions		Historical Institutions		Demographic/Political	
	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)
Social Policy	0.40	0.08 (0.03)	0.49 ***	0.10 (0.03)	0.23 **	0.05 (0.02)	0.33 †	0.06 (0.05)	0.08	0.02 (0.03)
FLP (instrument)	- 0.52 ***	- 0.05 (0.01)	- 0.41 ***	- 0.04 (0.01)	- 0.50 ***	- 0.05 (0.01)	- 0.43 ***	- 0.04 (0.01)	- 0.50 ***	- 0.05 (0.01)
Aged	0.32 *	0.13 (0.07)							0.28 †	0.12 (0.08)
Individualism			- 0.37 ***	- 0.03 (0.01)						
Corporatism					0.49 ***	0.48 (0.18)			0.44	0.44 (0.15)
English-Speaking							- 0.40 †	- 0.76		
intercept		- 0.16		2.54		2.43		1.84		1.37
-> Social Policy	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)
Public Opinion	- 0.06	- 0.33 (0.87)	- 0.11	- 0.58 (1.36)	0.18	0.89	- 0.16	- 0.82 (1.06)	0.20	0.97 (0.85)
Taxes (as a % of GDP)	0.40 ***	0.72 (0.28)	0.55 ***	1.01 (0.28)	0.35 *	0.64 (0.38)	0.14	0.25 (0.25)	0.32 *	0.59 (0.36)
Aged	0.43 **	0.90 (0.38)							0.34 *	0.70 (0.48)
Individualism			- 0.42 *	- 0.15 (0.09)						
Corporatism					0.28	1.37 (1.21)			0.14	0.69 (0.97)
English-Speaking							- 0.83 ***	- 8.06 (2.19)		
intercept		0.44		21.83		14.76		22.10		4.83

†p<.25 *p<.10 **p<.05 ***p<.01

Note: N=62, clustered in 19 countries. Data sources in Table 21. Non-recursive SEMs predicting simultaneous effects for both DVs. The variable public opinion estimated as a latent variable of itself with a reliability of 0.35 calculated from the individual level data.

Table 49. Goodness-of-Fit Statistics for Instrumental Variables Models shown in Table 48

GOF indices	<u>Demographics</u>	<u>Social Institutions</u>	<u>Political Institutions</u>	<u>Historical Institutions</u>	<u>Demographic/Political</u>
CFI	0.90	0.96	1.00	1.00	1.00
r ² Public Opinion	0.59 ***	0.61 ***	0.63 ***	0.63***	0.64 ***
r ² Social Policy	0.51 ***	0.37 †	0.47 **	0.62***	0.56 ***
AIC	1,489	1,712	1,359	1,242	1,609
free parameters	9	9	9	9	11
RMSEA	0.17 (0.00/0.35)	0.10 (0.00/0.29)	0.00 (0.00/0.15)	0.00 (0.00/0.19)	0.00 (0.00/0.14)
SRMR	0.05	0.04	0.01	0.02	0.01

Table 50. Instrumental Variables Models with Military Spending as an Alternative Instrument for Social Policy

-> Public Opinion	Demographics		Social Institutions		Political Institutions		Historical Institutions		Demographic/Political	
	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)
Social Policy	0.43 ***	0.07 (0.03)	0.73 ***	0.12 (0.02)	0.37 ***	0.07 (0.03)	0.41 †	0.07 (0.05)	0.24 †	0.04 (0.03)
FLP (instrument)	- 0.54 ***	- 0.05 (0.01)	- 0.52 ***	- 0.04 (0.01)	- 0.54 ***	- 0.05 (0.01)	- 0.48 ***	- 0.04 (0.01)	- 0.53 ***	- 0.05 (0.01)
Aged	0.24 †	0.09 (0.07)							0.17	0.06 (0.06)
Individualism			- 0.29 *	- 0.02 (0.01)						
Corporatism					0.40 *	0.34 (0.18)			0.39 **	0.34 (0.16)
English-Speaking							- 0.31	- 0.52 (0.49)		
intercept		0.19		1.60		1.76		1.45		1.31
-> Social Policy	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)	β	coeff.(se)
Public Opinion	- 0.11	- 0.66 (0.88)	- 0.65 **	- 0.65 (0.27)	- 0.21	- 1.16 (1.15)	- 0.37 **	- 2.08 (1.05)	- 0.14	- 0.74 (0.99)
Military Spending	0.13	3.44 (6.49)	0.75 ***	0.75 (0.17)	0.27 †	7.40 (5.36)	0.14	3.68 (3.12)	0.19	5.03 (5.52)
Aged	0.55 **	1.10 (0.47)							0.36 *	0.73 (0.39)
Individualism			- 0.95 **	- 0.95 (0.46)						
Corporatism					0.64 ***	3.06 (1.15)			0.47 **	2.21 (0.98)
English-Speaking							- 0.97 ***	- 9.20 (2.04)		
intercept		3.24		37.16		18.31		23.86		8.30

†p<.25 *p<.10 **p<.05 ***p<.01

Note: N=56, clustered in 18 countries. Data sources in Table 21. Non-recursive SEMs predicting simultaneous effects for both DVs. The variable public opinion estimated as a latent variable of itself with a reliability of 0.35 calculated from the individual level data.

Table 51. Goodness-of-Fit Statistics for Instrumental Variables Models shown in Table 50

GOF indices	<u>Demographics</u>	<u>Social Institutions</u>	<u>Political Institutions</u>	<u>Historical Institutions</u>	<u>Demographic/Political</u>
CFI	1.00	0.65	0.92	1.00	0.94
r ² Public Opinion	0.47 ***	0.44 ***	0.51 ***	0.50 ***	0.53 **
r ² Social Policy	0.24 †	<i>Undetermined</i>	0.29 †	0.56 ***	0.42 ***
AIC	1,062	1,237	951	844	1,185
free parameters	9	9	9	9	11
RMSEA	0.00 (0.00/0.24)	0.30 (0.15/0.47)	0.15 (0.00/0.34)	0.00 (0.00/0.20)	0.15 (0.00/0.34)
SRMR	0.03	0.08	0.04	0.02	0.04

11.2 Stata Syntax

11.2.1 *Data Prep

**The data utilized for this study have been downloaded from the Leibniz-Institut für Sozialwissenschaften (at www.gesis.org). The ISSP data files have been renamed with the self evident titles: "ISSP_85_RoleGovI.dta"; "ISSP_90_RoleGovII.dta"; "ISSP_91_ReligionI.dta"; "ISSP_96_RoleGovIII.dta"; "ISSP_98_ReligionII.dta"; "ISSP_06_RoleGov.dta".*

```
clear
```

*ISSP 1985 Role of Gov I

```
use "C:\Data\ISSP_85_RoleGovI.dta", clear

recode v3 (1=36) (2=278) (3=826) (4=840) (5=40) (8=380), gen(countryx)
gen year=1986
recode v101 (1=4) (2=3) (3=2) (4=1), gen(govjobs)
recode v107 (1=4) (2=3) (3=2) (4=1), gen(govincdiff)
recode v102 v103 v104 v105 v106 (1=4) (2=3) (3=2) (4=1), gen(govprices
    govhealth govold govind govunemp)
gen weight85 = v141
label var weight85 "Weight85"
gen isco = v110
gen age = v117
gen sex = v118
gen mar = v120
gen edyrs = v122
tab v127
tab v128
gen hhinc = v128
sort countryx
recode v109 (2=0), gen(unemp_i)
save "C:\Data\ISSP85merge.dta", replace
```

*ISSP 1990 Role of Gov II

```
use "C:\Data\ISSP_90_RoleGovII.dta", clear
recode v3
    (1=36) (2=278) (3=280) (4=826) (5=828) (6=840) (7=348) (8=380) (9=372) (10=578) (11
    =376), gen(countryx)
gen year=1990
recode v49 (1=4) (2=3) (3=2) (4=1), gen(govjobs)
recode v55 (1=4) (2=3) (3=2) (4=1), gen(govincdiff)
recode v50 v51 v52 v53 v54 (1=4) (2=3) (3=2) (4=1), gen(govprices govhealth
    govold govind govunemp)
gen weight90 = v114
label var weight90 "Weight 90"

gen sex = v59
gen age = v60
gen mar = v61
gen lifep = v62
gen isco = v66
gen edyrs = v80
gen lr = v87
gen hhinc = v100
recode v63 (5=1) (1/4=0) (6/10=0), gen(unemp_i)
sort countryx
```

```
save "C:\Data\ISSP90merge.dta", replace
```

*ISSP 1991 Religion I

```
use "C:\Data\ISSP_91_ReligionI.dta", clear

recode v3
    (18=36) (1=278) (2=280) (3=826) (4=828) (5=840) (6=348) (7=528) (8=380) (9=372) (10
    =578) (11=40) (12=705) (13=616) (14=376) (15=608) (16=554) (17=643),
    gen(countryx)
gen year=1991
recode v5 (1=4) (2=3) (3=2) (4=1), gen(govjobs)
recode v6 (1=4) (2=3) (3=2) (4=1), gen(govincdiff)
gen weight91 = v131
label var weight91 "Weight 91"

*NO WEIGHT specified for Australia or it is 0 (highly unlikely), so I will
    recode it to 1 so that Australia doesn't get dropped after the collapse
    with weights
replace weight91=1 if countryx==36
gen sex = v77
gen age = v78
gen mar = v79
gen lifep = v80
gen isco = v84
gen edyrs = v98
gen lr = v105
gen hhinc = v118
recode v81 (5=1) (1/4=0) (6/10=0), gen(unemp_i)
sort countryx

save "C:\Data\ISSP91merge.dta", replace
```

*ISSP 1996 Role of Gov III

```
use "C:\Data\ISSP_96_RoleGovIII.dta", clear

recode v3
    (1=36) (2=278) (3=280) (4=826) (5=828) (6=840) (7=40) (8=348) (9=380) (10=372) (11=
    528) (12=578) (13=752) (14=203) (15=705) (16=616) (17=100) (18=643) (19=554) (20=1
    24) (21=608) (22=376) (23=376) (24=392) (25=724) (26=428) (27=250) (28=196) (30=75
    6), gen(countryx)
gen year=1996
recode v36 (1=4) (2=3) (3=2) (4=1), gen(govjobs)
recode v42 (1=4) (2=3) (3=2) (4=1), gen(govincdiff)
recode v37 v38 v39 v40 v41 (1=4) (2=3) (3=2) (4=1), gen(govprices govhealth
    govold govind govunemp)
gen weight96 = v325
label var weight96 "Weight 96"
gen sex = v200
gen age = v201
gen mar = v202
gen lifep = v203
gen edyrs = v204
gen isco = v208
gen lrS = v223
recode v206 (5=1) (1/4=0) (6/10=0), gen(unemp_i)
sort countryx

save "C:\Data\ISSP96merge.dta", replace
```

*ISSP 1998 Religion II

```
use "C:\Data\ISSP_98_ReligionII.dta", clear
```

```

recode v3
  (1=36) (2=278) (3=280) (4=826) (5=828) (6=840) (7=40) (8=348) (9=380) (10=372) (11=
  528) (12=578) (13=752) (14=203) (15=705) (16=616) (17=100) (18=643) (19=554) (20=1
  24) (21=608) (22=376) (23=376) (24=392) (25=724) (26=428) (27=703) (28=250) (29=19
  6) (30=620) (31=152) (32=208) (33=756), gen(countryx)
gen year=1998
recode v5 (1=4) (2=3) (3=2) (4=1), gen(govjobs)
recode v6 (1=4) (2=3) (3=2) (4=1), gen(govincdiff)
gen weight98 = v316
label var weight98 "Weight 98"
gen sex = v200
gen age = v201
gen mar = v202
gen lifep = v203
gen edyrs = v204
gen isco = v208
gen lrS = v223
recode v206 (5=1) (1/4=0) (6/10=0), gen(unemp_i)
sort countryx

save "C:\Data\ISSP98merge.dta", replace

```

***ISSP 2006 RoG**

```

use "C:\Data\ISSP_06_RoleGov.dta", clear

clonevar countryx = V3a
gen year=2006
recode V25 (1=4) (2=3) (3=2) (4=1), gen(govjobs)
tab govjobs
recode V31 (1=4) (2=3) (3=2) (4=1), gen(govincdiff)
tab govincdiff
gen weight06 = WEIGHT
gen sex = SEX
gen age = AGE
gen mar = MARITAL
gen lifep = COHAB
gen edyrs = EDUCYRS
gen isco = ISCO88
gen lrS = PARTY_LR
recode WRKST (5=1) (1/4=0) (6/10=0), gen(unemp_i)
sort countryx

save "C:\Data\ISSP06merge.dta", replace

```

11.2.2 *Scale Validation (2-items/7-items)

```

use "C:\Data\ISSP96merge.dta ", clear

*Use the 1996 data to validate the two items as part of the larger scale

pwcorr govjobs govincdiff govprices govhealth govold govind govunemp sex age
  edyrs
factor govjobs govincdiff govprices govhealth govold govind govunemp
factor govjobs govincdiff govprices govhealth govold govind govunemp, factor(1)
rotate, varimax

```

*11.2.3 *Merge*

```

use "C:\Data\ISSP98merge.dta", clear

append using "C:\Data\ISSP85merge.dta", keep(countryx year govjobs govincdiff
sex age mar edyrs isco unemp_i weight85)
append using "C:\Data\ISSP90merge.dta", keep(countryx year govjobs govincdiff
sex age mar lifep edyrs isco unemp_i lr weight90)
append using "C:\Data\ISSP91merge.dta", keep(countryx year govjobs govincdiff
sex age mar lifep edyrs isco unemp_i lr weight91)
append using "C:\Data\ISSP96merge.dta", keep(countryx year govjobs govincdiff
sex age mar lifep edyrs isco unemp_i lrS weight96)
append using "C:\Data\ISSP06merge.dta", keep(countryx year govjobs govincdiff
sex age mar lifep edyrs isco unemp_i lrS weight06)

*Fix Weights
*1985 has a very strange weight variable that it seems will fall within the
appropriate range if divided by 100k. I cannot find anything online that
discusses this problem so I will use it as /100,000.

gen weight85adj = weight85/100000
egen weight=rowmean(weight85adj weight90 weight91 weight96 weight98 weight06)
drop weight85 weight85adj weight90 weight91 weight96 weight98 weight06

*Generate Unique Case ID
*Last two digits are the year and the preceeding digits are the ISO country
codes.

recode countryx (278 280=276)

gen id = .

replace id = 62006 if year==2006 & countryx==620
replace id = 3686 if year==1986 & countryx==36
replace id = 4086 if year==1986 & countryx==40
replace id = 27685 if year==1986 & countryx==276
*Questions not asked in Italy in 85
replace id = 38086 if year==1986 & countryx==380
replace id = 82685 if year==1986 & countryx==826
replace id = 84085 if year==1986 & countryx==840
replace id = 3690 if year==1990 & countryx==36
replace id = 3693 if year==1991 & countryx==36
replace id = 3696 if year==1996 & countryx==36
replace id = 3698 if year==1998 & countryx==36
replace id = 4093 if year==1991 & countryx==40
replace id = 4099 if year==1998 & countryx==40
replace id = 12496 if year==1996 & countryx==124
replace id = 12499 if year==1998 & countryx==124
replace id = 25097 if year==1996 & countryx==250
replace id = 25098 if year==1998 & countryx==250
replace id = 27690 if year==1990 & countryx==276
replace id = 27691 if year==1991 & countryx==276
replace id = 27696 if year==1996 & countryx==276
replace id = 27698 if year==1998 & countryx==276
replace id = 37291 if year==1990 & countryx==372
replace id = 37291 if year==1991 & countryx==372
replace id = 37296 if year==1996 & countryx==372
replace id = 37298 if year==1998 & countryx==372
replace id = 38091 if year==1990 & countryx==380
replace id = 38090 if year==1991 & countryx==380
replace id = 38096 if year==1996 & countryx==380
replace id = 38098 if year==1998 & countryx==380
replace id = 39296 if year==1996 & countryx==392
replace id = 39298 if year==1998 & countryx==392

```

```

replace id = 52891 if year==1991 & countryx==528
replace id = 52898 if year==1998 & countryx==528
replace id = 55491 if year==1991 & countryx==554
replace id = 55497 if year==1996 & countryx==554
replace id = 55498 if year==1998 & countryx==554
replace id = 57890 if year==1990 & countryx==578
replace id = 57891 if year==1991 & countryx==578
replace id = 57896 if year==1996 & countryx==578
replace id = 57898 if year==1998 & countryx==578
replace id = 72496 if year==1996 & countryx==724
replace id = 72498 if year==1998 & countryx==724
replace id = 75296 if year==1996 & countryx==752
replace id = 75298 if year==1998 & countryx==752
replace id = 75698 if year==1996 & countryx==756
replace id = 75699 if year==1998 & countryx==756
replace id = 82690 if year==1990 & countryx==826
replace id = 82691 if year==1991 & countryx==826
replace id = 82696 if year==1996 & countryx==826
replace id = 82698 if year==1998 & countryx==826
replace id = 84090 if year==1990 & countryx==840
replace id = 84091 if year==1991 & countryx==840
replace id = 84096 if year==1996 & countryx==840
replace id = 84098 if year==1998 & countryx==840
replace id = 3606 if year==2006 & countryx==36
replace id = 12406 if year==2006 & countryx==124
replace id = 20806 if year==2006 & countryx==208
replace id = 24606 if year==2006 & countryx==246
replace id = 25006 if year==2006 & countryx==250
replace id = 27606 if year==2006 & countryx==276
replace id = 82606 if year==2006 & countryx==826
replace id = 37206 if year==2006 & countryx==372
replace id = 39206 if year==2006 & countryx==392
replace id = 52806 if year==2006 & countryx==528
replace id = 55406 if year==2006 & countryx==554
replace id = 57806 if year==2006 & countryx==578
replace id = 72406 if year==2006 & countryx==724
replace id = 75206 if year==2006 & countryx==752
replace id = 75606 if year==2006 & countryx==756
replace id = 84006 if year==2006 & countryx==840

```

**The country-level measures are merged in from various sources, see Table 21 for details. All data are available in Table 43 and Table 44. The variable names used in the syntax are as follows.*

Public Opinion	govsAT
Social Policy	socprotS
FLP	femlabor
Married	married
Taxes Collected	taxpct
Military Spending	milexpc
Aged	aged
Corporatism	corpce
Individualism	hofindiv
English-speaking	english
Year	yearm
Education	edys
GDP	gdp_ppp

```
*you must install stata2mplus to use this function
*after all variables are merged in, this command converts data from .dta to .dat

stata2mplus using OpPol
```

11.2.4 *Figures

```
label define idc 3606 "OZ'06" 3686 "OZ'86" 3690 "OZ'90" 3696 "OZ'96" 3698
  "OZ'98" 4093 "AT'93" 4099 "AT'99" 12406 "CA'06" 12496 "CA'96" 20806
  "DK'08" 24606 "FI'06" 25006 "FR'06" 25097 "FR'97" 25098 "FR'98" 27606
  "DE'06" 27685 "DE'85" 27690 "DE'90" 27691 "DE'91" 27696 "DE'96" 27698
  "DE'98" 37206 "IE'06" 37291 "IE'91" 37296 "IE'96" 37298 "IE'98" 38091
  "IT'91" 38096 "IT'96" 38098 "IT'98" 39206 "JP'06" 39296 "JP'96" 39298
  "JP'98" 52806 "NL'06" 52891 "NL'91" 52898 "NL'98" 55406 "NZ'08" 55491
  "NZ'91" 55497 "NZ'97" 55498 "NZ'98" 57806 "NO'06" 57890 "NO'90" 57896
  "NO'96" 57898 "NO'98" 62006 "PT'06" 72406 "ES'06" 72496 "ES'96" 72498
  "ES'98" 75206 "SE'06" 75296 "SE'96" 75298 "SE'98" 75606 "CH'07" 75699
  "CH'99" 82606 "GB'06" 82685 "GB'85" 82690 "GB'90" 82691 "GB'91" 82696
  "GB'96" 82698 "GB'98" 84006 "US'06" 84085 "US'85" 84090 "US'90" 84091
  "US'91" 84096 "US'96" 84098 "US'98"
label val id idc
```

*Figure. Public Opinion and Social Policy in 18 Countries

```
gen labelp=3
replace labelp = 9 if id==12496 | id==39206 | id==82696 | id==82606 | id==52896
  | id==27696 | id==25006 | id==75206 | id==27685 | id==4093
replace labelp=6 if id==3606 | id==55498 | id==25097 | id==52898 | id==57890 |
  id==82691
replace labelp=10 if id==3696
replace labelp=12 if id==27691 | id==57896
twoway (scatter socprotS govSAT if english==1, mlabel(id) msymbol(O)
  mlabvpos(labelp) mlabs(vsmall) mlabc(black) mcolor(black) mlabgap(.1))
  (scatter socprotS govSAT if english==0, mlabel(id) msymbol(O)
  mlabvpos(labelp) mlabs(vsmall) mlabc(black) mcolor(black) mlabgap(.1)),
  legend(off) xtitle("Public Opinion: Support of Social Policy")
  ytitle("Social Policy: Welfare Spending as a % of GDP")
```

*Figure. Public Opinion and Social Policy in 18 Countries by Institution

```
twoway (scatter socprotS govSAT if english==1, msymbol(X) mcolor(black))
  (scatter socprotS govSAT if english==0, msymbol(Th) mcolor(black)),
  xtitle("Public Opinion: Support of Social Policy") ytitle("Social Policy:
  Welfare Spending as a % of GDP") legend(order(1 "English-speaking" 2
  "European"))
```

*Figure. Individualistic Social Norms and Social Policy

```
preserve
collapse hofindiv govSAT corpc socprotS english, by(countryx)
tab countryx
label define countryx 36 "OZ" 40 "AT" 124 "CA" 208 "DK" 246 "FI" 250 "FR" 276
  "DE" 372 "IE" 380 "IT" 392 "JP" 528 "NT" 554 "NZ" 578 "NO" 620 "PT" 724
  "ES" 752 "SE" 756 "CH" 826 "GB" 840 "US"
label val countryx countryx

twoway (scatter govSAT hofindiv if english==1, msymbol(O) mcolor(black)
  mlabel(countryx) mlabc(black)) (scatter govSAT hofindiv if english==0,
  msymbol(O) mcolor(black) mlabel(countryx) mlabc(black)), xtitle("Social
```

```
Institutions: Degree of Individualism") ytitle("Public Opinion: Support
of Social Policy") legend(off)
```

*It makes more sense to compare social policy spending in just one year. Take 2006 social policy spending and plot all countries. Otherwise they are biased by time.

```
gen socprotX =.
replace socprotX = 16.1 if countryx==36
replace socprotX = 27.0 if countryx==40
replace socprotX = 16.9 if countryx==124
replace socprotX = 26.6 if countryx==208
replace socprotX = 25.9 if countryx==246
replace socprotX = 28.6 if countryx==250
replace socprotX = 26.1 if countryx==276
replace socprotX = 15.8 if countryx==372
replace socprotX = 25.1 if countryx==380
replace socprotX = 18.4 if countryx==392
replace socprotX = 20.3 if countryx==528
replace socprotX = 19.0 if countryx==554
replace socprotX = 20.4 if countryx==578
replace socprotX = 22.9 if countryx==620
replace socprotX = 21.4 if countryx==724
replace socprotX = 28.4 if countryx==752
replace socprotX = 19.2 if countryx==756
replace socprotX = 20.4 if countryx==826
replace socprotX = 16.0 if countryx==840

gen labelX = 3
replace labelX = 9 if countryx == 36 | countryx == 250
twoway (scatter socprotX hofindiv if english==1, msymbol(0) mcolor(black)
mlabel(countryx) mlabc(black) mlabvpos(labelX)) (scatter socprotX
hofindiv if english==0, msymbol(0) mcolor(black) mlabel(countryx)
mlabc(black) mlabvpos(labelX)), xtitle("Social Institutions: Degreee of
Individualism") ytitle("Social Policy: Welfare Spending as a % of GDP")
legend(off)
```

*Figure. Corporatist Political Institutions, Public Opinion and Social Policy

```
gen labelp=3
replace labelp=9 if countryx==578

twoway (scatter govSAT corpc if english==1, msymbol(0) mcolor(black)
mlabel(countryx) mlabvpos(labelp) mlabc(black)) (scatter govSAT corpc if
english==0, msymbol(0) mcolor(black) mlabel(countryx) mlabvpos(labelp)
mlabc(black)), xtitle("Political Institutions: Degreee of Corporatism")
ytitle("Public Opinion: Support of Social Policy") legend(off)

gen labelXX=3
replace labelXX=9 if countryx==840 | countryx==246
twoway (scatter socprotX corpc if english==1, msymbol(0) mcolor(black)
mlabel(countryx) mlabvpos(labelXX) mlabc(black)) (scatter socprotX corpc
if english==0, msymbol(0) mcolor(black) mlabel(countryx)
mlabvpos(labelXX) mlabc(black)), xtitle("Political Institutions: Degreee
of Corporatism") ytitle("Social Policy: Welfare Spending as a % of GDP ")
legend(off)
```

```
restore
```

*Descriptive Statistics for Public Opinion and Social Policy Dataset

```
use "/Data/OpPol.dta", clear

sum govSAT socprotS aged married taxpct femlabor hofindiv corpc english
sum milexpc if countryx!=840
*country level
preserve
```

```
collapse govAT socprotS aged married femlabor hofindiv corpc english taxpct
      milexpc, by(countryx)
sum govAT socprotS aged married femlabor hofindiv corpc english taxpct
sum milexpc if countryx!=840
restore
```

*Correlations for All Variables

```
pwcorr govAT socprotS femlabor married taxpct milexpc aged hofindiv corpc
      english yearm edyrs gdp_ppp
pwcorr govAT socprotS femlabor married taxpct milexpc aged hofindiv corpc
      english yearm edyrs gdp_ppp if countryx!=840
*alternative correlations w/out US for 2nd Sensitivity model because US is a
      massive outlier in military spending
*output a second dataset for MPlus

drop if countryx==840

stata2mplus using OpPolw
```

11.3 MPlus Syntax

Uni-Directional Regressions

!This is an example of the regression predicting Public Opinion. Variations on this were produced using different mixtures of variables as shown in Table 23.

Data:

File is C:/Data/OpPol.dat ;

Variable:

Names are

id countryx edyrs socprotS gdp_ppp aged femlabor
taxpct hofindiv govAT married corpc yearm english
milexpc;

Usevariables are govAT aged edyrs femlabor;

Cluster is countryx;

Analysis:

Type = COMPLEX ;

Model:

govAT ON aged edyrs femlabor;

Output:

RES STDYX;

!This is an example of the regression predicting Social Policy. Variations on this were produced using different mixtures of variables as shown in Table 24.

Data:

File is C:/Data/OpPol.dat ;

Variable:

Names are

```

id countryx edyrs socprotS gdp_ppp aged femlabor
taxpct hofindiv govSAT married corpc yearm english
milexpc;
Usevariables are socprotS married aged femlabor;
Cluster is countryx;
Analysis:
Type = COMPLEX ;
Model:
socprotS ON married aged femlabor;
Output:
RES STDYX;

```

Reciprocal Model w/ Instrumental Variables

!This model is one variation of the different models employed to test for reciprocal causation between Public Opinion and Social Policy, as shown in Table 25. The error specified for Public Opinion is calculated from the alpha reliability of the two-items used to measure public opinion at the individual level. Alternative instrumental variables are modeled similarly as shown in Table 48 and Table 50. The model using Military Spending as an instrument is run on a datafile with the US cases dropped.

```

Data:
File is C:/Data/OpPol.dat ;
Variable:
Names are
id countryx edyrs socprotS gdp_ppp aged femlabor
taxpct hofindiv govSAT married corpc yearm english
milexpc;
Usevariables are
countryx socprotS govSAT corpc married femlabor;
Missing are all (-9999) ;
Cluster is countryx;
Analysis:
Type = COMPLEX;
!MLR is default estimator

Model:
govSAT (e1);
govSAT ON socprotS corpc femlabor;
socprotS ON govSAT corpc married;
Model Constraint:
e1=.3469;
Output:
STDYX;
RES;
TECH4;

```

I claim all work in this dissertation as my own original thought, unless otherwise referenced. I hereby certify that this dissertation was completed without any unauthorized aids. All sources and aids that I utilized are properly referenced in the text. All excerpts and ideas that I took from others are also referenced in the text. I certify that none of the work in this manuscript was plagiarized consistent with academic ethics and the honor codes of the University of Bremen and Jacobs University, Bremen.

Nate Breznau

A handwritten signature in black ink, appearing to be 'Nate Breznau', with a long horizontal line extending to the right.

Wednesday, July 10, 2013, Bremen, Germany