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The Political Economy of Financial Risk & Preferences

Anna auf dem Brinke

Thesis submitted for assessment with a view to
obtaining the degree of Doctor of Political and Social Sciences
of the European University Institute

Florence, 29 May 2015 (defence)

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Examining Board

Prof. Pepper D. Culpepper, European University Institute (Supervisor)
Prof. Sven Steinmo, European University Institute
Prof. Ben W. Ansell, University of Oxford
Prof. Jonas Pontusson, Université de Genève

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Starting my studies at University College London, I became fascinated by how my fellow students dealt with the sudden increase in tuition from one year to the other: They just borrowed the money and moved on. The degree, after all, would be more than worth it. Continuing my studies at the London School of Economics, where master degrees are even more expensive, I was intrigued by the decisions my classmates made: It made me wonder how the cost of their degree changed what they wanted from life. This dissertation is very much inspired by my experience as a student in London. I investigate the link between taking on financial risks as an individual, such as borrowing money for one's education, and one's views on fair policies and what party one supports. This project could not have happened without the support of many individuals and institutions and it is my great pleasure to thank them here.

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Time has become more precious with the arrival of the two, and it has made me more productive. Still, I would not have been able to finish my dissertation (in less than five years) without the help of my husband Robert. I wish to thank him for his unconditional support and encouragement. He made the impossible possible: allowing me to write my dissertation, organize research trips and stays, attend numerous conferences and workshops, while being the best dad in the world – not to mention that he finished his PhD even faster. I married my best friend and the love of my life. I am grateful beyond words for how far we have come together and I am looking forward to all the new adventures to come.

Abstract

Does exposure to financial market risk lead to a shift to the political left? This dissertation studies the effect of financial risk on policy and party preferences. I analyze three different types of financial risk: student debt, mortgages, and private pension savings. They are the result of the three most important financial investments of households. I examine their effect on attitudes towards taxation, labor market, monetary, and social policies, as well as party support, and vote choice in the 2000s. This decade witnessed both a boom and bust of financial markets.

All financial investments have in common that they first lower income, but promise higher income in the future. They are also substitutes for social insurance and other social benefits. Following the median voter theorem, there should be a shift to policies and parties on the right of the political spectrum when income increases. At the same time, individuals are exposed to financial risks: What happens if the investment does not pay off? Therefore, individuals will demand policies that both protect the returns of their investment as well as shelter them from risk. I argue that there are four effects: the income effect, the insurance effect, the risk effect, and the crisis effect. The income effect leads to a dislike for higher taxation. The insurance effect reduces demand for redistribution. The risk effect leads to different demands for different targeted policies, and the crisis effect reinforces both the income and risk effect.

Analyzing panel and survey data from the United Kingdom and United States, as well as a comparative data, I show that savers are united and borrowers divided. I find that financial market risk, unlike labor market risk and contrary to what we would expect from the literature on the effect of globalization in individual attitudes towards the state, moves individuals further to the right. The crisis reinforced this effect.

This dissertation speaks to previous research in welfare state retrenchment, new social risks, and inequality in post-industrial economies. It sheds light on the question of why we have not seen a new powerful group fighting for redistribution in the wake of the last crisis.

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Chapter 1

Introduction

1.1 Financial Risk & the Welfare State

The meltdown in 2007 led to the most severe financial and economic crisis since the Great Depression giving rise to new economic uncertainties: Millions of people lost their jobs, struggling to get by while incomes fell. Savers lost their savings. Debtors were not able to repay their debt. Some went bankrupt and had to leave their homes. This boom and bust of the financial market in the 2000s were unprecedented in modern economic history as Shiller (2007) shows.

The recession was triggered by an unprecedented increase in subprime mortgages - sustained by a credit and house price bubble - in the United States. Banks all around the world, but in particular in Western Europe, entered the American market and bought large amounts of securities based on subprime mortgages.

This meant that most major banks followed the same strategy, relied on the same products, and banked on the same growth model: rising house prices and universal credit access. When the bubble burst, it laid open structural imbalances around the world.

Because of the interconnectedness of financial markets, the crisis spread quickly causing the Great Recession. Iversen and Soskice (2012) argue that regulatory failure lay at the heart of two fundamental problems: high-risk lending activities concentrated in interdependent financial institutions, and global trade imbalances. Because the financial sector is concentrated in liberal market economies and the export sector in coordinated market economies, the disconnect between the two was inevitable.

Crises often bring change. Yet, little has changed. If anything, debt levels are

still rising. However, debt is not always bad. In fact, it can be an efficient tool for debtors and creditors to spread their money more evenly over time. But the financial crisis demonstrated just how volatile financial investments were. And very high debt levels do matter. Global debt levels are at their highest point ever. Most households were affected. Most advanced capitalist economies had moved from employment to asset dominance, as Ansell (2012b) argues. While wages were the prime source of income for most households following World War II, the importance of assets had started to grow in the 1980s. Wages became stable, but also stagnant. As Graeber (2011) puts it, instead of demanding higher wages, individuals, in particular in the liberal market economies, were encouraged to invest themselves: Invest in their education, save for a house, or invest money for retirement. Investing was no longer a business strategy. For a growing number of households it became the method to finance everyday needs (Fligstein and Goldstein, 2015). While wages were stable and stagnant, asset bubbles became the new source of volatility.

Crisis can be critical junctures that allow for change (e.g. Capoccia and Kelemen, 2007). In the comparative political economy literature, as Bermeo and Pontusson (2012b) point out, we often find that financial and economic crises trigger a reshaping of the political landscape: New interest groups evolve along new conflict lines, the electorate realigns, parties react, bringing about policy and institutional changes. However, as they observe, the financial crisis of 2007 followed by the Great Recession did not bring about drastic changes. While they point out that old coalitions did break down, no new coalitions or alignments had taken over and demanded an overhaul of the system. The Occupy movement was loud and visible, but their protests did not give rise to a new successful coalition to fight inequality. This is surprising since many individuals lost their savings and suffered from growing debt: Both will lead to a substantial loss of wealth over their lifetime.

What do we know about the preferences of borrowers and savers? Do they want the same policies? Do their attitudes change during economic boom and bust? In this dissertation, I investigate the effect of financial risk on individual attitudes towards policies and parties in the years around the crisis.

There are two competing hypothesis on the effect of globalization on government spending. On one extreme end, Iversen and Cusack (2000) argue that globalization has no direct effect on the welfare state. They argue that deindustrialization changes national labor markets and that these structural changes drive the support for state spending. On the other end lies the compensation hypothesis: Globalization, the free movement of capital, goods, and services, leads to more redistribution (Cameron, 1978; Katzenstein, 1985; Rodrik, 1998) because individuals demand more protection

from the state.

In both lines of argument, the welfare state is understood not only as alleviating poverty, but, crucially, as correcting a number of market failures including missing insurance markets by collectivizing risk. A prominent example in this literature is the protection against labor market risks (Mares, 2003; Hall and Soskice, 2001; Estévez-Abe, Iversen and Soskice, 2001; Cusack, Iversen and Rehm, 2006; Rehm, 2009). Following this logic, if the welfare state corrects market failures and marketization increases the risk of market failures, then more market will also mean support for an expanded role of the government to counter the additional volatility in expected income. Is the same true for financial risk?

It has long been known that targeted benefits can win over new parts of the electorate and sustaining benefits can help to maintain constituencies (e.g. Flora and Heidenheimer, 1981). Cutting back public spending is a different matter: Pierson (1996) argued that while politicians claim credit for extending or guaranteeing benefits, they try to avoid blame for cutting spending for two main reasons: First, cuts are often concentrated and their effects immediately visible. This will prompt organized interests to fight cuts (Olson, 1965). Second, the human mind reacts more strongly to perceived losses than to gains (Kahneman and Tversky, 1979). For these reasons, Pierson argued that reducing public spending by taking away from certain groups and giving money back to the taxpayers, an unorganized and diffuse entity, would be a losing proposition.

Since the 1980s, governments have tried to save money by cutting benefits and services, such as education, state pensions, and different social benefits. This privatization of formerly publicly provided investments, benefits, and services, means that individuals both have to pay more out of their own pockets and that they shoulder a larger fraction of the risk at the individual level, or what some call a risk shift: from risk socialization to risk individualization (Hacker, 2005, 2006; Taylor-Gooby and Zinn, 2006; Schwartz, 2010). Such shifts, as Streeck and Thelen (2005) argue have been underestimated. For instance, once tuition fees were introduced, they could be increased more easily. Adding private pensions to the more traditional state and occupational pensions made the old system inconsistent. Housing policies could be redirected by relaxing borrowing conditions.

It is important to note, however, that the surge in household investments is only partly the result of welfare state retrenchment. The welfare state also supports individuals to buy a house or invest into a private pension. The state has thereby also become deeply involved in financial market regulations. Some financial market policies are therefore also social policies and part of the welfare state, as Schelkle

(2012) points out.

If a society encourages homeownership and private pension over state pensions, does it create a new constituency that favors policies that support cheap credit and high interest rates at the expense of higher taxation and more social benefits? In other words, does privatization create demand for more privatization? And will those that have to repay mortgages have the same preferences than those holding other debt, such as student debt, or do they have conflicting interests? Helping individuals in debt by reducing their repayment burden means necessarily redistributing money away from savers to borrowers. Guaranteeing investments for savers comes at the expense of borrowers. So does reducing risk mean the same for borrowers and savers?

In this dissertation, I study the effect of financial risk on preferences for policies and parties. I compare the three largest debts and saving components on the household balance sheets: Student debt, mortgages, and private pensions. I study two countries, the United Kingdom and the United States. In both countries, individuals have higher exposure to financial markets than in most other large advanced economies. Both countries have experienced a boom and bust in the 2000s. I compare the results to a cross-national analysis. In the following sections I outline the puzzle, present a summary of the argument, explain the empirical strategy, and provide an outline of this thesis.

1.1.1   Puzzle

Crises often bring change. The financial crisis, followed by the Great Recession, in the late 2000s, had devastating effects for many. Certainly, it had the potential to bring about change: Many individuals, in particular those relying on financial investments, saw their income safety threatened. Yet, we did not see significant electoral realignments as Bermeo and Pontusson (2012*a*) point out. Why is this the case?

It is commonly argued that preferences for policies and parties are driven by some weighted combination of two sets of attitudes: material self-interest and values. Exposure to financial risk affects material self-interest. It can be measured by current income and proxies such as education, occupation, or class, in order to capture expected and lifetime income.

Individuals with higher income are commonly associated with a dislike for redistribution (Alesina and Giuliano, 2009), which is theoretically borne out by the Romer-Meltzer-Richard model (Romer, 1975; Meltzer and Richard, 1981). Individuals who are exposed to risk are more likely to be in favor of redistribution and support the political left. To understand actual policy outcomes, as Rehm, Hacker

and Schlesinger (2012) argue, one has to analyze the joint distribution of income and risk. They show that if risk is concentrated at the low income level, support for the welfare state will be low. If risk is also concentrated at higher levels of income, then there can be a coalition across income groups.

Exposure to financial risk both increases the up- and downside of expected income. It reduces current income because of the investment. And it increases expected income, once the returns of the investment are realized[1]. However, it may happen that the investment does not pay off. In this case, both current income and future income are lower than they otherwise would have been. This is true for all three examples of financial risk - student debt, mortgages, and private pensions - that this dissertation studies: The risk of the investment is concentrated at the individual levels. Rather than having the state pay for education or provide a pension for the retired, the individual makes the investment decision. Some will be better off than under state provision, and some will be worse off.

Private financial investments have four effects: They lower current income, increase expected income, act as private insurance, and add exposure to financial risks. Higher income and private insurance make it more likely that individuals support parties on the right and oppose redistribution. Risk exposure makes it more likely that they vote for the left and are in favor of redistributive policies. How can we make sense of these conflicting predictions? Does exposure to financial risk lead to a shift to the political right or left? Is there a alliance between borrowers against savers? Was the financial crisis a game changer? Can these conflicting preferences explain why we have not seen a new cleavage among the winners and losers from the crisis?

1.1.2 Argument

In this dissertation, I argue that being exposed to financial risks has an impact on policy and party preferences. All private financial investments at the household level reduce current income and increase expected income. This is what I call the income effect. The income effect makes individuals opposed to higher taxation because their regular contributions to their private savings already reduce their disposable income. In addition, the investment is a private substitute for social insurance and social benefits. The insurance effect prompts individuals to be less supportive of redistribution because they have invested in their own private insurance to counter

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[1]The effect of the upside potential is also present for individuals who attain higher education without going into debt or who are homeowners without a mortgage. For individuals with debt and savings due to these investment, we must therefore pay attention to both the asset and endowment effect as well as the financial risk effect.

adverse-life effects.

However, the investment may not pay off. This is the risk effect. It prompts individuals to demand specific policies from the government to protect their private investment. These targeted policies depend on the type of the investment. Individuals with student debt want the government to regulate the labor market such that they can reap the returns from their degree. Individuals with mortgages want stable and rising house prices, as well as good borrowing conditions. Likewise, individuals with pension funds need stable and growing financial markets. Thus, the risk effect leads to the demand for targeted policies.

The crisis effect reinforces both the income and the risk effect: It reduces income and makes losing more likely. When I started this project, I expected that the crisis effect would counter the insurance effect. As it becomes clear that private insurance cannot not protect individuals against systemic risk, they demand more redistribution and protection from the state. However, I did not find this to be true. Instead, borrowers moved even further to the right. I argue that this can be explained by the logic of the investment: Because individuals have decided to invest privately, they want to protect their income and investment from higher taxation, in particular if their income has already fallen and they have lost part of their savings. Privatization does indeed create for demand for more and is self-sustaining and reinforcing.

I found that savers are united, while borrowers are divided. I argue that this is because borrowers need different policies to protect them because the returns to their investment are realized in different markets. With savings, there is a convergence of preferences. Moreover, just as private savings are a substitute (although just a close and not a perfect one) for government spending, so is private borrowing.

Thus, I argue that exposure to financial risk, unlike labor market risk, leads to a shift to the political right and less support for redistribution. My argument can help to shed light on the question of why we saw no successful coalition of borrowers formed even in the wake of the last devastating financial and economic crisis. In the following section, I explain the empirical strategy underpinning this argument.

1.2 Empirical Strategy

In this section, I discuss the empirical strategy. In the first part, I describe the case selection methodology and justify it by setting it into the context of the economic and financial trends and events of the 2000s. In the second part, I discuss theoretical challenges of the data analysis: Endogeneity, self-selection, omitted variable bias.

I explain how I deal with these challenges by matching and difference-in-difference analysis. I also discuss how to conceptualize and measure debt and savings. I conclude with three caveats.

1.2.1 Analytical Framework

The case selection is based on the key explanatory variables: debt and assets, while I take the variation in preferences for policies and parties as given. I select on the independent variables, which have to satisfy the following two conditions: First, debt and assets must be sufficiently high such that they have an impact on disposable income. Second, debt and assets must be clearly linked to an investment which alters expected income. All three, student debt, mortgages and private pension funds, unlike credit card debt, auto loans, or general financial assets, have a clear objective: They are investments that promise higher expected income.

In addition, the debt variables must also satisfy the following condition: The debt cannot easily be repaid. For these reasons, I study student debt and mortgage debt in the 2000s. Student debt by definition cannot be disowned, e.g. by selling off your degree. Mortgages can in principle be paid off but only if the value of the house is larger than the remaining mortgage to be paid off. I will show that both the United Kingdom and the United States in the 2000s satisfy these conditions.

I employ what Gerring and Seawright (2006) have coined the *extreme case* selection technique: Cases are chosen because they exhibit extreme values on independent or dependent variables (or both) that are of interest. While these cases are interesting in their own right and may tell us something about the effects of a general trend, one cannot readily generalize from these two cases alone. In standard case selections for causal analysis the aim is to identify cases that reproduce the relevant causal features of the underlying universe of cases (King, Keohane and Verba, 1994; Hancké, 2009). In quantitative research with a large sample, randomization helps to satisfy the conditions such that the central limit theorem applies: If each observation is randomly sampled and independently identically distributed (i.i.d.) and finite, then the average of the sum of observations converges to a normal distribution. In case study research, these objectives must be met by some non-random procedure of selecting the cases (Gerring, 2006; Mahoney, 2009). Thus, results obtained by the extreme case selection strategy, that I use in this dissertation, cannot be generalized across countries. However, the data sets that I use for each country will be representative of the underlying population. I will show that both the United Kingdom and the United States in the 2000s exhibit the features of extreme cases in the relevant parameters.

The financial crisis of 2007 had its origins in a house price bubble, combined with regulatory failure of new financial intermediaries and products and the political will to expand low-income homeownership. Starting at the end of the 1990s, house prices began an historically unprecedented run-up which accelerated through the early 2000s and peaked in 2006. While in the United States, subprime borrowing had already been part of the government's strategy - in the 1940s and 1950s the Federal Housing Administration offered subsidized and guaranteed home purchase loans, later also through the Veterans Administration as part of the GI Bill, and finally using Freddie Mac and Fannie Mae as financial institutions - the share of mortgages with high-risk nonprime value rose substantially.

While they were a niche product for a long time, they accounted for about a third of all annual mortgages in 2006. Because most people needed loans to purchase a home and because capital requirements and credit worthiness conditions were not clearly regulated for new financial intermediaries, many people with low incomes were able to take out a loan with no collateral. The house price bubble was sustained by a credit bubble.

As long as house prices rose, lending to low-income households was a win-win situation for the banks because they expanded their customer base while being insured against foreclosures because of the growing value of the property. In addition, the government also provided an implicit guarantee. In the New Deal in the 1930s, the financial market in the U.S. was split into three segments: capital markets which were dominated by investment banks and responsible for long-term capital needs, commercial banks which supplied short-term credit to businesses, and the thrifts, which were responsible for long-term mortgage loans financing homeownership for families, in particular with lower incomes. Mergers in the 1980s, new financial intermediaries, and regulatory gaps blurred the line between these different segments.

Both, the United States and the United Kingdom are nations of borrowers, not savers: The household savings rate during the 2000s was 4.4 percent in the UK and even lower, 2.4 percent, in the United States. By comparison, the OECD average was 6.6 percent (OECD, 2009a). From 1995 until 2012, the average debt-to-income ratio, where income is measured as net disposable income (NDI), across the set of OECD countries, has almost doubled from 65 percent to 127 percent. It peaked in 2010 at 137 percent. The highest debt levels occurred from 2003 onwards. The United Kingdom and the United States experienced a boom in 2007. In 2007, debt-to-household stood at 180 percent and 143 percent, respectively. Very few countries, in particular Germany but also the Japan, saw net declining rates (OECD, 2014a).

The United Kingdom and the United States are not only among the countries

Figure 1.1: Mortgage to Income, 2000s, Selected Countries
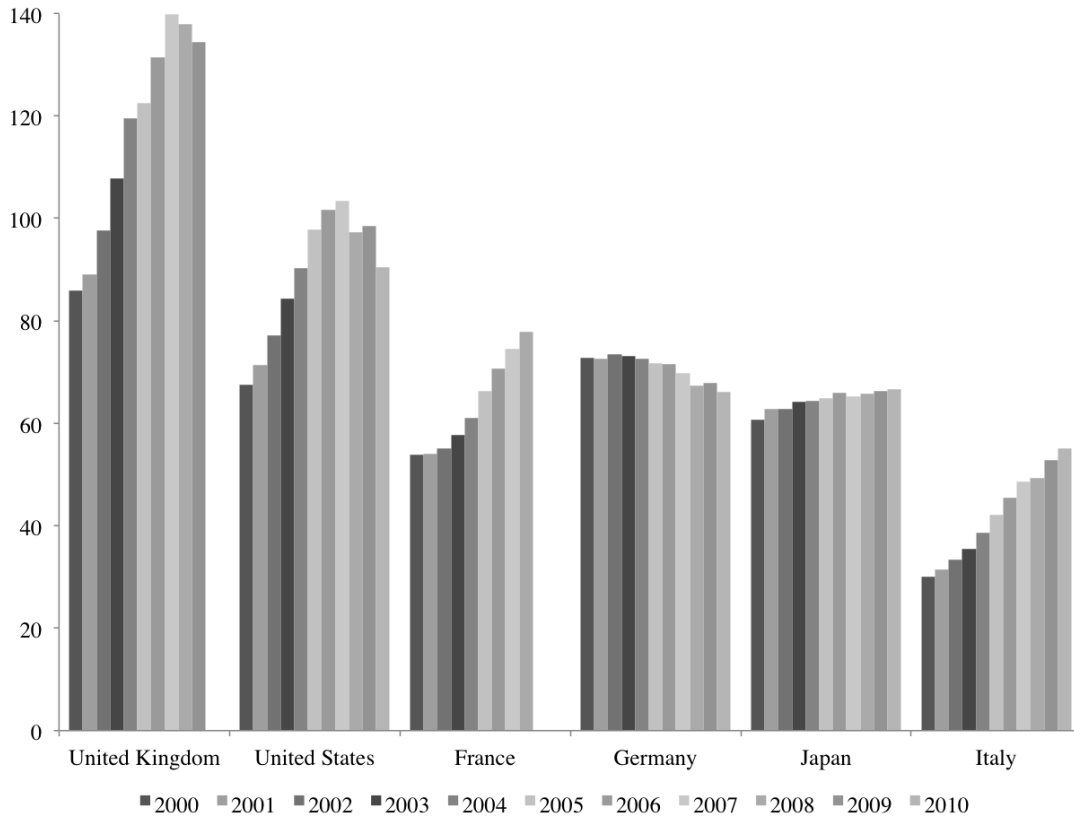
Figure shows mortgage as percentage of disposable income. Source: OECD (2014).

with the highest debt-to-income ratio. They also show the highest levels of house-holds holding financial assets. But while the increase in debt has become very real for many, the surge in assets has been unpredictable. The United Kingdom and United States have both very high and fluctuating wealth rates: From 2000 until 2011 financial assets fluctuated between 390 and 500 percent. By contrast, financial assets in France and Germany only amounted to volumes between 270 percent and 310 percent. Italian households ranged in-between with assets between 390 percent and 350 percent. Of the advanced capitalist societies with comparable data, only Japan showed higher levels of up to 550 percent.

Over time, financial assets in the UK and U.S. show clear cycles, dipping twice: first in 2002 and then again in 2008. This cyclical behavior was less pronounced in the other countries. Both boom and busts are much more clearly observed in those two countries (OECD, 2014*a*).

The largest part of this debt were mortgages. Because house price bubbles are pro-cyclical, the swings in debt can be explained by bubbles and bursts in the housing market. Potential buyers had an incentive to buy while house prices are increasing. In addition, if mortgages are tax deductible as they are in many countries including

the United States, there is a further incentive to buy during a boom. Figure 1.1
displays mortgages to disposable income in selected countries in the from 2000 to
2011, where available. In France, Germany, Italy, and Japan, mortgages to nominal
disposable income made up 54 percent and 73 percent in 2000. Ten years later, the
numbers were similar: between 56 percent and 67 percent. In the United Kingdom
and United States, by contrast, mortgages made up a larger proportion of household
debt. The mortgage crisis is clearly visible in 2007, with mortgages as high as
140 percent and 103 percent, respectively. The collapse of the house price bubble
triggered a foreclosure wave. In 2008, almost a quarter of all subprime borrowers
with adjustable rate mortgages were in foreclosure.

In the United States, student loans were the second largest balance after mort-
gage debt by the end of the 2000s. Mortgage debt in the United States grew from
3.62 trillion US-$ in 2000 and peaked at 9,294 trillion US-$ in the third quarter of
2008 as figure 1.2 shows. Since then, it has decreased a little to US-$ 8 trillion by
the end of 2012. Student loans have consistently grown from 0.241 trillion US-$ in
2003 to 0.966 trillion US-$ by the end of 2012. It is the only debt balance that has
grown over the entire period. Total debt has come down since the crisis of 2008 but
not returned to pre-crisis levels.

Student loans as a mass phenomenon are a novelty in the United Kingdom.
While the total volume when compared to the United States is still small, the
growth in student loan debt in volume and coverage is significant. The high levels of
student debt, just as the high mortgage levels, are no coincidence: Previous research
has shown that majoritarian systems (Busemeyer and Iversen, 2014) and economies
based on general skills (Iversen and Stephens, 2008) are more likely to have more
private spending on education.

The largest part of all financial assets are private pension funds. Among the
large economies, the United Kingdom and the United States are the countries where
pension funds are of highest importance. Figure 1.3 shows pension funds as a share
of GDP for selected countries between 2011 and 2012. Pension funds ranged between
58 percent and 96 percent in the two countries. The United States experienced a
pension fund boom in 2004 and 2005 with volumes just below 100 percent of GDP.

The U.S. have an earnings-related pay-as-you-go system and an additional oc-
cupational scheme. There is a safety-net in place for individuals with low incomes
but benefits are very low. Private savings therefore play an important role. In the
United Kingdom, the importance of pension funds has been consistently growing in
the 2000s with one dip in 2009. In 2012, pension funds are as large as 96 percent
of GDP. Since 1975, pensions in the United Kingdom have been earnings-related,

Figure 1.2: Debt Composition, 2000s, U.S.
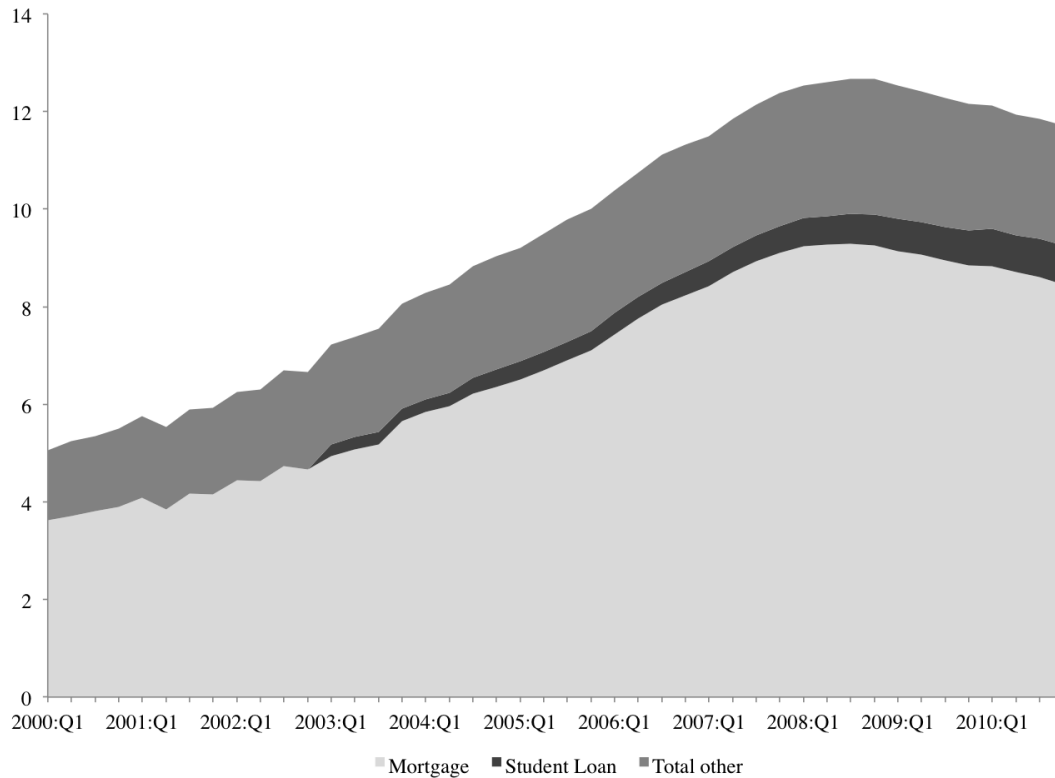
In trillion US-$. 'Total other' includes HE revolving credit, auto loans, credit cards, all other, and student loans until 2002:Q4. Source: Federal Reserve of New York (2012).

but there has been a flat-rate basic state pension which provides minimal assistance. The state spent relatively little on public pensions, similar to the United States. Private pension funds were encouraged but largely left unregulated. Since 2000, pension funds have been more strictly regulated and there was a move into government bonds with low returns.

Since private pensions are contribution-defined and not benefit-defined, many savers saw their retirement security eroded by the drop in financial assets in 2007-2007 (e.g. Ghilarducci, 2013). Individual, financial market-based pension plans also have a pro-cyclical effect just as mortgages (while defined-benefits schemes and social benefits in general are counter-cyclical and act as automatic stabilizers). Pension funds are much less important in other economies despite the fact that these economies, in particular Germany and Japan, have higher savings rates. In most countries, pension funds have been growing slowly, except for France. Still, levels are well below British and American ones.

This is in line with previous empirical observations about the welfare state. Esping-Andersen (1990) distinguished three types of welfare states: The liberal welfare state with predominantly means-tested assistance and comparatively modest

Figure 1.3: Pension Funds, 2000s, Selected Countries
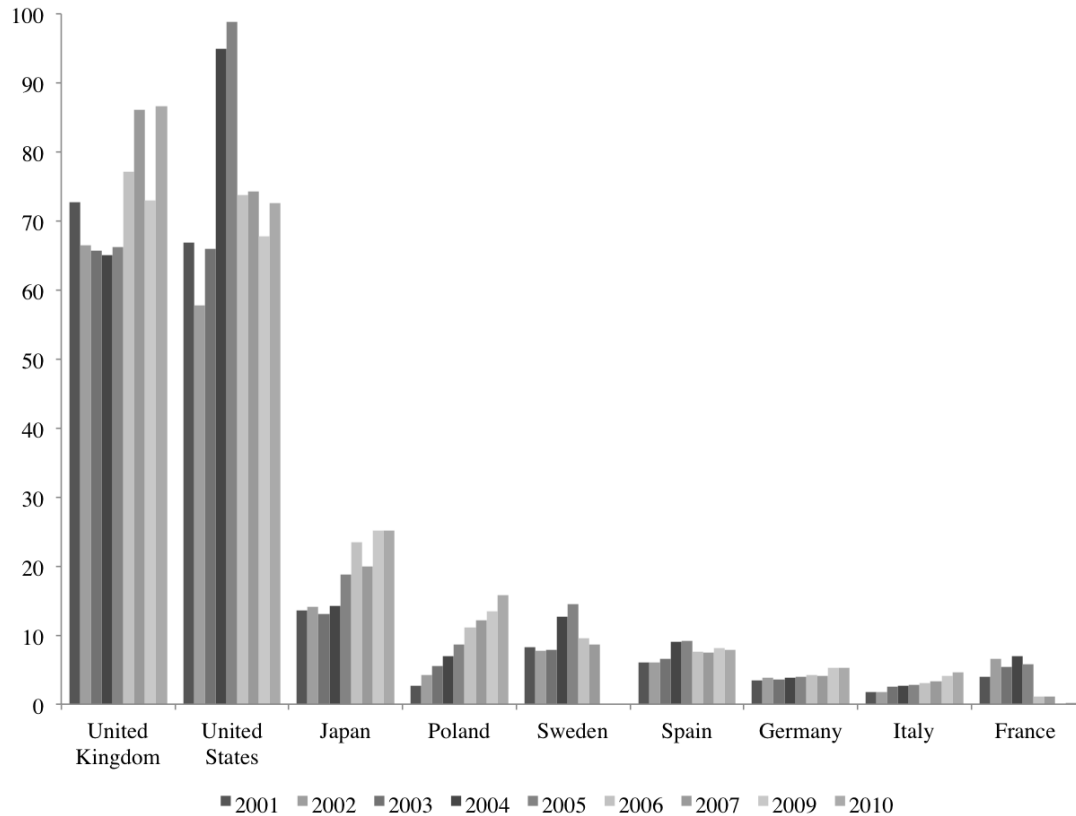
Figure shows pension funds as percentage of GDP. Source: OECD (2013).

benefits, the corporatist welfare state with earning-related benefits and compara-
tively little redistribution, and the social democratic welfare state with flat-rate
benefits following the principle of universalism. In the liberal economies, the United
Kingdom and even more so the United States, there has been a stronger emphasis
on market solutions. Mares (2003) argues that the retrenchment has been more
pronounced in the liberal and already less generous welfare states.

Through a range of new legislation, which started in the late 1970s, access to
credit has been extended over the years to new groups of borrowers. Among the
changes was deregulation, for instance of the interest rate, as well as changes in the
technical feasibility of fast credit scoring, new securitization policies, in particular
mortgage-backed securities. Why do people borrow to consume more when it re-
duces their purchasing power significantly? It has been argued that the deregulation
of the credit market was deliberately introduced to reduce demand for social pro-
tection. In particular, the increasing availability of mortgages has been interpreted
as a substitute for other income-smoothing social policies, most importantly old-age
protection (Schwartz and Seabrooke, 2008; Schwartz, 2009; Schwartz and Seabrooke,
2009; Schwartz, 2010; Trumbull, 2012). Housing and financial assets were embraced

by the political elite and the banking lobby as means to smooth consumption, ensure even vulnerable individuals against adverse-life events, and save for retirement - all while cutting back government social benefits. This view was shared by politicians from both sides of the aisle: access to market and social justice seemed to go hand in hand, in an almost Rawlsian fashion. Whatever the motives and the success of these policies, it is certainly no coincidence that economies with smaller welfare states extended the access to credit instead[2].

This thesis analyses the years 2000 until 2010. While it is true that households struggle until today and the data only include 2010, the financial crisis and the recession can be clearly distinguished from the current dump and they ended in 2009. The crisis effect in this dissertation is therefore limited to 2007-2009.

The long-term effects of the crisis and the effect of the continued recession and low growth rates are not explored in this dissertation. Comparing long-term trends will be more difficult as it is less plausible that everything else can be hold constant (expect for individual panel studies).

When conducting the empirical analysis, I did the same for the 1990s in the UK because the data were largely available. As expected, the effect of student debt and private pension were small and insignificant, underlying that they have only gained importance in the 2000s. Although the 2000s saw both a boom and a bust, it did not change the outlook of individuals completely. This is not surprising, of course, and confirms previous research. However, it also suggests that in the absence of seismic shifts, it will be even more difficult to detect an effect.

I suspect that this is not only true because of sticky preferences but also because of the quality of the data: Questions and information collected often lack the detail necessary to pick up changes in preferences. It is therefore plausible to look at the years 2000-2010, because student debt, mortgages and private pension savings were subject to a crisis that can be clearly defined. If we can find an effect given the quality of the data, this period is the most likely candidate even if preferences tend to be sticky.

In this section, I have outlined the case selection strategy and and shown that the United Kingdom and United States fit them well. Some other countries have also seen increases in student debt and mortgages. However, this is not a common experience for all advanced capitalist societies. Both countries are certainly pioneers in this area. Of course, it is no coincidence that these two political economies have both, high levels of debt and high levels of savings. The so-called "credit-as-welfare"

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[2]This is not to argue that also countries with large welfare states, such as Denmark, saw high levels of consumer lending - though, arguably, for different reasons.

policies (Trumbull, 2012), which are at the root of the surge in exposure to financial risk, can be seen in this context. I will return to this in the theoretical chapter 2. I have also discussed why I focus on the years 2000 until 2010. In the next section, I discuss methodological challenges and caveats.

1.2.2   Methodological Challenges

In this section, I will discuss general challenges to the study of attitudes and policies as well as the conceptualization and measurement of the key variables of interest. I include three caveats at the end.

There are three methodological challenges that research on the effects of policy changes on political preferences has to overcome: Endogeneity, self-selection, and omitted variable bias. First, if policies change attitudes and politicians react to opinion polls, then attitudes also change policies. The entire process has a strong endogenous element. An elegant strategy to deal with this problem is to analyze the effect of a policy change that only applies to some individuals by some rule and compare attitudes before and after the change. This suggests either a difference-in-difference approach or even a regression discontinuity design (Dunning, 2012). The data that are available for my research question allow for a difference-in-difference approach for some of the analyses. For both mortgages and pension there are sufficient observations both during the boom years as well as before and after the crisis. Similar to Margalit (2013), who investigates the effect of job loss during the Great Recession in the United States, I analyze the effect of having a pension or having a mortgage before and after the boom and bust for both the United States and the United Kingdom[3]. For robustness checks I analyze different intervals before and around the crisis years. This allows me to observe preferences during years of rising house prices and stock market prices as well as during years of sudden falls and a general economic depression.

A second solution is to disentangle the attitudes and policy field, which is the strategy that I adopt by looking at the effect of debt and savings on preferences for redistributive policies such as taxation and the redistribution from rich to poor households. Arguably, there is some correlation between social policy and the origin of household debt, but if any, this link will be weak. Moreover, the financial crisis of 2007 was an exogenous shock to preferences because it was not caused directly by policy reforms. The event window cannot be precisely defined such that standard event study methodology can be rigorously applied; however, it does provide an instance of an exogenous shock to preferences muting the endogeneity threat.

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[3]There are not sufficient observations for student debt to conduct the same analysis.

The second challenge is self-selection: Decisions to take out a student loan or a mortgage or save into a private pension fund are not random. For some, this is a matter of 'choice': They simply decide to take out a loan[4]. For others, the choice is triggered by a reform, for instance a change in tuition fees, mortgage or pension incentives. A third option would be that individuals choose to take out a loan or save in private funds because of values that they hold and the same values also lie at the root of their attitudes.

In the absence of a clear policy change, understanding *why* an individual has debt or assets lies beyond the scope of this dissertation. As Hollande (1986) remarked, there is the problem of unobservability of the unit causal effect: We only observe individuals with or without the 'treatment', but do not know what drove the selection in the first place. Since we do not have a natural experiment and a discontinuity design seems unfeasible, I provide robustness checks for my data analysis by matching on confounding factors. Matching has the goal to find for every individual with either debt or savings a second individual (or more) who is similar with respect to all relevant characteristics but has neither debt nor savings (Hollande, 1986; Ho et al., 2006; Diamond and Robinson, 2010; Stuart, 2010; Dunning, 2012). Student debt is the most likely candidate to suffer from self-selection because it is necessarily tied to higher education attainment. Higher education enrollment is strongly correlated with other socio-economic factors. Mortgages in the two countries are a mass phenomenon and not clearly associated with a distinct socio-economic class. Private pensions are more difficult to categorize; however, they are also not clearly associated with a distinct group[5].

Because student debt is clearly linked with other relevant explanations (e.g. parental income, wealth, education, type of higher education) and mortgages and private pensions are not, I match individuals and compare the results. If I cannot find an effect of self-selection for student debt, it seems plausible to conclude that self-selection into the other two financial investments based on factors that are also relevant for policy and party preferences is even weaker (although definitely not absent).

Since there is no theory of why individuals take out a student loan, I explore the causal power of different variables, such as parental income, parental education,

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[4]Why some individuals are more risk averse than others is a complex issue. In a twin study, Cronqvist and Siegel (2015) show that genetics can explain about a third of the variation in the propensity to save. The genetical effect is moderated by upbringing and the environment. Their findings suggest that the genetic component that regulates saving behavior is the same that determines whether an individual can be patient (time and self-control).

[5]I will return to the question of whether debt and savings cluster along well-known socio-economic groups in the last chapter.

number of books when growing up, test score results, type of higher education institution attended, years spent in higher education, type of degree, subject studied, gender, ethnicity, year of birth, and region of residence. I then keep those covariates that maximize observations by still explaining a large part of the variation in student debt.

While omitting variables may lead to bias, over-parametrization weakens the plausibility of the common support assumption and increases the variance. I use these variables to calculate the propensity score (Rosenbaum and Rubin, 1983). Then I match using two different matching methods and compare the results: nearest-neighbor propensity score matching and Mahalanobis matching adding the propensity score to the other covariates.

I use two different methods because I do not want to make assumptions about the relative weights of the covariates. Propensity score matching has the advantage of maximizing the fit subject to all covariates at once, but it has the disadvantage of reducing information. Mahalanobis matching retains more information at the expense of reducing the number of observations (but this depends on the restrictions of the model as well). In general, Mahalanobis metric matching uses a standardized Euclidean distance to match observations. It implies that all covariates have the same weight. Mahalanobis metric matching within a caliper defined by propensity score is the matching method that I present for most results. All non-treated individuals within the predetermined caliper of 0.25 times the standard deviation of the propensity score are selected, the Mahalanobis distances are calculated, and then matched using the smallest Mahalanobis distance.

I compare results with and without replacement. The advantage of replacement is that it minimizes the bias, but also increases the variance. This produces better matches because it allows an observation from the control group to be used more than once. Matching without replacement results in a larger bias, but reduces the variance. Where possible, I keep more than one control for each treated unit because it is more efficient than 1-1 matching (King et al., 2011). It is possible because there are more untreated than treated observations in the datasets.

For both methods, two assumptions must be satisfied. First, unconfoundedness: This assumption states that the conditional distribution of the outcome under the control treatment is identical to the distribution of the control group. Since we can never observe the treated group without the treatment outcome, this assumption cannot be directly tested[6].

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[6]In principle, there are ways of indirctly testing the assumption by being unable to reject the null hypothesis for a pseudo causal effect. However, this is not really a viable strategy in this setting.

The second assumption, which must be satisfied, is common support: Control variables must simulate an underlying regular assignment mechanism. In statistical terms, this means that the standardized difference between the treated and the untreated group should not be statistically significant.

The most common strategy in the matching literature is to match on a number of covariates and then compare the means of the treated and untreated group with respect to the outcome variable. A t-test indicates whether or not this difference is significant, in other words, whether there is a statistically significant effect of the treatment, in this case student debt. I have also done this for the student debt analysis. Sometimes the difference is statistically significant, sometimes it is not. However, I find these results inconclusive because the selection into treatment and control group is driven by another set of variables (and also time-wise prior) than variables that have been found to have an impact on preferences. For instance, current household income is a significant predictor of preferences, but current household income has no direct link to whether or not an individual has taken out a student loan. The same is true for marital status, union membership, etc. So the fact that the t-test when comparing treated and untreated is significant does not provide conclusive evidence to whether or not student debt makes a difference. I present the results of the matching protocol in the empirical chapters.

As a second strategy, I try to distinguish clearly between a debt (or savings) effect, and an education, income, or class, and values effect. To this end, I include a large set of control variables, including personal characteristics such as gender, age, ethnicity, marital status, region of residence, as well as a large set of variables that cover education and parental background. I control for income and add labor market characteristics, such as unemployment, union membership and also other values, measured by religious service attendance.

So far, I have addressed the methodological challenges in studying policy preferences. I move on with explaining how I measure the key variables of interest. I argue that the effect of debt and assets on preferences is categorically different from the effect of (negative) income on preferences: It does not suffice to measure debt just as income but with a negative sign. Likewise, one should not just add assets to income under the common term household wealth. I will explain why. The conceptualization of debt and assets matters both to measuring them as well as for interpreting the effect.

There are at least six plausible ways to measure debt and savings: First, debt and savings can be measured in nominal terms. This implies that the effect is linear and therefore constant. It has the advantage that the information entailed in the

variables in preserved. However, in a logistic regression, the effect will be difficult to interpret as large changes in the explanatory variable may be off the probabilistic scale.

Second, parallel to commonly used income measures, we may take a logarithmic transformation. This implies diminishing returns. At very high levels of income, the effect of an additional euro or dollar is smaller than at low levels. This approach preserves most of the information but does not postulate a linear effect. Since financial wealth and income are similar in this regard, a strong case can be made for measuring savings similarly to income. However, it seems plausible to argue that at very high levels of debt, an additional euro or dollar in debt may have a larger effect than at very low levels. When you are already in debt, taking on more debt may be more daunting then when you have little debt.

The third and opposite approach would be to take an exponential transformation. This entails that an additional euro or dollar of debt at high levels of debt has a larger effect than at low levels of debt (and vice versa for savings).

The fourth possibility would be to measure debt and savings relative to other individuals' debt and savings (compare income quintiles etc). This has the advantage that some of the information is preserved. To avoid the linearity constraint, we can then take dummies for each group. The disadvantage of this approach is that with debt and savings, there is often a large group of individuals with neither. As a consequence, the tail of the distribution is too thick and slicing the data into equal parts is not always possible.

The fifth possibility is to simply take dummies for debt and savings. This approach eliminates a lot of information and assumes that there is no difference between, say, one and 1,000,000 debt or savings. It has the advantage that it is easy to interpret and can account for the *experience* of having debt or savings.

The last option would be to take debt and savings as a proportion of income. The main disadvantage of this measure is that income often increase over time as individuals get more work experience. It falls upon retirement. Debt is most likely to be highest in the earlier days of the working life and then going to fall. Upon retirement it is usually low. Hence, income is an increasing, debt a decreasing function over time. Both will be relatively stable only after retirement. Measuring one in relation to the other may therefore be misleading and difficult to interpret.

For this dissertation, I have tested different measures of debt and savings. I have come to the conclusion that a simple dummy solution captures the effect best. The most simple measure was the easiest to interpret and produced the most convincing narrative.

Before I present the outline of this thesis, three caveats are in order: First, this dissertation assumes a simple and standardized world: Left-wing parties support higher taxation, predistribution and redistribution, active demand policy, and a large and protective government. Right-wing parties do just the opposite. There are only two parties.

Because of the majoritarian party system in the United Kingdom and the United States, and the two main polarized parties, this approach may be justified, but, of course, it is only an approximation. Past research has shown that preferences for redistribution are also an excellent predictor for party preferences (e.g. Cusack, Iversen and Rehm (2006)). In the UK and U.S., there are clear differences on redistribution issues between the two national parties: Both the Republican Party and the Conservative Party have been generally associated, with keeping taxes low for all citizens (Johnston, Hagen and Jamieson, 2004) and, in practice, with generating faster income growth among the very wealthy (Bartels, 2008). Relevant for this dissertation, the Democratic Party and the Labour Party are associated with higher taxation and redistribution, active demand management, and higher rates of inflation.

Of course, these are stylized facts. As Häusermann, Picot and Geering (2012) point out in their review of partisan politics, this simple connection between parties on the left and right and welfare state policies has been challenged. Boix (2000) finds that parties have an impact on fiscal and monetary policy, but that their impact is constraint by the extend of capital mobility and the exchange-rate regime. Conservative governments in OECD countries between the mid 1960s until the mid 1990s have engaged in more restrictive macroeconomic policies. They maintained high interest rates (above the OECD average) and balanced budgets. Left-wing governments, by contrast, engaged in expansionary policies with counter-cyclical budget measures. Both monetary and fiscal policies were expansionary, especially in liberal economies. Although Boix finds that the partisan effect got weaker over time, it still seems broadly right to associate expansionary fiscal and monetary policy with the left, rather than the rightfootnoteMore controversially, Boix also argues further that left-wing parties really have no specific macroeconomic pattern but rather opportunistically follow political business cycle strategies: expand before the election to get the credit and remain in office. .

Following the Mundell-Fleming model, the impossible trinity holds: In a world of free capital flows and fixed exchange rates, governments and central banks cannot have autonomous monetary policies. In the case of the UK and U.S., since they do not maintain fixed exchange rates regimes in the 2000s, they had more room to

maneuver, even during times of tight budgets. Scruggs and Allan (2004) find that parties still mater even in an age of welfare state retrenchment.

More can (and should) be said about how changes in preferences relate to party politics. However, this is beyond the scope of this dissertation. I concentrate on the effect of changes in the political economy on political preferences. I say little (or rather speculate) on the effects of party politics and policy outcomes. The role of politics in financial risk deserves more attention than this dissertation has given it. I will return to the link in the concluding chapter.

The second caveat concerns the quality of the available data. I use six large and well-known datasets. They are, to the best of my knowledge, the best available ones to address the research question. They are well-established surveys with representative samples and extensive background information about all respondents. They have been used extensively and in similar research projects and the items in the questionnaires are comparable to other large-scale studies. Still, they have shortcomings, which I discuss in more detail in the empirical sections. Because of these shortcomings, I have used different data sets to show that my results are consistent across different samples and with different measures of the key variables. Ansolabehere, Rodden and Snyder (2008) show that when averaging across multiple surveys, preferences are consistent and also related to vote choice. Following the same approach, I hope to show that even despite the limitations of the data available and potential measurement errors, we can draw interesting conclusions.

The third caveat that I would like to mention in the beginning is that this dissertation does not argue that financial risk changes everything: I show and interpret both findings and non-findings. I do not expect that all types of financial risk to change the long list of possible policy preferences. Nor do I argue that financial risk will change once and for all which party an individuals supports or whom he votes for. As I will show in more detail in the country studies, most surveys tend to underrepresent financial risk: I arrive at this conclusion by comparing aggregate distribution from other sources with the relevant distribution in the samples. Therefore, I expect that the effect of financial risk will become more visible once large surveys collect more information on them. This dissertation shows that even if the quality of data is not ideal, it is possible to come to meaningful conclusions about the effect of financial risk on preferences. This chapter concludes with an outline of the dissertation.

1.3 Outline

This dissertation proceeds as follows: In chapter 2, I review the assumptions and implications of the formal models, as well as empirical work in the field of expected income, labor market risk, and crisis. By building on previous work, I develop a model of financial risk and preferences and discuss the three applications, student debt, mortgage, and private pension.

The following three chapters are empirical: I test the hypotheses with two case studies and a cross-country comparison. The two case studies are the United Kingdom in chapter 3 and the United States in chapter 4. For both countries I work with longitudinal surveys. For the UK, I use the British Household Panel Survey, Understanding Society, and the British Social Attitudes Survey. For the U.S., I work with two different cohort studies of the National Longitudinal Survey of Youth. Each chapter starts with descriptive data, followed by an explanation of the empirical strategy. I conduct the same analysis for all three variables of interest, having student debt, a mortgage, or a private pension, separately. I test the effect of all three on policy and party preferences. Then I summarize the findings, compare the effects, and conclude.

In chapter 5, I ask whether there is a cleavage between borrowers and savers, and whether the losers have formed a successful coalition to address inequality. I compare the findings of the two case studies, and add a cross-national study based on data from the International Social Survey Programme. I conclude this chapter by summarizing the findings from all empirical research. This summary in section 5.5 provides an overview of all results and tries to unite them in a parsimonious framework.

I conclude this dissertation in chapter 6. I sum up and discuss the implications of my theoretical argument and empirical findings for inequality in advanced capitalist societies and develop ideas for further research.

Chapter 2

A Theory of Financial Risk & Preferences

2.1 Introduction

This dissertation analyzes the effect of financial risk on preferences. There is a large body of work on individual preferences for redistribution[1]. It is guided by the puzzle of why some societies are more unequal than others. Or in other words: Why do some redistribute more than others? Answers to this puzzle fall broadly into two categories: self-interest and values. Societies redistribute more if there are more individuals who benefit financially from the redistribution. And societies in which individuals believe, for one reason or another, that lower inequality is better, redistribute more. The argument in this dissertation belongs primarily into the first camp because financial investments and risk shape lifetime income and wealth. As financial investments make individuals richer, they demand less redistribution. But they want to be compensated for the risk that they have to bear.

In this chapter, I derive a theory of the effect of financial risk exposure on policy and party preferences. I start in section 2.2 with a review of the formal model that underpins preference research in political economy. I then focus on (empirical) work on three relevant dimensions for this dissertation: the effects of (expected) income, risk, and crisis. In section 2.3 I develop a theoretical argument for the effect of financial risk on preferences. Then I discuss the implications of the argument with reference to the three applications, student debt, mortgage, and private pension, in section 2.3.1. I sum up the hypotheses, which I will test in the following empirical chapters, in section 2.3.2, and conclude this chapter in section 2.4.

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[1]For a review of the relative strengths of material and value explanations, see for instance Alesina et al., 2001; Alesina and Glaeser, 2004; Alesina and Giuliano, 2009.

2.2   Preferences in Political Economy

2.2.1   Modeling Preferences

All research into preferences in (democratic) societies starts with a simple question: If the majority is poor, why do the poor do not expropriate the rich? To get at this question, one has to understand the underlying principles at work. In this section, I will discuss the mechanics, underlying assumptions, implications, and limits of the most commonly used preferences models. I will show that all of them face serious theoretical challenges. Yet, despite their theoretical difficulties, they serve as an inspiration for current research and also this dissertation.

It starts with an economist in the 1920s: Hotelling (1929) famously argued that on any high street or transcontinental road, two or more sellers with an identical product will cluster in the middle of a fixed length at $\frac{1}{2}\lambda$ to maximize their profits. This location is a Nash equilibrium, but not a dominant strategy equilibrium because each seller's strategy depends on decisions of the other seller: For instance, if player A sets up a store at $\frac{1}{4}\lambda$ of the length, then the best strategy for player B would be to open a store at the right of the $\frac{1}{4}\lambda$.

Downs (1957) applied this insight about competition for market shares based on distance (and prices) to voting. In his set-up, there is a policy space T which is defined by some interval. The indirect utility function of voters over some policy space T is defined by the function $v(t, h) = -(t_{1,2} - h_i)^2$, where h_i is voter i's ideal point and $t_{1,2} \in T$, which are some policies. Utility is maximized if $t = h$. There is a distribution of individual policy preferences F, which is a cumulative distribution function (cdf). There are two vote-maximizing politicians offering two policies, t_1, t_2. Individual i will vote for a policy t_1 if and only if $(t_1 - h)^2 < (t_2 - h)^2$, that is the distance between t_1 to voter i's ideal point h is smaller than the distant of policy t_2 to his ideal policy.

The Nash equilibrium of this game is, of course, that both politicians choose $t* = h*$ s.t. $F(h*) = \frac{1}{2}$, which means that a "passionate majority" (p. 64), as Downs called it, rules in a two-party system. This finding, however, only holds if Arrow's paradox (1950) is assumed away: For the median voter theorem to hold, individual preferences must be single-peaked and not a preference ordering, as Arrow postulated.

Arrow's (1950) Impossibility Theorem states that there is no satisfactory mechanism for aggregating individual preferences to get a social preference order. An earlier version of this finding was formulated by the Marquis de Condorcet in the Condorcet Paradox: If individual preference orderings are transitive and there are

three groups (for group 1 $\alpha \geq \beta$ and $\beta \geq \gamma$, and due to transitivity $\alpha \geq \gamma$; for group 2 $\beta \geq \gamma$ and $\gamma \geq \alpha$, and hence $\beta \geq \alpha$; for group 3 $\gamma \geq \alpha$ and $\alpha \geq \beta$, and hence $\gamma \geq \beta$), then no coherent social preference ordering across the three groups can occur. This is because if we compare any two preference orderings, $\alpha \geq \beta$, $\beta \geq \gamma$, but also $\gamma \geq \alpha$ and so on.

Arrow's Theorem is a generalization of the Condorcet Paradox. It shows that for any number of policy possibilities and possible preference orders of voters, there exists only one function F that satisfies all three properties: (i) Universal domain: The social welfare function is defined for every possible pair of individual orderings, satisfying the transitivity and completeness assumption. (ii) Weak Pareto efficiency: If for every individual $\alpha > \beta$, then the same must hold for the aggregated social preference function. If preferences change, the social welfare function must pick up those changes such that no one is worse off. (iii) Independence of irrelevant alternatives. Arrow's (1950) example for this is the following: Suppose there is a list of candidates and voters rank them according to preferences. Suppose further that one of the candidates dies after the preference orders have been submitted. Then, the name of the deceased candidate is ignored but the preference order for the surviving candidates remains unchanged.

The "rule of the passionate majority" ((1957), p. 65) then does not satisfy the first property, as the Condorcet Paradox clearly demonstrates[2] . In short, Arrow's Impossibility Theorem shows more generally, that if an an aggregate rule is transitive, weakly Paretian and independent of irrelevant alternatives, then it must be dictatorial. Mathematically, then there are two (and more) possible answers to find a 'Condorcet winner': single-peakedness of preferences and order restrictions.

Other responses to Arrow's Impossibility Theorem can broadly be summarized by falling into two camps: The first argue that not all preference orderings must be considered. Some preference orders are unreasonable. The second argue that preference orders are insufficient for solving social choice problems. In case of Down's median voter theorem, the following assumptions must hold to solve the problem: (i) Voters have single-peaked preferences. (ii) Politicians are vote-maximizers. (iii) There is a two party system. (iv) The policy is linear and uni-dimensional.

The most commonly used applications of the median-voter theorem in political economy were developed by Romer (1975), Roberts (1977) and Meltzer and Richard (1981). All models are variants of the Hotelling-Downs models with further restrictions. Voters are differentiated by income and vote over a linear tax rate. In this

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[2]Arrow's (1950) own preliminary answer to his paradox was a dictatorship: One person's preferences are adopted. He excluded this possibility by adding two more condtions: "The social welfare function is not to be imposed" (p. 338) and "The condition of nondictatorship" (p. 339).

uni-dimensional policy space under a majority voting rule, with two parties competing over the tax rate, the taxation revenue is the only source for redistribution and the money is allocated as a lump-sum subsidy. In equilibrium, there will only be one policy which both parties propose. This policy will satisfy the taxation preferences of the median voter. If the income distribution is left-skewed, as it is the case for most distributions, then the taxation rate should be high. In other words, redistribution is a decreasing function of the income of the median voter.

More formally, a version of this class of models can be written down as follows[3]: There are two goods, a private good x and a public good G. The price of the private good is standardized to 1, i.e. $p_x = 1$. The utility function of any given voter i is

$$u_i(x, G) = x - \frac{a}{2}(\mu - G)^2 \tag{2.1}$$

Voters have an annual income of w and $\sum\limits_{i=1,2,...n}^{n} \frac{w_i}{n} = \mu$, which is the mean annual income of the population. The policy space is given by $t \in T$ and $T = [0 : 1]$ for a linear income tax. The indirect utility function, which depicts utility in terms of the prices of the goods and individual income, is given by

$$u_i(t, w) = (1 - t)w - \frac{a}{2}\mu^2(1 - t)^2 \tag{2.2}$$

Assuming that there are no effects of taxation on labor supply, high taxation rates do not distort preferences to work. Setting the first derivative to zero and solving for the optimal tax rates yields

$$\frac{\partial u}{\partial t} = -w + a\mu^2(1 - t) = 0 \tag{2.3}$$

$$\hat{t}(w) = \left[0, 1 - \frac{w}{a\mu^2}\right] \tag{2.4}$$

This means that utility is that the optimal tax rate decreases with an individual's annual income. At some income, the preferred tax rate will be equal to 0. When voters are arrayed by income, the one with the lowest income will have the highest preferred tax rate and the one with the highest income the lowest. From this it follows that the median voter will prefer the median tax rate of the pool of tax rates available. This gives the median voter theorem. The second derivative confirms that the indirect utility function is a concave function. Hence, preferences are indeed

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[3]This is an illustration of the median voter theorem (not a proof thereof) that I have adapted from my seminar notes, taught by John Roemer at Yale University in winter term 2012.

single-peaked.

$$\frac{\partial u^2}{\partial t} = -a\mu^2 = 0 \qquad (2.5)$$

To sum up: The most commonly used model for the first is the Hotelling-Downs model (of which the Romer-Meltzer-Richard model is a variant), in which political actors maximize the probability of victory. In a uni-dimensional policy space with two competing parties, and quasi-concave single-peaked utility functions of the voters, the Hotelling-Downs model predicts that in equilibrium there will be one and only one policy. This finding holds whether or not parties know the true distribution of voters. In other words, it is the dominant strategy for both parties to propose the policy that satisfies the needs of the median voter.

The implications of the median voter theorem have been widely studied. One of the most powerful predictions of this model is that if the median voter is relatively poor (that is if the income distribution is left-skewed) the taxation rate should be relatively high. Most empirical research, however, finds the opposite to be the case: Countries with lower income inequality tend to have higher taxation rates, such as the Scandinavian countries, while notably in the U.S., we observe falling tax rates while income inequality rises. This is sometimes referred to as the Robin-Hood paradox (Pontusson and Rueda, 2010).

Most of the assumptions of the Romer-Meltzer-Richard model have been criticized (and consequently relaxed): First, the assumption of a uni-dimensional policy space has been extended to a multidimensional policy space (Roemer, 2001). Second, the core-constituency model has been extended to accommodate factions and different objectives within parties (Roemer, 2001; Pontusson and Rueda, 2010). Third, the two-party setting does not apply to multi-party regimes, in particular proportional representation systems (Iversen and Soskice, 2006). Fourth, the tax rate does not have to be linear and redistribution can take other forms than lump-sum subsidies. Fifth, the conceptualization of income falls short of its different dimensions.

One of the most critical accounts in formal modeling of the common application of variants of the Hotelling-Downs model in political economy has been voiced by Roemer in various publications (e.g. Roemer (1998, 2001, 2005, 2006)). Roemer's most powerful criticism of the common use of the Downsian model is that there are in total eight cases worth considering. The Downsian and an alternative partisan model each come in four versions: certainty versus uncertainty (i.e. knowing the true distribution of voters vs not knowing it), and uni-dimensional politics vs multidimensional politics. The median voter theorem is a result of the combination Downsian preferences of parties (maximizing vote share), certainty about the distribution of voter types and uni-dimensional politics. Roemer argues that this model

is ahistorical with respect to all three properties: Parties never care only about maximizing votes, they never know the true distribution of voters with certainty and they never compete over just one policy issue.

At the core of Roemer's criticism is that the Downsian model, which is the dominant model in political economy, does either produce no differentiated policies in equilibrium or has no equilibrium at all. The fact that in the real world, we do observe differentiated politics and equilibria calls into question the plausibility of the model.

Hinich and Munger (1994) raise a different criticism of the Downsian model: They argue that there is a paradox in the Downsian logic: On the one hand, parties are assumed to have no preferences over politics because they are only maximizing votes. On the other hand, they promise a policy which they will enact in the future after the election. In this model, there is no commitment device. Hinich and Munger argue, that ideology serves as a commitment device because ideology, unlike beliefs, can serve as a basis for choice in group decisions and provide a language. As ideology in this context, they define an internally consistent set of prepositions that tell one what is ethically desirable. The role of ideology is at least twofold: First, it bundles information and reduces the cost of information gathering for voters. Second, it explains stability within party politics and the absence of a full convergence to the median voter as ideologies cannot easily be averaged. As a side-effect, it may also account for seemingly irrational behavior. While they hold that the intuition behind the median voter theorem is correct, they argue that adding ideology to the picture can provide for a fuller account.

Following Strom (1990) several models include a core constituency with a common history, organization and shared values (e.g. Rueda, 2008; Pontusson and Rueda, 2010). The idea is that in addition to the median voter position, established party ties to its constituency also matter. The policy result is a compromise of both, the party's commitment to its core constituency and the effort to be as closely as possible to the demands of the median voter.

Notwithstanding the theoretical difficulties with the formal model, the intuition and its implication remain powerful and inspiring. A lot of work in political economy still starts with the paradox of why the poor do not expropriate the rich, or why some societies are more unequal than others. Following this tradition, but being fully aware of the theoretical challenges of the models, I also use the intuition behind the paradox to motivate my hypotheses. One of the things that the theoretical models seem to be missing is a better understanding of income and, in particular, income over time. In the next sections, I reflect on how to interpret preferences

for redistribution, before I review previous research that is closely linked to this dissertation.

2.2.2 Redistribution or Predistribution

In the spirit of the Hotelling-Downs model and its variants, the most frequently studied preferences are those for redistribution, often in form of taxation. This makes sense, as they shed light on why some societies are more unequal than others. More recently, there has been a shift in attention from redistribution to predistribution. The argument is that while redistribution matters for inequality, predistribution may matter just as much.

The government has a myriad of policies available to alter the allocation of resources across its population. Redistribution through tax and transfers, after some kind of market exchange has taken place, is one of the standard ways to change the income distribution. Prasad (2011) argues convincingly that preferences for higher taxation are not necessarily the same as preferences for more welfare state spending, except if three conditions are met: If taxation is for redistribution, for risk pooling, or if it is a question of whether it should be within the capacity of the state to to do. Still, there is a tension between taxation and redistribution, as Beramendi and Rueda (2007) argue: For left-wing parties, there can be a paradox between wanting to increase social spending, but having to rely on a regressive tax system to do that. Similarly, Barnes (2015) shows that preferences for the level of taxation are not the same as preferences for the entire tax system. Still, under some conditions, questions on taxation can be interpreted as concerning more or less redistribution.

An alternative strategy, which has been coined predistribution more recently by Hacker (2011), relies on an old concept most famously argued for by Meade (1964) in his account of a property-owning democracy. Meade argued that every citizen should be given a capital stake at birth with the aim to disburse control over economic resources. The idea was subsequently taken up by the political right; for instance, The British Prime Minister Margaret Thatcher borrowed heavily from this concept. The encouragement of homeownership can also be seen as a variant of the property-owning concept. Today, predistribution has become a concept more heavily associated with the political left. The idea, as Hacker puts it, is to achieve a more equal distribution of market power before any kind of market exchange has taken place. Although the final income distribution after redistribution and predistribution may be the same and policy design may look similar, there are important conceptual differences.

John Rawls has provided us with a normative account of the place of inequality

in a just society in "A Theory of Justice" (1971). Famously, rational and reasonable individuals behind a veil of ignorance will choose (apart from basic liberties to all) a socioeconomic policies in which the worst-off are as well off as possible. This means that inequality is not per se unfair, but only admissible to the extent in which it benefits society from the perspective of the poorest. Many see in this a defense of the redistributive welfare state. Yet towards the end of his career, Rawls concluded that a welfare state policy regime would not be chosen in an ideal society, precisely because redistributive policies still allow the concentration of political power due to unchecked economic power and thereby undermine fair equality of opportunity. In "Justice as Fairness, A Restatement", Rawls (2001) argues precisely that: A property-owning democracy, with predistributive policy instruments, is superior to welfare-state based politics because it fosters fair equality of opportunity, compatible with both economic efficiency and liberal values.

In today's political economy, there are several examples of predistributive policies, which all share the goal of leveling the playing field, e.g. the regulation of financial markets, the regulation of labor markets, and the provision of public goods that foster equality of opportunity. Examples of the first set are capital requirements for banks or the regulation of private pension funds or house prices. Among the second set are policies that strengthen workers' bargaining position such as union rights and minimum wages, and corporate governance reforms that allocate shares and rights to employers or limit executive pay. The third set includes education policies, such as early childhood education in particular for children from low-income families, and health care provision for people in need of mental or physical health care without means.

It has been argued that the policy space for predistributive policies is larger, because it does not require higher taxes and relies primarily on regulation. Standard economic theory holds that any form of taxation leads to a deadweight loss and less efficient market allocations. Moreover, higher taxes are salient on the political agenda and more difficult to achieve in times of low growth or recession. While the argument seems compelling at first, this is not self-evident and rather an empirical question: First, some policies, in particular early childhood education require a new pool of resources. Second, many of the proposed regulations apply to field with powerful interest groups, such as the regulation of financial and labor markets. Third, while the efficiency loss of taxation has already been disputed, the effect of predistributive policies on efficiency are also complex.

While the questions in surveys (and previous research) tend to focus on redistribution in the form of taxation, I explore a variety of policy preferences that cover

taxation, redistributive and predistributive policies, as they all matter for inequality. In the next section, I look at different dimensions of expected income and its importance for preference formation.

2.2.3   Income and Risk

An important step in the study of policy preferences has been the move from income as a key determinant to expected income or life-cycle income (Bénabou and Ok, 2001; Haider and Solon, 2006). The intuition behind these models is that individuals demand policies that do not only make them better off in their current position, but also take their future income into account. Thus, in addition to your money, also your beliefs about the future matter (Bénabou and Tirole, 2006).

Exposure to labor market risk is a case in point: Differences in labor market positions and the associated differences in class, skills, and risk exposure have received a lot of attention: Arguments cover both the class dimension of preferences (Svallfors, 2006) as well as differences in human capital: Iversen and Soskice (2001) argue that workers who have invested in specific skills, i.e. skills that are not transferable, will demand insurance to protect their investment into education against economic shocks. Cusack, Iversen and Rehm (2006) test the skill-specificity argument empirically. They find that occupational unemployment rates, as well as unemployment, explain social policy preferences (a similar argument is advanced in Rehm, 2009).

This account is also in line with other research which stresses the importance of daily experience at work for political attitudes (Kitschelt and Rehm, 2006; Oesch, 2006). Both studies study the interaction effect of risk and income. In a related study, Rehm, Hacker and Schlesinger (2012) show that the joint distribution of income and risk exposure matters. If income and risk are inversely related, i.e. if risk is concentrated at low-income levels, then support for the welfare state will be weak. If risk is also concentrated at high income levels, then there can be cross-cutting coalitions across income groups. In a similar vein, Häusermann, Kurer and Schwander (2014) find that occupational risk and the socio-economic status are not the same, but that there is the possibility for a cross-class coalition supporting the welfare state between outsiders with high and low income.

There is evidence that institutions mediate the effect of labor market risk. In a cross-country study, Gingrich and Ansell (2012) find that individualized risk in the labor market only matters for social policy preferences in an environment of low benefits and weak employment protection laws. Bringing together labor market position and crisis response, Rueda (2014) finds that labor market insiders were more influential than outsiders in imposing their preferences on parties.

There is evidence that income from wages becomes less important and assets become more important, as I discussed in the introduction. The move from an employment dominated to an asset dominated political economy, as Ansell (2012*b*) puts it, also matters because individuals substitute public insurance with private insurance. As they now receive income from capital, they become more sensitive to capital taxation, and benefit less from social insurance at the same time. As assets become more important, redistribution becomes less important.

Taken together, research on expected income and risk shows that lower income and higher risk exposure lead to a strong demand for more protection. Hence, as the labor market became more volatile for an increasing number of individuals, support for redistribution and other policies that bring stability grew. This was good news for welfare state support and the political left. Likewise, it seems plausible to expect that crises, which lead to unemployment and income loss, may trigger exactly the same attitudes. Yet, there is also evidence that employment is no longer the only decisive factor and that financial investments also matter. This brings me to the next section.

2.2.4   Crisis and Inequality

What happens during a crisis? Is an economic crisis the same as a financial crisis? Has being unemployed the same effect as losing one's savings?

Most studies are cross-sectional, but some have exploited the design of panel studies to understand preferences over time. In a large study, Stegmueller (2013) analyses preference stability. He studies the UK, drawing on data from the British Household Panel Study from 1991 until 2007. He finds that preferences are sticky and that about half of the differences in preferences are due to unobserved factors. He also confirms that factors such as age, income, education and parental background are important, but even more important at an early age (see also Giuliano and Spilimbergo, 2009 on the effect of growing up in a crisis). Hence, the variation in preferences observed in adults is small as most individuals will have formed their preferences long before they get picked up by surveys and these preferences then prove to be very sticky over time.

Other research also for the U.K. from 1986 until 2009, a period during which income inequality increased, shows that overall attitudes towards welfare recipients have become more conservative and that views on redistribution have barely changed (Cavaille and Trump, 2012).

In a different study for the years 2005 until 2010, Barnes and Hicks (2012) find that while the crisis did push some voters to the left, the effect was offset by

experiencing the crisis first-hand and by disappointment with the ruling Labour party.

In a similar study for the United States, Margalit (2013) found that personal economic circumstances matter but only in the form of job loss, not a drop in household income or perceived job insecurity. If an individual lost her job between 2007 and 2011, she became a stronger supporter of welfare benefits. This was true whether she was a Democrat or Republican in 2007. In fact, the effect was stronger for voters on the right. However, this effect was short-lived if individuals found a new job: support dropped again.

These studies point to both, sticky and myopic self-interested attitudes. They suggests that preference shifts during crises are often short-term and difficult to detect, happening on multiple levels, and lead to, at times, contradictory preference overlaps. This may also help to explain why even during severe crises, such as the meltdown of the financial system, the political left has not been able to capitalize politically on the hardship that was inflicted on millions, and why large shifts to the left of the political spectrum did not occur.

2.2.5 Summary

Taxation, redistribution and predistribution from the rich to the poor has been one of the most important and contentious powers of governments, even more so in times of crisis. Attitudes can be understood by two different sets of explanations: The first holds that preferences for redistribution are a function of an individual's materialistic self-interest. Formally, this it is an inter-temporal maximization problem: Individuals have preferences over their lifetime income (or consumption) and maximize their utility under a number of constraints. The second argues that in addition to self-interest or when those needs are satisfied, values such as general ideological positions can explain specific policy preferences. This review has focused on the first set.

Arguments on income and preferences are grounded in different versions of the median voter theorem (Hotelling, 1929; Downs, 1957). The most commonly used model to predict actual tax rates and redistribution in a democracy is the Meltzer-Richard model (Meltzer and Richard (1981), for other variants that were developed earlier see also Romer (1975); Roberts (1977)). These models make a number of crucial assumptions that allow for an equilibrium: Individuals only care about income, voters are differentiated by income and income is distributed across the population according to some underlying cumulative distribution function. There is a one-dimensional policy space and a linear income tax. There are only two parties under

majority rule and both propose a linear income tax rate and voters then vote for one of the two parties. The tax revenue is the only source of redistribution and the money is then allocated as a lump-sum subsidy.

The key prediction of these models is that if the median voter is relatively poor, that is, if the income distribution is left-skewed, the optical tax rate should be relatively high. This key prediction, however, is difficult to find in the real world - a phenomenon that Pontusson and Rueda (2010) describe as the Robin-Hood paradox: More unequal societies (pre-tax and transfers) should redistribute more and not less. What the theoretical models seemed to be lacking was a better understanding of income and, in particular, income over time. Still, it serves both as a reference as well as an inspiration for research.

There is a large body of both theoretical and empirical work on individual preferences for redistribution, although arguably some of it is and should be on predistribution: They start with the idea that expected income matters and explore different measures of expected income, such as income over time, labor market position, and exogenous shocks. Research over time has shown that preferences are often stable and even dramatic crises only have a short-lived effect. Yet, the higher the expected income, the lower the support for redistribution and the political left. The higher the risk exposure, the higher the support for both. The correlation of risk and income are important for welfare state support. The less it is correlated, the larger the group that benefits from safety nets. With these ideas in mind, I develop a model for the effect of financial risk on preferences.

2.3   A Model of Financial Risk and Preferences

What happens if individuals take on financial risk? Although financial investments and hence risks are different and the difference matters, I argue that the same underlying mechanics are at work:

Individuals invest money into a vehicle (e.g. a college degree, home, or fund). The investment lowers disposable income in t_1. During this time, the individual forgoes consumption at the expense of the investment. But afterwards, times are different: In t_2, the investment is realized. The individual benefits from the positive returns to the initial investment. Income is higher than it would be without the investment. This vehicle is effectively an individual income-smoothing device and a private insurance against adverse life-effects. If all goes well, the initial amount invested has paid off: There are high returns. Taken on the financial risk was a good decision. Thus, ceteris paribus, the individual has a lower income in t_1 and a higher

income in t_2.

But sometimes, things go badly. If the investment does not pay off (e.g. the degree proves worthless in the labor market, the home loses value in the housing market, the pension fund loses its money in the financial market), income in both, t_1 and t_2, is lower than it otherwise would have been.

Of course, nobody knows whether he or she will live in the good or bad state. There are hence three different effects: the income effect, the insurance effect, and the risk effect. The income effect is twofold: In t_1 disposable income is always lower. In t_2 disposable income is expected to be higher. This leads overall to a dislike for taxation and redistribution: Because the investment reduces income just like a tax in t_1 and because income is expected to be higher in t_2, individuals will oppose higher tax rates. In addition, there is the insurance effect. The investments are substitute for adverse life-effects such as unemployment or illness. They replace social insurance or other social benefits. The individual is therefore less likely to support redistributive policies. In addition to these two effects, there is a risk effect: The investment may or may not pay off. The private insurance will fall short of protecting the individual. This increases income volatility in t_2.

The risk effect prompts individuals to find ways to insure themselves against ending up in a bad state. There are three different options: First, rely on the state to provide different social benefits in case they need them. Second, demand policies that protect against income loss in t_2. These policies depend on the kind of investment. Third, try to insure themselves as best as possible by diversifying portfolios and spreading risk.

All risk coping strategies are called into question during a financial and economic crisis. This is the crisis effect. The crisis effect lowers income in t_1 and t_2. The financial market crash reduces returns to all investments that depend on the financial market. The recession and soaring unemployment reduces all returns in the labor market. The government has to cut its budget, cutting down social benefits. No matter how diversified an individual's portfolio is, she cannot insure herself against systemic risks. The crisis effect then reinforces both the income and risk effect by lowering income in t_1, increasing the probability that t_2 will be a bad state, and by eliminating coping strategies.

In a nutshell: I argue that the exposure to financial risk has four effects on preferences: the income, insurance, risk, and crisis effect. With this standardized model as reference, I will explore in the following section how these four effects play out with respect to student debt, mortgages, and private pensions.

2.3.1   Student Debt, Mortgage, and Private Pension

In this section, I apply the theoretical framework developed above to the three different financial risk applications: I start with mortgage debt, compare it to student debt, and then discuss private pensions.

Research on homeownership has shown that individuals who have bought a house are more averse to redistribution for two reasons: First, repayments for the home already lower disposable income, making individuals less supportive of higher taxes (Carroll, 1997). Second, owning a house provides security against adverse life-effects and is therefore a substitute for some social policies including old-age pensions. Because of this second characteristic, it has been argued that the political right deliberately encouraged homeownership to strengthen their constituency. Instead of expanding the welfare state in the 1970s, some countries, and in particular the United States, and to a lesser degree the United Kingdom, extended the access to credit. Thus, there seems to be a trade-off between the expansion of homeownership and the welfare state. The fact that homeowners are more conservative has been widely established (Kemeny, 1981, 2004; Castles, 1998; Schwartz and Seabrooke, 2008; Schwartz, 2010; Prasad, 2012; Trumbull, 2012; Ansell, 2014). While there is a rich literature on homeownership and it is well understood, the impact of mortgages on preferences has not fully been spelled out. I begin by demonstrating why mortgages matter and then discuss the implications for preferences.

The United States stand out with regard to their mortgage policies (Prasad, 2012): They have a high loan to value ratio and mortgages are fixed for a long term. The FHA and the New Deal legislation made it easy and widely popular for Americans to take on significant levels of debt: In macroeconomic terms, the rise of homeownership was important, but even more so the surge in debt for the working class and the middle class. As Prasad (2012) puts it, the US developed a type of 'mortgage Keynesianism'.

For most individuals, buying a home is one of the largest or the largest investment they will make during their lifetime. Ansell (2012*b*) shows that price changes in the housing market have an enormous impact on citizens' wealth. I present detailed data with references in the empirical chapters. For now, I just want to show that debt matters: On average, more than a third of all households repay a mortgage and the median mortgage is higher than $100,000. Mortgages peak when individuals are in their mid-30s and then fall. They can make up more than 80 percent of household income at that time. Most contracts are designed such that the mortgage is paid off when the individual retires. As a result, regular mortgage-payments reduce disposable income substantially and for a very long time. In other words,

income in t_1, which on average lasts until retirement, is reduced for more than 30 years. Income in t_2 is higher because the individual saves on rent and/or can sell the house for profit.

There are two major financial risks for individuals with mortgages: First, low inflation and high interest rates. Second, falling house prices. The higher the inflation rate, the more the debt burden shrinks by itself over time. The higher the interest rate, the higher the actual debt burden. Falling house prices reduce the value of the investment. If the house was primarily financed by a mortgage, the mortgage may exceed the value of the house. In that case, not even selling the house will allow the individual to repay the mortgage.

This second risk became apparent in the housing bubble that burst in 2007 (Watson, 2008; Schwartz, 2009; Schwartz and Seabrooke, 2009; Schwartz, 2010). Until then, housing prices in many countries, in particular the UK and U.S. were rising fast. Many individuals in the U.S. were able to buy a house without a downpayment. The housing bubble destabilized the economies. Changes in house prices have been shown to have a direct impact on preferences for social policies (Ansell, 2012*a*, 2014). Individuals who lived through a period of significant house price appreciation became less supportive of government support for the unemployed and public pensions. In that sense, housing bubbles and bursts reinforce the risk perception: Rising house prices prompt individuals to update their expectations, believing in even higher income in t_2. Falling house prices increase the odds of bankruptcy, even in t_1.

Based on previous research on homeownership and the importance of mortgage-financed homeownership both for the economy as a whole as well as for the individual, my argument is that homeowners with mortgages demand very specific policies: First, they are similar to mortgage-free homeowners. They will oppose higher taxation and redistributive policies, because of the income effect and insurance effect. Repaying a mortgage is similar to a 'individual property tax'. The house or apartment gives security in times of financial difficulties.

Second, during an economic downturn with falling house prices, the risk effect kicks in: Because of the danger of foreclosure and poverty, they will want more protection from the government. During a crisis, I expect them to be different from the other homeowners. In general, I expect them to be on the right of the political spectrum. Although their house may effectively still be owned by the bank, they share the same mindset with homeowners without a mortgage. Thus, I expect their preferences to be aligned, except during crisis.

It is important to note that previous research on homeownership (which did not

distinguish between individuals with and without mortgages) measured both, the effect of owning an asset and the effect of having to repay a mortgage without being able to tell the two effects apart. This dissertation aims to disentangle the two effects. I will now move on to student debt.

Who has access to education? Who pays for it? These are questions which have a redistributive dimension (Ansell, 2010). This is because a college degree carries a significant wage premium. For this reason, student finances are a heavily contested policy field. Changes to the funding formula and regulation of the student loan market have consequences not only for borrowing students, but also for lenders, such as federal and non-federal agencies (effectively the taxpayer) and private lending institutions (hence, private capital owners). Apart from the fact that student debt policies itself are redistributive, I argue that being in debt also has an impact on preferences for other policies and parties.

Student debt is a negative asset, just as mortgage loans, or credit card and auto debt. However, student debt is crucially different from other types of debt: It is necessarily correlated with an increase in educational attainment. More years spent in education are associated with higher income and higher income is associated with a dislike of higher taxation (the income effect) and redistribution as ample research has shown. Because education is a substitute for social insurance in the sense that higher income may help in smoothing out income volatility, and is associated with lower unemployment and crime rates (e.g. Bureau of Labor Statistics, 2012) as well as with better health (Deaton and Paxson, 2001). This is the insurance effect.

Thus, on the one hand, student debt repayments lower disposable income for a significant number of years and increase exposure to labor market and financial market risks. On the other hand, higher education leads to a higher skill set and this maps into better job opportunities and higher income in the labor market (Goldin and Katz, 2010)[4]. Thus, it leads to a higher income in both t_1 and t_2 because there is a college premium on wages. At the same time, it lowers income in t_1 because of the loan repayment (all else equal).

In addition, since student loan repayments fall for most individuals into the same period as job market entry, which correlates with lower wages due to lower levels of experience, buying of a house and starting a family, loan repayments eat up a considerable part of the budget at a time when income is rather low when compared to life-cycle income.

Going to college is risky: Financing a considerable share of higher education

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[4]How education maps into the labor market is a complex issue that I do not further explore in this dissertation (see Acemolgu and Autor, 2012).

by student contributions increases individual exposure to risk in the labor market as well as in the financial market. Study decisions, just like any other investment decision, require knowledge not only of today's labor markets but also future labor demand. Labor markets are complex and understanding and forecasting changes in demand for skills is challenging. Swings in demand for labor and hence swings in the unemployment rate carry risks for individuals. By privatizing higher education financing (as opposed to publicly paying for it) the risk for the investment is shifted to the individual. Moreover, since the interest rate by the time of taking out the loan crucially determines the amount that has to be paid back, individuals are also exposed to interest rate volatility in financial markets.

Standard economic theory predicts that risk-averse individuals buy insurance to counter the risk exposure. In the U.K., there is a safety net in place: Students only have to pay back their loans if their annual income exceeds £21,000. In addition, student debt that has not been paid back is forgiven after 30 years. In the U.S., there are no institutionalized risk spreading devices available. In fact, student loan debt in the U.S. cannot be written off in bankruptcy. As the high and growing delinquency and default rates for student loan debt repayments put individuals under considerable strain.

I expect individuals with student debt to oppose higher taxation and redistribution because paying back their loans is an effective 'graduate tax' and they are less likely to benefit from redistribution themselves. Since they benefit from active labor market policies as the returns to their investment are primarily realized in the labor market, they will support parties on the left. Hence, there is an interesting tension between lower redistribution and more active labor market policies. In addition, they will support higher inflation rates. What tips the balance depends, of course, on country specific party platforms: For instance, the Liberal Democrats in the UK ran explicitly on a student-debt friendly platform during the General Election campaign of 2009. Overall, I expect individuals with student debt to be on the left of the political spectrum. Thus, I expect student debt to be different from mortgage debt. Preferences of debtors should align on some dimensions but not all. Last, I will discuss private pensions.

The introduction of private pensions on a larger scale started in most countries in the 1990s. In the United Kingdom, about five million individuals save into a private pension fund today. In the U.S., there are more than 50 million savers. For most individuals this is an opportunity to further smooth their income and add to their public and occupational pension an additional pension and thus making sure that they have a more comfortable life when they retire. For some, who have no access

to state or occupational pensions, these savings are not a luxury but a necessity.

There are three important differences between private and public pensions (Barr and Diamond, 2006): First, public pensions can cope with risk, such as macroeconomic shocks or demographic shocks, because the state can always generate taxes or move money between funds to compensate for unexpected loss. Thus, even though private pension schemes can also spread risk to some extent, they are not as effective as public pensions. Even more so, because private pensions have to deal with the problems of adverse selection, high administrative costs, and limited information on part of the consumer. There is no way for private pensions to overcome the shortcoming that that they are exposed to asset volatility (also Burtless, 2012).

Second, while both public and private pension can help to smooth income, only public pensions can also redistribute income and provide poverty relief. Because private pensions depend on how much was paid in by the individual, no adjustments are made if this is too little when the individual retires. Thus, while there is leverage for state pension to redistribute money to individuals who would otherwise live in poverty, private pensions follow a strict mathematical logic. While it is possible to 'nudge' people into good private pension options and create a good default plan, there are no solutions to negative returns, as they occurred during the financial crisis (Mabbett, 2012).

The third feature concerns the macroeconomy and also applies to homeownership: Both are pro-cyclical. Private pensions are pro-cyclical because they have defined contributions. Thus, when an individual retires during an economic upswing and turns the fund into annuities, she can withdraw more money from the fund than during an economy downturn. The same is true for mortgages: If the house is sold during an upswing, the profits can be substantially larger. Defined-benefits schemes and social benefits in general are counter-cyclical and act as automatic stabilizers.

This implies that private pensions, as the other two investments, lower income in t_1. They increase income in t_2 because the individual can complement the first two pension pillars with a third pension. This is the income effect. The private pension substitutes or compliments a state or occupational pension. This is the insurance effect. However, a private pension carries risks, as I explained above. Hence, it may be the case that the individual loses money overall. Because of that, I expect that individuals with private pension savings oppose redistributive policies and higher taxation. They rely on stable financial market and high interest rates, as well as low inflation rates. Overall, because each saver is a little capitalist, he or she leans towards the right of the political spectrum. In crisis times, I expect that private pension savers want the government to protect their savings.

Based on the theoretical model and the implications for the three different types of financial risks, I sum up the hypotheses that will be tested in the empirical chapters in the next section.

2.3.2 Hypotheses

In the two case studies and the cross-country comparisons, I will test the following hypotheses (ceteris paribus):

Financial risk: All individuals who choose to invest into education, a home, or a private pension have lower income in t_1 and expect higher income in t_2. This is the income effect: All of them will oppose higher taxation. In addition, the investments are substitutes for social insurance and other social benefits. As a result, they will also oppose redistribution. Because the returns to the investment are realized in different markets, and because the policies that protect their investment in t_2 are different, they want different targeted policies. This is the risk effect. Overall, I expect a move away from taxation and general redistributive policies, to targeted policies (taxation, redistributive and predistributive policies) that meet the demand of the different groups.

Student debt: Individuals with student debt will favor policies that enhance labor market opportunities. They will dislike higher taxation because, first, they effectively already pay a graduate tax. Second, they are less willing to support the government in spending money on general social benefits because they expect to be at the higher end of the income distribution and require less social assistance. I also expect them to prefer higher rates of inflation to lower as it will reduce the debt burden. As they need a peculiar policy mix, it is difficult to predict the overall effect. Because of the importance of labor market policies and the support for expansionary monetary policy, I expect them to lean overall to the political right, despite the dislike for redistribution.

Mortgage: Individuals with mortgages will favor policies that guarantee the stability of the housing and stock market. They will not support labor market policies. Because they have to repay monthly installments, they are less likely to support higher taxation and redistribution to different social groups (e.g. poor, unemployed, or retired). I expect them to support the political right. Generally, their preferences should align with those of homeowners without mortgages during a boom, but should diverge during a house price crisis, when they will require a safety net to protect them.

Private pension: Individuals who save into private pension funds should oppose all forms of redistribution, in particular in old age, and higher taxation because they

save for themselves. As their monthly contributions are effectively an additional 'retirement tax', they oppose tax increases. They favor policies that stabilize and secure returns in financial markets. I expect them to favor parties on the political right.

Financial crisis: During a crisis, there are two opposing forces: On the one hand, individuals expect the government to shelter them from income shocks. On the other hand, they oppose redistribution as it reduces their already shrinking (expected) income. I expect that individuals with debt, both student debt and mortgage debt, become more favorable towards labor market policies and redistribution, while individuals with assets move more towards the right of the political spectrum.

Borrowers against savers: I expect savers to be united and borrowers to be divided. Savers will favor policies and parties on the political right. Borrowers will demand different policies and parties depending on their kind of debt. Those with student debt rely primarily on returns in the labor market. Those with mortgages need stable and rising house prices. Both require good borrowing conditions.

2.4   Conclusion

In this chapter, I have revisited the standard model in political economy that predicts that the lower the expected income is, the higher is the support for redistributive policies and the political left. I have shown that despite its clear intuition, the theoretical foundations are complex, and call into question its applicability to the real world. Still, the median voter theorem and its variants have motivated an insightful literature on preferences.

With this in mind, I have reviewed a selection of work in the field to set up my own theoretical argument. I have developed a theory of the effect of financial risk on preferences and have then examined the implications for different kinds of investments. Based on this, I have developed hypotheses that will be tested in the following three empirical chapters.

Chapter 3

Financial Risk in the UK

3.1 Introduction

The last decade was a turbulent time in the United Kingdom. Student debt was virtually non-existent, but skyrocketed within very few years, leading to mass student protests on the streets. The housing market saw ever increasing house prices and then suddenly collapsed. Private pension funds, the largest as a share of GDP when compared to all other countries, as I showed in the first chapter, earned negative returns during the financial crisis. The following recession left the UK in a slump. In this chapter, I will analyze the effect of financial risk on preferences for policies and parties in the United Kingdom. I use data from three large and well-known data sources: The British Household Panel Survey, the follow-up longitudinal dataset Understanding Society, and the British Social Attitudes Surveys. I show that student debt matters, and that it has a different effect than mortgage debt. Individuals with mortgages share many preferences with homeowners with no mortgages and private pension savers. The crisis moved everyone even further to the right. This meant bad news for the Labour Party. The Conservative Party and also the Liberal Party profited from these shifts in the electorate.

This chapter is structured as follows: I start with descriptions of student debt, mortgages, and private pensions in the UK in section 3.2, paying close attention to the developments from 2000 until 2010. Then I describe the datasets and variables, explain how I code the main variables of interest, and describe the estimation technique in section 3.3. The findings are summarized in section 3.4 and I conclude the chapter in section 3.5. All results and a detailed description of the datasets and variables can be found in the appendix in section 3.5.

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3.2   Financial Risk in the UK

3.2.1   Student Debt

Having student debt in the United Kingdom is both a novelty and a shared experience. Student debt in the UK started as a subsidy to encourage students from low-income families to study. The Student Loan Company introduced income-contingent loans in the early 1990s. Initially, only £420 per year were available. This amount carried a zero percent interest rate. The repayment followed a traditional mortgage-style plan. Repayments were income-contingent: Once graduates earned more than 85 percent of the national average wage, the loan had to be repaid monthly over the course of five years in equal installments.

The transition from free to high-cost education started at the end of the 1990s under New Labour: In the academic year 1998/99, most available grants were transformed into loans and tuition fees of up to £1,000 were introduced. Some loans were still income-contingent but most loans were now available for everyone, irrespective of parental income. The repayment scheme was still income-contingent: Graduates had to pay 9 percent if their income exceeded £10,000 annually. In 2000, this threshold was raised to £15,000 and it is still in place (with adjustments for inflation). The interest rate subsidy has been abolished and now fluctuates at around 5 percent. Previously, loans were forgiven upon retirement at the age of 65. Today, loans are written off after 25 years.

After the introduction of tuition fees, they rose fast: Starting in the academic year of 2006/07, new students could be charged variable fees of up to £3,000 per year. This amount was tripled to £9,000 and was applicable to all students starting in the academic year of 2012/13. Since 2009/10 the maximum maintenance loan for students not living at home (excluding London for which there is an extra allowance) is £4,950, if the student is not eligible for a maintenance grant based on income. The maximum tuition fee loan is now £8,325.

As tuition cost rose, so did the number of students borrowing money. From the academic year 1990/91 to the academic year 2005/06, the number of student loan borrowers rose from 180,000 to 881,000 every year. These borrowers took out collectively only £70 million in 1990/91, but £2,933 million in 2005/06. The average annual loan increased from £390 to £3,330. The take-up rate of eligible students increased from 28 percent in 1990 to about 85 percent in 2010, and most students were eligible for some loans (Library of the Commons, 2013).

Figure 3.1 shows the total volume of all student loans and the number of borrowers from the academic year of 2000/2001 until 2010/2011. The legislative changes

Figure 3.1: Student Loans, 2000s, UK
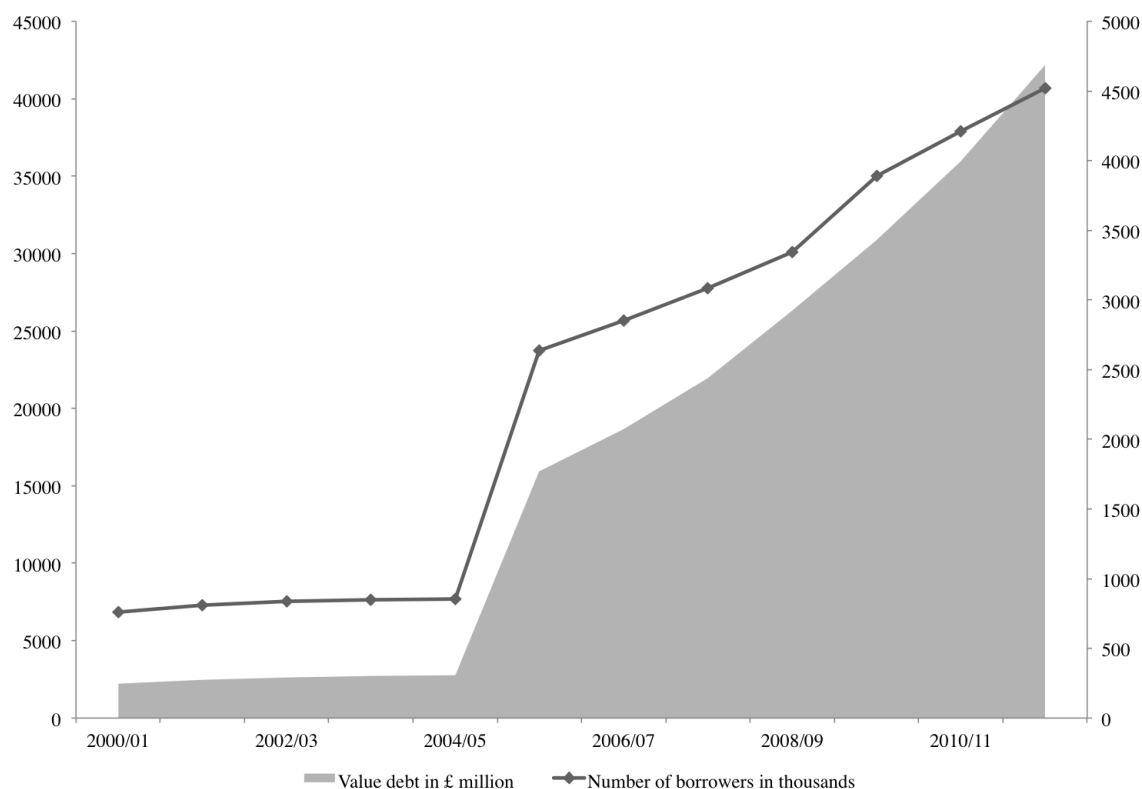
Figure shows data for income-contingent loans and mortgage style loans. The accounting method was changed in 2005. Sources: DfES statistical first release 32/2003 Student support: statistics of student loans for higher education in the UK; Student Support for Higher Education in England: Adademic Year 2012/13 (Provisional) and earlier editions, SLC; Student Support Scheme Facts and Figures, www.slc.co.uk.

that increased the tuition cost and relaxed the eligibility criteria are clearly visible[1]. From 2000 to 2005 the numbers have almost quadrupled. From 2005 to 2010, they doubled again. Almost every student now takes out a loan to study.

Repayment rates, of course, correlate with cohorts. For instance, 45 percent of the 2000 graduation cohort fully repaid their loans in England, while only 4 percent of the 2000 did so (as of 2012). Of all cohorts in the 2000s, with at least one tax year processed, 16 percent paid back their loans. The average amount of repayment per borrower of the 2000 cohort was £330 in 2000/1 and increased to £800 in 2010/11. For the 2005 cohort, the first average repayment was £350 and increased to £1060 in 2010/11 (Student Loan Company, 2012). Students, who started in 2009 after tuition fees doubled, have only started repaying in 2012.

The number of borrowers and the amount of money borrowed continues to rise (according to the latest data for England): The amount lent in 2013/14 was £9.0

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[1]The Student Loan Company also changed the accounting method in 2005, which accounts for a small part of the kink.

billion. The outstanding balance including loans that are not due yet for repayment was £54.4 billion. The average debt of all borrowers at the end of 2012/13 was £6,400 for the 2000 cohort and £20,100 for the 2014 repayment cohort (all from Student Loan Company, 2014).

In comparison to other higher education systems, the United Kingdom stands out with a long tradition of no fees, followed by a sudden and substantial transformation in the 2000s to a high-fee system. This makes the UK a very interesting case to study.

3.2.2   Mortgage

The 2000s were also exciting and crushing times for homeowners in the United Kingdom. House prices rose constantly and fast, in 2002 alone by 17 percent (Office for National Statistics, 2014). The boom ended abruptly, in 2008, when house prices fell for the first time in that decade. Falling house prices hit those badly who had a mortgage to repay as the economy was in recession. Mortgages as percentage of disposable income rose from 86 percent in 2001 to 140 percent in 2007 and fell back to 126 percent in 2010 (OECD, 2009b, 2014b).

About two in five households in the United Kingdom had mortgages at the end of the 2000s (Office for National Statistics, 2013a). The median household property debt was £75,000. Jointly, these households held £848 billion in property debt. By comparison, all other household debt, such as credit card debt, only added up to £95 billion (idem). Mortgage debt is more than ten times larger than all other household debt combined.

38 percent of all households are repaying a mortgage, making it the largest group when compared to renters and homeowners with mortgage-free homes. However, mortgages are not equally distributed across income and regions. They are increasing in income: 92 percent of the least wealthy rented their main residence, only 8 percent were paying back mortgages. Almost no one owned their home. By contrast, 56 percent of the most wealthy households owned their house outright, 40 percent paid back mortgages. Half of all middle wealth households had a mortgage. And there are huge regional disparities: London has the highest median household debt at £128,000. The amount is less than half in Scotland: £55,000 (idem).

Paying back a mortgage puts considerable strain on households. Married or co-habitating couples with dependent children are the typical mortgage payers: 68 percent of them have property debt and the median stands at £95,000. Figure 3.2 shows the self-reported burden of property debt by property liabilities. Households with single parents suffer the most: 23 percent say that paying back their mortgage

Figure 3.2: Mortgage as Burden, 2008-2010, UK
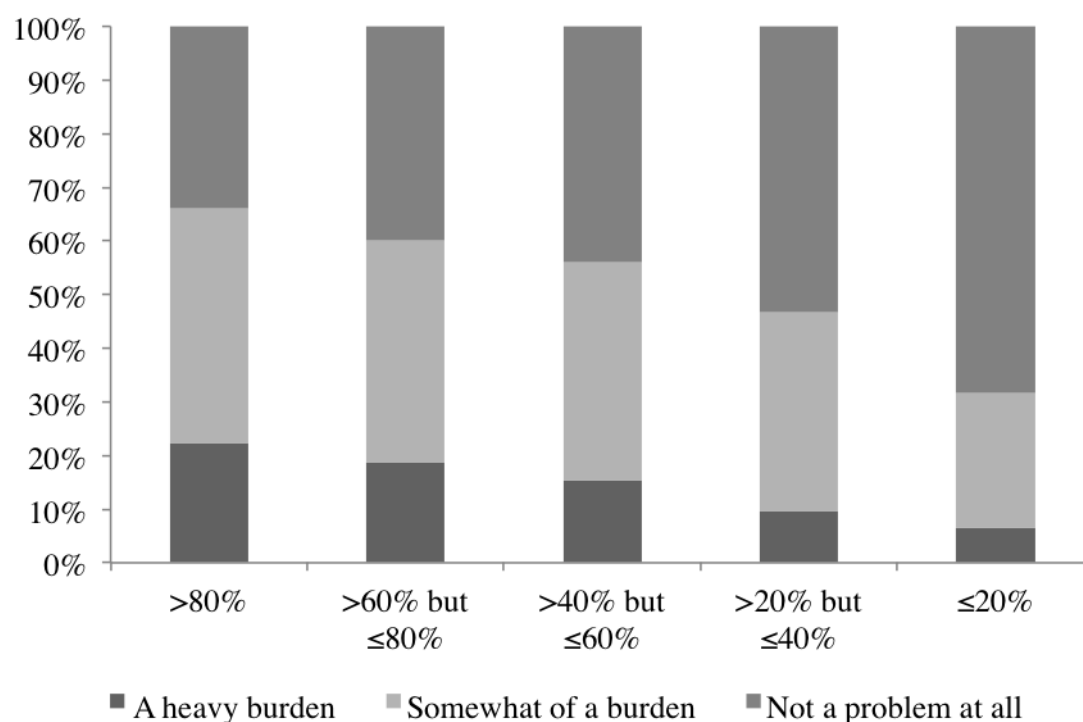
Note: x-Axis: Percentage of main residence value outstanding on mortgage. y-Axis: Percentage of self-reported burden. Source: Office of National Statistics (2014).

is a heavy burden. At the end of the 2000s, 22 percent of households, whose debt burden exceeded 80 percent of the total value of their house or apartment, reported that the debt was a heavy burden. The lower the debt, the lighter the burden. However, the proportion of those who consider it "somewhat of a burden" is almost constant. A little more than half of all mortgage payers across all liabilities report that the mortgage is a "heavy" or "somewhat of a burden" (idem).

In short, the largest group in the UK repays a mortgage. Some of them were lucky when house prices rose fast as they saw the value of their investment increase rapidly. Others were in trouble when the housing bubble burst and the mortgage exceeded the value of their house. While most households manage to repay their mortgage, it takes up a considerable part of their income every year. Compared to other countries, the United Kingdom has an average homeownership rate but very high mortgage rates.

3.2.3 Private Pension

The United Kingdom has a classic three-pillar pension system. There is a flat-rate basic state pension, which is a pay-as-you-go state pension. However, its assistance

Figure 3.3: Contributions to Private Pensions, 1990-2010, UK
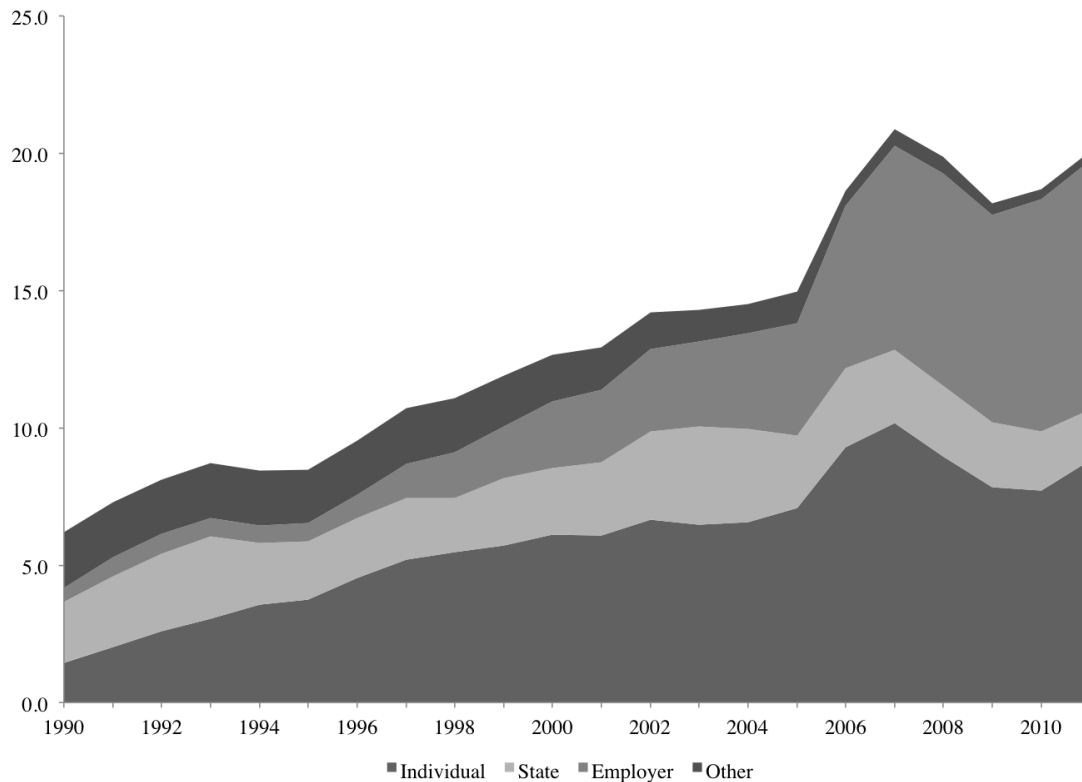
Shows billion £ (not adjusted for inflation). Individual contributions are those from employees, self-employed, and non-earners. State contributions are the rebate to funds of individuals who have opted out of a state pension. Others include RACs (Retirement Annuity Contracts, which can no longer be taken out) and FSAVCs (Free Standing Additional Voluntary Contributions, from 2006 onwards added to individual contributions). Source: Office for National Statistics (2013), Data from Figure 8.4.

is so low that individuals relying on state pensions live below the poverty line and therefore receive additional social benefits. On top of that sits the second pillar, which is earnings-related and often tied to an occupational scheme. The third pillar consists of private pension funds, which are encouraged but largely left unregulated. Since 2000, pension funds have been more strictly regulated and there was a move into government bonds with low returns.

The total number of individuals contributing to private pensions was about 5.7 million. The majority of them are employees (5 million). 600,000 are self-employed individuals. The rest are non-earners: students, unemployed, and retired individuals. On average, individuals contributed £3,260 in 2010 or close to £300 every month. These numbers have been largely constant over the past decade, with a slight drop in participants and a slight increase in annual contributions (Office for National Statistics, 2013b).

Figure 3.3 shows annual contributions from 1990 until 2010. In 1990, total con-

tributions amounted to £6.2 billion. The amount tripled and in 2010, more than £20 billion were invested. Since 2006, individuals with private pension savings receive substantial tax breaks. The largest part of contributions came from individuals, but employers and the state also contributed. There was a drop in contributions following 2007. Due to the recession, many individuals paid less into their private savings (Office for National Statistics, 2013*b*).

Most individuals buy annuities with these pension savings. They guarantee a steady inflation-adjusted income stream after retirement. On every £1,000 saved, individuals get about £60 every year. So the average contribution returns less than £200 every year. Other investment opportunities have been introduced more recently, including creating portfolios of a mix of bonds and shares. The higher the bond-to-share ratio of the portfolio, the lower the capital risk. Many individuals lost a substantial amount of money they had saved: Since private pensions are contribution-defined and not benefit-defined, many savers saw their retirement security eroded by the financial crisis in in 2007 (e.g. Ghilarducci, 2013).

When compared to other advanced capitalist economies, as I highlighted in the introduction, the United Kingdom is the country with the largest private pension funds when measured as share of GDP. With these descriptive data in mind, I describe the set-up for the empirical analysis.

3.3 Empirical Analysis

3.3.1 Dataset

Data for the empirical analysis come from three well-known data sets that all consist of a representative sample of the British population: the British Household Panel Survey (BHPS), the follow-up panel Understand Society (UKHLS), and the British Social Attitudes Survey (BSA) . The BHPS covers the years 1991 until 2008 and includes a representative sample of more than 5,000 households or about 10,000 individuals every year. Most of the participants were phased into the follow-up study, which is an even larger longitudinal study with 40,000 households or about 100,000 individuals. Data were available, at the time of writing, for the years 2009 until 2012. The BSA interviews more than 3,000 different individuals every year. It started in 1983 and is still running. From the BHPS I use waves from the year 2000 until 2008. I add two waves from 2009 and 2010 from Understanding Society. I use this merged dataset both to pool all available data, as well as to conduct difference-in-difference analysis. From the BSA, I pool data from 2000 until 2010.

Using these datasets, I study the effect of student debt, mortgages, and private

pensions on preferences for policies and parties. In the following section, I describe the dependent and key explanatory variables from these three surveys.

3.3.2   Dependent Variables

There are two different sets of dependent variables: The first set covers policy preferences, the second party support and vote choice.

The first battery of questions comes from the BSA and covers preferences for redistribution, taxation and social spending: If the government had to choose between reducing, keeping, or increasing taxes and thereby spending less, the same, or more on health, education and social benefits, what would you prefer? Should the government spend more on benefits for parents, who have low-incomes, on unemployed[2] and retired people? In each question the respondent is made aware that more spending would probably mean higher taxes and lower spending would probably mean lower taxes.

The second group of questions cover the labor market including questions on predistribution: Whether the government should impose an earnings cap, whether major public services and industries should be owned by the state, whether the government should provide a job for everyone, and whether unions are needed to protect employees.

The questions cover both, active (e.g. the government should provide a job for everyone) and passive labor market policies (e.g. the government should pay unemployment benefits).

The questions in the BHPS are more difficult to interpret than those in the BSA, both for the respondent, as well as for the analyst because they can be interpreted in different ways. In particular, the statement 'major public services and industries ought to be in state ownership'. To some, this may sound like a socialist claim against private ownership. To others, this may mean that there will be more secure employment opportunities in the public sector. Some may argue for state ownership due to ideology. Others out of self-interest or even because they think the state will be more efficient, in particular in running monopolies. Because of the unclear ideology component, I have adopted an outcome-based interpretation, in the sense that a larger public sector means more public employment. The questions in the BSA are clearer in the sense that they alert the respondent of the trade-off between spending more and paying higher taxes. Yet, all of these questions have been used in previous research and allow for a comparison of the results with the literature.

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[2]Unemployment benefits also belong to labor market policies.

The second set of variables covers party preferences: The first question asks if there were to be a General Election tomorrow, which political party do you think you would be most likely to support? I am interested in whether individuals would support the Conservative Party, Labour Party or the Liberal Democrats - the three largest parties in the 2000s. In addition to these three general choices, I also analyze whether individuals were more likely to support the Labour Party over the Tories and the Labour Party over the Liberal Democrats. The second question asks which party the respondent voted for in the last General Election. The first question was asked every year while the second (about actual voting behavior) almost every year[3].

The wording of each question and a description of how I coded the variables can be found in the appendix in sections 3.6.5, 3.6.6, and 3.6.7. Every variable is coded as a binary variable because for all variables, the constant odds assumption did not hold. In other words, the likelihood of an individual to change from 'strongly agree' to 'agree' and 'agree' to 'neither' was not the same. I decided to simplify the dependent variables such that I could estimate a standard logistic regression[4].

There is also a frequency table in section 3.6.8 for all dependent variables. Almost half of the population agrees that there should be higher taxes and more social spending. 66 percent would like to give more benefits to low-income families. Only 17 percent want to support the unemployed, but 73 percent want to help the retired. Less than a fourth of the population thinks that earnings should be capped. Roughly a third believes that the government should own major public services and industries. Almost half want the government to help individuals find a job. A remarkable 62 percent claim that strong unions protect the working conditions and wages of employees.

In terms of political support, the left clearly wins: 45 percent support Labour and 62 percent would choose Labour over the Conservative Party. A fourth reported that they voted for the Tories in the last General Election. 16 percent support the third party, the Liberal Democrats.

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[3]This, however, is not a problem, since the question asked about past voting behavior and since General Elections are only held every 4-5 years, it would make sense to ask this question only in the survey immediately following an election.

[4]All regressions, also in the other chapter for comparison, are therefore logistic regressions. It has the advantage that the direction of the effect can be interpreted easily. The disadvantage is a loss of information. I have therefore tested whether it makes a difference how I simplify the dependent variable (whether I group those who agree or those who disagree) but I did not find a significant difference. Alternatively, I could have estimated a multinomial regression model and interpreted the marginal effects.

3.3.3   Key Explanatory Variables

There are three key explanatory variables: individuals with student debt, homeowners with mortgages, and individuals with private pension savings. Again, the exact wording of the questions can be found in the appendix in sections 3.6.5, 3.6.6, and 3.6.7.

I start with student debt. In general, the British Household Panel Survey allows to construct more adequate measures for student debt than the British Social Attitudes Survey. The results derived from the British Social Attitudes Survey have therefore to be interpreted with care[5]. I create a dummy variable for having to repay student debt.

Because the BSA question is not ideal, student debt is underrepresented: Only 1 percent of all individuals report that student loans are their main source of income, as the table 3.6.8 in the appendix shows. In the BHPS, 5 percent report that they owe student debt. This is also a small number but can be explained by the fact that student debt, unlike in the U.S., is a recent phenomenon. In line with the theoretical argument in the previous chapter, I expect that individuals with student debt are against redistribution and social benefits, but support labor market policies that improve their wages and employment conditions.

Unlike most preference studies on homeownership, I distinguish between homeowners with and without a mortgage. This allows me to single out the effect of the mortgage. The omitted category are renters. In addition to mortgage, I test for particular hardship (where the information is available). I create a dummy variable for negative house prices. If an individuals has bought a house and the house is worth less today than at the day of purchase, this variable is 1 (and 0 otherwise).

I am particularly interested in the effect of the housing price bubble and bust. I therefore generate a crisis dummy for the years 2007 until 2009[6]. To test the effect, I use two strategies: First, I interact the two dummy variables, one for having a mortgage and one for the crisis years. Second, I conduct a difference-in-difference analysis, comparing preferences of individuals before and after the boom and bust[7].

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[5]The variable for student debt is noisy. The survey does not distinguish between student loans and student grants. Since student grants have been phased out in the 2000s, the misrepresentation may become less severe over time. More fundamentally, the survey does not ask whether an individual has any student debt, but rather whether it is currently the main source of income. This leads to a substantial underrepresentation of individuals with student debt. In other words, the regressions only capture the preferences of those individuals whose main source of income are student loans.

[6]Apart from the substantial argument, that these years capture the crisis well, the year dummies for those three years are also collinear.

[7]This is only possible in the BHPS because it is a panel, and only for a few variables that are repeated in intervals that can be meaningfully interpreted. Also note that there is under-

In both samples, as shown in table 3.6.8, there are more homeowners with a mortgage: 38 percent of all individuals are paying back a mortgage in both surveys; 31 percent in the BSA and 29 percent in the BHPS have mortgage-free homes. This mirrors current statistics, as discussed before. I expect that individuals with and without mortgages dislike redistribution on average, and in particular redistribution towards retired people, as their investment is effectively an income-smoothing device. In terms of party preferences, I expect mortgagees to be more conservative than renters, but less conservative than mortgage-free homeowners, because they rely on a social safety net to protect them if their investment does not pay off. The crisis should reinforce two effects: On the one hand, mortgages become even more opposed to income redistribution as both mortgages relative to the house value rise, and wages fall. However, they will want policies that improve the labor market and therefore shift to the left with regards to policies that help them.

The last key explanatory variable is private pension savings. I analyze the preferences of all individuals who have taken out a private personal pension. To set them in perspective, I also include a control variable for having an employer's pension, that is regulated by the government and allows for risk sharing, in contrast to private pension funds that concentrate risk at the individual level. As with student debt, the private pension variable in the BSA is far from perfect, as it only captures individuals whose main source of income are private pensions. The one in the BHPS and UKHLS captures exactly what I need and I will therefore give those results more weight. This is also reflected by the share of private pension holders in the sample as shown in the distribution table in section 3.6.8: There are only a little more than 1 percent in the BSA whose main source of income are private pensions. In the BHPS, the share of individuals saving into private pensions is 10 percent.

Because the stock market crash hit private pension savers hard during those years, I expect that they want policies and vote for parties that protect their investment during the crisis. Reinke's (2014) work on bailouts in the UK suggests that protecting private pensions was a main goal of policy makers during the crisis. They will oppose higher taxation and redistribution, as well as any measures that may risk their pension savings.

3.3.4   Estimation Method

I include a large set of control variables. Following previous research in the political economy of preferences, I include the following ones: Gender, age, ethnicity, mari-

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representation of low-income low-education individuals due to drop-outs, but studies have shown that the magnitude of the under-representation is small (Jenkins, 2010).

tal status, children, whether the individual lives in Scotland, education, household income, unemployment, union membership, and religious service attendance.

Women tend to be further on the left of the political spectrum. However, married individuals and older individuals move towards the right. Individuals with children who still live in the household, have different preferences from those without. Non-white individuals with an immigration background tend to be on the left of the political spectrum (Alesina and Giuliano, 2009). I also include a regional dummy for Scotland because the strong independence movement and past voting behavior suggests that Scotland as a region leans more to the left when compared to the other regions of the United Kingdom.

Income and education, often also used as a measure for expected and life-cycle income, are among the strongest predictors for preferences (Alesina and Giuliano, 2009). I include two variables for income: whether or not an individual attended higher education (which may also capture the left-college bias) as well as household income (log). A range of empirical studies suggests that labor market positions matter (e.g. Rehm, 2009). For my specifications, I include whether or not an individual is currently unemployed and whether or not an individual is a union member. Although unions have lost their influence in the United Kingdom since Thatcher and there is further evidence that they have become even less important during the financial crisis (Culpepper and Regan, 2014), I find union membership to be a strong predictor of political preferences.

I also include a dummy for regular attendance of religious services (at least once a month). Scheve and Stasavage (2006) show that services provided by religious organizations are a close substitute for government provided benefits. Last, I control for time by using year dummies and a dummy for the crisis years 2007 until 2009. Where possible, I interact the key explanatory variables with the crisis dummy.

As discussed in the introduction, I pay attention to the problem of self-selection, and omitted variable bias. In principle, this is a threat to all three key explanatory variables. However, I have argued that the threat is most worrying for the student debt variable. Most individuals are homeowners and most of them have to repay a mortgage. It is hence a common phenomenon. With private pensions, it is difficult to tell, because both low-income individuals who do not have constant employment contracts, as well as self-employed and high-income individuals could have an incentive to take out a pension. Thus, in the absence of a clear theory of how individuals self-select, I rely on a set of controls: For mortgage, I control for whether or not the house is worth less today than when it was bought (where the information is available). For private pension, I also control for whether an individual also has an

occupational pension.

In the case of student debt, however, it is clear that only individuals who go to university can take out student loans, and that going to college is correlated with relevant socio-economic characteristics. To address the problem of an education effect in the student loan regressions, I also control for mother's education, different types of education, and whether or not the student attended a Russell group university[8].

As a further check to control for the possible self-selection into student debt, I also match on different student debt determinants before running the regressions. To simulate the self-selection into student debt, I match observations on different covariates. For the selection of covariates I tested a number of predictors that may all play a role in whether or not an individual takes out a student loan: Gender, year of birth, ethnicity, type of school attended, type of higher education institution attended, whether the BA or the MA was obtained from the Russell Group, whether the father or the mother had obtained higher education, the social class of the father's and mother's job[9], and the number of books in the household when the respondent grew up. The tables for key determinants and the matching protocol can be found in section 3.6.2.

Gender, year of birth, and the type of higher education institution attended, as well as living in Scotland already explain most of the variation in student debt. Adding additional covariates improves the fit only slightly but reduces the number of observations significantly. Whether or not an individual attends a higher education institution is, of course, the most important predictor. Age is the other important determinant because the student loan program and tuition costs change from one year to the next and individuals of one cohort face the same costs and loan conditions. Scottish students in Scotland effectively do not pay tuition fees, while the rest do. I match using Mahalanobis matching (with no weights), adding the p-score as the last covariate. The matching is restricted to a caliper of .25 times the standard deviation of the p-score, which is in line with standard conventions.

What about the sample balance after matching? The *t*-test is significant for

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[8]The Russell Group is an association that was formed in 1994. Today, 24 public research universities are members of the group. They are: University of Birmingham, University of Bristol, University of Cambridge, Cardiff University, Durham University, University of Edinburgh, University of Exeter, University of Glasgow, Imperial College London, King's College London, University of Leeds, University of Liverpool, The London School of Economics and Political Science, University of Manchester, Newcastle University, University of Nottingham, University of Oxford, Queen Mary (University of London), Queen's University Belfast, University of Sheffield, University of Southampton, University College London, University of Warwick, and University of York.

[9]I also tested the relevance of having a professional occupation, a managerial and technical occupation or a skilled non-manual occupation versus skilled manual, partly skilled, or unskilled occupations.

some, indicating that there are differences between the treated and control group. The means between both tests are very similar. The mean age is between 29 and 30 years. I run (an ordered) logistic regressions with the reduced sample size, which is now a balanced sample for those with and without student debt on common support. The model fit after matching is better. This is as expected because matching reduces the sample variance. Overall, there is no self-selection into student debt and results do not differ substantially with and without matching. Therefore, I only present the results without matching in the next section[10].

I pool the data for all years, from 2000 until 2010, and also conduct difference-in-difference analyses. All specifications in section 3.6.1 are (ordered) logistics regression with binary choice variables as dependent variables. Tables show odds and robust standard errors in parentheses. For the difference-in-difference analysis errors are clustered at the individual level. A coefficient larger than one indicates a positive effect, and smaller than one a negative effect. In interpret an effect as statistically significant if the null hypothesis cannot be denied at the 90 percent level. The odds help to compare the relative magnitude of the effects. In the next sections, I sum up the findings from the empirical study.

3.4 Findings

3.4.1 Student Debt

I sum of the results for the variables of interest in figures 3.4 and 3.5. The regression results can be found in the appendix in section 3.6.1. Overall, individuals with student debt are less likely to support redistributive policies: They are less likely to support higher taxes to help those with low incomes or in unemployment. Individuals with a university degree have lower than average unemployment rates and will, on average, have a higher income. They are therefore less likely to benefit from social benefits. Moreover, they are already paying back their student loans and will therefore not support higher taxes for services they will, most likely, never use.

However, individuals with student debt want the government to intervene in the labor market by maintaining a larger public sector, which provides more secure job opportunities. They also believe that strong unions protect employees. To repay their student loans, they depend on stable employment. Their preferences align here, by contrast to redistributive policies, with those with lower incomes, union membership or higher education. However, individuals with student debt do not

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[10]All matching results are available upon request.

Figure 3.4: Student Debt and Policy Preferences, UK
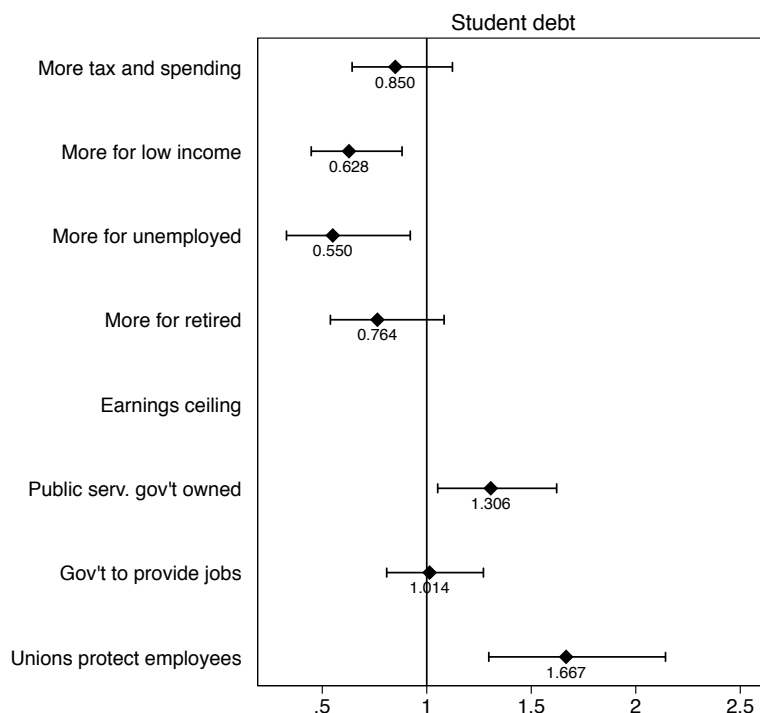
Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

want the government to provide jobs, unlike those with lower education attainment, lower incomes, or union membership.

I will now turn to the findings for party preferences: Having student debt has a statistically significant effect on preferences. Individuals are less likely to support or vote for the Conservative Party. There are also significant education and class effects: Having attended further and higher education, as well as having been to one of the Russell institutions makes support less likely. The same is true for low-income individuals and union members. The effect of student debt on voting behavior in the general election in 1997 is insignificant[11], indicating that student debt became an issue of relevance to voters only in the 2000s, when tuition costs began to increase. Individuals with student debt are not more likely *per se* to support the Labour Party, possibly indicating that other parties, such as the Liberal Democrats, recruited voters by running on this platform. Low-income individuals and union members are more likely to support the Labour Party. While more income is associated with less support, higher levels of educational attainment is associated with more support. The Liberal Democrats begin to draw support from individuals with student debt

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[11]Results are available upon request.

Figure 3.5: Student Debt and Party Preferences, UK
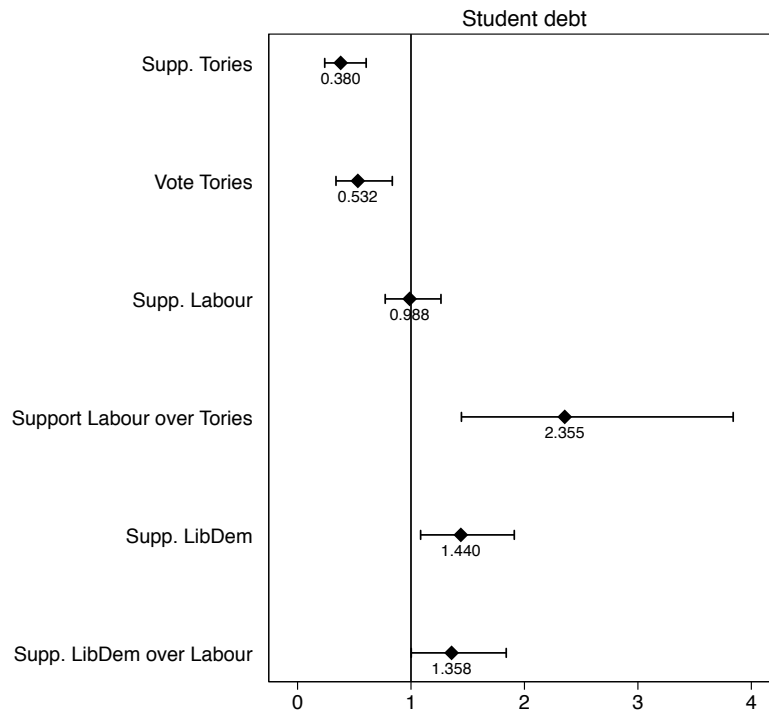
Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

by 2005. There is a very strong education effect for the Liberal Democrats. The income effect is less pronounced. If there is one, then low-income individuals are less likely to vote for the Liberal Democrats and high-income individuals are more likely.

Individuals with student debt are less likely to support redistribution and show similar preferences than labor market insiders in previous research (compare Rueda, 2005; 2006; 2014). Student debt has a significant and robust impact on party preferences: Individuals are more likely to be on the liberal-left spectrum of party policies. The education effect can be clearly distinguished from the student debt effect. The crisis had no additional effect for individuals with student debt but the hypothesis could only be tested in a few specifications. In general, the crisis pushed everyone towards the right of the political spectrum. Gender and marital status are in general very powerful predictors of preferences, and so are living in Scotland, age, and having children, although to a lesser degree. Income matters, both in absolute terms as well as in relation to the general income distribution, and so does union membership. Having been to a university of the Russell group has no effect. Religious service attendance only plays a limited role. The signs of the control variables, when

Figure 3.6: Mortgage and Policy Preferences, UK
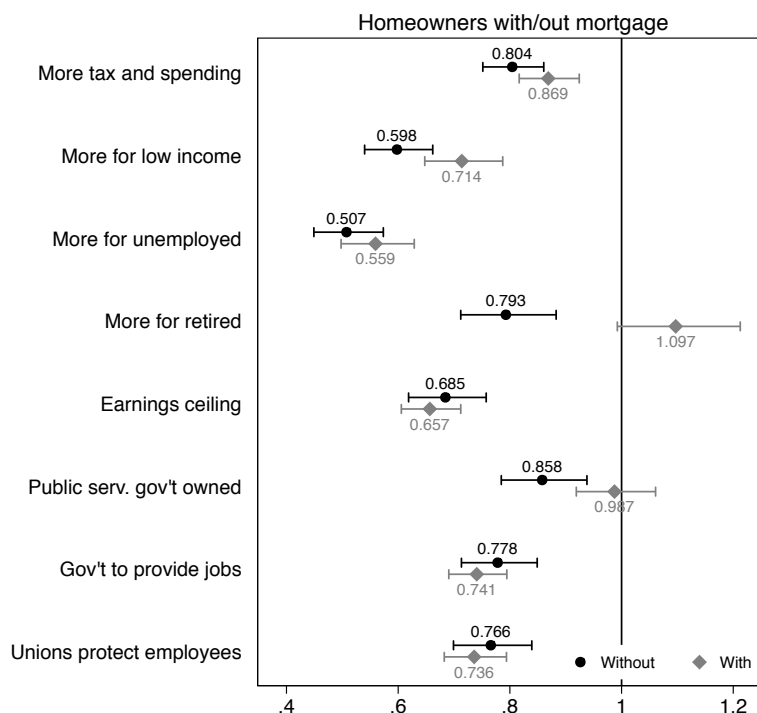
Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

significant, are in line with previous research. Adding education, income, and union membership increase the fit of the model.

3.4.2   Mortgage

The coefficient plots can be seen in figures 3.6 and 3.7. The results can be found in the appendix in section 3.6.3. Let me start with policy preferences: All homeowners oppose more government spending and higher taxes: The magnitude of the effect is often very similar. Still, in every specification it is always larger for mortgage-free homeowners. An interesting difference arises over the question of whether the government should spend more on people in retirement: Here, only homeowners without a mortgage oppose spending. Renters and homeowners with mortgages have the same preferences. The financial crisis of 2007-2009 pushes individuals with mortgages even further to the right on taxes and social spending.

In terms of labor market preferences, the group of homeowners with and without mortgages is almost indistinguishable: Both groups oppose a cap on earnings, the government to provide a job for everyone, and do not believe that unions protect employees. Only when it comes to public employment opportunities do those with

Figure 3.7: Mortgage and Party Preferences, UK

Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

mortgages share the interest of individuals renting homes. During the boom in the early 2000s (I compare the interval of 2000 to 2004), individuals with mortgages were less likely to support the government in providing a job for everyone who wants one. Also the crisis of 2007-2009 had the same effect. Owning a house that is worth less today then when it was bought makes individuals more likely to support earnings caps and a larger public sector.

Party preferences mirror policy preferences. Both groups are more likely to support the Conservative Party and also vote for them. They are less likely to support Labour as well as choose Labour over Tories. The effects, however, are consistently smaller (but always statistically significant at the 1 percent level) for individuals with mortgages. There is a clear difference when it comes to support for the Liberal Democrats: Only homeowners without a mortgage are more likely to support them, and also to choose them over Labour. Mortgagees are not different from people who rent their apartments or houses.

The difference-in-difference analyses and the crisis dummies add further nuances to the preference map: The financial crisis moved everybody further to the right, but in particular individuals with mortgage. As before, all control variables have

Figure 3.8: Private Pension and Policy Preferences, UK
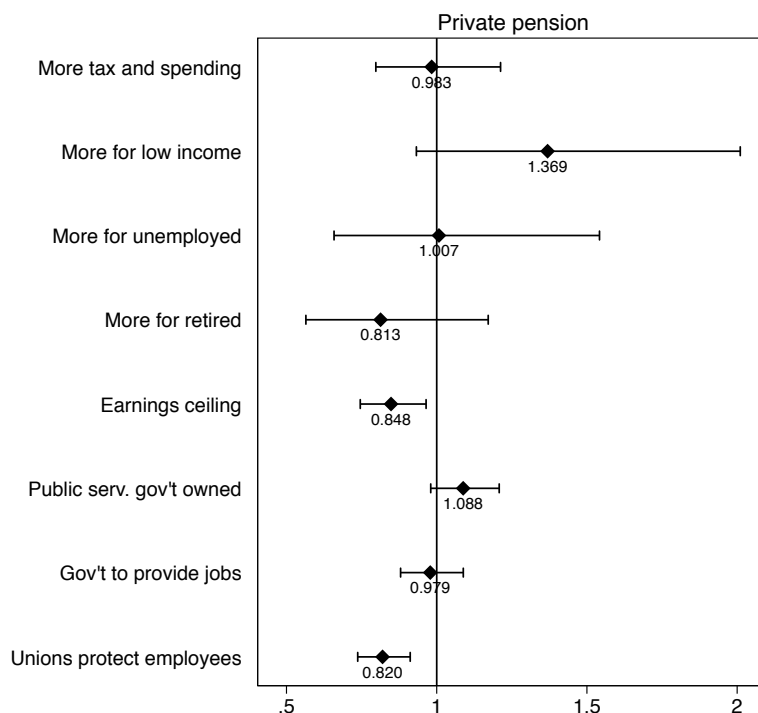
Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

the expected signs.

3.4.3 Private Pension

A summary of all regression results can be seen in figures 3.8 and 3.9. All regression tables for private pension preferences can be found in the appendix in section 3.6.4. Both individuals with private pension and employer's pension are opposed to maintaining an earnings ceiling. Both groups are also not in support of strong trade unions. Respondents with employers' pension show clear labor market insider preferences. They think that the government should maintain a larger public sector and that the government is not responsible for providing a job for everybody who is looking for one. The difference-in-difference analysis reveals that from the boom to the bust years (the interval from 2004 to 2007), individuals with private pensions became supportive of the government to provide jobs, while over the same period, the support for unions dropped.

Party preferences are clear cut: Private pension savers are more likely to support and vote for the Conservative Party and the Liberal Democrats and less likely to support Labour. Individuals with employer's pensions are less likely to vote for the

Figure 3.9: Private Pension and Party Preferences, UK
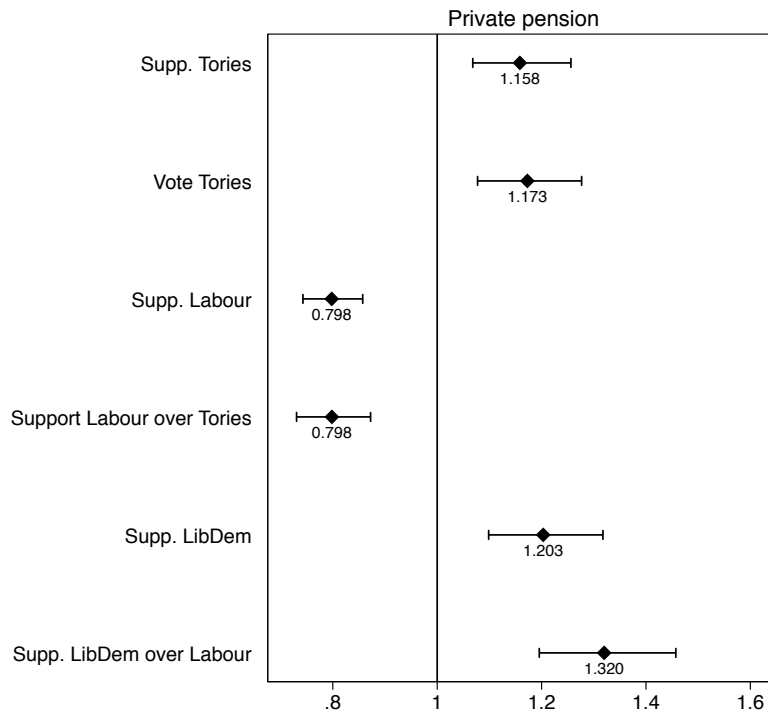
Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

Tories, but show similar sympathies for the Liberal Democrats.

In sum, individuals with employer's pensions are more left than those with private pensions, but on some policies they agree. In terms of labor market policies, those with employer's pensions show clear similarities with labor market insiders.

All control variables have the same effect as in previous research. In the following section, I contrast the findings for private pensions, with the ones from the other two empirical chapters for student debt and mortgages for the United Kingdom.

3.5   Conclusion

Individuals who have to repay a student loan or a mortgage are more likely to disapprove of higher spending for low-income families and the unemployed. Individuals with mortgages are also more likely to oppose higher taxation and more social spending. On all three issues, their preferences align with homeowners with no mortgage at all.

For labor market policies, different forms of debt have different effects. While individuals with student debt are more likely to support a large public sector and

see a need for strong unions to protect employees, individuals with mortgage debt are less likely to support such policies. Here, individuals with mortgages share the same preferences with homeowners with no mortgages and individuals with private pension savings. All homeowners are less likely to support active job creation.

Overall, financial market risk leads to a dislike for redistributive policies with an exception of policies that protect employees in the labor market, in particular insider policies. Here, individuals with students loans are different from all homeowners, with and without mortgage, and individuals with private pension savings.

Individuals with student debt are both less likely to support and to have voted for the Conservative Party. Unsurprisingly, they are more likely to support the Labour Party over the Conservative Party. However, they are generally most likely to support the Liberal Democrats, both over all other choices as well as over the Labour Party in particular.

Homeowners with and without mortgage lean towards the right of the political spectrum and are very similar with respect to party support and actual voting behavior. Both homeowners with and without mortgages are more likely to support and vote for the Conservative Party. They are also less likely to support the Labour Party. Individuals with private pension savings preferences align with homeowners. They also support and vote for the Conservative Party and are less likely to support Labour. Homeowners and private pension savers are more likely to choose Labour over Tories, when presented with only these two choices. They are also more likely to support the Liberal Democrats, the only party where their preferences coincide with those with individuals with student loans, and more likely to support the Liberal Democrats over Labour.

Overall, the data suggest that homeowners with and without mortgage and private pension savers form a strong base for support for the Tories and the Liberal Democrats. Somewhat ironically, growing student debt leads to more support for Labour, but the Liberal Democrats are benefitting similarly from this development.

All individuals became more averse to redistribution during the financial and economic crisis from 2007 until 2009. They were less likely to support more taxation and government spending for social services, spend more on the unemployed, and were less supportive of a large public sector, and active labor market policies. The only increase in support can be observed for more government spending on working low-income families. In terms of party support, individuals during the crisis years were more likely to move to the right of the political spectrum; a result that is also borne out by the Tory victory in the 2009 General Elections[12].

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[12]Of course, financial risk alone does not explain the outcome of the General Election.

The effect of having to repay a mortgage and the crisis years reinforced each other with respect to a number of policies. During 2007-2009, mortgagees were even less likely to support higher taxation and more government spending on social services. Likewise, they were more opposed to the government aiming to provide a job for every job seeker. Interestingly, the same is true for the boom period in the first half of the 2000s. The difference-in-difference analysis for 2000 and 2004, a boom period when house prices were rising rapidly, shows that the same individuals were less likely to support government job creation in 2004 than in 2000. They were more likely to support the Conservative Party and even less likely to choose Labour over Tories.

Individuals with private pension displayed a similar pattern, but a lesser effect. Individuals became even less likely to view unions as essential for employee protection. This may reflect the often discussed distinction between labor market insiders and outsiders (e.g. Häusermann and Schwander, 2009). Labor market outsiders tend not to have union membership and tend to be excluded from the traditional social safety nets, such as employers' pensions. Interestingly, from 2000 to 2004, individuals with private pension savings were more likely to support the government in job provision. In terms of political parties, private pension savers leaned even more towards the Tories during the crisis years. However, they became less likely (instead of more likely than in the other years) to support the Liberal Democrats.

In a nutshell, these results are bad news for inequality and the left in the UK. Financial market risk, unlike labor market risk, makes individuals less supportive of redistribution and moves them to the right of the political spectrum. Will the same be true also for the United States? In the next chapter, I conduct the same analysis for the other large liberal market economy.

3.6 Appendix

3.6.1 Student Debt Regressions

Table 3.1: Student Debt, Policy Preferences I, 2000s, UK

	More tax and spending	+ interaction	More for low income	+ interaction	More for unemployed	+ interaction	More for retired	+ interaction
Student grant/loan	0.850	0.923	0.628**	0.781	0.550*	0.753	0.764	0.979
	(0.144)	(0.207)	(0.130)	(0.212)	(0.172)	(0.278)	(0.162)	(0.280)
Female	1.246***	1.246***	1.007	1.007	0.728***	0.728***	1.023	1.024
	(0.035)	(0.035)	(0.042)	(0.042)	(0.039)	(0.039)	(0.045)	(0.045)
Age	1.008***	1.008***	0.991***	0.991***	0.997*	0.997*	1.004**	1.004**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Non-white	0.677***	0.677***	0.929	0.927	1.488***	1.483***	1.147	1.132
	(0.044)	(0.044)	(0.089)	(0.089)	(0.159)	(0.158)	(0.115)	(0.113)
Married	0.999	0.999	1.118**	1.119**	0.930	0.931	1.211***	1.215***
	(0.044)	(0.044)	(0.052)	(0.052)	(0.056)	(0.056)	(0.061)	(0.061)
Children	1.056*	1.057*	1.380***	1.381***	1.057	1.059	0.967	0.970
	(0.031)	(0.031)	(0.052)	(0.052)	(0.056)	(0.056)	(0.061)	(0.061)
Scotland	1.276***	1.276***	1.208***	1.207***	1.464***	1.460***	1.188**	1.182**
	(0.060)	(0.060)	(0.071)	(0.071)	(0.070)	(0.070)	(0.050)	(0.050)
Attended HE	1.107***	1.107***	0.860***	0.861***	1.105	1.108	0.735***	0.736***
	(0.035)	(0.035)	(0.041)	(0.041)	(0.118)	(0.118)	(0.036)	(0.036)
HH inc. log	0.988	0.988	0.769***	0.770***	0.515***	0.515***	0.816***	0.818***
	(0.016)	(0.016)	(0.026)	(0.026)	(0.069)	(0.070)	(0.028)	(0.028)
Unemployed	1.191**	1.193**	1.463***	1.480***	1.750***	1.776***	1.032	1.037
	(0.087)	(0.088)	(0.192)	(0.195)	(0.211)	(0.216)	(0.129)	(0.130)
Union member	1.251***	1.251***	1.205***	1.205***	1.150**	1.150**	1.391***	1.391***
	(0.045)	(0.045)	(0.065)	(0.065)	(0.080)	(0.080)	(0.081)	(0.081)
Finan./econ. crisis	0.462***	0.463***	1.105**	1.112**	0.850***	0.858***	0.985	0.985
	(0.017)	(0.017)	(0.052)	(0.053)	(0.053)	(0.053)	(0.049)	(0.049)
Student loan * crisis		0.817		0.603		0.401		0.590
		(0.285)		(0.256)		(0.277)		(0.252)
Observations	22054	22054	11290	11290	11293	11293	11215	11293
Pseudo R^2	0.027	0.027	0.018	0.018	0.060	0.060	0.014	0.014

Exponentiated coefficients; robust standard errors in parentheses; Source: British Social Attitudes Survey.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 3.2: Student Debt, Policy Preferences II, 2000 & 2005, UK

	Public serv. gov't owned	Gov't to provide jobs	Unions protect employees
Student loan	1.306**	1.014	1.667***
	(0.172)	(0.139)	(0.254)
Female	0.797***	1.283***	1.089*
	(0.037)	(0.060)	(0.052)
Age	1.010***	0.993***	0.985***
	(0.002)	(0.002)	(0.002)
Non-white	1.014	2.619***	1.791***
	(0.166)	(0.419)	(0.318)
HH income (log)	0.978	0.717***	0.747***
	(0.038)	(0.035)	(0.035)
Married	0.933	1.039	0.847***
	(0.052)	(0.058)	(0.049)
Children	1.017	0.954	1.003
	(0.055)	(0.051)	(0.055)
Scotland	1.055	1.364***	1.295***
	(0.060)	(0.077)	(0.078)
Mother FE	1.125**	0.895*	0.975
	(0.067)	(0.054)	(0.061)
Attended FE	1.278***	0.754***	0.922
	(0.068)	(0.039)	(0.050)
Attended HE	1.312***	0.570***	0.896
	(0.095)	(0.043)	(0.067)
BA Russel group	0.915	0.907	0.944
	(0.105)	(0.110)	(0.110)
Union member	1.564***	1.086*	2.403***
	(0.078)	(0.053)	(0.119)
Unemployed	1.171	1.429**	1.264
	(0.214)	(0.246)	(0.250)
Religious service att.	0.969	0.869**	1.107
	(0.058)	(0.053)	(0.069)
Year 2005	0.988	0.808***	1.016
	(0.047)	(0.038)	(0.050)
Observations	8193	8319	8321
Pseudo R^2	0.015	0.031	0.043

Exponentiated coefficients; robust standard errors in parentheses; Source: British Household Panel Survey.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 3.3: Student Debt, Party Preferences, 2000 & 2005, UK

	Supp. Tories	Vote Tories	Supp. Labour	Supp. Labour over Tories	Supp. LibDem	Supp. LibDem over Labour
Student loan	0.380***	0.532**	0.988	2.355***	1.440**	1.358*
	(0.107)	(0.146)	(0.148)	(0.700)	(0.248)	(0.251)
Female	0.918	0.926	1.025	1.080	1.254***	1.198**
	(0.059)	(0.060)	(0.063)	(0.067)	(0.052)	(0.067)
Age	1.015***	1.019***	0.993***	0.984***	1.003	1.007*
	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)	(0.004)
Non-white	0.519**	0.587**	1.731***	2.343***	1.109	0.846
	(0.135)	(0.160)	(0.327)	(0.639)	(0.245)	(0.195)
HH income (log)	1.324***	1.340***	0.951	0.784***	0.921	0.928
	(0.096)	(0.101)	(0.046)	(0.060)	(0.052)	(0.067)
Married	1.119	1.032	0.936	0.874	1.225**	1.243**
	(0.088)	(0.084)	(0.060)	(0.074)	(0.104)	(0.114)
Children	0.801***	0.800***	1.326***	1.370***	0.825**	0.718***
	(0.060)	(0.062)	(0.083)	(0.112)	(0.068)	(0.063)
Scotland	0.322***	0.409***	0.868**	2.435***	0.764***	0.837*
	(0.031)	(0.041)	(0.057)	(0.252)	(0.067)	(0.080)
Mother FE	1.114	1.049	0.711***	0.747***	1.458***	1.621***
	(0.095)	(0.093)	(0.049)	(0.069)	(0.123)	(0.151)
Attended FE	0.849**	0.919	1.008	1.100	1.267***	1.248**
	(0.062)	(0.068)	(0.062)	(0.087)	(0.107)	(0.113)
Attended HE	0.625***	0.659***	0.899	1.317***	1.942***	1.859***
	(0.068)	(0.071)	(0.075)	(0.154)	(0.202)	(0.210)
BA Russel group	0.544***	0.712*	1.036	1.815***	1.393**	1.240
	(0.101)	(0.129)	(0.129)	(0.365)	(0.188)	(0.210)
Union member	0.531***	0.532***	1.606***	2.060***	1.006	0.757***
	(0.035)	(0.036)	(0.093)	(0.147)	(0.075)	(0.183)
Unemployed	0.693	0.598*	1.552**	1.638*	0.799	0.662
	(0.193)	(0.180)	(0.327)	(0.480)	(0.250)	(0.215)
Religious service att.	1.133	0.858*	0.886*	0.805**	1.296***	1.328***
	(0.099)	(0.073)	(0.065)	(0.075)	(0.113)	(0.127)
Year 2005	0.850**	0.914	0.964	1.138*	1.230***	1.227***
	(0.055)	(0.061)	(0.053)	(0.080)	(0.088)	(0.094)
Observations	5909	6201	5909	4176	5909	3778
Pseudo R^2	0.069	0.055	0.020	0.062	0.033	0.039

Exponentiated coefficients; robust standard errors in parentheses; Source: British Household Panel Survey.

* $p < .1$, ** $p < .05$, *** $p < .01$

3.6.2 Student Debt Matching

Table 3.4: Student Debt, Debt Determinants, 2000 & 2005, UK

	2000	2005
Female	1.210	1.209
	(0.759)	(0.897)
Age	0.865***	0.857***
	(-8.475)	(-11.001)
Attended FE	2.847***	2.183**
	(2.736)	(2.561)
Attended HE	8.745***	7.124***
	(5.858)	(6.795)
Scotland	0.949	2.045***
	(-0.187)	(3.318)
Observations	2674	2992
Pseudo R^2	0.246	0.303

Exponentiated coefficients; Standard errors in parentheses; Source: British Household Panel Survey.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 3.5: Student Debt, Matching Protocol, 2000, UK

	Mean treated	Mean control	t-test
Female	.568	.568	-0.37
Age	29.376	29.376	7.85
Attended FE	.544	.544	-0.61
Attended HE	.36	.36	2.82
Scotland	.28	.28	-5.94
p-score	.195	.195	-15.31

Table 3.6: Student Debt, Matching Protocol, 2005, UK

	Mean treated	Mean control	t-test
Female	.585	.585	1.56
Age	31.227	31.227	11.40
Attended FE	.602	.602	-0.61
Attended HE	.261	.261	4.14
Scotland	.347	.347	-5.91
p-score	.241	.241	-19.86

3.6.3   Mortgage Regressions

Table 3.7: Mortgage, Policy Preferences I, 2000s, UK

	More tax and spending	+ interaction	More for low income	+ interaction	More for unemployed	+ interaction	More for retired	+ interaction
Homeowner (mortgage)	0.869***	0.908**	0.714***	0.738***	0.559***	0.574***	1.097	1.094
	(0.033)	(0.037)	(0.042)	(0.047)	(0.040)	(0.044)	(0.067)	(0.072)
Homeowner (no mortgage)	0.804***	0.803***	0.598***	0.597***	0.507***	0.507***	0.793***	0.793***
	(0.033)	(0.033)	(0.037)	(0.037)	(0.038)	(0.038)	(0.052)	(0.052)
Female	1.249***	1.251***	1.015	1.016	0.728***	0.728***	1.031	1.031
	(0.035)	(0.035)	(0.042)	(0.042)	(0.040)	(0.040)	(0.046)	(0.046)
Age	1.010***	1.010***	0.995***	0.995***	1.002	1.002	1.008***	1.008***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Non-white	0.661***	0.661***	0.895	0.893	1.376***	1.375***	1.151	1.152
	(0.043)	(0.043)	(0.086)	(0.086)	(0.149)	(0.148)	(0.116)	(0.116)
Married	1.027	1.026	1.164***	1.165***	1.006	1.007	1.218***	1.217***
	(0.032)	(0.032)	(0.055)	(0.055)	(0.062)	(0.062)	(0.061)	(0.061)
Children	1.044	1.047	1.345***	1.347***	1.024	1.025	0.937	0.937
	(0.034)	(0.034)	(0.070)	(0.070)	(0.068)	(0.069)	(0.049)	(0.049)
Scotland	1.257***	1.255***	1.178**	1.178**	1.431***	1.431***	1.170**	1.170**
	(0.060)	(0.060)	(0.084)	(0.084)	(0.117)	(0.116)	(0.089)	(0.089)
Attended HE	1.118***	1.120***	0.873***	0.875***	1.133**	1.135**	0.742***	0.742***
	(0.035)	(0.035)	(0.042)	(0.042)	(0.072)	(0.072)	(0.037)	(0.037)
HH inc. log	1.010	1.011	0.835***	0.834***	0.591***	0.591***	0.806***	0.806***
	(0.017)	(0.017)	(0.030)	(0.030)	(0.025)	(0.025)	(0.030)	(0.030)
Unemployed	1.178**	1.176**	1.475***	1.472***	1.754***	1.752***	1.061	1.061
	(0.086)	(0.086)	(0.196)	(0.195)	(0.206)	(0.206)	(0.133)	(0.133)
Union member	1.266***	1.267***	1.238***	1.238***	1.210***	1.209***	1.381***	1.381***
	(0.046)	(0.046)	(0.068)	(0.068)	(0.085)	(0.085)	(0.081)	(0.081)
Finan./econ. crisis	0.472***	0.510***	1.094*	1.157**	0.826***	0.856**	0.987	0.983
	(0.017)	(0.023)	(0.052)	(0.071)	(0.052)	(0.063)	(0.049)	(0.062)
Mortgage * crisis		0.817***		0.867		0.878		1.012
		(0.055)		(0.084)		(0.124)		(0.103)
Observations	21985	21985	11247	11247	11249	11249	11249	11249
Pseudo R^2	0.028	0.028	0.023	0.023	0.070	0.070	0.016	0.016

Exponentiated coefficients; robust standard errors in parentheses; Source: British Social Attitudes Survey.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 3.8: Mortgage, Policy Preferences II, 2000s, UK

	Earnings ceiling	Public serv. gov't owned	+ interaction	Gov't to provide jobs	+ interaction	Unions protect employees	+ interaction
Homeowner (mortgage)	0.657***	0.987	0.970	0.741***	0.775***	0.736***	0.724***
	(0.032)	(0.043)	(0.048)	(0.032)	(0.037)	(0.034)	(0.037)
Homeowner (no mortgage)	0.685***	0.858***	0.860***	0.778***	0.773***	0.766***	0.768***
	(0.042)	(0.047)	(0.047)	(0.041)	(0.037)	(0.043)	(0.043)
House value neg.	1.275***	1.089	1.091	0.988	0.983	1.140*	1.142*
	(0.083)	(0.073)	(0.074)	(0.066)	(0.066)	(0.079)	(0.079)
Female	1.085**	0.783***	0.783***	1.259***	1.260***	1.113***	1.113***
	(0.045)	(0.027)	(0.027)	(0.042)	(0.042)	(0.039)	(0.039)
Age	1.014***	1.010***	1.010***	0.994***	0.994***	0.983***	0.983***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Non-white	1.117	1.256*	1.257*	2.329***	2.325***	1.443***	1.444***
	(0.159)	(0.147)	(0.148)	(0.274)	(0.273)	(0.184)	(0.184)
Married	0.962	0.954	0.954	1.078*	1.077*	0.899**	0.899**
	(0.047)	(0.039)	(0.039)	(0.044)	(0.044)	(0.038)	(0.038)
Children	1.119**	0.994	0.994	0.957	0.958	1.048	1.048
	(0.054)	(0.040)	(0.040)	(0.038)	(0.038)	(0.043)	(0.043)
Scotland	1.282***	1.071	1.071	1.229***	1.229***	1.251***	1.251***
	(0.063)	(0.046)	(0.046)	(0.052)	(0.052)	(0.057)	(0.057)
Attended HE	0.837***	1.179***	1.179***	0.586***	0.586***	0.889**	0.888**
	(0.048)	(0.054)	(0.053)	(0.028)	(0.028)	(0.042)	(0.042)
HH income (log)	0.809***	1.006	1.005	0.718***	0.719***	0.779***	0.778***
	(0.026)	(0.028)	(0.028)	(0.027)	(0.028)	(0.027)	(0.027)
Unemployed	1.104	1.278*	1.277*	1.427***	1.430***	1.669***	1.668***
	(0.182)	(0.180)	(0.180)	(0.195)	(0.196)	(0.275)	(0.275)
Union member	1.210***	1.528***	1.528***	1.146***	1.146***	2.502***	2.502***
	(0.053)	(0.056)	(0.056)	(0.041)	(0.041)	(0.092)	(0.092)
Religious service att.	1.013	1.025	1.026	0.902**	0.901**	1.059	1.059
	(0.054)	(0.046)	(0.046)	(0.041)	(0.041)	(0.049)	(0.049)
Finan./econ. crisis		0.883***	0.857***	0.896***	0.864**	1.046	1.017
		(0.032)	(0.045)	(0.032)	(0.050)	(0.039)	(0.055)
Mortgage * Crisis			1.058		1.055		1.055
			(0.076)		(0.061)		(0.077)
Observations	15851	15176	15176	15465	15465	15459	15459
Pseudo R^2	0.019	0.014	0.014	0.028	0.028	0.045	0.045

Exponentiated coefficients; robust standard errors in parentheses; Source: British Household Panel Survey.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 3.9: Mortgage, Government to provide jobs, DID, UK

	From 2000 to 2004	From 2004 to 2007
Homeowner (mortgage)	0.951**	0.978
	(0.020)	(0.021)
Homeowner (no mortgage)	0.965	0.988
	(0.027)	(0.027)
House value neg.	0.984	0.997
	(0.023)	(0.022)
Married	0.972	1.003
	(0.028)	(0.031)
Scotland	0.967*	0.917
	(0.018)	(0.157)
HH income (log)	0.987	1.014
	(0.015)	(0.012)
Unemployed	0.967	1.053
	(0.045)	(0.045)
Union member	0.826***	1.010
	(0.035)	(0.038)
Observations	7230	8986
Pseudo R^2		

Exponentiated coefficients; robust standard errors clustered at individual level in parentheses.
Source: British Household Panel Survey. * $p < .1$, ** $p < .05$, *** $p < .01$

Table 3.10: Mortgage, Party preferences I, 2000s, UK

	Supp. Tories	+ interaction	Vote Tories	+ interaction	Supp. Labour	+ interaction
Homeowner (mortgage)	1.475***	1.430***	1.531***	1.525***	0.905***	0.920***
	(0.057)	(0.058)	(0.064)	(0.066)	(0.027)	(0.029)
Homeowner (no mortgage)	1.827***	1.835***	1.857***	1.859***	0.628***	0.626***
	(0.078)	(0.079)	(0.083)	(0.083)	(0.027)	(0.029)
Female	0.869***	0.869***	0.897***	0.897***	1.061**	1.060**
	(0.024)	(0.024)	(0.026)	(0.026)	(0.023)	(0.023)
Age	1.011***	1.011***	1.015***	1.015***	1.003**	1.003**
	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)
Non-white	0.436***	0.436***	0.476***	0.476***	2.211***	2.212***
	(0.051)	(0.051)	(0.063)	(0.063)	(0.183)	(0.183)
Married	1.122***	1.122***	1.062*	1.062*	0.943**	0.943**
	(0.038)	(0.038)	(0.038)	(0.038)	(0.026)	(0.026)
Children	0.856***	0.856***	0.792***	0.792***	1.360***	1.360***
	(0.029)	(0.029)	(0.028)	(0.028)	(0.037)	(0.037)
Scotland	0.325***	0.326***	0.421***	0.421***	0.807***	0.806***
	(0.014)	(0.014)	(0.019)	(0.019)	(0.023)	(0.023)
Attended HE	0.618***	0.617***	0.642***	0.642***	0.819***	0.820***
	(0.024)	(0.024)	(0.026)	(0.026)	(0.025)	(0.025)
HH income (log)	1.326***	1.325***	1.294***	1.294***	0.911***	0.912***
	(0.041)	(0.040)	(0.041)	(0.041)	(0.025)	(0.025)
Unemployed	0.910	0.910	0.886	0.886	1.264**	1.265**
	(0.110)	(0.110)	(0.121)	(0.121)	(0.120)	(0.120)
Union member	0.549***	0.549***	0.527***	0.527***	1.579***	1.579***
	(0.016)	(0.016)	(0.016)	(0.016)	(0.039)	(0.039)
Religious service att.	1.116***	1.116***	0.731***	0.731***	0.872***	0.872***
	(0.043)	(0.043)	(0.027)	(0.027)	(0.028)	(0.028)
Finan./econ. crisis	1.265***	1.176***	1.001	0.992	0.869***	0.910**
	(0.042)	(0.055)	(0.035)	(0.048)	(0.025)	(0.037)
Mortgage * Crisis		1.159**		1.020		0.912
		(0.075)		(0.070)		(0.052)
Observations	31331	31331	33278	33278	31331	31331
Pseudo R^2	0.067	0.067	0.059	0.059	0.024	0.024

Exponentiated coefficients; robust standard errors in parentheses; Sources: British Household Panel Survey, Understanding Society.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 3.11: Mortgage, Party preferences II, 2000s, UK

	Supp. Labour over Tories	+ interaction	Supp. LibDem	+ interaction	Supp. LibDem over Labour	+ interaction
Homeowner (mortgage)	0.692***	0.714***	0.969	0.983	1.033	1.038
	(0.028)	(0.031)	(0.039)	(0.041)	(0.044)	(0.047)
Homeowner (no mortgage)	0.484***	0.482***	1.142***	1.138***	1.461***	1.459***
	(0.023)	(0.023)	(0.055)	(0.055)	(0.075)	(0.075)
Female	1.158***	1.158***	1.245***	1.245***	1.158***	1.158***
	(0.034)	(0.034)	(0.038)	(0.038)	(0.038)	(0.038)
Age	0.993***	0.993***	0.997*	0.997*	0.997*	0.997*
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Non-white	2.910***	2.912***	0.936	0.936	0.672***	0.672***
	(0.350)	(0.350)	(0.096)	(0.096)	(0.071)	(0.071)
Married	0.886***	0.887***	1.074*	1.074*	1.100**	1.099**
	(0.032)	(0.032)	(0.040)	(0.040)	(0.044)	(0.044)
Children	1.312***	1.312***	0.790***	0.790***	0.687***	0.687***
	(0.047)	(0.048)	(0.029)	(0.029)	(0.027)	(0.027)
Scotland	2.303***	2.302***	0.746***	0.745***	0.848***	0.848***
	(0.106)	(0.106)	(0.029)	(0.029)	(0.036)	(0.036)
Attended HE	1.294***	1.295***	2.110***	2.111***	2.038***	2.038***
	(0.056)	(0.056)	(0.076)	(0.076)	(0.081)	(0.081)
HH income (log)	0.767***	0.768***	0.975	0.975	1.030	1.030
	(0.025)	(0.025)	(0.023)	(0.023)	(0.030)	(0.030)
Unemployed	1.224	1.225	0.698**	0.699**	0.657***	0.657***
	(0.156)	(0.156)	(0.103)	(0.103)	(0.101)	(0.101)
Union member	2.019***	2.019***	0.978	0.978	0.745***	0.746***
	(0.063)	(0.063)	(0.032)	(0.032)	(0.027)	(0.027)
Religious service att.	0.803***	0.804***	1.421***	1.421***	1.468***	1.469***
	(0.034)	(0.034)	(0.056)	(0.056)	(0.063)	(0.063)
Finan./econ. crisis	0.791***	0.857***	0.688***	0.722***	0.778***	0.792***
	(0.029)	(0.044)	(0.028)	(0.041)	(0.035)	(0.049)
Mortgage * Crisis		0.856**		0.905		0.965
		(0.061)		(0.074)		(0.085)
Observations	22109	22109	31331	31331	19723	19723
Pseudo R^2	0.063	0.063	0.027	0.027	0.034	0.034

Exponentiated coefficients; robust standard errors in parentheses; Sources: British Household Panel Survey, Understanding Society.
* $p < .1$, ** $p < .05$, *** $p < .01$

3.6.4 Pension Regressions

Table 3.12: Pension, Policy Preferences I, 2000s, UK

	More tax and spending	+ interaction	More for low inc.	+ interaction	More for low unempl.	+ interaction	More for retired	+ interaction
Private pension	0.983	0.980	1.369	1.222	1.007	1.039	0.813	0.815
	(0.125)	(0.146)	(0.320)	(0.314)	(0.261)	(0.315)	(0.180)	(0.211)
Female	1.246***	1.246***	1.008	1.008	0.730***	0.730***	1.027	1.027
	(0.035)	(0.035)	(0.042)	(0.042)	(0.039)	(0.039)	(0.045)	(0.045)
Age	1.008***	1.008***	0.991***	0.991***	0.997	0.997	1.004**	1.004**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Non-white	0.677***	0.677***	0.929	0.928	1.488***	1.489***	1.135	1.135
	(0.044)	(0.044)	(0.089)	(0.089)	(0.159)	(0.159)	(0.114)	(0.114)
Married	1.000	1.000	1.125**	1.126**	0.931	0.931	1.213***	1.213***
	(0.031)	(0.031)	(0.053)	(0.053)	(0.056)	(0.056)	(0.061)	(0.061)
Children	1.058*	1.058*	1.379***	1.376***	1.064	1.065	0.974	0.975
	(0.034)	(0.034)	(0.071)	(0.071)	(0.070)	(0.070)	(0.051)	(0.051)
Scotland	1.276***	1.276***	1.209***	1.209***	1.460***	1.461***	1.181**	1.181**
	(0.060)	(0.060)	(0.086)	(0.086)	(0.118)	(0.118)	(0.089)	(0.089)
Attended HE	1.107***	1.107***	0.860***	0.861***	1.103	1.103	0.735***	0.735***
	(0.035)	(0.035)	(0.041)	(0.041)	(0.069)	(0.069)	(0.036)	(0.036)
HH inc. log	0.988	0.988	0.771***	0.771***	0.517***	0.517***	0.818***	0.818***
	(0.016)	(0.016)	(0.026)	(0.026)	(0.020)	(0.020)	(0.028)	(0.028)
Unemployed	1.189**	1.189**	1.448***	1.450***	1.740***	1.739***	1.024	1.024
	(0.087)	(0.087)	(0.191)	(0.191)	(0.210)	(0.210)	(0.127)	(0.127)
Union member	1.252***	1.252***	1.210***	1.210***	1.151**	1.151**	1.392***	1.392***
	(0.045)	(0.045)	(0.065)	(0.065)	(0.080)	(0.080)	(0.081)	(0.081)
Finan./econ. crisis	0.462***	0.462***	1.101**	1.097*	0.845***	0.846***	0.982	0.982
	(0.017)	(0.017)	(0.052)	(0.052)	(0.052)	(0.053)	(0.049)	(0.049)
Pension * crisis		1.011		1.872		0.883		0.991
		(0.291)		(1.251)		(0.506)		(0.492)
Observations	22054	22054	11290	11290	11293	11293	11293	11293
Pseudo R^2	0.027	0.027	0.018	0.018	0.060	0.060	0.013	0.013

Exponentiated coefficients; robust standard errors in parentheses; Source: British Social Attitudes Survey.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 3.13: Pension, Policy Preferences II, 2000s, UK

	Earnings ceiling	Public serv. gov't owned	+ interaction	Gov't to provide jobs	+ interaction	Unions protect employees	+ interaction
Private pension	0.848**	1.088	1.066	0.979	1.062	0.820***	0.819***
	(0.066)	(0.069)	(0.079)	(0.063)	(0.080)	(0.053)	(0.063)
Employer's pension	0.835***	1.211***	1.211***	0.767***	0.767***	0.863***	0.863***
	(0.051)	(0.065)	(0.065)	(0.040)	(0.040)	(0.049)	(0.049)
Female	1.086*	0.778***	0.778***	1.225***	1.224***	1.100**	1.100**
	(0.054)	(0.032)	(0.032)	(0.040)	(0.040)	(0.049)	(0.049)
Age	1.018***	1.008***	1.008***	0.994***	0.994***	0.986***	0.986***
	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Non-white	1.027	1.451**	1.450**	2.451***	2.459***	1.625***	1.625***
	(0.177)	(0.210)	(0.210)	(0.351)	(0.353)	(0.266)	(0.266)
Married	0.880**	0.906**	0.906**	1.073	1.073	0.853***	0.853***
	(0.052)	(0.045)	(0.045)	(0.054)	(0.054)	(0.045)	(0.045)
Children	1.090	0.969	0.969	0.921*	0.922*	1.004	1.004
	(0.060)	(0.045)	(0.045)	(0.054)	(0.054)	(0.045)	(0.045)
Scotland	1.188***	1.17**	1.17**	1.200***	1.202***	1.219***	1.219***
	(0.070)	(0.057)	(0.057)	(0.061)	(0.061)	(0.048)	(0.048)
Attended HE	0.874**	1.149***	1.149***	0.642***	0.642***	0.681***	0.681***
	(0.058)	(0.060)	(0.060)	(0.036)	(0.036)	(0.051)	(0.051)
HH income (log)	0.771***	0.945	0.945	0.632***	0.632***	0.920	0.920
	(0.040)	(0.038)	(0.038)	(0.032)	(0.032)	(0.066)	(0.066)
Unemployed	1.414	1.733	1.733	0.768	0.769	2.553	2.553
	(1.586)	(0.927)	(0.927)	(0.392)	(0.394)	(1.745)	(1.745)
Union member	1.298***	1.532***	1.532***	1.186***	1.185***	2.922***	2.922***
	(0.072)	(0.072)	(0.072)	(0.055)	(0.055)	(0.138)	(0.138)
Religious service att.	1.117*	1.028	1.028	0.963	0.965	1.136**	1.136**
	(0.056)	(0.056)	(0.056)	(0.053)	(0.053)	(0.066)	(0.066)
Finan./econ. crisis	0.894**	0.887**	0.887**	0.909**	0.939	1.065	1.065
	(0.070)	(0.042)	(0.042)	(0.045)	(0.045)	(0.050)	(0.053)
Pension * Crisis			1.076		0.731**		1.003
			(0.151)		(0.108)		(0.141)
Observations	11117	10180	10180	10348	10348	10351	10351
Pseudo R^2	0.015	0.015	0.015	0.029	0.029	0.054	0.054

Exponentiated coefficients; robust standard errors in parentheses; Source: British Household Panel Survey.

$* \ p < .1, \ ** \ p < .05, \ *** \ p < .01$

Table 3.14: Pension, Government to provide jobs, DID, UK

	From 2000 to 2004	From 2004 to 2007
Private pension	1.032	1.065***
	(0.024)	(0.025)
Married	0.977	0.999
	(0.028)	(0.030)
Scotland	0.970	0.918
	(0.018)	(0.143)
HH income (log)	0.983	1.016
	(0.014)	(0.011)
Unemplyoed	0.980	1.061
	(0.043)	(0.044)
Union member	0.835***	1.009
	(0.034)	(0.037)
Observations	7346	9144
Pseudo R^2		

Exponentiated coefficients; robust standard errors clustered at individual level in parentheses.
Source: British Household Panel Survey. * $p < .1$, ** $p < .05$, *** $p < .01$

Table 3.15: Pension, Unions Protect Employees, DID, UK

	From 2000 to 2004	From 2004 to 2007
Private pension	0.976	0.955**
	(0.023)	(0.021)
Married	0.969	0.992
	(0.027)	(0.027)
Scotland	0.941	0.820*
	(0.156)	(0.094)
HH income (log)	0.996	1.002
	(0.014)	(0.012)
Unemplyoed	1.017	0.981
	(0.051)	(0.049)
Union member	1.055	1.100***
	(0.043)	(0.039)
Observations	7346	9144
Pseudo R^2		

Exponentiated coefficients; robust standard errors clustered at individual level in parentheses.
Source: British Household Panel Survey. * $p < .1$, ** $p < .05$, *** $p < .01$

Table 3.16: Pension, Party Preferences I, 2000s, UK

	Supp. Tories	+ interaction	Vote Tories	+ interaction	Supp. Labour	+ interaction
Private pension	1.158***	1.112*	1.173***	1.141**	0.798***	0.784***
	(0.057)	(0.061)	(0.061)	(0.065)	(0.035)	(0.037)
Employer's pension	0.958	0.956	0.905**	0.905**	0.975	0.974
	(0.042)	(0.042)	(0.042)	(0.042)	(0.036)	(0.036)
Female	0.848***	0.848***	0.871***	0.871***	1.068**	1.068**
	(0.029)	(0.029)	(0.031)	(0.031)	(0.030)	(0.030)
Age	1.008***	1.008***	1.009***	1.009***	0.999	0.999
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Non-white	0.307***	0.306***	0.349***	0.347***	2.353***	2.350***
	(0.050)	(0.050)	(0.066)	(0.066)	(0.236)	(0.236)
Married	1.182***	1.182***	1.145***	1.145***	1.032	1.032
	(0.050)	(0.050)	(0.052)	(0.052)	(0.035)	(0.035)
Children	0.890***	0.889***	0.814***	0.813***	1.386***	1.385***
	(0.034)	(0.034)	(0.033)	(0.033)	(0.043)	(0.043)
Scotland	0.335***	0.335***	0.448***	0.448***	0.775***	0.775***
	(0.017)	(0.017)	(0.024)	(0.024)	(0.026)	(0.026)
Attended HE	0.586***	0.586***	0.610***	0.610***	0.893***	0.893***
	(0.028)	(0.028)	(0.030)	(0.030)	(0.032)	(0.032)
HH income (log)	1.547***	1.546***	1.533***	1.532***	0.882***	0.882***
	(0.067)	(0.067)	(0.066)	(0.066)	(0.026)	(0.026)
Unemployed	0.119**	0.120**	0.374	0.374	1.819	1.821
	(0.124)	(0.125)	(0.290)	(0.290)	(0.688)	(0.688)
Union member	0.546***	0.547***	0.510***	0.510***	1.506***	1.506***
	(0.020)	(0.020)	(0.020)	(0.020)	(0.048)	(0.048)
Religious service att.	1.104**	1.102*	0.661***	0.661***	0.847***	0.847***
	(0.055)	(0.055)	(0.032)	(0.032)	(0.034)	(0.034)
Finan./econ. crisis	1.322***	1.287***	1.019	0.999	0.882***	0.872***
	(0.056)	(0.059)	(0.047)	(0.049)	(0.032)	(0.034)
Pension * Crisis		1.231*		1.166		1.108
		(0.152)		(0.154)		(0.127)
Observations	20788	20788	22640	22640	20788	20788
Pseudo R^2	0.062	0.062	0.052	0.052	0.020	0.020

Exponentiated coefficients; robust standard errors in parentheses; Sources: British Household Panel Survey, Understanding Society.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 3.17: Pension, Party Preferences II, 2000s, UK

	Supp. Labour over Tories	+ interaction	Supp. LibDem	+ interaction	Supp. LibDem over Labour	+ interaction
Private pension	0.798***	0.817***	1.203***	1.266***	1.320***	1.392***
	(0.043)	(0.049)	(0.066)	(0.075)	(0.079)	(0.090)
Employer's pension	1.010	1.011	1.272***	1.275***	1.244***	1.248***
	(0.047)	(0.047)	(0.065)	(0.065)	(0.067)	(0.068)
Female	1.180***	1.180***	1.279***	1.278***	1.178***	1.179***
	(0.044)	(0.044)	(0.048)	(0.048)	(0.048)	(0.048)
Age	0.993***	0.993***	1.000	1.000	1.001	1.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Non-white	4.027***	4.039***	1.029	1.033	0.723***	0.725***
	(0.673)	(0.675)	(0.124)	(0.125)	(0.088)	(0.088)
Married	0.886***	0.886***	0.982	0.982	0.978	0.978
	(0.040)	(0.040)	(0.044)	(0.044)	(0.047)	(0.047)
Children	1.294***	1.294***	0.757***	0.758***	0.659***	0.660***
	(0.053)	(0.053)	(0.032)	(0.032)	(0.029)	(0.029)
Scotland	2.166***	2.169***	0.772***	0.772***	0.898**	0.899**
	(0.118)	(0.118)	(0.035)	(0.036)	(0.045)	(0.045)
Attended HE	1.430***	1.430***	1.881***	1.881***	1.762***	1.764***
	(0.073)	(0.073)	(0.080)	(0.080)	(0.082)	(0.082)
HH income (log)	0.670***	0.670***	0.952	0.952	1.012	1.013
	(0.032)	(0.032)	(0.033)	(0.033)	(0.041)	(0.041)
Unemployed	9.295**	9.281**	1.630	1.624	1.145	1.138
	(9.784)	(9.765)	(0.709)	(0.704)	(0.512)	(0.507)
Union member	1.965***	1.963***	0.940	0.939	0.745***	0.744***
	(0.079)	(0.079)	(0.039)	(0.039)	(0.034)	(0.034)
Religious service att.	0.807***	0.807***	1.508***	1.511***	1.551***	1.555***
	(0.043)	(0.043)	(0.073)	(0.073)	(0.082)	(0.082)
Finan./econ. crisis	0.773***	0.784***	0.673***	0.704***	0.761***	0.796***
	(0.036)	(0.039)	(0.035)	(0.039)	(0.043)	(0.048)
Pension * Crisis		0.893		0.685**		0.672**
		(0.120)		(0.114)		(0.122)
Observations	14527	14527	20788	20788	13383	13383
Pseudo R^2	0.053	0.053	0.028	0.028	0.030	0.031

Exponentiated coefficients; robust standard errors in parentheses; Sources: British Household Panel Survey, Understanding Society.

$* p < .1$, $** p < .05$, $*** p < .01$

Table 3.18: Pension, Support Conservatives/Labour, DID, UK

	Labour from 2006 to 2010	Tories from 2008 to 2010
Private pension	1.062*	1.049*
	(0.034)	(0.028)
Married	0.959	0.971
	(0.052)	(0.060)
Scotland	1.030	0.961
	(0.031)	(0.025)
Attended HE	0.992	1.006
	(0.027)	(0.016)
HH income (log)	0.990**	1.004
	(0.005)	(0.004)
Unemployed	1.195	0.995
	(0.177)	(0.008)
Union member	0.996	1.013
	(0.025)	(0.023)
Observations	1648	1756
Pseudo R^2		

Exponentiated coefficients; robust standard errors clustered at individual level in parentheses.
Source: British Household Panel Survey. * $p < .1$, ** $p < .05$, *** $p < .01$

3.6.5   British Social Attitudes Survey (BSA)

Dependent variables: Policy preferences

– More tax and spending: "Suppose the government had to choose between the three options on this card. Which do you think it should choose?" [asked in 2000-2010]

· Answer categories: "Reduce taxes and spend less on health, education and social benefits; Keep taxes and spending on these services at the same level as now; Increase taxes and spend more on health, education and social benefits; None." For the binary choice model simplified into increase taxes and spend more on health, education and social benefits versus all others.

– More for low income: "Some people think that there should be more government spending on social security, while other people disagree. For each of the groups I read out please say whether you would like to see more or less government spending on them than now. Bear in mind that if you want more spending, this would probably mean that you would have to pay more taxes. If you want less spending, this would probably mean paying less taxes. Would you like to see more or less government spending than now on benefits for parents who work on very low incomes?" [asked in 2002, 2004, 2006, 2008]

· Answer categories: Spend much more, spend more, spend the same as now, spend less, spend much less. For the binary choice model simplified into spend more (if spend much more or spend more) and all others.

– More for unemployed: "Some people think that there should be more government spending on social security, while other people disagree. For each of the groups I read out please say whether you would like to see more or less government spending on them than now. Bear in mind that if you want more spending, this would probably mean that you would have to pay more taxes. If you want less spending, this would probably mean paying less taxes. Would you like to see more or less government spending than now on benefits for unemployed people?" [asked in 2002, 2004, 2006, 2008]

· Answer categories: "Spend much more, Spend more, Spend the same as now, Spend less, Spend much less." For the binary choice model simplified into spend more (if spend much more or spend more) and all others.

– More for retired: "Some people think that there should be more government spending on social security, while other people disagree. For each of the groups I read out please say whether you would like to see more or less government spending on them than now. Bear in mind that if you want more spending, this would probably mean that you would have to pay more taxes. If you want less spending, this would probably mean paying less taxes. Would you like to see more or less government spending than now on benefits for retired people?" [asked in 2002, 2004, 2006, 2008]

　　· Answer categories: "Spend much more, Spend more, Spend the same as now, Spend less, Spend much less." For the binary choice model simplified into spend more (if spend much more or spend more) and all others.

Key explanatory variables

– Student debt: "Which of these is the main source of income for you (and your husband/wife/partner) at present?" [asked in 2000-2010]

　　· Answer categories: "Earnings from employment (own or spouse/partner's); Occupational pension(s) - from previous employer(s); Private pension(s); State retirement or widow's pension(s); Jobseeker's allowance/unemployment benefits; Income support/minimum income guarantee for pensioners; Invalidity sickness or disabled pension or benefit(s); Other state benefits or tax credit; interest from savings or investments; *Student grant, bursary or loans*; Dependent on parents/other relatives; Other main income."

– Homeowner with/out mortgage: "Does your household own or rent this accommodation? If owns: Outright or on a mortgage? If rents: From whom? [asked 2000-2010]

　　· From this question, I generate two dummies: The first is 1 if the individual is a homeowner with a mortgage and 0 otherwise. The second is 1 if the individual is a homeowner without a mortgage and 0 otherwise.

– Private pension: "Which of these is the main source of income for you (and your husband/wife/partner) at present?" [asked 2000-2010]

　　· Answer categories: "Earnings from employment (own or spouse/partner's); Occupational pension(s) - from previous employer(s); *Private pension(s)*; State retirement or widow's pension(s); Jobseeker's allowance/unemployment

benefits; Income support/minimum income guarantee for pensioners; Invalidity sickness or disabled pension or benefit(s); Other state benefits or tax credit; interest from savings or investments; Student grant, bursary or loans; Dependent on parents/other relatives; Other main income."

3.6.6   British Household Panel Survey (BHPS)

Dependent variables: Policy preferences

– Earnings ceiling: "The government should place an upper limit on the amount of money that any one person can make." [asked in 2001, 2003, 2006]

· Answer categories: "Strongly agree, Agree, Neither agree nor disagree, Disagree, Strongly disagree, Don't know." For the binary choice model simplified into agree (if strongly agree or agree) and all others.

– Public serv. gov't owned: "Major public services and industries ought to be in state ownership." [asked in 2000, 2004, 2007]

· Answer categories: "Strongly agree, Agree, Neither agree nor disagree, Disagree, Strongly disagree, Don't know." For the binary choice model simplified into agree (if strongly agree or agree) and all others.

– Gov't to provide jobs: "It is the government's responsibility to provide a job for everyone who wants one."[asked in 2000, 2004, 2007]

· Answer categories: "Strongly agree, Agree, Neither agree nor disagree, Disagree, Strongly disagree, Don't know." For the binary choice model simplified into agree (if strongly agree or agree) and all others.

– Unions protect employees: "Strong trade unions are needed to protect the working conditions and wages of employees."[asked in 2000, 2004, 2007]

· Answer categories: "Strongly agree, Agree, Neither agree nor disagree, Disagree, Strongly disagree, Don't know." For the binary choice model simplified into agree (if strongly agree or agree) and all others.

Dependent variables: Party preferences

– Support Tories/Labour/LibDem: "If there were to be a General Election tomorrow, which political party do you think you would be most likely to support?" [asked in 2000-2008]

     · Answer categories: "Open, including: none, can't vote, don't know."

  – Vote Tories: "Which political party did you vote for?" [asked in 2000, 2005]

     · Answer categories: "Open, including: none, can't vote, don't know."

Key explanatory variables

  – Student debt: "I would like to ask you now about any other financial commitments you may have apart from mortgages and housing related loans. Do you currently owe any money on the things listed on this card? Please do not include credit card and other bills being fully paid off in the current month." [asked in 2000, 2005]. If answer is "yes", then:

     · "Which ones?"

     · Answer categories: "Hire purchase agreements, personal loans (from bank, building society or other financial institution), credit cards (inc. store cards), catalogue or mail order purchase agreements, DSS Social Fund loan, any other loans from a private individual, overdrafts, *student loan*, anything else, don't know."

  – Homeowner with/out mortgage: "Does your household own or rent this accommodation or does it come rent-free?" [asked 2000-2008]

     · Answer categories: "Owned/being bought on mortgage, Shared ownership (part-owned part-rented), Rented, Rent free, Other."

     · If "owned or being bought on mortgage": "Is this accommodation: Owned outright, Or is it being bought with a mortgage?"

     · Dummy variables for homeowner with mortgage and homeowner without mortgage. The reference category is all others (most of them renting their place).

  – Private pension: "In the past, that is since [...] have you paid any contributions or premiums for a private personal pension, or had such contributions paid on your behalf by the Department for Work and Pensions?" [2000-2008]

     · Answer categories: "Yes, No." Coded into a dummy variable.

  – Employer's pension: "Does your present employer run a pension scheme or superannuation scheme for which you are eligible?" [asked 2000-2008]

· Answers: "Yes, No." If yes, then

· "Do you belong to your employer's pension scheme?" Answers: "Yes, No." Coded into a dummy variable.

3.6.7 Understanding Society (UKHLS)

Dependent variables: Party preferences

– Support Tories/Labour/LibDem: "If there were to be a General Election tomorrow, which political party do you think you would be most likely to support?" [asked in 2009-2010]

· Answer categories: "Open, including: none, can't vote, don't know."

– Vote Tories: "Which political party did you vote for?" [asked in 2010]

· Answer categories: "Open, including: none, can't vote, don't know."

Key explanatory variables

– Homeowner with/out mortgage: "Does your household own this accommodation outright, is it being bought with a mortgage, is it rented or does it come rent-free?"

· Answer categories: "Owned outright, Owned/being bought on mortgage, Shared ownership (part-owned part-rented), Rented, Rent free, Other." From this information, I created two dummy variables: one for homeowners with mortgage and one for those without. The omitted category is all others.

– Private pension: "[Other than your main employer or occupational pension scheme, are /Are] you currently a member of any personal pension scheme or do you currently contribute to any personal pension scheme? Please include any Additional Voluntary Contribution scheme you may belong to." [asked in 2010]

· Answer categories: "Yes, No." Coded into a binary variable.

– Private pension: "In the past, that is since [...] have you paid any contributions or premiums for a private personal pension, or had such contributions paid on your behalf by the Department for Work and Pensions?" [2000-2008]

· Answer categories: "Yes, No." Coded into a dummy variable.

– Employer's pension: "Does your present employer run a pension scheme or superannuation scheme for which you are eligible?" [asked 2009-2010]

· Answers: "Yes, No." If yes, then

· "Do you belong to your employer's pension scheme?" Answers: "Yes, No." Coded into a dummy variable.

3.6.8   Distribution of Variables

Table 3.19: Distribution of Variables, UK

	Agree/yes %	Mean	Std. dev.	Observ.
Policy preferences in BSA				
More tax and spending	48.57	.486	.500	29,273
More for low income	66.41	.664	.477	16,533
More for unemployed	17.17	.172	.377	13,227
More for retired	73.10	.731	.443	13,229
Policy preferences in BHPS				
Earnings ceiling	22.67	.227	.419	44,596
Public services gov't owned	34.47	.374	.484	28,604
Gov't to provide jobs	47.97	.479	.500	29,532
Unions protect employees	61.96	.620	.485	29,345
Party preferences in BHPS & UKHLS				
Supports Tories	27.40	.274	.446	19,944
Voted Tories	23.38	.234	.423	19,606
Supports Labour	45.35	.454	.498	19,944
Supports Labour over Tories	62.34	.623	.485	14,510
Supports LibDems	15.91	.159	.366	19,944
Supports LibDems over Labour	25.98	.260	.439	12,219
Student Debt				
Student Debt in BSA	0.96	.010	.973	44,381
Student debt in BHPS	4.78	.048	.213	29,510
Mortgage				
Homeowner with mortgage in BSA	38.28	.383	.486	41,180
Homeowner without mortgage	31.68	.317	.465	41,180
Homeowner with mortgage in BHPS & UKHLS	38.61	.386	.487	93,268
Homeowner without mortgage in BHPS & UKHLS	28.76	.288	.453	94,388
Private Pension				
Private pension in BSA	1.20	.012	.109	44,381
Private pension in BHPS & UKHLS	9.89	.099	.299	160,586

Chapter 4

Financial Risk in the U.S.

4.1 Introduction

Mortgages matter. The United States witnessed two debt crises in the 2000s. First, the subprime mortgages crisis triggered the financial meltdown in 2007. Many individuals found themselves unable to service their payments, some went into foreclosures and lost their homes. When mortgages and all other consumer debts finally started to fall, it became visible that a second debt crisis was already well on its way. Student debt kept growing, even during the financial crisis and the following recession. By law, individuals in the U.S. cannot get rid of student debt through bankruptcy. Student debt is therefore here to stay. The two debt crises were accompanied by the stock market crash, which brought about severe losses for all savers and harmed those with private retirement funds. This chapter analyzes the effect of these three financial risks on preferences in the United States. I analyze two panel datasets from the National Longitudinal Study of Youth. I show that there is a clear divide between borrowers, and that savers form a strong group. Some borrowers lean towards the left, others to the right. All savers are more likely to support the Republican Party.

The chapter follows the same structure as the previous one. I describe how student debt, mortgages, and private pension evolved in the past decade in section 4.2. Then I explain the steps of the empirical analysis in section 4.3. This is followed by a summary of the regression results in section 4.4. At the end, I conclude the case study of the U.S. in section 4.5. Again, all empirical results and lists of the questions and variables used from the different surveys can be found in the appendix in section 4.6.

4.2   Financial Risk in the U.S.

4.2.1   Student Debt

Student debt in the United States has risen to unprecedented levels. Although the U.S. has had a partially private higher education system for a longer time than most other advanced capitalist countries, current debt levels are record-breaking. Data of the Federal Reserve Bank of New York (2012) for the third quarter of 2012 show that student debt has hit the one trillion US-\$ mark, having outgrown both consumer credit card and auto loan debt. It is also the only consumer debt that is still rising in the aftermath of the financial and economic crisis of the 2007-2009. Total consumer indebtedness peaked in 2008 at \$12.7 trillion and has fallen since, but total student loan debt is still rising (idem). With constantly rising enrollment rates, having to pay back student loans has become a mass phenomenon. Around 38 million individual, the equivalent of the population of California, currently have to pay back student loan debt (Brown et al., 2012).

The story of student debt in the U.S. cannot be told without taking into account the development of direct student costs, in particular tuition. As figure 4.1 shows, the relative growth rates of student costs, with 4-year colleges as the main cost driver, and median weekly earnings differed substantially. Accounting for inflation, student costs rose steadily, while changes in the median wage fluctuated at low levels with years of negative wage growth. The average annual costs of tuition and fees, as well as room and board for undergraduates rose across all institutions, but in particular in 4-year colleges, where they roughly doubled from \$11,000 to almost \$23,000 over a period of 25 years (in constant 2011-12 US-\$). Costs for 2-year institutions rose more moderately, from less than \$7,000 to about \$9,000 in the same period (idem). Enrollment rates have constantly risen in the same period. In 1967, roughly one third of the 18- to 24-year olds with a high school degree attended a degree-granting institution (National Institute for Education Statistics, 2012a). In 2010, half of all young individuals were enrolled (idem). Hence, ever higher student costs apply to a growing share of the population.

While the rapid increase in student cost suggests that student loans and hence student debt must have increased at a similar pace, one cannot make a direct link. This is because what students actually pay is complex and data on average tuition fees shed little light on individual budgets. While there has been an increase in tuition and other fees, various forms of student assistance exists. Pell Grants and other federal and non-federal grants play an important role in student finances. The average amount of financial aid received by a full-time undergraduate student

Figure 4.1: Tuition and Wages, 1984-2010, U.S.
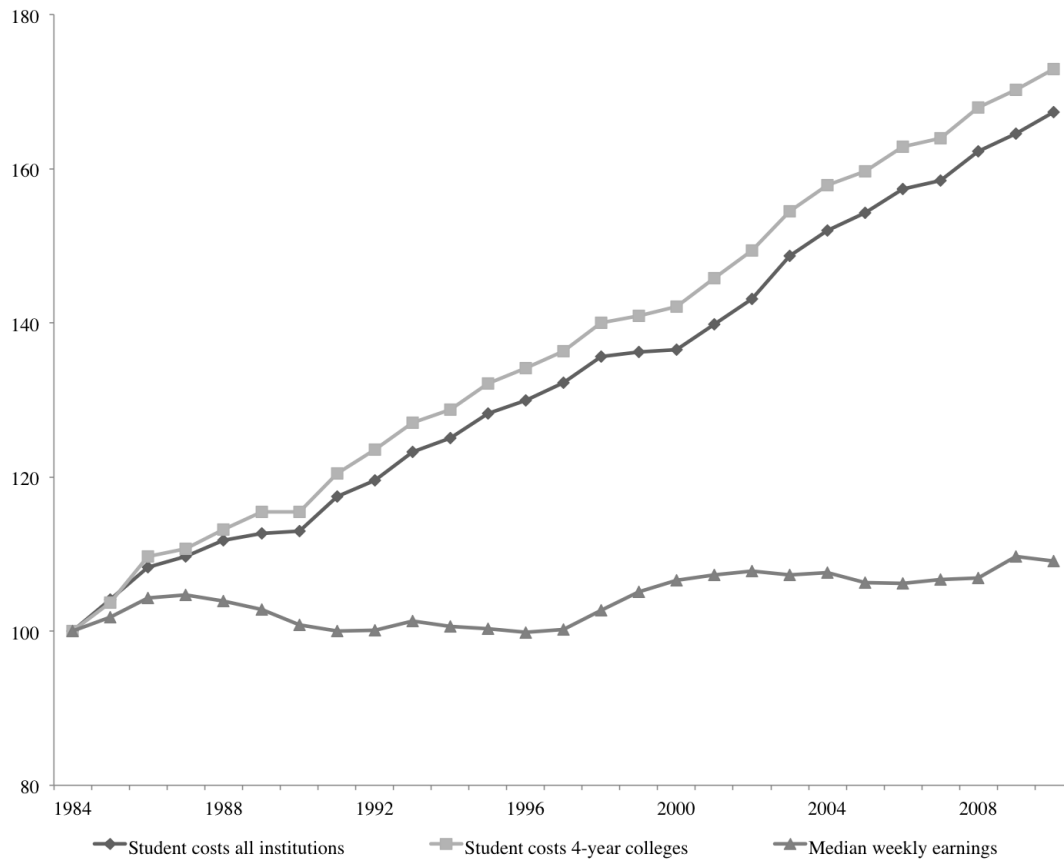
Figure shows relative growth in student costs and median weekly earnings. Student costs include average undergraduate tuition, fees, room, and board rates. Years are school (academic) years for student costs. They reflect in-state rates and are denoted in constant 2011-12 US-dollars based on the CPI, prepared by the Bureau of Labor Statistics, U.S. Department of Labor, adjusted to a school-year basis. Median usual weekly earnings in constant 1982-1984 US-$ for Education Statistics (2013), table 349; U.S. Bureau of Labor Statistics (2013), Series ID LES1252881600; and own calculation.

was $12,700 in 2007-2008 (National Institute for Education Statistics, 2012*a*). An average undergraduate received $7,100 in grants and borrowed $9,500 (idem). Lower income households received more financial aid in the forms of grants (idem). In addition to financial aid, loan conditions matter: an interest rate subsidy (vis-à-vis a market interest rate) can significantly change the amount of debt. Repayment conditions also alter the actual debt burden. While student costs may provide the best single measure for the privatization trend, focusing on this one-dimensional policy change may blur the picture, as Häusermann (2010) has convincingly argued. This is because changes to financing rules, that have broad implications, are usually part of a larger compromise.

I will now turn to the data on student loans. To cope with the increase in costs, students and their families can take out loans, both federal as well as pri-

Figure 4.2: Student Loan Default Rates, 2007-2010, U.S.
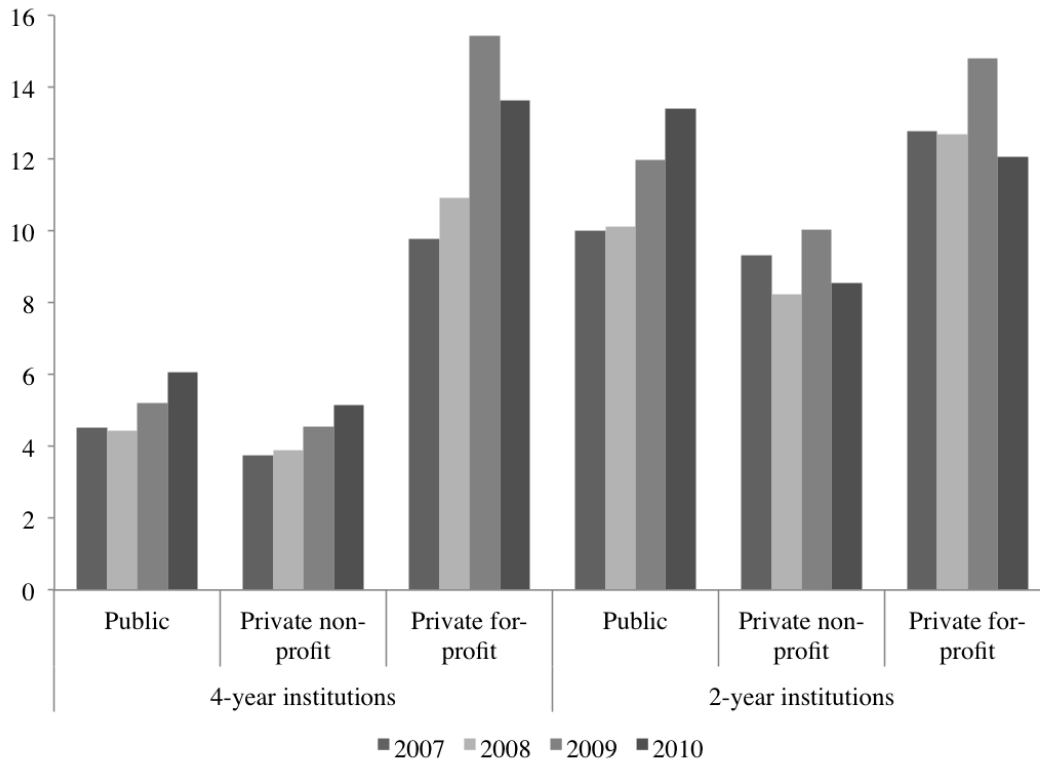
Table shows the 2-year cohort default rate for the fiscal years 2007-2010. It depicts the percentage of borrowers who enter repayment during a given fiscal year and who default by the end of the following year. A default occurs if a borrower does not make a payment for 270 days. Data are for certain loans only, including the Federal Family Education Loan Program, the William D. Ford Federal Direct Loan Program, and Federal Stafford Loans. Data do not include PLUS loans, Federal Insured Student Loans, or Federal Perkins Loans. In 2007, 3.4 million individuals entered the repayment phase. In 2010, 4.1 million individuals had to make their first repayment. Source: National Institute for Education Statistics (2013), adapted from table 365.5.

vate loans. In 2000, the average undergraduate student loan was about $4,300 per year (National Institute for Education Statistics, 2012b). By 2010, this amount had increased to $6,600 per year with an increase of 15 percentage points in the share of undergraduates with loans over the same period. Four-year colleges were more expensive per year. Fewer students took out lower loans in public than in private institutions, with a considerable difference between not-for-profit and for-profit institutions. More students took out higher loans in the North-East of the US, than in the Midwest, South and West.

Interestingly, higher student loans are neither a low-income, nor a high-income phenomenon, nor are they only relevant to the middle class. Loans are increasing in income, which may be due to higher collateral and choice of college, as well as to a number of socioeconomic characteristics. For low-income students with family income lower than $20,000, annual loans were about $5,000. Students from

households with an annual income of \$100,000 or more took out double the amount (National Institute for Education Statistics, 2013). For independent students, higher income is also associated with larger federal and non-federal loans but the differences are smaller: Students with less than \$10,000 income took out \$7,000 in federal and 6,400 in non-federal loans (idem). Independent students with an income of \$50,000 or more borrowed \$7,200 and \$7,400, respectively (idem). More generally, the data suggest that student loans have become a mass phenomenon.

Annual loans add up to graduation debt. Data collected by the Project on Student Debt, a non-profit organization promoting access to college and affordable financing, shows that average graduation debt has constantly risen from about \$18,000 in the academic year of 2003-2004 to \$25,000 in 2010-2011 (The Institute for College Access & Success, 2013). Graduates at private institutions graduated on average with higher debt levels. Thus, student debt has risen constantly, while being concentrated at about 60 percent of the student population. The fact that average student debt has risen more in proportion than the percentage of student taking out loans is remarkable from the perspective of redistributive policies, since, as pointed out before, financing higher education through tuition fees is itself a redistributive policy.

Paying back this amount of debt is not simple. Figure 4.2 shows default rates for students within the first two years after the first repayment is due for the years 2007 until 2010, spanning the years before and after the financial and economic crisis of the late 2000s. Default rates ranged between 4 and 15 percent. In general, default rates from two-year college graduates were higher than those from four-year graduates. However, graduates from private for-profit institutions at four-year institutions experienced overall the highest default rate in 2009, when 15 percent were unable to make repayments.

In total, as data from the Federal Reserve of New York show (2012), student loans have risen from \$241 billion in the first quarter of 2003 to \$758 billion in the first quarter of 2010. Recent research by the Federal Reserve of New York (Brown et al., 2012) shows that 27 percent of all borrowers had past due balances in 2011, while the total number of borrowers was about 38 million. In addition, student loans are also different in that they are not eligible for discharge in bankruptcy. This has been the case for federal loans since 1978 and was extended to most private student loans in 2005[1].

To sum up the descriptive data from this section: The increase in student debt is caused by an increase in tuition costs.. All have risen constantly and constitute

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[1]Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (P.L. 109-8, 10/17/2005).

a significant part of total consumer debt in the United States. Servicing student loan debt has become an important budget constraint to a growing share of the population.

4.2.2   Mortgage

The subprime mortgage crisis in the United States triggered the financial meltdown in 2007. The U.S. has a long history of encouraging homeownership, including government-sponsored institutions, that help individuals to finance their house: Fannie Mae (Federal National Mortgage Association) and Freddie Mac (Federal Home Loan Mortgage Corporation). Both operate in the secondary market for mortgages, buying and packaging up mortgages to sell them again as mortgage-backed securities. As a result, mortgages were available to almost everyone, irrespective of credit ratings. Rising house prices helped to sustain ever more people buying houses with the hope that the rising house price itself would re-finance the mortgage.

While a discussion of the subprime mortgage crisis lies beyond the scope of this dissertation[2], it is important to note that more and more households took out (subprime) mortgages. When the crisis started, mortgages outgrew income: They amounted to 73 percent of disposable income in 2001, peaked at 103 percent in 2007, and fell to 90 percent in 2010 (OECD, 2009b, 2014b).

At the same time, homeownership rates fell from 82 percent in 2000 to 67 percent in 2010. Households above the median income have traditionally higher homeownership rates: They rose slowly from 81 percent in 2000 to 85 percent in 2006 and then fell to 82 percent in 2010. For households below the median income, rates were substantially lower stagnating at 52 percent over the entire decade with only small swings (U.S. Census Bureau, 2014).

The decline in homeownership rates mirrors the slow wage growth over that period. In addition, young prospective homeowners, as first empirical evidence suggests, are likely to delay buying a house due to the fact that they have to service their student loans first. Figure 4.3 shows the distribution of homeowners with student loans: For all age groups, the percentage of those who hold student debt has grown. For the youngest cohort, it is the highest: 45 percent of all homeowners under 30 paid back student debt.

The share of households who pay more than 50 percent of their income has increased from 13 percent in 2001 to 17 percent in 2010. Adding those who pay 30

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[2]There is no shortage of literature on mortgage in the United States. For instance, Green and Wachter (2005) give a comprehensive overview of mortgages in the U.S. in both a historical and comparative perspective.

Figure 4.3: Homeowners with Student Debt, 2000s, U.S.
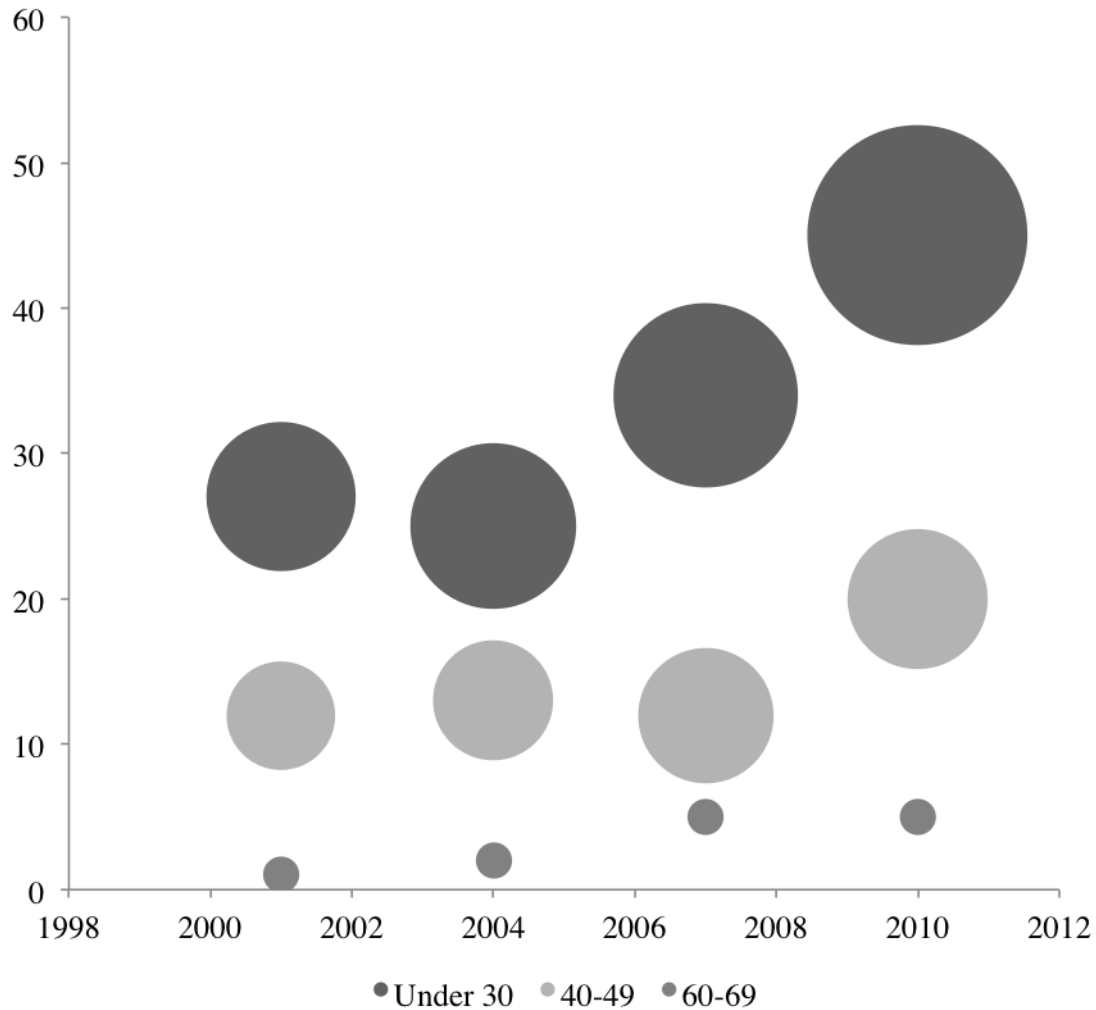
Percentage of homeowners with student debt by age cohort. Taken from the Survey of Consumer Finances by the Federal Reserve Board. Source: Joint Center for Housing Studies of Harvard University (2014).

to 50 percent, the total share of households paying a substantial part of their income to service their mortgage rose from 30 percent in 2001 to 35 percent in 2010.

Not surprising, the figures differ according to household income: Of those homeowners with mortgages and less than \$15,000 annual income, 94 percent are severely cost-burdened, i.e. paying more than half of their income on mortgages. Only 1 percent of those with income of 75 percent and more share the same fate.

Single-parent families are also struggling: about a third is spending half of their income on mortgages. The rate is lowest for households that are ethnically white-Caucasian and highest for those who are African-American. It is also increasing in education and linked to employment status. Half of all the households where the main breadwinner is unemployed feel severely burdened (Joint Center for Housing

Studies of Harvard University, 2014).

Mortgages, and in particular subprime mortgages, have been in the spotlight since the financial crisis. The housing boom, sustained by the availability of credit, followed by a sudden credit crunch showed how important the regulation of mortgages has become for an economy. Moreover, it also revealed how many households were dependent upon their mortgage-financed homes.

4.2.3   Private Pension

In addition to social security, individuals in the U.S. can save money for their retirement in occupational and private schemes. Employers get tax breaks if they contribute to their employee's pensions but it is not mandatory. Most pension plans were transformed from 'defined benefits' to 'defined contributions': The pension an individual receives when retired depends only on how well they have invested their money in funds.

Many people, in particular those whose employers do not provide a pension plan, those who are self-employed, and those who believe that their pension will be too small, choose to invest into private pension funds, either Individual Retirement Accounts (IRAs) or Keogh plans.

IRAs (traditional and Roth) are effectively savings plans that only allow you to withdraw your money once you have reached a certain age. After retirement age, the annual withdrawal allowance is calculated. In return, there are different tax exemptions. In most plans, individuals can decide how to invest their money. Depending on the type, different eligibility criteria are in place. They depend on annual income, family situation, and other occupational pension plans.

More than 50 million people participated in IRAs in the 2000s (OECD, 2009c). By comparison, close to 150 million people participated in occupational pension schemes (idem). Keogh plans are less frequently used: They are targeted at high-earning self-employed individuals (and a small group of employees). They allow higher contributions and can therefore be set-up also relatively close to retirement age.

Figure 4.4 shows both, the investment performance of private pensions and the volume of money invested. The aggregate investment performance of these pension plans is by no means constant: While it was always positive in the 1990s, the largest gain in the 2000s occurred in 2003 with 18 percent, and the largest loss in 2008 with -22 percent. By contrast, 2003 was a very good year.

On average, the rate of return from 2000 until 2010 was 4 percent. The available assets fell slightly in the early 2000s, and then rose constantly, following the boom

Figure 4.4: Private Pension Assets and Performance, 2000s, U.S.
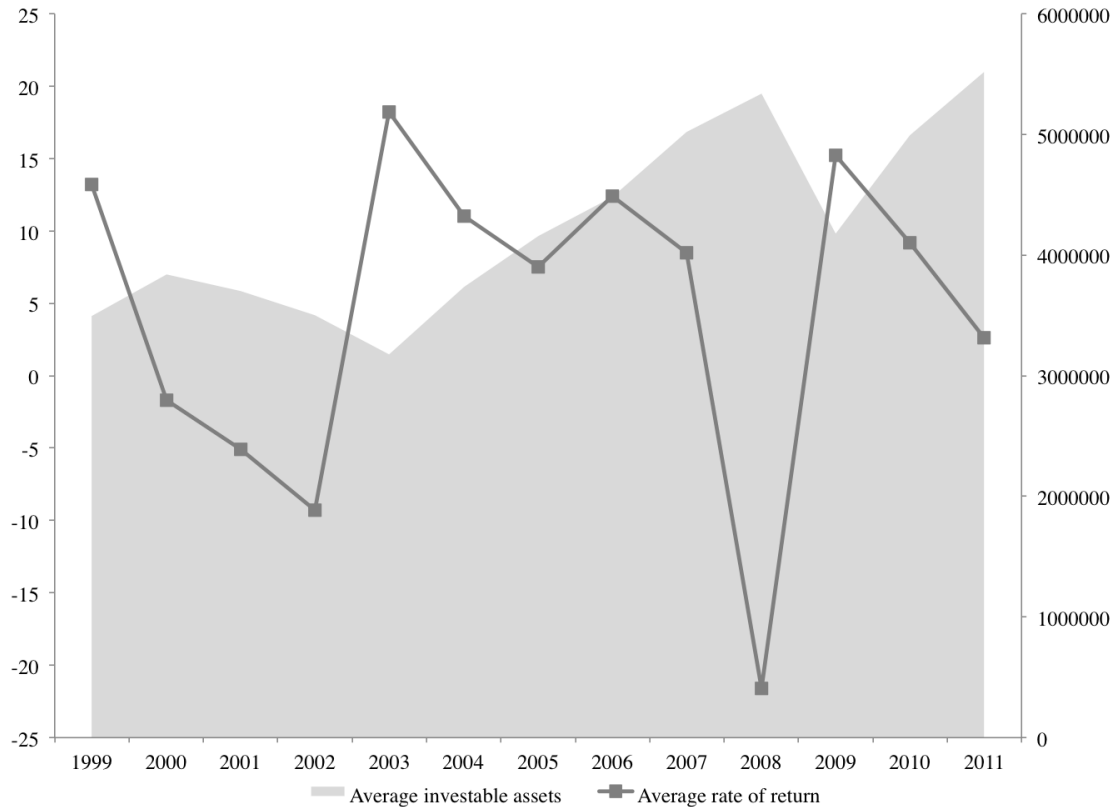
Figure shows aggregate investment performance of pension plans with 100 or more participants. x-axis shows rate of return. y-axis shows assets in million US-$. Average investable assets include all contributions minus the administrative costs of managing the pension funds. Source: U.S. Department of Labor (2014), Table E22.

in 2003. From 2008 to 2009 they fell sharply and then recovered (U.S. Department of Labor, 2014). From 2000 to 2010, the total amount of assets invested rose by almost 20 percent.

Private pension savings follow the dynamics of the financial markets. Following a boom, investments increase, during a bust, they decrease. The rate of return fluctuates and many individuals lost a substantial part of their savings in 2008.

4.3   Empirical Analysis

4.3.1   Dataset

The data for the empirical analysis come from two longitudinal studies. The first dataset covers young individuals, who are in between finishing their education and entering the labor market, and their policy preferences. The data come from the 1997 cohort of the National Longitudinal Surveys of Youth (NLSY97). In 2006,

individuals were between 22 and 26 years old, and about 60 percent were currently enrolled or had attained a college degree, which is close to the enrollment rate data at the national level, as discussed before.

In the second part of the analysis, I explore the preferences of an older cohort. The data is taken from the 1979 cohort of the National Longitudinal Surveys of Youth (NLSY79)[3]. Studying both, the preferences of individuals in their mid-20s and in their late-40s, allows to present a more nuanced picture of the impact of financial risk on preferences[4].

The NLSY97 consists of a representative sample of individuals born between 1980 and 1984 in the United States. Close to 9,000 individuals were interviewed annually and the data are available from 1997 until 2011. In 2006, a representative sub-sample of around 1,800 individuals answered questions about the responsibility of the government. These questions are similar to the ones I used for the UK case study.

The National Longitudinal Survey of Youth 1979 consists of a representative sample of 12,686 individuals born between 1957 and 1964 and are currently interviewed every two years (available from 1979 until 2012). The first wave was conducted in 1979. There are 26 waves available today. In the presidential election year of 2008, a representative sub-sample of individuals answered questions on their political party preferences. By that time, respondents were between 44 and 51 years old.

Both surveys are primarily used for sociological studies: This has the advantage that they contain a lot of information on the socio-economic background and allow controlling for a number of factors.

4.3.2 Dependent Variables

As in the UK case study, there are two sets of dependent variables: policy and party preferences. Policy preferences come from the NLSY97; party preferences from the NLSY79.

In 2006, the young cohort was asked questions on redistribution, labor market and industrial policy, as well as inflation preferences. The exact wordings from the

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[3]Statistically speaking, the 1979 cohort constitutes the parent generation of the 1997 cohort, as the median age at first birth for women in 1960 was 23 years.

[4]As Busemeyer et al. (2009) show, age is an important factor when explaining differences in preferences over redistributive policies, such as education, unemployment insurance, pension and health spending. Another interesting question is whether young individuals, having entered the labor market during a serious recession, such as the one starting in 2008, will have systematically different beliefs than those who grew up during relatively stable times. Research by Giuliano and Spilimbergo (2009) suggests that individuals growing up during a recession believe that success in life depends more on luck than on effort.

questionnaire can be found in section 4.6.5 in the appendix. It includes a standard question on redistribution: Is the government responsible to reduce income differences between low- and high-income households? As in the previous case study, there is also a question on whether the government is responsible to provide for the unemployed. A further labor market question is whether the government is responsible to help the industry grow. Last, there is a question on whether it is the government's responsibility to keep prices under control.

None of these survey items is without flaws, as has been pointed out numerous times. In this context, the questions under-specify possible trade-offs and context: For instance, if the government spends more on job creation, will it spend less on other policies? If the government redistributes more income, will this mean higher taxation? Tax rates in the U.S. differ across states so individuals will face different tax rates when asked these questions.

Still, these items have the advantage that the results are comparable to previous research that uses similar questions (e.g. from the International Social Survey Programme, the World Value Survey, or the General Social Survey).

The question on the control of prices may be tricky to interpret: On the one hand, it has a socialist ring to it. On the other, it may simply mean that the government (and, thus, the Federal Reserve System) should maintain a low inflation rate. Since almost 90 percent of all respondents agree that the government should keep prices under control, as can be seen in the table in section 4.6.7 in the appendix, I think it is safe to conclude that this question was generally interpreted as controlling inflation.

The same table also contains the distribution of the other variables: About 60 percent think that the government should reduce income inequality, provide jobs for job-seekers, and support the unemployed. More than 80 percent want the government to help the industry grow and 96 percent want to help students from low-income households. Overall, one may argue that this young cohort is rather supportive of redistribution and government intervention.

The questions on party preferences are taken from the NLSY79. They were collected during the presidential election year in 2008. A description of the variables can be seen in the appendix in section 4.6.6.

Individuals were asked whether they think of themselves as Democrat or Republican. If they identified with either Party, they were asked how strongly they do. If they did not identify with either of the two major parties, they were asked whether they leaned towards any.

The table in section 4.6.7 shows also the distribution party preferences: Roughly one third think of themselves as Republicans, 45 percent as Democrats. Of those,

about 50 percent identify strongly with the Republican Party, and 62 percent with the Democratic Party. From the group of independents, almost 19 percent lean towards the Republicans, while 27 are closer to the Democrats.

4.3.3   Key Explanatory Variables

I now turn to the key explanatory variables, student debt, mortgage, and private pension. There are two different sets of questions on student debt: First, on loans from family and friends, and second, on loans from the government and private institutions. Again, the questions can be found in the appendix in section 4.6.5.

Ideally, I would like to be able to distinguish between them but the distinction will in practice be less clear cut. For instance, education loans from families might also be loans that parents have taken out from private institutions. Because no clear distinction can be made, I sum up all loan data to one amount.

The data must be interpreted with caution due to the fact that income data are not collected in every survey year. For simplicity and to address the problem of imprecise estimates, I therefore reduce the information on student debt into a binary variable for either having student loan debt or having none. I collect data for 2006 and add data from the years 2003-2009 if none was available for 2006 from the NLSY97.

To address the problem of over- and underestimation and the fact that the data is not inflation-adjusted, I break down this information into a dummy for having student loan debt. This means that the measure for student debt may be underestimated and that I cannot control for possible threshold effects. Estimates of the effect of student loan debt will therefore be conservative.

Since repayments act as an effective tax and they expect higher incomes, I expect that individuals will oppose income redistribution. In terms of labor market preferences, I expect that having student loan debt is associated with higher support for job provision, as those individuals will benefit from an increased number of job opportunities. Because individuals with college education are less likely to be unemployed, they will not support government benefits for the unemployed. In terms of monetary policies, they are less inflation averse, because a higher inflation rate reduces their debt burden.

Section 4.6.7 in the appendix shows the percentage of agreement, mean, and standard deviation as well as the number of observations for all variables. 18 percent have student debt to repay. I will now describe the data set for the older cohort.

There are two key explanatory variables: individual student loan debt and total household student loan debt, which includes also student debt of spouse and/or

children. More than half of all individuals in the sample have been in debt due to higher education at some point between 1984 and 2010. The second variable picks up total household student debt from the years 2004-2010[5]. This includes student loan debt of a spouse and children, if applicable. One fifth of the sample has had to pay back student loan debt in the years 2004 until 2010.

Because data are not inflation adjusted and not collected every year from every individual, I generate two simplified variables. The first binary variable is 1 if an individual has had student loan debt between the years 1984 until 2010 and 0 otherwise. The second binary variable is 1 if an individual or his or her spouse and children, if applicable, have had to repay student loan debt between the years 2004-2010. Both measures are not perfect measures of student loan debt, but testing both in different specifications provides for a number of robustness checks.

I expect that student loan debt, both individual and household, is positively associated with identifying with or feeling closer to the Democratic Party (Bartels, 2008). 34 percent of all respondents had to repay individual student debt. One fifth had to repay debt also from their spouses and children.

The second group of key explanatory variables is mortgages and homeownership. In both surveys, there is information on whether the individual is a homeowners with or without a mortgage. The questions can be seen in sections 4.6.5 and 4.6.6. The omitted reference category is renters.

In the NLSY97, information on homeownership and debt is collected whenever an individual in the cohort turns 20, 25, and 30. I take the best possible fit for the year 2006. In the NLSY79, questions on homeownership and mortgages are asked in 2008, 2004, and 2000. Again, I use the best information available to code the two dummy variables.

The distribution of homeowners with and without mortgages within the sample can be seen in section 4.6.7. Among the young cohort, 16 percent own their home and are still repaying their mortgage. Only 7 percent live in a mortgage-free home. Almost half of all respondents in the NLSY79 are homeowners with mortgages. 11 percent own their house outright. Thus, one out of four young individuals and three out of five older individuals are homeowners. Having a mortgage is the most common experience for the older cohort.

I expect individuals with mortgages to have similar preferences as homeowners: On average and all else equal, they should support the Republican Party. However, in 2008 the financial and economic crisis was well under way: This means that

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[5]Respondents do not answer income questions in this biennial survey. I therefore supplement data from the years before and after 2008.

individuals with mortgages should move to the left of the political spectrum as they need protection from the adverse effects of their investment, including the threat of personal bankruptcies and foreclosures.

The last set of key explanatory variables is having a private pension plan in addition to any occupational pension (including 401(k)s), i.e. either an IRA or Keogh plan. In the appendix in sections 4.6.5 and 4.6.6, I explain how the variables are coded. In the young cohort, about 10 percent have an individual savings plan (with or without their spouse). In the older cohort, 40 percent save into an IRA or Keogh plan.

The distribution of all key variables can be seen in section 4.6.7 in the appendix. I expect individuals with private pensions to oppose redistribution and to support the Republican Party, in line with the theoretical argument in chapter 2.

4.3.4 Estimation Method

Again, the main challenges to address are self-selection and omitted variable bias: The self-selection into student debt and the possible congruence of factors that have an impact on student debt and preferences. To this end, I employ the same strategies as in the U.K. study.

The first one is to clearly separate the student debt effect from possible education and income effects. Apart from the usual set of controls, which includes gender, age, ethnicity, marital status, living in the South and children (for the older cohort), as well as religious service attendance [6], I add information from the educational background: For the young cohort, I control for whether they have been to college for two years or four years, and whether they have been to graduate school. I also control for the type of institution, differentiating between private and public institutions and for-profit and not-for-profit ones.

For the older ones, I control for whether the father had attained higher education (capturing parental income), as well as whether the respondent had been to college for four years or to graduate school. I also add household income for both. For the young cohort, I also add parental income in 1997, as it has been shown to be a good predictor for lifetime income and income measures for college students and young individuals are flawed. Finally, I add unemployment.

As a second strategy, I match individuals on student debt on a range of covariates. The matching protocol can be seen in the appendix in section 4.6.2. For the young cohort, I use gender, year of birth, ethnicity, years in college and graduate school,

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[6]For a justification for the control variables, please refer to the same section in the previous chapter.

Figure 4.5: Student Debt and Policy Preferences, U.S.
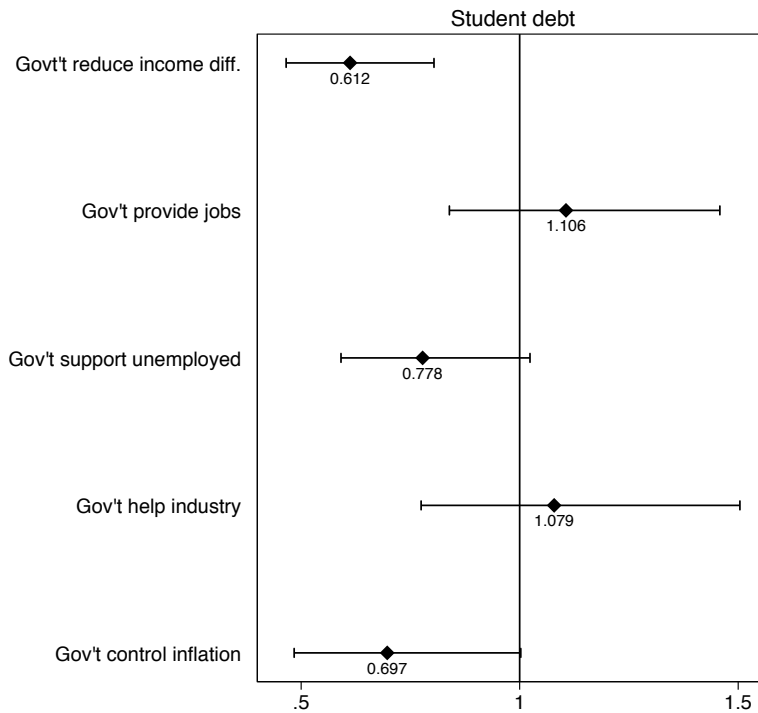
Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

type of institution, and parental income. For the older cohort, I match on gender, age, ethnicity, father's educational attainment, college years, graduate school, and for household student loan debt also on marital status and children. As in the U.K. case study, matching does not significantly improve the results. I therefore present the results with the full set of controls but without matching[7].

To make the results comparable to the UK case study, I also run logistic regressions with binary choice variables. I report estimated odd ratios to compare magnitudes and robust standard errors. In the next section, I summarize the findings from different specifications. In interpret an effect as statistically significant if the null hypothesis cannot be denied at the 90 percent level.

4.4 Findings

4.4.1 Student Debt

I will first describe the results for the young cohort and policy preferences in 2006, and then move on to the older cohort and their party preferences in the election

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[7]Results are available upon request.

year 2008. The tables can be found in the appendix in section 4.6.1. The coefficient plots are summed up in figures 4.5 and 4.6.

Young individuals with student debt are more likely to oppose income redistribution from the rich to the poor. This is as expected because, on average, there is a college premium on wages and they expect to earn more than median wages, and they are effectively already paying their very own graduation 'tax'. This is in line with the income effect and insurance effect: The higher the income, the less likely an individual supports income redistribution.

I also find that individuals with student debt are less likely to support the government in controlling inflation. The same is true for those with four or more years of college education, possibly also picking up an ideological education effect.

I cannot detect distinct labor market preferences of individuals with student debt in the analysis. Overall, however, preferences of individuals with student debt are diametrically opposed to those who are unemployed or have low income. All control variables have the expected signs. In all regressions, gender, race and marital status are strong predictors of preferences.

Moving on to the results for the older cohort, we can see that both individual student debt and household student debt push individuals further to the left: having had to pay back student debt makes it more likely that an individual thinks of herself as Democrat, and if so, strongly identifies as Democrat or, if independent, leans towards the Democratic Party. The effect holds even if we control for education and the often-observed left-bias in college.

Household student debt, i.e. having to service debt from your spouse or children, has a similar but weaker effect. Again, individuals with household student debt are more likely to support the Democrats. Gender, ethnicity, and marital status are again strong predictors of preferences. All other controls have the expected signs.

Overall, individuals with student debt are more likely to be on the left of the political spectrum with the remarkable exception that they oppose redistribution: Unlike individuals with low income or low educational attainment, they expect higher wages and have to repay their debt, and are therefore unlikely to benefit from general redistribution through taxation.

4.4.2   Mortgage

All regression results can be found in the appendix in section 4.6.3. The coefficient plots can be seen in figures 4.7 and 4.8. In terms of policy preferences, young individuals with mortgages are more similar to renters than to other homeowners: Apart from job provision, they share the same policy preferences. This is interesting as it

Figure 4.6: Student Debt and Party Preferences, U.S.
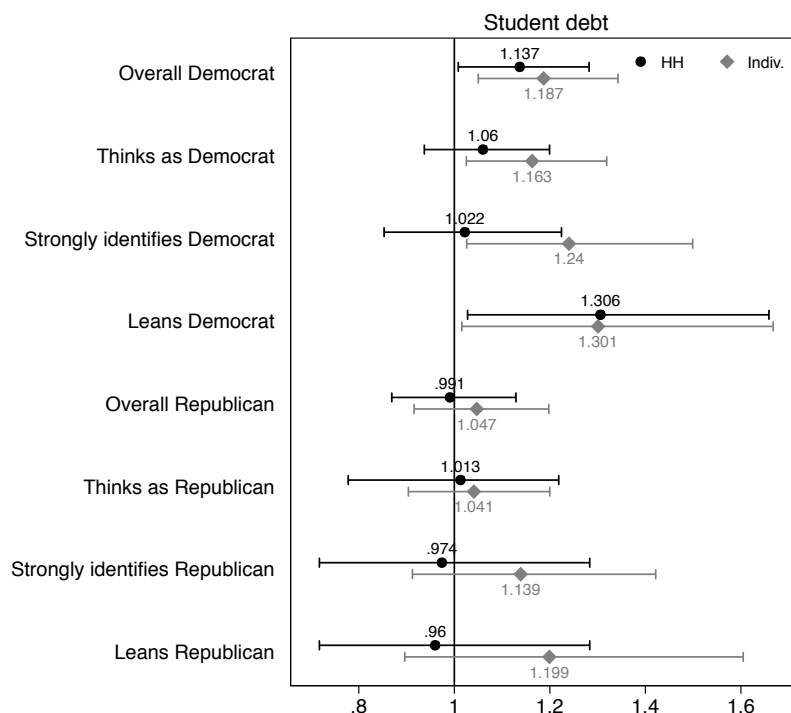
Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

suggests that homeowners, who financed the purchase with the help of a mortgage, do not have stable preferences over the course of their life. Instead, it suggests that the larger the part of the house that they own, the more similar they become to mortgage-free homeowners.

Homeowners without any mortgages are less likely to support the government in providing for the unemployed, but they want the government to create an environment for industry to grow and keep prices under control. This last preference makes sense because tighter monetary policy protects the value of their home.

Older individuals, who presumably have years of experience of paying back mortgages, show distinct preferences: Unlike homeowners in the UK case study, who displayed similar preferences whether or not they were repaying mortgages, homeowners with mortgages are less likely to support the Democratic Party. They are not statistically different from renters in that respect. Both, homeowners with and without debt, are more likely to support the Republican Party. The effect is larger in magnitude for mortgagees.

These results are contrary to my expectations, because, as I argued previously, I expected individuals with mortgages to move to the left during the crisis years. As

Figure 4.7: Mortgage and Policy Preferences, U.S.
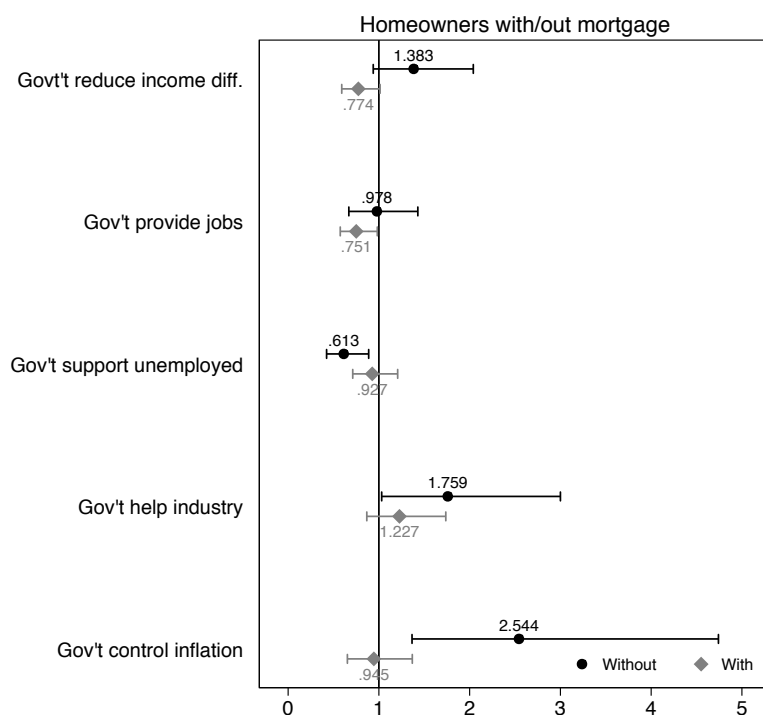
Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

I only observe individuals once, it is impossible to infer anything about preference dynamics. Still, the empirical evidence suggests that just the opposite happened. Homeowners with mortgages cared more about protecting their property than about receiving social benefits. It is impossible to infer whether homeowners with mortgages are even further to the right in non-crisis years. Yet, the fact alone that they are more conservative than homeowners without mortgages even during a crisis is important. I will elaborate more on this in the next chapter.

All control variables have the expected signs. In line with previous research, women are more supportive of government intervention, and so are non-white individuals, and unemployed. Higher income is associated with a dislike for redistribution and support for the Republican Party. Regular religious service attendance is associated with the political right.

4.4.3   Private Pension

All results can be seen in the appendix in section 4.6.4. The coefficient plots show the key variable of interest in figures 4.9 and 4.10. Let me start again with policy preferences, although I do not want to over-interpret the results because old-age

Figure 4.8: Mortgage and Party Preferences, U.S.
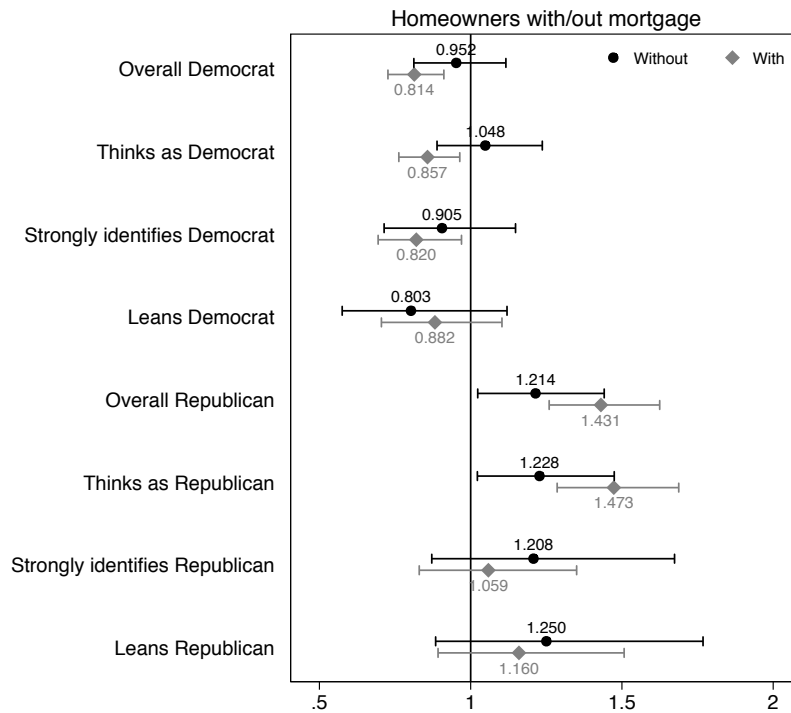
Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

savings are not a prime concern of people in their mid-20s and only one in ten individuals has started saving privately. Those that have are less likely to support the government in providing for unemployed individuals. They are far more likely to support the government with industry-friendly policies.

Private pension savings have a strong party effect. They make it far less likely that an individual identifies, identifies strongly, or leans towards the Democratic Party. Private pension savers are more likely to be Republicans, and also, if they are independent, to lean towards the Republican Party. This is as expected because private pension savers have a strong interest in stable financial markets and low tax rates.

All other control variables have the expected signs. Gender, ethnicity, and marital status remain strong predictors of both policy and party preferences. The following section concludes this case study chapter.

Figure 4.9: Private Pension and Policy Preferences, U.S.
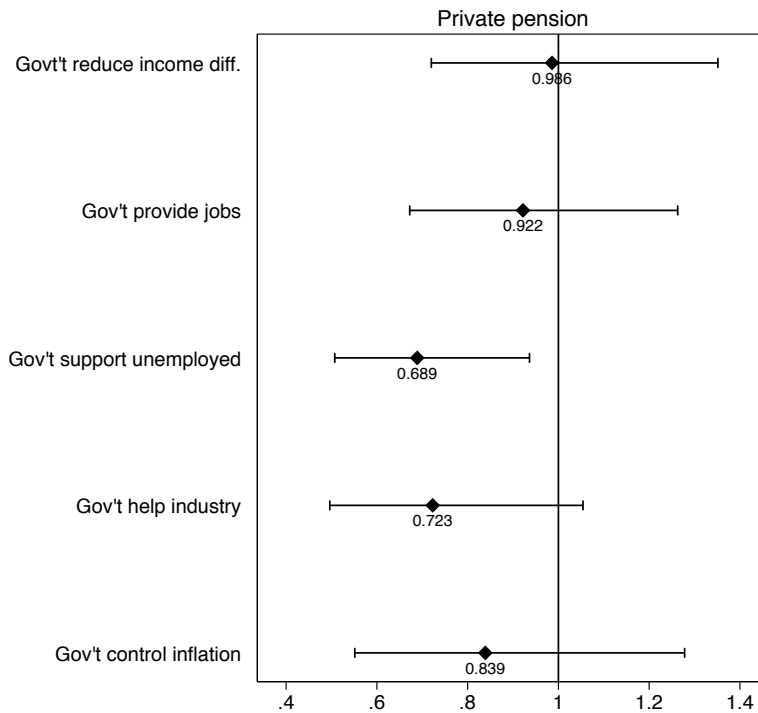
Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

4.5   Conclusion

Let me start with a comparison of the different policy preferences and financial risks. Individuals with student debt are less likely to support income redistribution. Those with mortgages do not think that the government is responsible to provide a job for every job-seeker. Homeowners and individuals with private pensions savings do not want the government to support the unemployed. Furthermore, homeowners and private pension savers support the government in helping the industry to grow. They favor lower inflation rates, while individuals with student debt support higher inflation rates. Since this is a young cohort of mid-20s, some of the results may look different once individuals have made more financial investments. Nevertheless, they offer a first understanding of how diverse policy preferences are.

In terms of party preferences, a clear picture emerges. Individuals with student debt support the Democratic Party, alongside with those with low incomes and the unemployed. All others, homeowners with and without mortgage and individuals with private pension savings, support the Republican Party.

The findings show that financial and labor market risks are not the same, not even for individuals with student debt. We already know that as income rises,

Figure 4.10: Private Pension and Party Preferences, U.S.
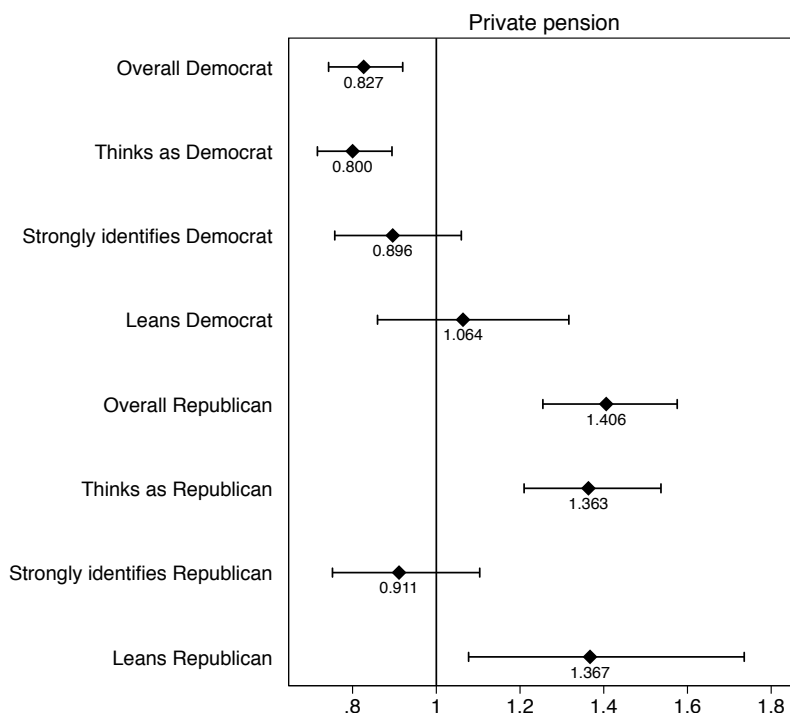
Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

support for the left and redistribution falls. The opposite is true for unemployment: Individuals who are unemployed are more likely to support the Democrats and redistribution. Individuals who are exposed to financial risk are different from those with low incomes or even unemployed. They oppose redistribution and are more likely to vote for the right (with the exception of student debt).

The exception of student debt seems no coincidence, as the Democratic Party ran explicitly on a platform to ease the repayment burden for those who struggle with their debt. What is surprising is that individuals with mortgages are even more conservative than those without.

From the analysis of the policy questions, it seems plausible to argue that as the exposure to financial risk grows, the anti-tax and redistribution lobby will become stronger. Individuals exposed to financial risk are likely to join their ranks.

In addition, there is room for parties to cater to very specific interests. Individuals exposed to financial risk do not support income redistribution *per se*, but rather a distinct set of policies. In other words, the poor and less-educated and the well-educated with higher income are not exposed to the same kinds of risks, even though their risk exposure in general may be increasing. Well-educated individuals

want the government to provide substitutes for *different* missing insurance markets than less-well educated individuals.

As for party strategy, the findings suggest that higher taxation and more redistribution is not a winning strategy. Instead, lower taxation and specific policies that cater to the needs of the different groups seem to be a better bet. The specific set of preferences might even exacerbate income inequality and I will return to this in the concluding chapter.

4.6 Appendix

4.6.1 Student Debt Regressions

Table 4.1: Student Debt, Policy Preferences, 2006, U.S.

	Gov't reduce income diff.	Gov't provide jobs	Gov't support unemployed	Gov't help industry	Gov't control inflation
Student debt	0.612***	1.106	0.778	1.079	0.697
	(0.102)	(0.186)	(0.130)	(0.218)	(0.154)
Female	1.372***	1.579***	1.166	1.504***	1.808***
	(0.164)	(0.191)	(0.139)	(0.236)	(0.332)
Born 1981	0.719*	1.786***	1.124	1.157	0.843
	(0.140)	(0.347)	(0.216)	(0.286)	(0.234)
Born 1982	0.687*	1.747***	1.068	0.801	0.920
	(0.132)	(0.338)	(0.201)	(0.188)	(0.257)
Born 1983	0.689*	1.734***	1.318	1.072	1.094
	(0.139)	(0.345)	(0.266)	(0.278)	(0.338)
Born 1984	0.719*	1.774***	1.032	1.268	0.880
	(0.141)	(0.349)	(0.198)	(0.331)	(0.249)
Non-white	1.396***	2.097***	1.634***	1.872***	2.071***
	(0.180)	(0.270)	(0.211)	(0.329)	(0.391)
Married	0.657***	0.604***	0.599***	0.946	0.899
	(0.092)	(0.086)	(0.085)	(0.172)	(0.180)
South	0.911	1.031	0.881	1.022	0.982
	(0.113)	(0.130)	(0.110)	(0.166)	(0.184)
College 2yrs	1.020	0.756	0.843	0.870	0.669
	(0.215)	(0.157)	(0.170)	(0.244)	(0.203)
College 4yrs	0.903	0.709**	1.120	0.510***	0.447***
	(0.144)	(0.114)	(0.183)	(0.097)	(0.096)
Graduate school	1.090	0.658	1.191	0.443**	0.522*
	(0.354)	(0.198)	(0.382)	(0.152)	(0.204)
Private inst.	1.110	0.827	1.358	0.752	0.642*
	(0.241)	(0.182)	(0.299)	(0.187)	(0.171)
For-profit inst.	1.579	1.967**	1.327	1.902	2.186
	(0.532)	(0.656)	(0.456)	(0.849)	(1.089)
HH inc. log	0.927**	0.944*	0.923**	0.936	0.926
	(0.034)	(0.033)	(0.031)	(0.038)	(0.048)
Parental inc. log	0.965	0.947	1.123	1.075	1.134
	(0.086)	(0.085)	(0.100)	(0.117)	(0.139)
Unemployed	1.879**	1.245	1.798**	1.373	2.405*
	(0.482)	(0.317)	(0.461)	(0.465)	(1.114)
Religious service att.	0.614***	1.003	0.913	0.767	0.889
	(0.080)	(0.133)	(0.119)	(0.126)	(0.164)
Observations	1276	1276	1276	1276	1276
Pseudo R^2	0.050	0.069	0.040	0.060	0.090

Exponentiated coefficients; robust standard errors in parentheses; Source: NSLY97.

* $p < .1$, ** $p < .05$, *** $p < .01$

Table 4.2: Student Debt (Individual), Party Preferences I, 2008, U.S.

	Overall Democrat	Thinks as Democrat	Stongly identifies Democrat	Leans Democrat
Student debt	1.187**	1.163**	1.240*	1.301*
	(0.089)	(0.089)	(0.143)	(0.196)
Female	1.399***	1.502***	1.027	1.418***
	(0.088)	(0.097)	(0.099)	(0.175)
Age	1.029**	1.029*	1.035	1.025
	(0.014)	(0.015)	(0.022)	(0.027)
Non-white	3.804***	3.957***	2.260***	1.589***
	(0.258)	(0.272)	(0.236)	(0.208)
Married	0.712***	0.755***	0.770**	0.863
	(0.051)	(0.056)	(0.081)	(0.119)
Children	0.829**	0.838*	0.882	1.244
	(0.078)	(0.080)	(0.122)	(0.233)
South	0.914	1.001	1.220**	0.833
	(0.059)	(0.066)	(0.121)	(0.106)
Father HE	0.813***	0.824**	1.044	0.924
	(0.062)	(0.066)	(0.133)	(0.144)
College 4yrs	0.940	0.868	1.148	1.374
	(0.090)	(0.086)	(0.183)	(0.274)
Graduate school	1.305***	1.286**	1.285	1.405
	(0.134)	(0.135)	(0.205)	(0.302)
HH income (log)	0.975	0.984	1.037	0.974
	(0.020)	(0.020)	(0.028)	(0.033)
Observations	4807	4603	2036	1435
Pseudo R^2	0.098	0.103	0.041	0.024

Exponentiated coefficients; robust standard errors in parentheses; Source: NSLY79.

* $p < .1$, ** $p < .05$, *** $p < .01$

Table 4.3: Student Debt (Household), Party Preferences I, 2008, U.S.

	Overall Democrat	Thinks as Democrat	Stongly identifies Democrat	Leans Democrat
HH Student Debt	1.137*	1.060	1.022	1.306*
	(0.083)	(0.079)	(0.112)	(0.190)
Female	1.356***	1.486***	1.046	1.325**
	(0.080)	(0.090)	(0.093)	(0.154)
Age	1.018	1.017	1.039**	1.019
	(0.013)	(0.014)	(0.020)	(0.025)
Non-white	3.824***	4.012***	2.177***	1.578***
	(0.243)	(0.259)	(0.212)	(0.195)
Married	0.718***	0.751***	0.778***	0.928
	(0.048)	(0.051)	(0.075)	(0.120)
Children	0.825**	0.862*	0.913	1.056
	(0.074)	(0.078)	(0.119)	(0.183)
South	0.929	0.975	1.252**	0.950
	(0.056)	(0.060)	(0.115)	(0.112)
Father HE	0.830**	0.845**	1.108	0.960
	(0.061)	(0.065)	(0.135)	(0.146)
College 4yrs	0.979	0.908	1.328*	1.487**
	(0.086)	(0.084)	(0.197)	(0.267)
Graduate school	1.388***	1.349***	1.457***	1.556**
	(0.128)	(0.128)	(0.209)	(0.307)
HH income (log)	0.983	0.995	1.013	0.960
	(0.017)	(0.018)	(0.024)	(0.029)
Observations	5410	5179	2317	1638
Pseudo R^2	0.095	0.101	0.037	0.020

Exponentiated coefficients; robust standard errors in parentheses; Source: NSLY79.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 4.4: Student Debt (Individual), Party Preferences II, 2008, U.S.

	Overall Republican	Thinks as Republican	Stongly identifies Republican	Leans Republican
Student debt	1.047	1.041	1.139	1.199
	(0.085)	(0.090)	(0.154)	(0.212)
Female	0.726***	0.813***	0.829	0.903
	(0.049)	(0.058)	(0.096)	(0.126)
Age	0.989	0.986	0.971	1.023
	(0.015)	(0.016)	(0.026)	(0.032)
Non-white	0.233***	0.258***	0.911	0.368***
	(0.019)	(0.023)	(0.136)	(0.068)
Married	1.580***	1.632***	1.267	1.305
	(0.132)	(0.148)	(0.191)	(0.227)
Children	1.264**	1.286**	1.105	1.164
	(0.135)	(0.143)	(0.205)	(0.259)
South	1.179**	1.219***	1.422***	1.112
	(0.084)	(0.091)	(0.168)	(0.167)
Father HE	1.411***	1.327***	1.196	1.499**
	(0.113)	(0.111)	(0.152)	(0.244)
College 4yrs	1.358***	1.271**	1.021	1.402
	(0.139)	(0.137)	(0.168)	(0.302)
Graduate school	0.920	0.978	1.031	0.836
	(0.102)	(0.113)	(0.183)	(0.209)
HH income (log)	1.161***	1.168***	1.021	1.110
	(0.047)	(0.056)	(0.049)	(0.077)
Observations	4807	4603	1259	1435
Pseudo R^2	0.130	0.113	0.014	0.064

Exponentiated coefficients; robust standard errors in parentheses; Source: NSLY79.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 4.5: Student Debt (Household), Party Preferences II, 2008, U.S.

	Overall Republican	Thinks as Republican	Stongly identifies Republican	Leans Republican
HH Student Debt	0.991	1.013	0.974	0.960
	(0.079)	(0.084)	(0.133)	(0.170)
Female	0.731***	0.821***	0.876	0.897
	(0.047)	(0.056)	(0.097)	(0.119)
Age	0.990	0.987	0.967	1.017
	(0.014)	(0.015)	(0.024)	(0.029)
Non-white	0.242***	0.264***	0.876	0.405***
	(0.019)	(0.022)	(0.124)	(0.069)
Married	1.659***	1.741***	1.285*	1.286
	(0.129)	(0.145)	(0.183)	(0.212)
Children	1.182*	1.196*	1.088	1.143
	(0.120)	(0.126)	(0.194)	(0.240)
South	1.160**	1.186**	1.409***	1.128
	(0.078)	(0.084)	(0.159)	(0.161)
Father HE	1.426***	1.358***	1.172	1.459**
	(0.109)	(0.110)	(0.145)	(0.229)
College 4yrs	1.412***	1.347***	1.140	1.465**
	(0.131)	(0.131)	(0.172)	(0.282)
Graduate school	0.992	1.019	1.165	1.029
	(0.098)	(0.105)	(0.186)	(0.232)
HH income (log)	1.122***	1.111***	1.022	1.151*
	(0.038)	(0.042)	(0.040)	(0.084)
Observations	5410	5179	1363	1638
Pseudo R^2	0.127	0.112	0.014	0.060

Exponentiated coefficients; robust standard errors in parentheses; Source: NSLY79.
* $p < .1$, ** $p < .05$, *** $p < .01$

4.6.2   Student Debt Matching

Table 4.6: Student Debt, Debt Determinants, 2006, U.S.

	Model 1
Female	1.202
	(1.126)
Born 1981	0.848
	(-0.675)
Born 1982	0.892
	(-0.480)
Born 1983	0.375***
	(-3.426)
Born 1984	0.387***
	(-3.582)
White	0.933
	(-0.303)
African-American	1.152
	(0.554)
College 2yrs	3.059***
	(4.222)
College 4yrs	9.127***
	(10.921)
Graduate school	10.663***
	(7.063)
Private inst.	1.860**
	(2.539)
For-profit inst.	0.829
	(-0.488)
Parental inc. 1/3	0.627**
	(-2.088)
Parental inc. 3/3	1.089
	(0.394)
Parental inc. 10/10	0.533**
	(-2.314)
Observations	1269
Pseudo R^2	0.186

Exponentiated coefficients; robust standard errors in parentheses; Source: NSLY97.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 4.7: Student Debt, Matching Protocol, 2006, U.S.

	Mean treated	Mean control	t-test
Female	.574	.574	-1.95
Born 1981	.235	.235	-1.43
Born 1982	.235	.235	0.25
Born 1983	.140	.140	0.71
Born 1984	.169	.169	1.49
White	.676	.676	-2.50
African-American	.176	.176	1.41
College 2yrs	.110	.110	-2.26
College 4yrs	.478	.478	-6.13
Graduate school	.022	.022	-1.47
Private inst.	.188	.118	-2.79
For-profit inst.	.029	.029	-1.42
Parental inc. 1/3	.213	.213	1.04
Parental inc. 3/3	.485	.485	-3.43
Parental inc. 10/10	.081	.081	-1.24
p-score	.719	.719	7.86

Table 4.8: Student Debt, Debt Determinants, 2008, U.S.

	Individual	Household
Female	1.075	1.181**
	(0.993)	(2.386)
Age	0.913***	1.014
	(-5.483)	(0.912)
Non-white	1.400***	1.416***
	(4.383)	(4.733)
Father HE	1.027	0.984
	(0.298)	(-0.192)
College 2yrs	5.186***	1.785***
	(15.873)	(5.320)
College 4yrs	11.686***	2.130***
	(24.300)	(7.466)
Graduate school	22.318***	2.712***
	(27.856)	(9.896)
Married		1.288***
		(3.311)
Children		1.593***
		(4.027)
Observations	4807	5410
Pseudo R^2	0.239	0.036

Exponentiated coefficients; Source: NSLY79. t statistics in parentheses
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 4.9: Student Debt (Individual), Matching Protocol, 2008, U.S.

	Mean treated	Mean control	t-test
Female	.561	.561	-2.17
Age	46.696	46.696	-0.69
Non-white	.472	.472	-1.65
Father HE	.278	.278	-3.73
College 2yrs	.125	.125	-3.27
College 4yrs	.185	.185	-4.58
Graduate school	.211	.211	-7.09
p-score	.593	.593	10.72

Table 4.10: Student Debt (Household), Matching Protocol Debt, 2008, U.S.

	Mean treated	Mean control	t-test
Female	.561	.561	-2.17
Age	46.696	46.696	-0.69
Non-white	.472	.472	-1.65
Father HE	.278	.278	-3.73
College 2yrs	.125	.125	-3.27
College 4yrs	.185	.185	-4.58
Graduate school	.211	.211	-7.09
Married	.640	.584	2.98
Children	.903	.841	3.18
p-score	.234	.228	-9.09

4.6.3   Mortgage Regressions

Table 4.11: Mortgage, Policy Preferences, 2006, U.S.

	Gov't reduce income diff.	Gov't provide jobs	Gov't support unemployed	Gov't help industry	Gov't control inflation
Homeowner (mortgage)	0.774	0.751*	0.927	1.227	0.945
	(0.127)	(0.123)	(0.149)	(0.259)	(0.213)
Homeowner (no mortgage)	1.383	0.978	0.613**	1.759*	2.544**
	(0.327)	(0.226)	(0.138)	(0.571)	(0.963)
Female	1.370***	1.556***	1.147	1.573***	1.877***
	(0.162)	(0.185)	(0.135)	(0.246)	(0.337)
Born 1981	0.703*	1.760***	1.216	1.181	0.831
	(0.137)	(0.346)	(0.235)	(0.289)	(0.224)
Born 1982	0.698*	1.665***	0.978	0.864	1.010
	(0.131)	(0.319)	(0.182)	(0.200)	(0.271)
Born 1983	0.733	1.663***	1.280	1.134	1.283
	(0.146)	(0.325)	(0.255)	(0.291)	(0.389)
Born 1984	0.773	1.724***	1.005	1.391	1.024
	(0.150)	(0.336)	(0.191)	(0.358)	(0.279)
Non-white	1.373**	2.142***	1.641***	2.033***	2.231***
	(0.175)	(0.274)	(0.209)	(0.352)	(0.417)
Married	0.730**	0.646***	0.640***	0.854	0.911
	(0.108)	(0.097)	(0.094)	(0.167)	(0.193)
South	0.939	1.053	0.949	1.031	0.960
	(0.116)	(0.133)	(0.118)	(0.166)	(0.178)
College 4yrs	0.801	0.741**	1.093	0.496***	0.402***
	(0.113)	(0.104)	(0.157)	(0.085)	(0.073)
Graduate school	0.860	0.656	1.203	0.377***	0.479**
	(0.242)	(0.179)	(0.355)	(0.113)	(0.168)
HH inc. log	0.924**	0.954	0.926**	0.920**	0.912*
	(0.033)	(0.032)	(0.030)	(0.038)	(0.049)
Parental inc. log	0.982	0.973	1.116	1.092	1.191
	(0.086)	(0.086)	(0.098)	(0.118)	(0.143)
Unemployed	1.861**	1.232	1.807**	1.539	2.434*
	(0.474)	(0.310)	(0.465)	(0.541)	(1.122)
Religious service att.	0.612***	0.963	0.942	0.743*	0.828
	(0.078)	(0.125)	(0.121)	(0.121)	(0.149)
Observations	1300	1300	1300	1300	1300
Pseudo R^2	0.046	0.069	0.037	0.066	0.089

Exponentiated coefficients; robust standard errors in parentheses; Source: NLSY97.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 4.12: Mortgage, Party Preferences I, 2008, U.S.

	Overall Democrat	Thinks as Democrat	Stongly identifies Democrat	Leans Democrat
Homeowner (mortgage)	0.814***	0.857**	0.820*	0.882
	(0.056)	(0.061)	(0.083)	(0.120)
Homeowner (no mortgage)	0.952	1.048	0.905	0.803
	(0.092)	(0.105)	(0.131)	(0.163)
Female	1.351***	1.485***	1.006	1.314**
	(0.076)	(0.086)	(0.087)	(0.147)
Age	1.018	1.015	1.031	1.015
	(0.013)	(0.013)	(0.020)	(0.024)
Non-white	3.577***	3.788***	2.077***	1.492***
	(0.220)	(0.238)	(0.198)	(0.183)
Married	0.753***	0.768***	0.811**	0.974
	(0.050)	(0.052)	(0.079)	(0.126)
Children	0.870	0.889	0.916	1.185
	(0.074)	(0.076)	(0.115)	(0.198)
South	0.909	0.950	1.266***	0.964
	(0.053)	(0.056)	(0.112)	(0.110)
Father HE	0.814***	0.839**	1.128	0.891
	(0.057)	(0.062)	(0.134)	(0.133)
College 4yrs	0.997	0.921	1.312*	1.495**
	(0.085)	(0.082)	(0.188)	(0.263)
Graduate school	1.422***	1.374***	1.456***	1.635**
	(0.127)	(0.126)	(0.204)	(0.318)
HH income (log)	1.004	1.010	1.019	0.989
	(0.016)	(0.017)	(0.023)	(0.028)
Observations	5803	5565	2476	1769
Pseudo R^2	0.090	0.095	0.036	0.016

Exponentiated coefficients; robust standard errors in parentheses; Source: NLSY79.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 4.13: Mortgage, Party Preferences II, 2008, U.S.

	Overall Republican	Thinks as Republican	Stongly identifies Republican	Leans Republican
Homeowner (mortgage)	1.431***	1.473***	1.059	1.160
	(0.111)	(0.122)	(0.157)	(0.185)
Homeowner (no mortgage)	1.214*	1.228*	1.208	1.250
	(0.126)	(0.137)	(0.240)	(0.263)
Female	0.742***	0.841***	0.874	0.879
	(0.046)	(0.055)	(0.094)	(0.113)
Age	0.988	0.985	0.971	1.017
	(0.014)	(0.014)	(0.024)	(0.029)
Non-white	0.260***	0.286***	0.930	0.407***
	(0.019)	(0.023)	(0.126)	(0.066)
Married	1.540***	1.608***	1.283*	1.230
	(0.116)	(0.130)	(0.180)	(0.190)
Children	1.146	1.183*	1.029	1.057
	(0.111)	(0.120)	(0.178)	(0.212)
South	1.196***	1.232***	1.399***	1.083
	(0.077)	(0.084)	(0.152)	(0.147)
Father HE	1.444***	1.371***	1.201	1.502***
	(0.107)	(0.107)	(0.143)	(0.228)
College 4yrs	1.375***	1.306***	1.120	1.441**
	(0.123)	(0.124)	(0.163)	(0.268)
Graduate school	0.969	1.002	1.121	0.995
	(0.092)	(0.099)	(0.172)	(0.216)
HH income (log)	1.084***	1.075**	1.009	1.114*
	(0.030)	(0.034)	(0.038)	(0.066)
Observations	5803	5565	1463	1769
Pseudo R^2	0.126	0.111	0.013	0.062

Exponentiated coefficients; robust standard errors in parentheses; Source: NLSY79.
* $p < .1$, ** $p < .05$, *** $p < .01$

4.6.4 Pension Regressions

Table 4.14: Pension, Policy Preferences, 2006, U.S.

	Gov't reduce income diff.	Gov't provide jobs	Gov't support unemployed	Gov't help industry	Gov't control inflation
Private pension	0.986	0.922	0.689**	0.723	0.839
	(0.189)	(0.177)	(0.128)	(0.166)	(0.215)
Female	1.350**	1.559***	1.152	1.528***	1.828***
	(0.159)	(0.185)	(0.136)	(0.239)	(0.327)
Born 1981	0.751	1.817***	1.148	1.227	0.945
	(0.144)	(0.350)	(0.219)	(0.298)	(0.251)
Born 1982	0.700*	1.671***	1.003	0.831	0.966
	(0.132)	(0.318)	(0.186)	(0.192)	(0.258)
Born 1983	0.741	1.693***	1.296	1.081	1.255
	(0.147)	(0.330)	(0.258)	(0.275)	(0.375)
Born 1984	0.777	1.769***	1.043	1.301	0.980
	(0.149)	(0.342)	(0.198)	(0.332)	(0.264)
Non-white	1.384***	2.191***	1.657***	1.922***	2.150***
	(0.174)	(0.278)	(0.210)	(0.332)	(0.396)
Married	0.673***	0.604***	0.653***	0.931	0.898
	(0.094)	(0.087)	(0.092)	(0.167)	(0.175)
South	0.953	1.048	0.924	1.055	1.005
	(0.117)	(0.132)	(0.114)	(0.171)	(0.184)
College 4yrs	0.789*	0.727**	1.065	0.489***	0.399***
	(0.111)	(0.102)	(0.152)	(0.084)	(0.072)
Graduate school	0.822	0.634*	1.203	0.368***	0.450**
	(0.232)	(0.172)	(0.355)	(0.111)	(0.157)
HH inc. log	0.920**	0.948	0.926**	0.931*	0.916*
	(0.033)	(0.032)	(0.031)	(0.038)	(0.048)
Parental inc. log	0.978	0.968	1.116	1.100	1.190
	(0.086)	(0.086)	(0.119)	(0.119)	(0.141)
Unemployed	1.890**	1.260	1.820**	1.501	2.434*
	(0.484)	(0.318)	(0.467)	(0.532)	(1.130)
Religious service att.	0.619***	0.966	0.945	0.755*	0.848
	(0.079)	(0.125)	(0.122)	(0.123)	(0.153)
Observations	1298	1298	1298	1298	1298
Pseudo R^2	0.043	0.067	0.037	0.065	0.083

Exponentiated coefficients; robust standard errors in parentheses; Source: NLSY97.

* $p < .1$, ** $p < .05$, *** $p < .01$

Table 4.15: Pension, Party Preferences I, 2008, U.S.

	Overall Democrat	Thinks as Democrat	Stongly identifies Democrat	Leans Democrat
Private pension (HH)	0.827***	0.800***	0.896	1.064
	(0.054)	(0.054)	(0.091)	(0.138)
Female	1.388***	1.541***	1.036	1.292**
	(0.082)	(0.094)	(0.093)	(0.150)
Age	1.015	1.015	1.036*	1.015
	(0.013)	(0.014)	(0.020)	(0.025)
Non-white	3.699***	3.818***	2.118***	1.660***
	(0.237)	(0.248)	(0.209)	(0.206)
Married	0.740***	0.771***	0.772***	0.950
	(0.050)	(0.054)	(0.077)	(0.123)
Children	0.849*	0.869	0.932	1.147
	(0.076)	(0.079)	(0.124)	(0.201)
South	0.905*	0.945	1.249**	0.952
	(0.055)	(0.059)	(0.117)	(0.113)
Father HE	0.831**	0.845**	1.151	0.958
	(0.061)	(0.065)	(0.141)	(0.145)
College 4yrs	1.010	0.942	1.303*	1.417*
	(0.089)	(0.087)	(0.191)	(0.256)
Graduate school	1.480***	1.423***	1.454***	1.618**
	(0.138)	(0.135)	(0.211)	(0.319)
HH income (log)	0.992	1.017	1.029	0.949*
	(0.019)	(0.020)	(0.029)	(0.029)
Observations	5357	5140	2253	1618
Pseudo R^2	0.093	0.098	0.036	0.019

Exponentiated coefficients; robust standard errors in parentheses; Source: NLSY79.
* $p < .1$, ** $p < .05$, *** $p < .01$

Table 4.16: Pension, Party Preferences II, 2008, U.S.

	Overall Republican	Thinks as Republican	Stongly identifies Republican	Leans Republican
Private pension (HH)	1.406***	1.363***	0.911	1.367**
	(0.097)	(0.099)	(0.106)	(0.198)
Female	0.723***	0.815***	0.854	0.891
	(0.046)	(0.055)	(0.094)	(0.117)
Age	0.991	0.989	0.973	1.011
	(0.014)	(0.015)	(0.024)	(0.029)
Non-white	0.256***	0.282***	0.924	0.400***
	(0.020)	(0.023)	(0.130)	(0.069)
Married	1.543***	1.645***	1.354**	1.161
	(0.119)	(0.136)	(0.192)	(0.181)
Children	1.223**	1.239**	0.983	1.166
	(0.123)	(0.130)	(0.175)	(0.244)
South	1.187**	1.228***	1.506***	1.078
	(0.080)	(0.087)	(0.169)	(0.153)
Father HE	1.415***	1.344***	1.255*	1.470**
	(0.108)	(0.107)	(0.153)	(0.228)
College 4yrs	1.311***	1.255**	1.094	1.341
	(0.121)	(0.121)	(0.164)	(0.256)
Graduate school	0.891	0.932	1.130	0.897
	(0.088)	(0.097)	(0.180)	(0.196)
HH income (log)	1.105***	1.102**	1.025	1.123*
	(0.038)	(0.043)	(0.044)	(0.076)
Observations	5357	5140	1394	1618
Pseudo R^2	0.123	0.108	0.017	0.061

Exponentiated coefficients; robust standard errors in parentheses; Source: NLSY79.
* $p < .1$, ** $p < .05$, *** $p < .01$

4.6.5   National Longitudinal Study of Youth 1997 (NLSY97)

Dependent variables: Policy preferences

- Gov't reduce income diff.: "On the whole, do you think it should or should not be the government's responsibility to reduce income differences between the rich and poor?" [asked in 2006]

  · Answer categories: "Definitely should be, Probably should be, Probably should not be, Definitely should not be, Don't Know." For the binary choice model simplified into should be (if definitely should be or probably should be) and all others.

- Gov't provide jobs: "On the whole, do you think it should or should not be the government's responsibility to provide a job for everyone who wants one?" [asked in 2006]

  · Answer categories: "Definitely should be, Probably should be, Probably should not be, Definitely should not be, Don't Know." For the binary choice model simplified into should be (if definitely should be or probably should be) and all others.

- Gov't support unemployed: "On the whole, do you think it should or should not be the government's responsibility to provide a decent standard of living for the unemployed?" [asked in 2006]

  · Answer categories: "Definitely should be, Probably should be, Probably should not be, Definitely should not be, Don't Know." For the binary choice model simplified into should be (if definitely should be or probably should be) and all others.

- Gov't help industry: "On the whole, do you think it should or should not be the government's responsibility to provide industry with the help it needs to grow?" [asked in 2006]

  · Answer categories: "Definitely should be, Probably should be, Probably should not be, Definitely should not be, Don't Know." For the binary choice model simplified into should be (if definitely should be or probably should be) and all others.

– Gov't help students: "On the whole, do you think it should or should not be the government's responsibility to give financial assistance to college students from low-income families?" [asked in 2006]

   · Answer categories: "Definitely should be, Probably should be, Probably should not be, Definitely should not be, Don't Know." For the binary choice model simplified into should be (if definitely should be or probably should be) and all others.

– Gov't control inflation: "On the whole, do you think it should or should not be the government's responsibility to keep prices under control?" [asked in 2006]

   · Answer categories: "Definitely should be, Probably should be, Probably should not be, Definitely should not be, Don't Know." For the binary choice model simplified into should be (if definitely should be or probably should be) and all others.

Key explanatory variables

– Student debt: "In previous interviews you reported receiving loans from parents, other relatives, or friends to help you attend school or college. What is the total amount that you owe altogether on these educational loans from family members or friends?" and "In previous interviews you reported borrowing government-subsidized or other types of loans to attend a school or college. What is the total amount that you owe altogether on these educational loans?" [asked in 2003-3009]

   · The respondent either states the total amount or is given limits and brackets to estimate it. I condense the information into a dummy variable, which is 1 if the respondent has any kind of student loans, and 0 otherwise.

– Homeowner: Cumulative variable: Primary type of owned housing at age 20, 25, and 30. [asked at age 20, 25, and 30]

   · Answer categories: House, Ranch/Farm, Mobile Home, Mobile Home and Lot, Lot for Mobile Home, R does not own, Unit, Building.

– Mortgage: Cumulative variable: Debt owed on the respondent's primary housing at age 20, 25, and 30. [asked at age 20, 25, and 30]

   · Answers: open.

– Homeowner with/out mortgage: Based on the above information I create two dummy variables: one for homeowners with mortgage and one for homeowners without.

– Private pension: "Now I would like to ask you some questions about any pension or retirement savings. Many employers and unions have pensions or retirement plans, some provide tax-deferred plans such as thrift/savings, 401 K's, profit sharing or stock ownership plans. Additionally, individuals can provide for their own retirement with IRA or Keogh plans. Do [you/you or your spouse/you or your partner] have any savings in these types of plans?"

  · Answer categories: "No; Yes, respondent has own plans; Yes, respondent has own plans and also has plans jointly with spouse/partner; Yes, respondent only has plans jointly with spouse/partner; Spouse/partner has own separately from respondent." I generated a binary variable for having a private pension plan with or without spouse/partner.

4.6.6   National Longitudinal Study of Youth 1979 (NLSY79)

Dependent variables: Party preferences

– Think as Democrat/Republican: "Generally speaking, do you usually think of yourself [a Democrat, a Republican / a Republican, a Democrat], an Independent, or what?" [asked in 2008]

  · Answer categories: "Democrat, Republican, Independent, Other party, No preference." I create dummy variables that are 1 if the respondent thinks of herself as Democrat/Republican and 0 otherwise.

– Strongly identifies Democrat/Republican: If the respondent identifies either as Democrat or Republican: "A strong [Democrat/Republican] or a not very strong [Democrat/Republican]?" [asked in 2008]

  · Answer categories: "Strong, Not very strong." The dummy variables have the same categories.

– Leans Democrat/Republican: If the respondent neither identifies as a Democrat, nor a Republican, then she is asked the following question: "Do you think of yourself as [closer to the Democratic party, closer to the Republican party], or equally close to both?" [asked in 2008]

· Answer categories: "Closer to Republican Party, Closer to Democratic Party, Equally Close, Neither." For the analysis, I simplify the answer into closer to Democratic Party against all others.

– Overall Democrat/Republican: This dummy variables sum up the answer to the three questions above: They are 1 if the respondent either thinks of herself as Democrat or feels closer to the Democratic party, and 0 otherwise.

Key explanatory variables

– Student debt: "How much was the total dollar value of all the loans you have received for your college expenses at [names of the up to three last colleges] since [date of last interview]?" [asked in 1984-2010]

· If yes, then the respondent either states the exact amount or estimates the amount with the help of brackets. I simplify the information into a dummy variable.

– HH student debt: Spouse: "Are you [spouse/partner's name] responsible for making payments on any student loans that you had for your own education [or] [spouse/partner's name] education?" [asked in 2004-2010]

· If the answer is yes, then the question reads: "About how much do you [or] [spouse/partner's name] owe on all these student loans"? I create a dummy variable for spouse has student debt, yes or no.

– HH student debt: Children: "Are you [or] [spouse/partner's name] responsible for making payments on any student loans for your [child/children]? Please only include loans that have been made in your [or] [spouse/partner's name]'s name for your [child/children]'s education. Only include student loans from the government and not withdrawals against other types of loans, even if the withdrawal is used for educational purposes." [asked in 2004-2010]

· If the answer is yes, then the question reads: "About how much do you owe on student loans for your [child/children] that you [or] [spouse/partner's name] are primarily responsible for?"

· If the approximate amount is not known, follow-up questions try to determine magnitude of student loan debt.

· I create a dummy variable for children have student debt and parents pay for it, yes or no.

· Finally, I generate a dummy variable that is 1 if an individual is responsible for paying back a spouse's or children's student debt, and 0 otherwise.

– Homeownership: "Is this (house/apartment) owned or being bought by you [or] [Spouse/partner's name]?" [asked in 2000, 2004, 2008]

· Mortgage: "About how much do you [or] [Spouse/partner's name] owe on this property, for mortgages, back taxes, home improvement loans, etc.?" [asked in 2000, 2004, 2008]

· With this information, I generate two dummy variables: one for homeownership with mortgage and one for homeownership without a mortgage.

– Private pension: "Do you [or] [Spouse/partner's name] have any money in individual retirement accounts such as IRAs or Keoghs?" [asked in 2000, 2004, 2008]

· Answer categories: "Yes, No." Same coding for the dummy.

4.6.7 Distribution of Variables

Table 4.17: Distribution of Variables, U.S.

	Agree/yes %	Mean	Std. dev.	Observ.
Policy preferences in NSLY97				
Gov't reduce income diff.	60.90	1.609	.488	1,775
Gov't provide jobs	58.43	1.584	.493	1,833
Gov't support unemployed	62.12	1.621	.485	1,811
Gov't help industry	83.97	1.840	.367	1,815
Gov't control inflation	87.57	1.876	.330	1,859
Party preferences in NLSY79				
Overall Republican	31.85	.318	.466	4,807
Thinks of herself as Republican	27.48	.275	.446	4,603
Strongly identifies with Republicans	51.39	.514	.500	1,259
Leans towards Republicans	18.54	.185	.389	1,435
Overall Democrat	50.53	.505	.500	4,807
Thinks of herself as Democrat	44.51	.445	.497	4,603
Strongly identifies with Democrats	61.84	.618	.485	2,036
Leans towards Democrats	26.48	.264	.441	1,435
Overall Democrat over Republican	38.66	.387	.487	3,960
Student debt				
Student debt (individual) in NSLY97	18.36	.184	.387	1,269
Student debt (individual) in NSLY79	34.16	.342	.474	4,807
Student debt (HH) in NLSY79	20.37	.203	.403	5,410
Mortgage				
Homeowner with mortgage in NLSY97	15.79	.158	.365	8,623
Homeowner without mortgage in NLSY97	7.05	.071	.256	8,623
Homeowner with mortgage in NLSY79	48.46	.485	.500	7,995
Homeowner without mortgage in NLSY79	10.71	.107	.309	8,298
Private pension				
Private pension (HH) in NLSY97	9.57	.096	.294	8,736
Private pension (HH) in NLSY79	39.17	.392	.488	6,743

Chapter 5

Borrowers against Savers

5.1 Introduction

Is there a coalition of borrowers against savers? And do parties mirror the cleavage between those who lend and those who borrow? Graeber (2011) argues that not just during the last financial crisis, but over the course of the past 5,000 years, all conflicts between the rich and the poor have been fought along the lines of creditors and debtors. With the financial crisis of 2007, there was the clear opportunity to reorganize interests, because both borrowers and savers found themselves in a difficult positions: Borrowers struggled to repay it and avoid bankruptcy. Savers lost substantial amounts of their capital. So, can we observe a clear divide between these two groups? Is there potential for both or either to mobilize and become a powerful and relevant group?

This chapter brings the findings from the two case studies together and adds a cross-national analysis. In section 5.2, I discuss whether borrowers and savers can be added to the list of cleavages. Then I compare the results of the UK and U.S. case studies in section 5.3. Section 5.4 presents a cross-national comparison of borrowers and savers, using the International Social Survey Programme of 2009. The last section, section 5.5, concludes by bringing together the findings from the two case studies and the comparative analysis.

5.2 Borrowers against Savers?

Can we speak of a cleavage between borrowers and savers? Lipset and Rokkan (1967*a*; 1967*b*) and their colleagues argue that conflict lines within societies can be understood in terms of cleavages. These cleavages translate into the political sphere, and are often represented by political parties. If they do, political parties

align alongside societal cleavages. But does it make sense to separate borrowers and savers? After all, most individuals are both, borrowers and savers at the same time or at different times in their lives.

Research on cleavages first focused on geographic divides (the urban versus rural population), the socio-economic status (owners vs. workers), cultural differences including ethnicity, cultural values and religiosity (Lipset and Rokkan, 1967*b*; Deegan-Krause, 2007). Later, new cleavages attracted attention including education levels (Inglehart, 1977), economic sectors and redistributive-libertarian versus market-authoritarian views (Kriesi, 1998), as well as gender, environment, and religious views and values.

The antagonism of capital versus labor is intimately tied to industrialization and the industrialized society. Inglehart and Welzel (2005) argue that in a post-industrialized world the central conflict lines have moved from a materialist divide to one over autonomy, self-expression, and quality of life. This value change will, as they speculate, lead to a decline in social class voting, although not fully replace it (Inglehart, 1977). A possible divide between borrowers and savers would follow the ´old' conflict lines based on material self-interest. It seems plausible to argue that savers belong to capital, but it is less clear where borrowers fit into this well-established framework.

How then can we best describe the relationship between borrowers and savers? Some cleavages are more easily translated into politics than others. Following the definition of Bartolini and Mair (1990), most research on cleavages satisfies three conditions: The group is self-conscious group, sharing a common mindset, and is organized in a distinct political organization (Deegan-Krause, 2007).

I argue that savers share a common mindset, because all policies that protect their savings must guarantee low inflation, high growth rates, high interest rates, and more generally stable and growing financial markets. To the extent that individuals are aware of these commonalities, they are a self-conscious group, but they are a long way from being a distinct political organization. Instead, it seems plausible that the interests of savers align with those of large financial institutions, which are powerful interest groups. Culpepper (2010) shows that large corporations are more influential in areas of low public salience. Before the financial crisis, many financial regulations certainly belonged to the technical realm of policy questions and were of low salience. During the crisis, things changed: Financial regulations gained high salience. It is difficult to say what the long-term effects will be. In any case, it seems likely that if preferences of individual savers overlap with interest of large financial institutions, they will be an influential group.

Borrowers do not share a common mindset as I have argued before. The kind of policies they need cannot readily be summed up under an umbrella term. They may be a self-conscious group in crisis times and organize in political protest, as the Occupy movement demonstrated. Still, their strength cannot be compared to organized labor or unemployed or low-income families.

Thus, while conceptually it may make sense to perceive of a cleavage of borrowers against savers, real-world politics does not (yet?) mirror the different interests. I return to the implications of this difference in the conclusion. In the next section, I compare borrowers and savers in the United Kingdom and United States.

## 5.3 Borrowers and Savers in the UK and U.S.

Let me start with a comparison of how many people are exposed to financial risk, measured by the three most important investments: student debt, mortgages, and private pensions. Everybody borrows and saves in the United Kingdom. Figure 5.1 shows the distribution of student debt, mortgages and private pensions across income quintiles for the years 2000 to 2010. Student debt is almost constant across all quintiles. Both mortgages and private pensions are increasing in income. The wealthy buy larger houses and invest more into private funds.

The rich in the United States borrow and save more. Figure 5.2 shows student debt, mortgage and private pensions across income quintiles. The figure only depicts borrowers and savers from one cohort from the NLSY79[1]. However, it is an interesting cohort to look at because individuals are in their mid- to late-forties: They are halfway into their working lives, having made already substantial investment decisions.

Because the UK data in figure 5.1 shows all cohorts (older than 18 years), it is not possible to compare the two distributions too closely. Yet, there are both important similarities and differences that are likely to hold irrespective of age: All debts and savings in the United States are increasing in income, just as in the United Kingdom. In the U.S., a larger proportion of the population has debts and savings. There are more individuals (both in numbers as in proportion) who have student debt or save into private pension funds in the U.S. Homeowners with mortgages are about the same. This is also confirmed by aggregate data discussed in chapter 1.1. Student debt is almost equally distributed across all quintiles. For mortgages and private pension savings, there is a clear cut at the third quintile: The middle- and upper-income groups spend and save more.

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[1]No better individual-level data are available that have information of all three.

Figure 5.1: Distribution of Debt and Savings Across Income, 2000s, UK
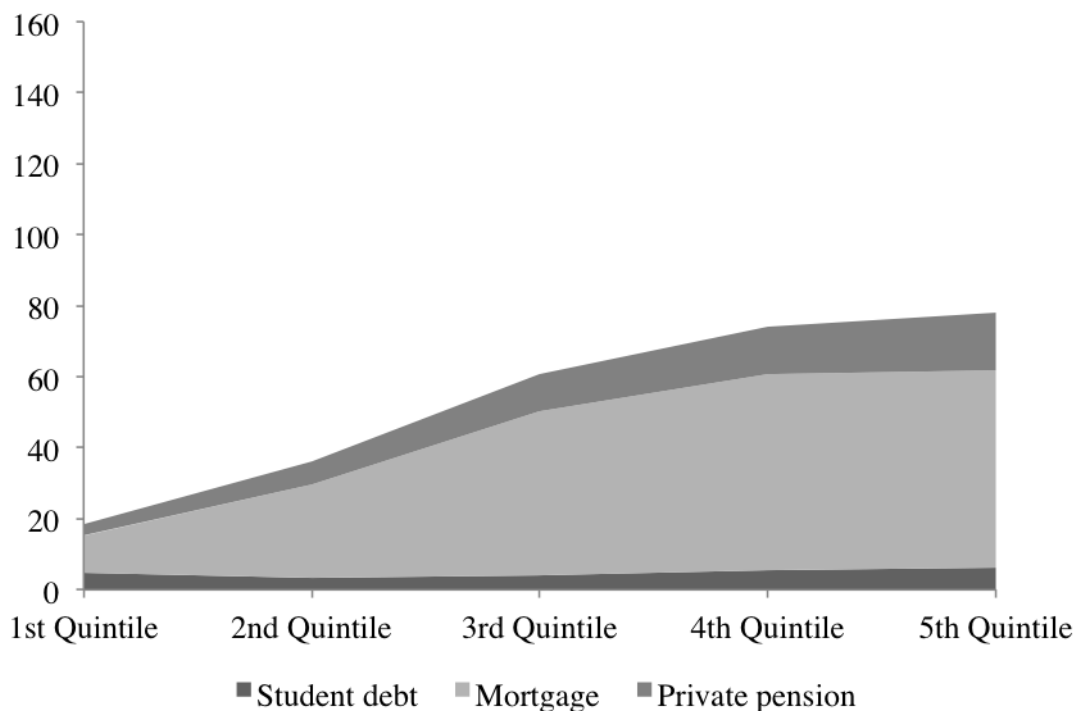
Note: y-axis shows cumulative percentage of a representative sample. Sources: British Household Panel Survey, Understanding Society.

Yet, the results from the different regressions in both countries are consistent: Student debt makes individuals more opposed to redistribution, but makes it more likely that they favor certain labor market policies, and higher inflation rates. Individuals with mortgages are more similar to homeowners with mortgage-free homes. Private pensions are also towards the right of the political spectrum.

The two political economies are, of course, different in many respects, but when compared with other advanced capitalist countries, they are more alike than different. They share a majoritarian voting system with two parties. Moreover, they are both liberal market economies. In both countries, we can observe that the income effect and insurance effect of these investments make individuals less likely to support higher taxation and redistribution. The risk effect prompts them to demand specific policies that protect them. The crisis effect, contrary to expectations, reinforces the income effect in the sense that as income is falling, individuals want to minimize taxation and instead save more money for themselves.

In the case studies, I presented the findings for dummy variables. I have also tested, where possible, other measures of debt and savings, in particular the size of the investment or contribution relative to income. Since the results were no different, I reported those for dummy variables, as they are easy to interpret and compare.

Figure 5.2: Distribution of Debt and Savings Across Income, 2008, U.S.
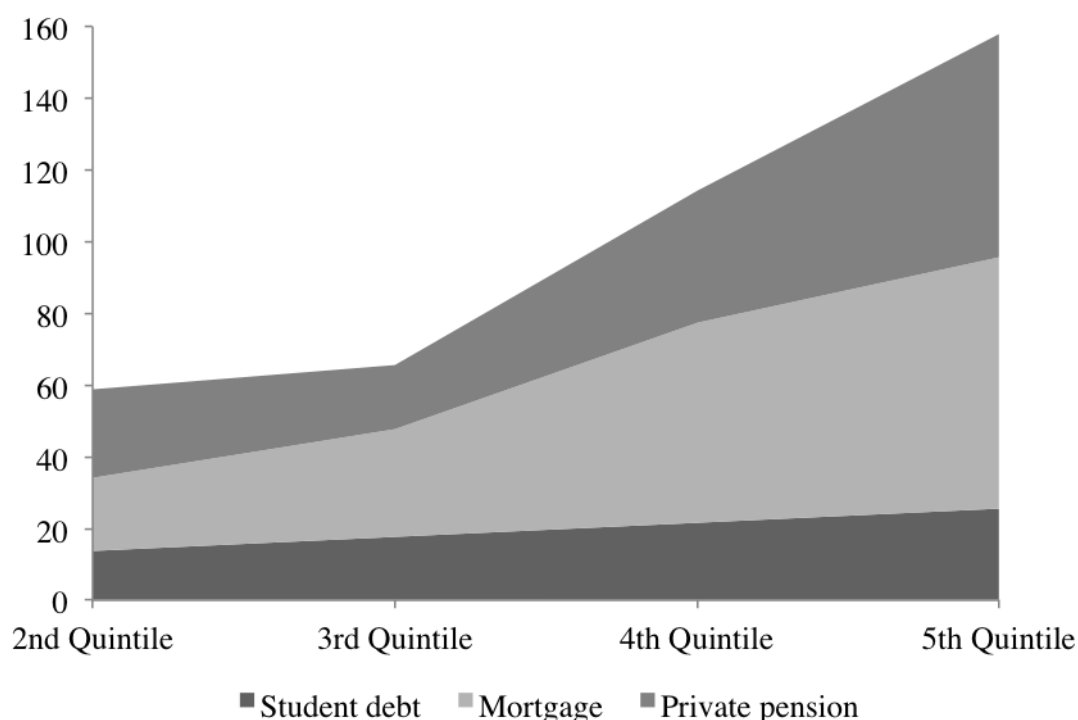
Note: y-axis shows cumulative percentage of a representative sample of a the cohort born in 1979 in the United States. 1st quintile ommitted due to too few observations. Source: NLSY79.

This finding combined with the observation that effects of financial investments are consistent across the two countries no matter the differences, suggests that the *experience* of being exposed to financial risk matters, irrespective of the volume of the investment.

Can we draw lessons for comparative research? It seems no coincidence that levels of financial risk are high in two countries that are more deregulated and have a smaller welfare state. Countries with proportional representation are on average more egalitarian and show higher levels of redistribution, as research has shown (Iversen and Soskice, 2006; Iversen and Stephens, 2008; Iversen and Soskice, 2009).

The retrenchment of the welfare state and the consequent privatization, however, is a common phenomenon among the advanced capitalist economies. More and more countries have partly privatized higher education, many encourage individuals to save into a private pension, and homeownership financed by mortgages sustained by rising house prices and low interest rate has been a common practice in most countries for a very long time and in particular in the past decade. The increase in individual investments into different income-smoothing devices can be interpreted as a broader trend of privatizing formerly public services (Gingrich, 2011).

Austerity politics due to the debt crisis make further cuts in public spending

Figure 5.3: Financial Assets, 2000 & 2010, Selected Countries
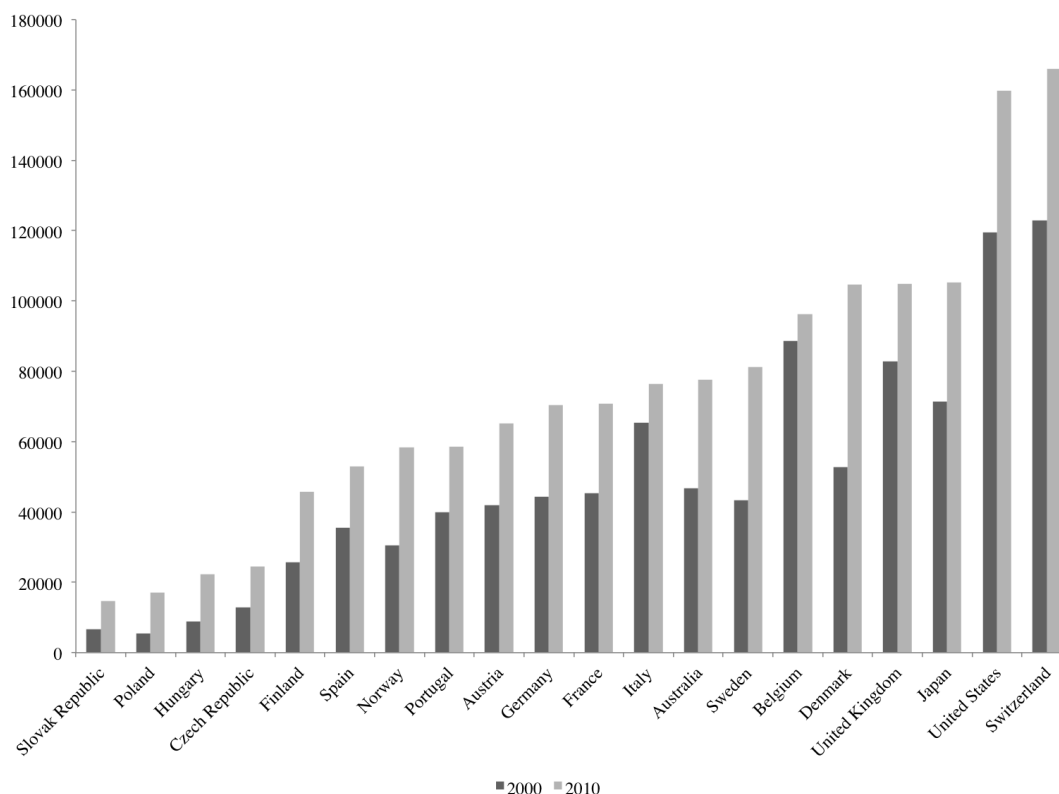
Figure shows financial assets per capita. In US dollars at current PPPs. Source: OECD (2012a).

likely. In the next section, I conduct a cross-national analysis to test whether the findings for the UK and U.S. can be replicated in a cross-national setting. Since the same level of detail is not available for a larger set of countries, I develop aggregate measures to answer the question of whether we observe a divide between borrowers and savers around the world.

5.4   Borrowers and Savers in a Cross-National Study

5.4.1   Financial Risk across Countries

In this section, I summarize descriptive data for those countries for which I also have individual-level data for the preference analyses. Almost all countries in this analysis are also OECD members and hence, although more can be said about their differences, belong all to the club of advanced economies.

Households across the world are investing more in financial assets. From the beginning to the end of the 2000s, financial assets held by households (and measured

per capita in US-$ at current PPPs) have increased in all countries[2] in the sample, as figure 5.3 shows.

East European countries, such as the Slovak Republic, Poland, Hungary, and the Czech Republic show the lowest levels of household assets. In all countries, however, assets doubled within ten years and are now at around $20,000 per person (in PPP). In most advanced economies, such as Spain, Germany, France, Italy, and Sweden, household assets amount to $40,000 to $80,000 (in PPP). Countries with more than $100,000 (in PPP) household assets per person are Denmark, the United Kingdom, Japan, the United States, and Switzerland. Despite their high levels already in 2000, all of these countries have seen significant increases, on average of 48 percent. For the whole sample, financial assets increased by 72 percent within the ten year period.

The asset portfolio, however, varies widely across countries, as figure 5.4 reveals. It shows financial assets of households broken down by type of asset - from the more traditional assets held in currency and deposits to insurance technical reserves and shares and securities. The two largest shares on average are currency and deposits (31 percent) and insurance technical reserves (35 percent). Currency and deposits make up half of all assets or more in Slovenia, Japan, the Czech Republic, and the Slovak Republic. Insurance technical reserves are the largest share in most countries with up to 60 percent in Australia and Chile. Shares and equities are most important in the United States, Finland, Sweden and Hungary. All countries have in common that households rely on a mix of assets.

Homeownership rates on average stand at 77 percent in 2010, as figure 5.5 depicts. In most countries, homeownership rates have constantly increased. They are lowest in Switzerland with around 45 percent. Austria, Germany, Denmark, and Sweden show also low rates between 50 and 66 percent. At the top end are the Slovak Republic, Hungary, and Spain with more than 90 percent.

There is a lot of variation across these countries in the types of assets that households hold. Yet, there is a general trend towards higher financial risk concentration at the individual level. We observe both a catching up of those countries with initially lower household assets as well as a continuing rise in those with already very high levels of assets.

5.4.2 Empirical Strategy

The International Social Survey Programme is a well-established data source that collects annual data across countries on a range of topics. One of the repeated

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[2]I include all countries for which data are available and which are included in the ISSP 2009.

Figure 5.4: Households' Portfolios, 2010, Selected Countries

■Currency and deposit　　■Securities other than shares

■Loans　　■Shares and other equity

■Insurance technical reserves　　■Other accounts
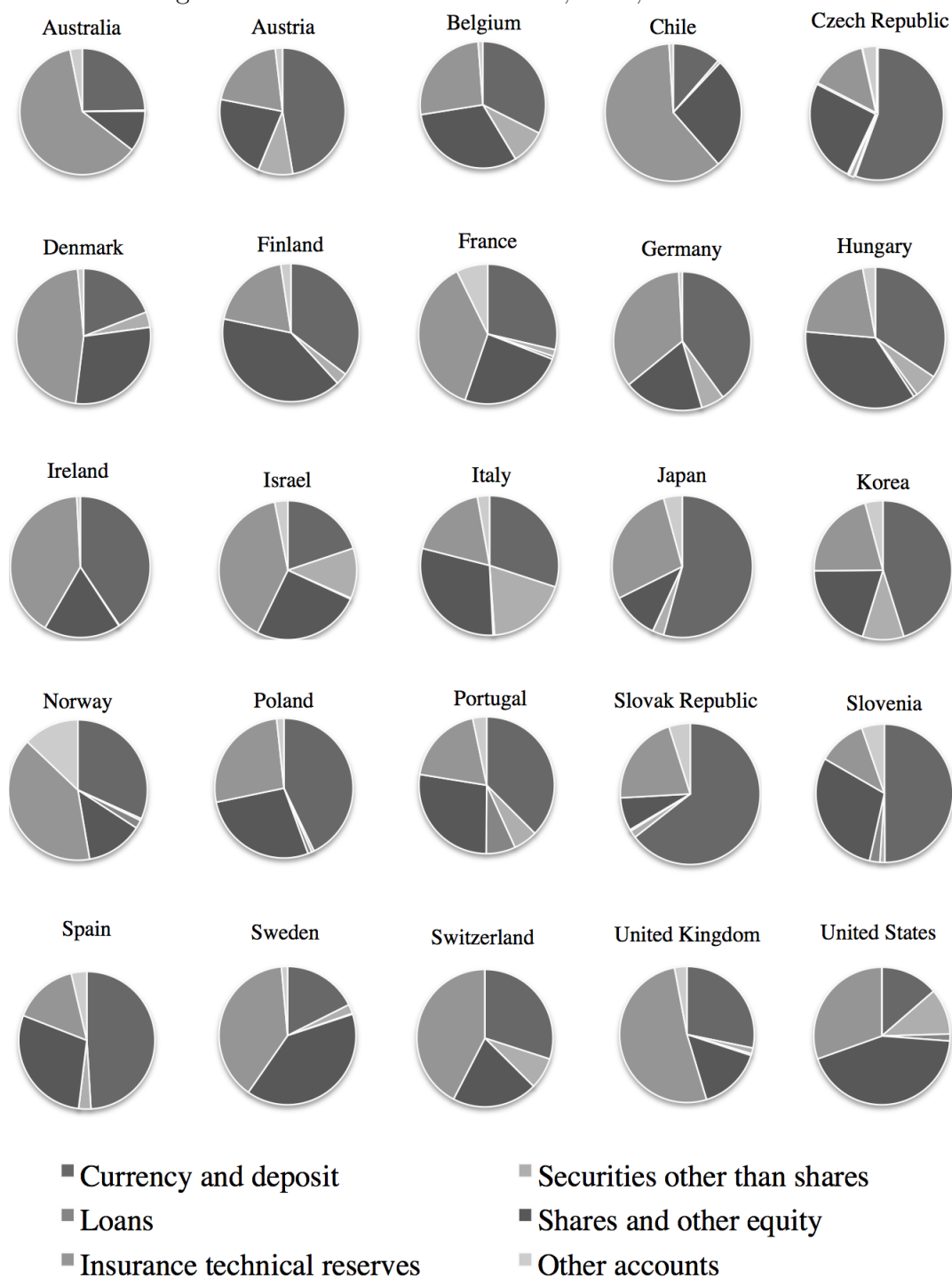
Figure shows financial assets of households by type of asset in percentage. Source: OECD (2012a).

surveys is the "Social Inequality" round: It was conducted in 1987, 1992, 1999, and 2009. The surveys cover individual attitudes towards income inequality as well as social cleavages.

In 2009, the "Social Inequality IV" wave collected cross-national information on

Figure 5.5: Homeownership Rates, 2010, Selected Countries
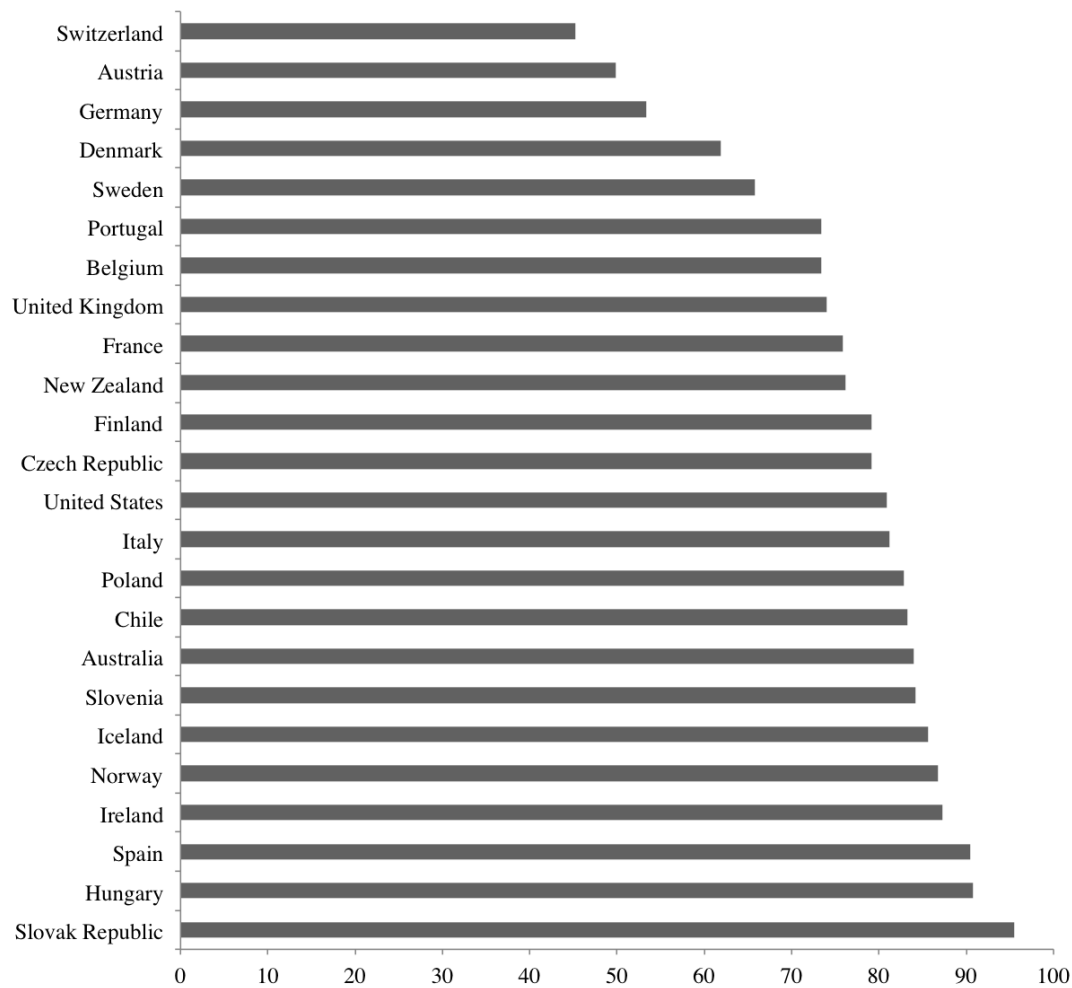
Source: OECD (2013).

attitudes towards inequality and, for the first time, also various components of the respondent's personal balance sheet. The survey includes 40 countries[3].

The newly introduced questions in the ISSP 2009, from which I generate my key explanatory variables, cover both components of the personal balance sheet: current assets and liabilities. The wording of the two questions that I use can be found in the appendix in section 5.6.2, where I also explain how I generate the five different variables.

In short, I have a dummy variable for homeownership, a dummy variable for whether the mortgage exceeds all assets and a logged variable on the actual difference

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[3]Argentina, Australia, Austria, Belgium, Bulgaria, Chile, China, Croatia, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, New Zealand, Norway, Philippines, Poland, Portugal, Russia, Slovak Republic, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Turkey, Ukraine, United Kingdom, United States, and Venezuela.

between the two, and a third dummy for whether all savings are larger than all liabilities, and a logged variable for the nominal difference between the two. This allows me to test both the effect of different types of debt and assets, and also to say more about whether the amount of debt and savings matters. I take the log because I assume, as it is common with income, diminishing returns to both assets and debt. Those that have a positive net worth are net savers. Individuals with a negative net worth are net borrowers.

I expect that homeowners are opposed to higher taxation and redistribution and vote for the political right. Individuals in debt are just the opposite. In the two country studies, I could distinguish between different kinds of debt. In this analysis, I only have an aggregate measure for debt [4]. It includes all kinds of debt including credit card debt, debt due to medical bills, auto loans etc. This debt is very different from student debt or mortgages as individuals with this kind of debt do not expect higher income in the future. In a sense, they are not in debt because they have made an investment. They are in debt because otherwise they could not have paid their bills. Net savers are on the right of the political spectrum, net borrowers on the left.

The ISSP 2009 asks various questions on how the respondents feel about fairness within society. I use the following four questions, which are similar to the ones in the previous analyses and focus on redistribution: Whether or not the respondent thinks that income differences are too large, whether the government should reduce inequality, whether the tax system should be progressive, and whether the respondent thinks that actual tax rates are too high. It also includes a question on whether the government should provide a decent standard of living for the unemployed, and spend more on social benefits for the poor.

Because the party questions are country-specific, I use a general left-right measure for party allegiance, which is provided by the ISSP. I generate three possible party choices: left, liberal-center, and right.

The distribution of all key variables can be seen in the appendix in section 5.6.3. 85 percent report that income differences are too large in their country. Three in four individuals want the government to reduce these income differences and to provide for those who are unemployed. Almost the same number wants individuals with higher incomes to pay more taxes. 22 percent believe that they are already paying

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[4]It would be ideal to be able to distinguish between different kinds of debt to be able to say more about the different effects. Unfortunately, the information is not available. It is therefore possible that the empirical results hide that different types of debt have different effects, as I argued previously. I expect that individuals who are in debt other than student debt or mortgage debt support redistribution and social spending.

too much. 20 percent also want the government to spend less on poor households.

In terms of party preferences, the three mainstream political orientations are similar: 24 percent support the left, 22 percent the liberal-center, and 19 percent the right. I leave out those at the extreme ends, the radical left and the radical right.

77 percent of all individuals in the sample are homeowners. Of them, 7 percent would be in debt if they were to sell their house and all assets. 10 percent would be in debt if they sold all their assets and paid off all their liabilities. Those whose portfolio includes a house or apartment are on average richer than those who only hold other assets.

I include a similar set of control variables than in the previous analyses: I control for gender, age, marital status, highest educational attainment (higher secondary, above higher secondary, and university degree), household income (log), employment status (employed, unemployed, and retired), union membership, as well as for religious service attendance (at least once a month). I also include country controls.

To test the different measures for net savers and borrowers, I use two different specifications. In the first, I include homeownership, and the two dummies for debt, i.e. whether or not an individual has a negative difference between the house value and all liabilities and the cash value of all savings, stocks, and bonds, and all liabilities. The first model allows me to test whether debt has an effect, while controlling for income, education, and employment status, and whether different kinds of debt have different effects.

In the second specification, I include homeownership and the two continues variables that describe the positive difference between house value and all liabilities and savings, stocks, and bonds, and all liabilities. This model allows me to test whether net savers, again while holding income, education, and employment status constant, has an effect on preferences and whether the kind of positive net worth matters. The dependent variables, set of control variables, and the sample size are the same for both specifications.

For the different questions on policy preferences, the sample consists between 22,233 up to 23,534 observations. For the question on placement on the political spectrum, the sample consists of between 16,772 up to 17,618 observations.

As before, I run logistic regressions with binary choice. I report estimated odd ratios and country-clustered standard errors in parentheses. In interpret an effect as statistically significant if the null hypothesis cannot be denied at the 90 percent level. In the following section, I sum up the findings from the empirical analysis.

Figure 5.6: Debt and Preferences, Cross-national
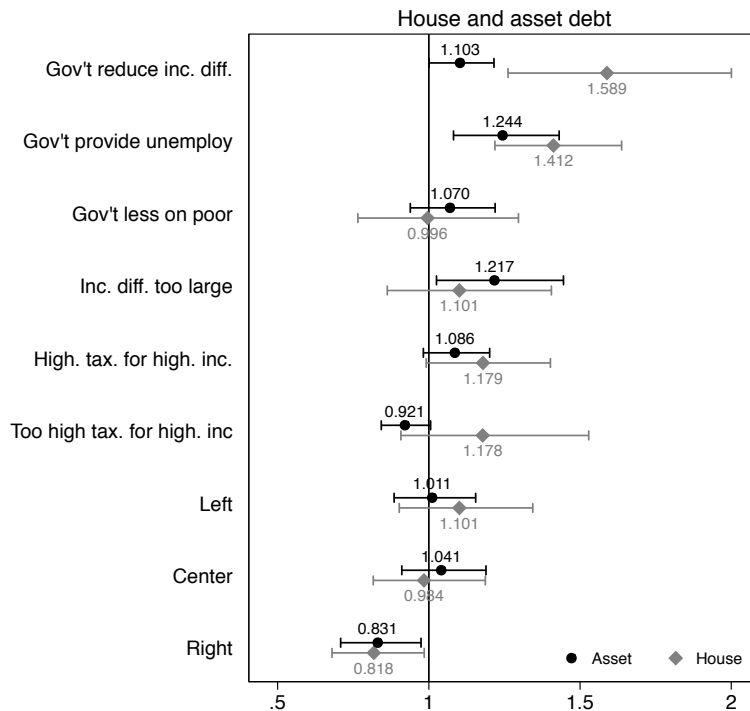
Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

5.4.3   Findings

The detailed regression tables can be found in the appendix in section 5.6.1. I test two different combinations of key explanatory variables, either homeownership and debt or homeownership and being a net saver, for two sets of preferences: policy preferences and party preferences. For the coefficient plots I group the results by these two different measures. The results can be seen in figures 5.6 and 5.7.

Homeowners are less likely to believe that income differences are too large. They are therefore also less likely to support the government in redistributing income to reduce inequality, or specifically help unemployed or low-income families. Homeowners on average do not support higher taxes for higher incomes.

Individuals in debt, measured either by the difference of the house value minus all liabilities or assets minus all liabilities excluding mortgages, are in general more likely to support income redistribution but with different priorities. Individuals whose liabilities are larger than their assets think that income differences are too large in general and that the government should provide for unemployed individuals. Those whose house value is smaller than their liabilities agree that unemployed individuals should be helped by the government. They also think that the government should

more generally decrease inequality and tax higher incomes more. Paradoxically, they also describe taxes for high incomes as currently too high in their own country.

The significant effect of homeownership on preferences disappears or even changes sign when we control for positive net worth instead of debt. Homeowners are now more likely to support the government in reducing income differences. Net savers, either because their house value exceeds their liabilities or their assets are larger than their liabilities, do not support the government in reducing income differences or helping the unemployed. They do not agree that higher incomes should be taxed higher than lower incomes. Individuals with a positive net worth in assets do not agree that income differences are currently too large and they think that there are too high taxes for higher incomes.

In terms of political party affiliation, the effect of homeownership depends on the other key explanatory variables. If we control for debt, then homeowners are more likely to be affiliated with the political right. If we control for positive net worth, homeowners are more likely to support the political left. Individuals in debt are less likely to associate with the political right. Net savers are less likely to be affiliated with the left parties and more likely to support parties on the right. Individuals with positive net worth in assets are also more likely to support parties in the liberal-center.

The control variables show the expected effects in all regressions. Women on average support the government in redistributing income and want higher taxes for those with high incomes. Politically, they are more likely to be affiliated with the political left and less likely to support liberal-center or right-wing parties. Older individuals in general support income redistribution and are more likely to be either on the political left or right (but not in the middle) of the political spectrum. Education and income have the expected effects: the higher the educational attainment and the higher household income, the less supportive are individuals of redistributive policies. Higher income (but not higher education) makes individuals less likely to support redistribution to the poor. Employed individuals think that income differences are too large but they do not support the government in spending more on unemployed or low-income individuals, which is also in line with a clear outsider-insider divide. Unemployed individuals, not surprisingly, are more likely to want the government to send more money their way and favor higher taxes for higher incomes. Retired individuals think that the government should do more to reduce income inequality, but not spend it on the unemployed. Union members believe that the government should reduce income inequality and tax higher incomes more. Union members are more likely to be affiliated with the political left. Both union

Figure 5.7: Net Worth and Preferences, Cross-national
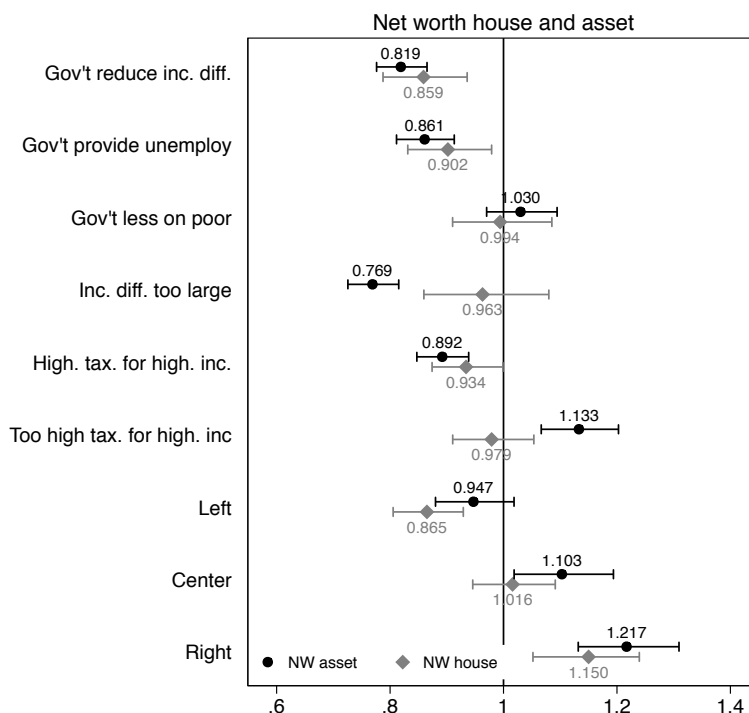
Coefficient plot: Figure shows odds ratios with 90% confidence interval after logit with robust standard errors. Source: Author's calculations, see appendix.

members and retired individuals are less likely to support the liberal-center or the political right. Individuals who attend a religious service at least once a month are more likely to be on the right-end of the political spectrum and are generally less likely to support income redistribution or higher taxes for higher incomes.

We observe a difference of preferences. Net borrowers are on the left, net savers on the right of the political spectrum. Individuals in debt are more likely to support social spending for different groups. Since the measures here include all kinds of debt including consumer debt (credit card debt, auto debt etc.) and not just those that I studied previously, this finding is not surprising since it is not the case that individuals expect higher income in the future just because they are in debt.

The effect of homeownership changes sign depending on the other control variables. This suggests that homeownership is a complex variable that captures different causal chains. When I control for debt, homeowners oppose redistribution and are on the right of the political spectrum. When I include for being a net saver, the effect of being a homeowner becomes insignificant or even opposed to the previous results. This suggests that homeownership is a necessary but not sufficient condition for the finding that they are more conservative. In addition, they also have to be

net savers, in other words, the liabilities they own should not exceed the mortgage and any other outstanding debt.

The findings speak to a recent contribution by Ansell (2014). He also uses the question of how much money would be left if the home was sold. He estimates the effect of positive and negative equity to understand whether the effect is symmetric. The dependent variable is a commonly used question on redistribution, which I also include in this analysis: Should the government reduce income differences?

Although there are some differences to the model's specification, the results are interesting to compare: Ansell finds that individuals with negative equity are more likely, both as homeowners and as renters, to support redistribution. This effect is mediated by partisanship: Right-wing voters who experience depreciation in their house value are more likely to than other voters to be less supportive of redistribution.

I use different measures than Ansell but the results are comparable and consistent. I also find that those with a positive net worth when the difference between the value of the house and all liabilities is calculated (what he calls positive equity) are less likely to support redistribution. I find the same effect for those, who have a positive net worth in terms of assets minus all liabilities. Those who are in debt due to the house they bought are more likely to support redistribution.

In short, net savers are on the right of the political spectrum and net borrowers on the left. The effect of homeownership on preferences is mediated by the effect of being either a net borrower or a net saver.

5.5   Conclusion

I conclude by bringing together all empirical results. There are three observations which I would like to elaborate further. First, borrowers and savers across countries are alike. Second, savers are united, and borrowers divided. Third, financial risk moves individuals to the right.

Let me start with the first. Borrowers and savers across countries are alike. In this dissertation, I have analyzed two countries that share many characteristics, in particular and relevant to this argument, they belong to the group of liberal market economies and have a majoritarian political system. Thus, while it seems plausible to argue that other liberal market economies with a similar political system and high levels of debt and wealth will most likely show similar characteristics, I also want to argue for a stronger interpretation. Results across the United Kingdom and the United States are broadly consistent. Differences in party preferences can

be explained by country-specific characteristics, such as the strength of the Liberal Democrats in the 2009 General Election in the UK. As debt and savings grow, they become more important in two different ways: First, they are better picked up by large surveys, as they become a common phenomenon. Second, as they grow in volume, they have a stronger impact on preferences. This observation, I would argue, also extends to other advanced capitalist societies. As individuals save and owe more, this part of their personal calculation becomes more important for the policies they want, and the parties they vote. This is also confirmed by the cross-national study in this chapter, although it does not allow for the same nuances as the country case studies. Net borrowers are very different from net savers. This is true for a large group of countries.

Second, savers form a strong group. Borrowers are divided across policies and parties. Table 5.1 sums up the results in the two most simplified dimensions: more and less redistribution, and political left and right. I have presented a more detailed interpretation of the results before. However, if we simplify the results and plot them across the two dimensions only, a simple picture emerges. The savers support less redistribution and the political right. The borrowers are divided. Net borrowers, of which we do not know more about their portfolio, support more redistribution and the political left. Those with student debt are also on the left of the political spectrum, but want less redistribution. And finally, individuals with mortgages are just like savers. They oppose redistribution and vote for the right. Are the two variables for net savers and net borrowers just mirroring income effects? This seems unlikely as the correlation between those measures and household income in the cross-national dataset is 20 percent at most. Measures for debt and income are negatively correlated but the correlation is less than 1 percent. Why then is there no broad and powerful consensus among debtors? As I have argued earlier, the most plausible answer in my view is that debt is not always debt. There may also be another way of looking at it, which brings me to my third observation.

Third, financial risk moves individuals to the right. One way to interpret this is that the income effect and insurance effect trump the risk effect: The hope to have higher expected income trumps the experience of insecurity because of risk concentrated at the individual level. However, especially the experience of the financial crisis that started in 2007 makes this interpretation unlikely. Individuals (and politics) were well aware of the risk and potential ramifications that this posed to both borrowers and savers. The instability of the financial system became apparent. Thus, it seems that the risk effect cannot be assumed away.

A second possible interpretation of this finding is that financial risk is more

Table 5.1: Borrowers and Savers on Redistribution and Parties

	Political left	*Political right*
More redistribution	Net borrowers	
Less redistribution	Student debt	Mortgage Private pension Net savers

difficult to anticipate, observe and, consequentially, more difficult to counter with policies. In the case of labor market risk, it has been shown that as the individual risk exposure increases, individuals move toward the left: They demand more protection. Labor market risk is well understood: Too low wages or unemployment. Also for the government, there are strong signals. The unemployment rate is among the most important indicators both for economic and political reasons. There are a range of well-known policies to help those with too low wages or in need of a job such as minimum wages, unions to negotiate industry-wide deals, active labor market policies, unemployment benefits, incentives to find a new job, and further education.

The indicators for financial risk are more complex for at least three reasons: Individual portfolios differ. Losses are more difficult to anticipate. There is little experience with policies addressing these risks, if only for the reason that it is difficult to find an international consensus to regulate global capital flows. Thus, in addition to financial risk, epistemic uncertainty enters the picture.

In the meantime, the results suggest that individuals solve those risk problems at the individual level: They demand lower taxation and lower redistribution, so that they can help themselves. Of course, this does not compensate for actual insurance. Instead, more risk is concentrated at the individual level. Thus, as a result it may be difficult to tell the risk and income effect apart.

It is evident, however, that the effects of income, labor market risk, financial risk are linearly correlated, in other words, they have the same effect on preferences. Instead, debt and savings appear to have qualitatively different effects depending on their specific composition. This means that a continuum from high debt to high savings does not mirror the trajectory from no income to high income, or from low labor market risk to high labor market risk.

My findings suggest that policy demands of savers will have more political weight. In the last chapter of this dissertation, I discuss the contribution of my research and

set it into broader context.

5.6 Appendix

5.6.1 Borrowers and Savers Regressions

Table 5.2: Borrowers and Savers, Policy Preferences I, 2009, Cross-National

	Gov't reduce inc. diff.	Gov't provide unempl.	Gov't less on poor
Homeowner	0.819***	0.797***	1.118
	(0.046)	(0.035)	(0.096)
Debt (house-liab.)	1.589***	1.412***	0.996
	(0.223)	(0.127)	(0.160)
Debt (assets-liab.)	1.103*	1.244**	1.070
	(0.065)	(0.106)	(0.085)
Female	1.254***	0.976	0.931*
	(0.070)	(0.036)	(0.034)
Age	1.001	1.008***	0.996*
	(0.002)	(0.003)	(0.002)
Married	1.067	0.976	1.028
	(0.056)	(0.051)	(0.045)
Higher secondary	0.812***	0.908	0.860*
	(0.059)	(0.062)	(0.073)
Above higher secondary	0.716***	0.848*	0.772**
	(0.057)	(0.072)	(0.081)
University degree	0.622***	0.974	0.752*
	(0.055)	(0.110)	(0.128)
HH income (log)	0.741***	0.794***	1.087*
	(0.056)	(0.040)	(0.048)
Employed	0.968	0.712***	1.216***
	(0.065)	(0.047)	(0.061)
Unemployed	1.065	1.571***	0.942
	(0.123)	(0.201)	(0.115)
Retired	1.141	0.752***	1.203**
	(0.092)	(0.073)	(0.097)
Union member	1.477***	1.285***	0.951
	(0.107)	(0.073)	(0.047)
Religious service att.	0.907	1.043	1.068
	(0.068)	(0.058)	(0.085)
Country controls	yes	yes	yes
Observations	23394	23462	23344
Pseudo R^2	0.109	0.094	0.127

Exponentiated coefficients; country-clustered standard errors in parentheses
* $p < .1$, ** $p < .05$, *** $p < .01$

Countries (dummies not shown): Australia, Austria, Belgium, Bulgaria, China, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Israel, Italy, Japan, South Korea, Latvia, New Zealand, Norway, Poland, Portugal, Russia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, Turkey, Ukraine, United Kingdom, United States, Venezuela. Source: ISSP (2009).

Table 5.3: Borrowers and Savers, Policy Preferences II, 2009, Cross-National

	Inc. diff. too large	High. tax for high. inc.	Too high tax. for high. inc.
Homeowner	0.770***	0.917	1.069
	(0.065)	(0.050)	(0.073)
Debt (house-liab.)	1.101	1.179	1.178
	(0.163)	(0.124)	(0.187)
Debt (assets-liab.)	1.217*	1.086	0.921
	(0.127)	(0.067)	(0.050)
Female	1.385***	1.047	0.929
	(0.092)	(0.043)	(0.044)
Age	1.008***	1.016***	0.987***
	(0.002)	(0.002)	(0.003)
Married	1.049	1.040	0.909***
	(0.065)	(0.055)	(0.033)
Higher secondary	0.828**	0.992	0.974
	(0.067)	(0.083)	(0.060)
Above higher secondary	0.776**	0.909	1.051
	(0.085)	(0.069)	(0.079)
University degree	0.556***	0.949	1.099
	(0.071)	(0.094)	(0.096)
HH income (log)	0.764***	0.824***	1.291***
	(0.062)	(0.052)	(0.073)
Employed	1.156	1.052	0.977
	(0.108)	(0.069)	(0.083)
Unemployed	1.119	1.213*	0.994
	(0.127)	(0.132)	(0.136)
Retired	1.236**	1.142	0.988
	(0.120)	(0.111)	(0.112)
Union member	1.414***	1.341***	0.710***
	(0.099)	(0.100)	(0.071)
Religious service att.	0.757***	0.860**	1.195**
	(0.057)	(0.060)	(0.101)
Country controls	yes	yes	yes
Observations	23534	23268	22233
Pseudo R^2	0.140	0.062	0.085

Exponentiated coefficients; country-clustered standard errors in parentheses

* $p < .1$, ** $p < .05$, *** $p < .01$

Countries (dummies not shown): Australia, Austria, Belgium, Bulgaria, China, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Israel, Italy, Japan, South Korea, Latvia, New Zealand, Norway, Poland, Portugal, Russia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, Turkey, Ukraine, United Kingdom, United States, Venezuela. Source: ISSP (2009).

Table 5.4: Borrowers and Savers, Policy Preferences III, 2009, Cross-National

	Gov't reduce inc. diff.	Gov't provide unempl.	Gov't less on poor
Homeowner	1.129	0.991	1.114
	(0.101)	(0.082)	(0.096)
Pos. net worth (house-liab.)	0.859***	0.902**	0.994
	(0.045)	(0.045)	(0.053)
Pos. net worth (asset-liab.)	0.819***	0.861***	1.030
	(0.027)	(0.031)	(0.038)
Female	1.231***	0.961	0.933*
	(0.066)	(0.035)	(0.034)
Age	1.003**	1.009***	0.996*
	(0.001)	(0.003)	(0.002)
Married	1.059	0.971	1.030
	(0.054)	(0.052)	(0.045)
Higher secondary	0.838**	0.926	0.855*
	(0.062)	(0.063)	(0.071)
Above higher secondary	0.744***	0.871*	0.768***
	(0.058)	(0.073)	(0.078)
University degree	0.657***	1.015	0.746*
	(0.058)	(0.113)	(0.124)
HH income (log)	0.801***	0.836***	1.075*
	(0.057)	(0.043)	(0.045)
Employed	0.933	0.694***	1.222***
	(0.061)	(0.047)	(0.061)
Unemployed	1.045	1.555***	0.946
	(0.122)	(0.198)	(0.116)
Retired	1.150*	0.750***	1.199**
	(0.094)	(0.074)	(0.095)
Union member	1.454***	1.271***	0.951
	(0.103)	(0.071)	(0.046)
Religious service att.	0.906	1.040	1.067
	(0.067)	(0.057)	(0.085)
Country controls	yes	yes	yes
Observations	23394	23462	23344
Pseudo R^2	0.112	0.094	0.127

Exponentiated coefficients; Country-clustered standard errors in parentheses

* $p < .1$, ** $p < .05$, *** $p < .01$

Countries (dummies not shown): Australia, Austria, Belgium, Bulgaria, China, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Israel, Italy, Japan, South Korea, Latvia, New Zealand, Norway, Poland, Portugal, Russia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, Turkey, Ukraine, United Kingdom, United States, Venezuela. Source: ISSP (2009).

Table 5.5: Borrowers and Savers, Policy Preferences VI, 2009, Cross-National

	Inc. diff. too large	High. tax for high. inc.	Too high tax. for high. inc.
Homeowner	0.893	1.064	1.070
	(0.116)	(0.071)	(0.091)
Pos. net worth (house-liab.)	0.963	0.934*	0.979
	(0.067)	(0.038)	(0.043)
Pos. net worth (asset-liab.)	0.769***	0.892***	1.133***
	(0.027)	(0.028)	(0.041)
Female	1.360***	1.037	0.936
	(0.087)	(0.041)	(0.043)
Age	1.010***	1.017***	0.986***
	(0.003)	(0.002)	(0.003)
Married	1.038	1.037	0.912**
	(0.064)	(0.054)	(0.033)
Higher secondary	0.854**	1.010	0.959
	(0.069)	(0.085)	(0.058)
Above higher secondary	0.807**	0.929	1.032
	(0.087)	(0.069)	(0.075)
University degree	0.588***	0.979	1.070
	(0.075)	(0.095)	(0.092)
HH income (log)	0.831**	0.858**	1.242***
	(0.066)	(0.056)	(0.071)
Employed	1.116	1.033	0.990
	(0.104)	(0.069)	(0.085)
Unemployed	1.087	1.200*	1.007
	(0.128)	(0.132)	(0.139)
Retired	1.262**	1.144	0.976
	(0.123)	(0.112)	(0.111)
Union member	1.391***	1.330***	0.714***
	(0.095)	(0.097)	(0.070)
Religious service att.	0.756***	0.860**	1.192**
	(0.059)	(0.060)	(0.101)
Country controls	yes	yes	yes
Observations	23534	23268	22233
Pseudo R^2	0.144	0.064	0.086

Exponentiated coefficients; country-clustered standard errors in parentheses

* $p < .1$, ** $p < .05$, *** $p < .01$

Countries (dummies not shown): Australia, Austria, Belgium, Bulgaria, China, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Israel, Italy, Japan, South Korea, Latvia, New Zealand, Norway, Poland, Portugal, Russia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, Turkey, Ukraine, United Kingdom, United States, Venezuela. Source: ISSP (2009).

Table 5.6: Borrowers and Savers, Party Preferences I, 2009, Cross-National

	Left	Liberal-center	Right
Homeowner	0.947	0.943	1.379***
	(0.050)	(0.064)	(0.109)
Debt (house-liab.)	1.101	0.984	0.818*
	(0.133)	(0.112)	(0.092)
Debt (assets-liab.)	1.011	1.041	0.831*
	(0.082)	(0.084)	(0.080)
Female	1.222***	0.919*	0.796***
	(0.046)	(0.045)	(0.042)
Age	1.003**	0.996*	1.006**
	(0.002)	(0.003)	(0.002)
Married	0.900**	1.158**	1.044
	(0.044)	(0.073)	(0.064)
Higher secondary	1.125*	0.870	1.210**
	(0.079)	(0.085)	(0.111)
Above higher secondary	1.063	0.955	1.196**
	(0.090)	(0.103)	(0.102)
University degree	1.224**	1.039	0.894
	(0.123)	(0.134)	(0.092)
HH income (log)	0.905***	1.078	1.393***
	(0.034)	(0.065)	(0.071)
Employed	1.050	0.878	0.921
	(0.080)	(0.105)	(0.069)
Unemployed	1.162	0.796	0.755*
	(0.144)	(0.117)	(0.115)
Retired	1.137	0.821	0.958
	(0.113)	(0.121)	(0.083)
Union member	1.751***	0.780***	0.592***
	(0.113)	(0.063)	(0.060)
Religious service att.	0.695***	1.198	1.499***
	(0.065)	(0.180)	(0.173)
Country controls	yes	yes	yes
Observations	17618	17299	16772
Pseudo R^2	0.102	0.132	0.131

Exponentiated coefficients; country-clustered standard errors in parentheses

* $p < .1$, ** $p < .05$, *** $p < .01$

Countries (dummies not shown): Australia, Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Iceland, Italy, Japan, South Korea, Latvia, New Zealand, Norway, Poland, Portugal, Russia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, United States, Venezuela. Source: ISSP (2009).

Table 5.7: Borrowers and Savers, Party Preferences II, 2009, Cross-National

	Left	Liberal-center	Right
Homeowner	1.178**	0.892	1.035
	(0.076)	(0.083)	(0.063)
Pos. net worth (house-liab.)	0.865***	1.016	1.150***
	(0.038)	(0.044)	(0.052)
Pos. net worth (asset-liab.)	0.947	1.103**	1.217***
	(0.042)	(0.053)	(0.054)
Female	1.214***	0.927	0.810***
	(0.044)	(0.046)	(0.043)
Age	1.005***	0.995**	1.003
	(0.002)	(0.003)	(0.002)
Married	0.906**	1.163**	1.049
	(0.044)	(0.073)	(0.063)
Higher secondary	1.144*	0.858	1.175*
	(0.079)	(0.082)	(0.105)
Above higher secondary	1.083	0.941	1.154*
	(0.087)	(0.099)	(0.100)
University degree	1.253**	1.014	0.852
	(0.122)	(0.129)	(0.086)
HH income (log)	0.941*	1.042	1.282***
	(0.034)	(0.065)	(0.064)
Employed	1.030	0.894	0.959
	(0.077)	(0.106)	(0.075)
Unemployed	1.145	0.806	0.771*
	(0.141)	(0.119)	(0.118)
Retired	1.134	0.820	0.953
	(0.113)	(0.119)	(0.081)
Union member	1.735***	0.785***	0.604***
	(0.108)	(0.064)	(0.060)
Religious service att.	0.694***	1.195	1.503***
	(0.064)	(0.179)	(0.172)
Country controls	yes	yes	yes
Observations	17618	17299	16772
Pseudo R^2	0.103	0.132	0.135

Exponentiated coefficients; country-clustered standard errors in parentheses
* $p < .1$, ** $p < .05$, *** $p < .01$
Countries (dummies not shown): Australia, Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Iceland, Italy, Japan, South Korea, Latvia, New Zealand, Norway, Poland, Portugal, Russia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, United States, Venezuela. Source: ISSP (2009).

5.6.2 International Social Survey Programme (ISSP 2009)

Dependent variables: Policy preferences

- Inc. diff. too large; Gov't reduce inc. diff., Gov't provide unemploy., Gov't less on poor: "To what extent do you agree or disagree with the following statements? (a) Differences in income in [your country] are too large. (b) It is the responsibility of the government to reduce the differences in income between people with high incomes an those with low incomes. (c) The government should provide a decent standard of living for the unemployed. (d) The government should spend less on benefits for the poor."

  - There are five answer categories of interest: "Strongly agree, Agree, Neither agree nor disagree, Disagree, Strongly disagree." I simplify this information into a binary variable, which is 1 for "Strongly agree" and "Agree", and 0 otherwise.

- High tax. for high inc.: "Do you think people with high incomes should pay a larger share of their income in taxes than those with low incomes, the same share, or a smaller share?"

  - The answer options are: "Much larger share, Larger, The same share, Smaller, Much smaller share." I simplify answers into a binary variable which is 1 for "Much larger share" and "Larger", and 0 otherwise.

- Too high tax. for high.: "Generally, how would you describe taxes in [your] country today for those with high incomes?"

  - Answers: "Taxes are... much too high, too high, about right, too low, much too low." I simplify them again into two response categories: "Much too high" and "Too high" against the three other categories.

Dependent variables: Party preferences

- The questions for party preferences are country specific. I use a variable that is provided by the ISSP for party alliance across the left-right-spectrum. I generate five binary outcome variables: Far-left, left, liberal-center, right, and far-right.

Key explanatory variables

– "About how much money would be left if the home or apartment you and/or your immediate family live in was sold, and any debts on it, such as a mortgage or personal loan, would have been paid off? Please give your best estimate."

  · The response options are: "Just debts", "I/we do not own a home", and various amounts (country specific) ranging from €1 to more than €1,000,000.

– "About how much money would be left if you and/or your immediate family converted to cash all savings, stocks, or bonds you own, and then paid off any personal debts you have (not including any home loan)? Please give your best estimate."

  · The options are "Just debts", "Nothing", and various amounts ranging from €1 to more than €700,000 (again, country specific).

– With this information, I generate the following five key explanatory variables: First, whether or not the individuals owns a house. Second, a dummy variable that takes on the value 1 if the house was sold and all liabilities including the mortgage were paid off, but the individual would still be in debt. The dummy is 0 if the difference between the value of the house and all liabilities is positive. I call this variable in the regression debt (house value minus liabilities). Third, I create a similar dummy for assets: The variables takes on the value 1 if all savings, stocks and bonds were converted into cash and all personal debt was paid off (excluding the mortgage) but there would still be only debt. If the difference between these assets and the liabilities is positive, the variable is 0. I call this variable debt (assets minus liabilities). Fourth, I construct a variable that is the log of the positive difference between the value of the house and all liabilities. The variable is 0 for individuals, who are not homeowners or for whom the difference is negative. I use the log because I assume diminishing returns to assets. I call this variable positive net worth (house minus liabilities). Fifth, I construct a similar variable that is the log of the positive difference between the value of all savings, stocks and bonds and all liabilities (excluding mortgages). The variable is 0 only for individuals for whom the difference is negative. Again, I assume diminishing returns to assets. In the regression, the variable is called personal net worth (assets minus liabilities).

5.6.3 Distribution of Variables

Table 5.8: Borrowers and Savers, Distribution of Variables, Cross-National

	Agree/yes %	Mean	Std. dev.	Observ.
Policy preferences in ISSP 2009				
Income diff. too large	85.06	.851	.356	54,059
Gov't reduce inc. diff.	72.06	.721	.449	53,633
Gov't provide unemploy.	73.55	.735	.441	53,929
Gov't less on poor	19.39	.184	.387	53,507
High. tax for high. inc.	76.33	.763	.425	52,533
Too high tax. for high. inc.	22.44	.224	.417	49,331
Party preferences in ISSP 2009				
Left	24.42	.244	.430	37,538
Liberal-center	22.15	.222	.415	37,538
Right	19.19	.192	.398	37,538
Net worth in ISSP 2009				
Homeowner	76.72	.767	.423	35,715
Debt (house-liabilities)	6.76	.068	.251	35,715
Pos. net worth (house-liabilities)		1.102	.853	35,715
Debt (assets-liabilities)	9.65	.096	.295	34,133
Pos. net worth (assets-liabilities)		.838	.839	34,133

5.6.4   Summary of Results

Table 5.9: Borrowers and Savers: Summary of Results

	Yes	*No*
Redistribution & taxation		
Differences in incomes are too large	Net borrowers	Homeowner Net savers
Reduce income differences between rich and poor	Net borrowers	Student debt Homeowner Net savers
Spend more on benefits for the poor		Homeowner Mortgage
Spend more on benefits for the unemployed	Net borrowers	Student debt Homeowner Mortgage Private pension Net savers
Higher taxes for higher incomes	Net borrowers	Net savers
Upper limit on earnings		Homeowner Mortgage Private pension
Labor & monetary policy		
Gov't responsible to provide jobs for everyone		Homeowner Mortgage Private pension
Strong unions are needed to protect employees	Student debt	Homeowner Mortgage
Public services and industries state-owned	Student debt	Homeowner
Gov't responsible to provide industry with help	Homeowner Private pension	
Keep prices under control	Student debt	Homeowner
Political Parties		
Left	Student debt Net borrowers	Homeowner Mortgage Private pension Net savers

Chapter 6

Conclusion

In this concluding chapter, I start with a short summary of this dissertation and its contribution to the literature. I end with some reflections on the concentration of risk and its implications for inequality and party strategies.

Does financial market risk lead to a shift to the political left? Is there a coalition between debtors versus savers? Do preferences change in crisis times? In this dissertation, I analyze the effect of financial risk on individual preferences for policies and parties. I argue that taking on financial risk has become a common phenomenon across advanced industrialized countries and in particular in the United Kingdom and United States. I therefore study these two countries in depth and add a cross-national analysis.

I study the effects of the three most important financial investments that any household can make, education, private property, and retirement savings, and there effect when they turn individuals into savers and borrowers with student debt, mortgages, and private pension savings. I study the effect of being in debt or having savings on preferences for taxation, redistribution, labor market policy and monetary policy. In addition, I look at the consequences for party support and vote choice.

This thesis focuses on the years 2000 until 2010, a turbulent decade for all borrowers and savers. First, there was an asset and house price bubble, followed by a stock market crash and financial meltdown. This led to a private debt crisis, high unemployment and large savings losses. I argue that exposure to financial risk has four effects: the income effect, the insurance effect, the risk effect, and the crisis effect. The income effect is twofold: Any financial investment reduces current income, because individuals have to pay regular contributions, and increases expected income, because the investment will return a profit. This leads to a dislike for taxation because the investment adds an additional private tax, and higher expected income makes it less likely that an individual will profit from redistribution.

Because all investments are private income-smoothing devices, they are a substitute for other social insurances. Individuals insure themselves against income loss by investing into skills, property, and funds. Thus, individuals will demand fewer other forms of social insurance. Yet, private insurance is not a perfect substitute for social insurance because there are many shocks it cannot cope with, such as a stock market crash or high unemployment. Since the investment may not pay off and individuals lose a substantial amount of their lifetime income and wealth, there is a risk effect of any financial investment. This adds new volatility to income over lifetime. The crisis effect reinforces the risk effect. It makes it more likely that the investment does not pay off and renders the private insurance effect obsolete.

I test this argument using six large longitudinal and cross-sectional datasets. I find that overall, individuals exposed to financial risk dislike higher taxation and redistribution. They should demand very specific policies that protect themselves. All net savers support the political right. Net borrowers are on the left of the political spectrum. If it is possible to distinguish the type of debt individuals hold, I find that student debt makes it more likely that an individual supports the political left, while individuals with mortgages join the other homeowners without mortgages and private pension savers in their support for the political right. Borrowers are divided, savers are united.

This may explain why we have not (yet) seen a mass movement of debtors hoping to get debt relief and demanding new redistributive policies to help them. Instead, it seems that the privatization of higher education, homeownership and old-age savings, accompanied by exposure to financial markets, has not prompted individuals to demand a more protective state. Instead, because individuals have invested in their own income-smoothing devices they do not want their income further reduced by taxes and general social benefits. Instead, they want the state to protect their investment. Privatization becomes self-sustaining.

This dissertation adds to a long and insightful literature on the role of material interest on individual preferences for redistribution and other policies. I argue that financial investments that lead to debt and savings are different from income, and that this difference matters for policy preferences. I also add to the research on assets, in particular homeownership, a theory of debt and savings more generally.

While the exposure to labor market risk is well understood, exposure to financial risk and financial markets has not been explored. This dissertation hopes to fill this gap. It speaks to the literature on new risks in a post-industrial world, welfare state retrenchment and privatization, and new inequality in advanced capitalist societies.

I have paid closer attention to findings than to non-findings. However, I have

tried to also interpret non-findings where they reveal something about preferences, for instance, if individuals with mortgages become more similar to renters than to homeowners without a mortgage. It is obvious, and I also demonstrate it in this dissertation, that there are policy and party preferences where financial risk, as measured here, has no significant effect on preferences. Because the aim of this project was to understand how exposure to financial risk affects individuals, I have constructed a narrative around the findings that do tell us something new about individual preferences.

There are at least two possible explanations for non-findings. First, financial market risk exposure is too small to have a sizable effect or financial market risk is not measured well in the data. I believe that there is truth to both explanations. First, the results clearly show that the effect is largest for mortgages, which is the largest financial investment among the three.

Second, the questions in the surveys do not pick up all aspects of financial risk and they are often not precise. To test the theory, I have worked with well-established datasets which have a very high quality. However, I show that financial risk, as measured by student debt, mortgages, and private pension savings, tends to be under-represented. To overcome this problem, it would be best to add questions in the income section of the questionnaires that cover in greater detail the types and amounts of financial investment.

An alternative, and possibly faster and less expensive way, would be to rely on a set of experiments (Holt and Laury, 2002; Morton and Williams, 2010; Dunning, 2012). Recent experimental research into preferences for taxation suggests that this can be a promising avenue Duch and Sloaz (2013); Zhang et al. (2014); Steinmo (2015).

Two sets of experiments could help to generate better data and gain new insights. The first divides individuals randomly into two groups: those who hold assets and those who do not. In the second, individuals are divided into a group with and without debt. In both sets, one can test different kinds of financial assets (e.g. private pension funds, insurance technical reserves, securities other than shares, and shares other than equities) and different types of debt (e.g. mortgages, credit card debt, auto debt, and student loan debt). Each set consists of three modules: a preliminary gains game, a range of allocation games (a public goods games, a dictator game, and a lottery game), and a final questionnaire that covers both their socio-economic background as well as asks further policy questions. With this set of experiments it would be possible to collect data which cover policy and party preferences as well as detailed information on the individual portfolios.

In addition to experimental research, my findings suggest that the concentration of risk may play an important role to understand potential cross-class alliances and coalitions. Most social-economic risks, such as being unemployed or ill, are concentrated among the poor. However, some labor market risks in post-industrialized economies also threaten those at the upper end of the income distribution.

Research has shown that labor market insiders and outsiders face different conditions and that therefore their preferences do no longer align on many policy issues. Financial risk has become a mass phenomenon. In most countries, it affects all individuals - but does it affect them equally?

First evidence suggests that young and poor individuals face spillovers from one type of debt to another. For instance, because of outstanding student debt, individuals face worse borrowing conditions in the market. Likewise, a bad credit card rating may translate into higher interest rates on subsequent mortgage loans.

Evidence suggests that young individuals lag behind in wealth accumulation, and are more likely to have other debt such as auto loan and credit card debt (Pew Research Center, 2014). They also behave differently in the labor market. Rothstein and Rouse (2011) show that graduates with student debt are substantially less likely to choose a low-paid ´public interest' job. It therefore seems plausible that some groups in society are more affected by debt than others, even if nominal debt amounts are increasing in income. This suggests that the effects of debt may be concentrated in particular social groups.

Private pension savings are also becoming a mass phenomenon. However, both labor market outsiders, who can no longer rely on the traditional pension scheme, and high-income individuals, who have enough income to make additional investments, have an incentive to invest in private funds. This suggests that there may be a cross-alliance of those low-income labor market outsiders and high-income individuals.

There is a rich literature on the long-run determinants of inequality. The research points to different factors, including family structure, labor market institutions, education, welfare state spending, and beliefs about fairness and consensus (e.g. Kenworthy and Pontusson (2005); Scheve and Stasavage (2009); Beramendi and Andersen (2011); Huber and Stephens (2014)). In addition, and of interest to this argument, Lupu and Pontusson (2011) show that the structure of inequality matters. In other words, whether the middle-income voter is more likely to align with the top or the bottom. Does financial risk exposure lead to more inequality? There are at least five reasons to believe it will.

First, there is less support for taxation. This applies to both, taxation on labor

income and capital income. Although taxation may not be the most efficient way to redistribute money because of the dead weight loss, taxation is a feasible policy instrument to reduce differences in income.

Second, there is less support for redistribution. Because of the income effect and the insurance effect, individuals are less likely to support any redistributive policies, in particular to social groups to which they are less likely to belong. Both less support for taxation and redistribution are also caused by low or negative growth rates, as Pontusson (2005) shows. The financial risk effect may thus add to the low growth effect. Redistribution is not a winning strategy if there is less to begin with. Instead, and this is reason number three, individuals want targeted policies that protect the value of their investment. Being exposed to financial risks is not the same as being exposed to labor market risk or even the risk of falling below the poverty line. The empirical results show that there is little overlap between these different groups. Instead, it seems that there are many dividing lines.

Fourth, opting out of the national solidarity system and replacing it instead by individual responsibility may have spillover effects in other areas. The experience of living outside the solidarity system, not getting free higher education, no access or a very low state or occupational pension, and uncertainty about old-age security may make individuals less likely to support solidarity policies in other areas, including poverty relief. Some argue that individuals in the United Kingdom (and in Europe more generally) are not used to as much risk-bearing as they are in the United States (e.g. Mabbett (2012)). In times of crisis and in the case of pension, they therefore turn towards the state. While this may be true, I suspect that in the long run, we will observe that the state will help those individuals by protecting their individual investments rather than reducing income inequality.

Fifth, and related to the previous point, there is little evidence on the micro level that losers will have consistent preferences and unite under a common policy slogan, such as debt forgiveness. It seems therefore unlikely that there will be a strong political movement fighting for the losers. Instead, it seems that the winners will be loud and powerful.

This can also be seen in a broader context. Piketty (2014) shows that the larger the share of income from wealth, the more unequal the distribution of income among individuals, because wealth is more highly concentrated among the rich than income from labor. Although it is not a logical necessity that the rate of return to capital has to exceed the growth rate, Piketty shows that since the 19th century at least, this has always been the case. Because of this, income from wealth will grow faster than the income from capital because the depreciation rate of capital is smaller than

often assumed.

This is bad news for equality because the rich will get richer. But is it good news for the households who invest? At first sight, one might argue then that the more households invest themselves, the larger the share they get from this increase in wealth. However, it seems that since they still rely primarily on wages, the effect will be too small to offset the general effect. Moreover, income from wealth is even more concentrated at the top than wealth because larger amounts of wealth tend to earn higher returns than smaller ones.

Empirical evidence suggests that higher concentration of wealth leads to crisis, as Kumhof and Rancière (2010) show for the periods from 1920-29 and 1983-2008. However, my results suggest that a financial and economic crisis will push individuals exposed to financial risks even further to the right. Of course, there may be a tipping point but this remains speculation. All in all, it seems plausible to predict that financial risk will lead to more inequality.

How do parties reconcile the general shift towards the right with the demand for specific policies that protect individuals exposed to financial market risk? For example, how do they solve the policy dilemma that borrowers need low interest rates and high inflation rates, while savers need just the opposite? Reconciling different demands seems even more pressing since most individuals are both, borrowers and savers, at some points in their lives.

My findings suggest that the policy demands of savers have more political weight. Of course, knowing preferences is not knowing power, as Gourevitch (1986) puts it. Yet, it seems that savers can join the powerful ranks of the finance lobby. Some evidence on the macro level seems to support this finding at the micro level. For instance, Pontusson and Raess (2012) show that when compared to other crises, governments in the UK and U.S. (among other countries) opted for tax cuts and spending cuts in response to the recession from 2008-2009. They argue that this can be explained by the diminished influence of unions and employers and instead the growing influence of the finance lobby. Debtors are both divided among themselves and have little overlap with the labor movements, nor do are they concentrated at the bottom of the income distribution and profit from anti-poverty measures.

There seems to be a deep disconnect between left-wing support and opposition of higher taxation and redistribution of individuals in debt. Marketization and privatization as a winning strategy, as Gingrich (2011) argues, must not necessarily be a prerogative of the right. She argues that also left-wing parties may introduce markets if they can help to meet the needs of their constituency. Similarly, Ansell (2010) argues that the introduction of fees did help Labour's constituency because

higher education was highly regressive: free for the rich and privileged, while the working class did not profit.

The empirical analysis shows that this introduction did indeed increase support for the left, although due to the fact that they seem more likely to help students shoulder the debt burden. The privatization of old-age retirement provision, even if meant to support individuals in atypical employment and other outsiders, prompted individuals to support the political right. Individuals with mortgages, except for the very young, seem to think just as the homeowners without any mortgages.

This seems bad news for the left. If they want to connect to these voters, they have to protect their private investments at the expense of higher taxation and more generous social benefits. Of course, taxing the very rich remains a policy option, but it will be harder to win once individuals with lower incomes but financial investments share the same preferences with the very rich with respect to both labor and capital income taxation.

Bibliography

Acemoglu, Daron and David Autor. 2012. "What Does Human Capital Do? A Review of Goldin and Katz's The Race between Education and Technology." *Journal of Economic Literature* 50(2):426–463.

Alesina, Alberto and Edward Glaeser. 2004. *Fighting Poverty in the U.S. and Europe: A World of Differences*. Oxford: Oxford University Press.

Alesina, Alberto, Edward Glaeser and Burce Sacerdote. 2001. "Why Doesn't the United States Have a European-Style Welfare State?" *Brookings Papers on Economic Activity* 2001(2):187–277.

Alesina, Alberto and Paola Giuliano. 2009. Preferences for Redistribution. In *Handbook of Social Economics*, ed. Alberto Bisin and Benhabib Jess. Amsterdam: North Holland pp. 93–132.

Ansell, Ben W. 2010. *From the Ballot to the Blackboard*. Cambridge Studies in Comparative Politics Cambridge: Cambridge University Press.

Ansell, Ben W. 2012*a*. "Assets in Crisis: Housing, Preferences and Policy in the Credit Crisis." *Swiss Political Science Review* 18(4):531–537.

Ansell, Ben W. 2012*b*. Crisis as Political Opportunity? Partisan Politics, Housing Cycles, and the Credit Crisis. In *Coping with Crisis*, ed. Nancy Bermeo and Jonas Pontusson. New York: Russell Sage Foundation chapter 11.

Ansell, Ben W. 2014. "The Political Economy of Ownership: Housing Markets and the Welfare State." *American Political Science Review* 108(2):383–402.

Ansolabehere, Stephen, Jonathan Rodden and James M. Jr. Snyder. 2008. "The Strength of Issues: Using Multiple Measures to Gauge Preference Stability, Ideological Constraint, and Issue Voting." *American Political Science Review* 102(2):215–232.

Arrow, Kenneth J. 1950. "A Difficulty in the Concept of Social Welfare." *Journal of Political Economy* 58(4):328–346.

Barnes, Lucy. 2015. "The size and shape of government: preferences over redistributive tax policy." *Socio-Economic Review* 13(1):55–78.

Barnes, Lucy and Timothy Hicks. 2012. "Left Behind? Partisan Politics After The Financial Crisis." *APSA Annual Meeting Paper* (September):1–33.

Barr, Nicholas and Peter Diamond. 2006. "The Economics of Pensions." *Oxford Review of Economic Policy* 22(1):15–39.

Bartels, Larry M. 2008. *Unequal Democracy: The Political Economy of the New Gilded Age.* Princeton: Princeton University Press.

Bartolini, Stefano and Peter Mair. 1990. *Identity, Competition and Electoral Availability.* Cambridge: Cambridge University Press.

Bénabou, Roland and Efe A. Ok. 2001. "Social Mobility and the Demand for Redistribution: The POUM Hypothesis." *The Quarterly Journal of Economics* 116(2):447–487.

Bénabou, Roland and Jean Tirole. 2006. "Belief in a Just World and Redistributive Politics." *Quarterly Journal of Economics* 121(2):699–746.

Beramendi, Pablo and Christopher Andersen. 2011. Economic Institutions, Partisanship, and Inequality. In *Democracy, Inequality, and Representation: A Comparative Perspective.* New York: Russell Sage Foundation chapter 5.

Beramendi, Pablo and David Rueda. 2007. "Social Democracy Constrained: Indirect Taxation in Industrialized Democracies." *British Journal of Political Science* 37(4):619–641.

Bermeo, Nancy and Jonas Pontusson, eds. 2012a. *Coping with crisis: government reactions to the great recession.* New York: Russell Sage Foundation.

Bermeo, Nany and Jonas Pontusson. 2012b. Coping with Crisis: An Introduction. In *Coping with Crisis*, ed. Nancy Bermeo and Jonas Pontusson. New York: Russell Sage Foundation chapter 1.

Boix, Carles. 2000. "Partisan Governments, the International Economy, and Macroeconomic Policies in Advanced Nations." *World Politics* 53(1):38–73.

Brown, Meta, Andrew Haughwout, Donghoon Lee, Maricar Mabutas and Wilbert van der Klaauw. 2012. "Grading Student Loans." *Report by the Federal Reserve Bank of New York* .

Bureau of Labor Statistics. 2012. *Household Data, Table A-4. Employment status of the civilian population 25 years and over by educational attainment.* Washington, D.C.: U.S. Department of Labor.

Bureau of Labor Statistics. 2013. *Median usual weekly earnings, seasonally adjusted, constant 1982-84 USD, Series id: LES1252881600.* Washington, D.C.: U. S. Department of Labor.

Burtless, Gary. 2012. "Can Improved Options for Private Savings Offer a Plausible Substitute for Public Pensions?" *Politics & Society* 40(1):81–105.

Busemeyer, Marius R., Achim Goerres and Simon Weschle. 2009. "Attitudes towards redistributive spending in an era of demographic ageing: the rival pressure from age and income in 14 OECD countries." *Journal of European Social Policy* 19(3):195–212.

Busemeyer, Marius R. and Torben Iversen. 2014. "The politics of opting out: explaining educational financing and popular support for public spending." *Socio-Economic Review* 12(2):299–328.

Cameron, David R. 1978. "The Expansion of the Public Economy: A Comparative Analysis." *World Politics* 72(4):1243–1261.

Capoccia, Giovanni and R. Daniel Kelemen. 2007. "The Study of Critical Junctures: Theory, Narrative, and Counterfactuals in hHistorical Institutionalism." *World Politics* 59(3):341–369.

Carroll, Christopher D. 1997. "Buffer-Stock Saving and the Life Cycle/Permanent Income Hypothesis." *The Quarterly Journal of Economics* 112(1):1–55.

Castles, Francis. 1998. "The real big trade-off: Home ownership and the welfare state in the new world and the old." *Acta Politica* 33(5):5–19.

Cavaille, Charlotte and Kris-Stella Trump. 2012. "Redistributive Attitudes in Hard Times." *Working Paper* pp. 1–29.

Cronqvist, Henrik and Stephan Siegel. 2015. "The Origins of Savings Behavior." *Journal of Political Economy* 123(1):123–169.

Culpepper, Pepper and Aidan Regan. 2014. "Why don't governments need trade unions anymore? The death of social pacts in Ireland and Italy." *Socio-Economic Review* 12(4):723–745.

Culpepper, Pepper D. 2010. *Quiet Politics and Business Power.* Cambridge, UK: Cambridge University Press.

Cusack, T., T. Iversen and P. Rehm. 2006. "Risks at Work: The Demand and Supply Sides of Government Redistribution." *Oxford Review of Economic Policy* 22(3):365–389.

Deaton, Angus and Christina Paxson. 2001. Mortality, Education, Income and Inequality Among American Cohorts. In *Themes in the Economics of Aging*, ed. David A. Wise. Chicago: Chicago University Press chapter 8.

Deegan-Krause, Kevin. 2007. New Dimensions of Political Cleavages. In *The Oxford Handbook of Political Behavior*, ed. Russell J. Dalton and Hans-Dieter Klinge-mann. Oxford: Oxford University Press chapter 28.

Diamond, Jared and Robinson. 2010. Afterword: Using Comparative Methods in Studies of Human History. In *Natural Experiments of History*, ed. Jared Diamond and James A Robinson. Cambridge, Massachusetts: The Belknap Press of Harvard University Press.

Downs, Anthony. 1957. *An Economic Theory of Democracy.* New York: Harper-Collins.

Duch, Raymond M and Hector Sloaz. 2013. "Why We Cheat: Experimental Evidence on Tax Compliance." *Paper prepared for the 2013 Annual Meeting of the American Political Science Association* pp. 1–40.

Dunning, Thad. 2012. *Natural Experiments in the Social Sciences: A Design-Based Approach.* Cambridge and New York: Cambridge University Press.

Esping-Andersen, Gosta. 1990. *The Three Worlds of Welfare Capitalism.* Princeton: Princeton University Press.

Estévez-Abe, Margarita, Torben Iversen and David Soskice. 2001. Social Protection and the Formation of Skills: A Reinterpretation of the Welfare State. In *Varieties of Capitalism, The Institutional Foundations of Comparative Advantage*, ed. Peter A Hall and David Soskice. Oxford: Oxford University Press.

Federal Reserve Bank of New York. 2012. "Quarterly Report on Household Debt and Credit Q3." *Research and Statistics Group, Microeconomic Studies* .

Fligstein, Neil and Adam Goldstein. 2015. "The emergence of a finance culture in American households, 1989-2007." *Social Economic Review* X(X):1–27.

Flora, Peter and Arnold J Heidenheimer, eds. 1981. *The Development of Welfare States in Europe and America*. New Brunswick: Transaction Books.

Gerring, John. 2006. *Case Study Research*. Cambridge: Cambridge University Press.

Gerring, John and Jason Seawright. 2006. Techniques for Choosing Cases. In *Case Study Research*. Cambridge: Cambridge University Press chapter 5.

Ghilarducci, Teresa. 2013. Pension Policies to Minimize Future Economic Crises. In *The Handbook of the Political Economy of Financial Crises*, ed. Gerald A. Epstein and Martin H. Wolfson. Oxford: Oxford University Press chapter 34.

Gingrich, J. and B. Ansell. 2012. "Preferences in Context: Micro Preferences, Macro Contexts, and the Demand for Social Policy." *Comparative Political Studies* 20(10):1–31.

Gingrich, Jane R. 2011. *Making Markets in the Welfare State, The Politics of Varying Market Reforms*. Cambridge: Cambridge University Press.

Giuliano, Paola and Antonio Spilimbergo. 2009. "Growing Up in a Recession: Beliefs and the Macroeconomy." *IZA Discussion Paper Series* (4365).

Goldin, Claudia and Lawrence F Katz. 2010. *The Race between Education and Technology*. Cambridge, Massachusetts: Harvard University Press.

Gourevitch, Peter. 1986. *Politics in Hard Times*. Ithaca: Cornell University Press.

Graeber, David. 2011. *Debt, The First 5,000 Years*. New York: Melville House.

Green, Richard K. and Susan M. Wachter. 2005. "The American Mortgage in Historical and International Context." *Journal of Economic Perspectives* 19(4):93–114.

Hacker, Jacob. 2006. *The Great Risk Shift: The Assault on American Jobs, Families, Health Care, and Retirement and How You Can Fight Back*. Oxford, UK: Oxford University Press.

Hacker, Jacob S. 2005. Policy Drift: The Hidden Politics of US Welfare State Retrenchment. In *Beyond Continuity, Institutional Change in Advanced Political Economies*, ed. Wolfgang Streeck and Kathleen Thelen. Oxford: Oxford University Press.

Hacker, Jacob S. 2011. The institutional foundations of middle-class democracy. In *"Priorities for a new political economy: Memos to the Left", Progressive Governance Conference.* London and Oslo: Policy Network pp. 33–37.

Haider, Steven and Gary Solon. 2006. "Life-Cycle Variation in the Association between Current and Lifetime Earnings.".

Hall, Peter A. and David Soskice. 2001. *Varieties of Capitalism.* Oxford: Oxford University Press.

Hancké, Bob. 2009. *Intelligent Research Design, a guide for beginning research in the social sciences.* Oxford: Oxford University Press.

Häusermann, Silja. 2010. "The Politics of Welfare State Reform in Continental Europe, Modernization in Hard Times.".

Häusermann, Silja, Georg Picot and Dominik Geering. 2012. "Review Article: Rethinking Party Politics and the Welfare State, Recent Advances in the Literature." *British Journal of Political Science* 43(1):221–240.

Häusermann, Silja and Hanna Schwander. 2009. "Identifying outsiders across countries: similarities and differences in the patterns of dualisation." *Working Papers on the Reconciliation of Work and Welfare in Europe* pp. 1–40.

Häusermann, Silja, Thomas Kurer and Hanna Schwander. 2014. "High-skilled outsiders? Labor market vulnerability, education and welfare state preferences." *Socio-Economic Review* AdvancedAc:1–29.

Hinich, Melvin J. and Michael C. Munger. 1994. *Ideology and the Theory of Political Choice.* Ann Abor: The University of Michigan Press.

Ho, Danield E., Kosuke Imai, Gary King and Elizabeth A. Stuart. 2006. "Matching as Nonparametric Preprocessing for Reducing Model Dependence in Parametric Causal Inference." *Political Analysis* 15(3):199–236.

Hollande, Paul W. 1986. "Statistics and Causal Inference." *Journal of the American Statistical Association* 81(396):945–960.

Holt, Charles A. and Susan K. Laury. 2002. "Risk Aversion and Incentive Effects." *The American Economic Review* 92(5):1644–1655.

Hotelling, Harold. 1929. "Stability in Competition." *The Economic Journal* 39(153):41–57.

Huber, Evelyne and John D. Stephens. 2014. "Income inequality and redistribution in post-industrial democracies: demographic, economic and political determinants." *Socio-Economic Review* 12(2):245–267.

Inglehart, Ronald. 1977. *The Silent Revolution, Changing Values and Political Styles Among Western Publics.* Princeton: Princeton University Press.

Inglehart, Ronald and Christian Welzel. 2005. *Modernization, Cultural Change, and Democracy.* Cambridge: Cambridge University Press.

ISSP Research Group. 2012. *International Social Survey Programme: Social Inequality IV - ISSP 2009, ZA5400 Data file Version 3.0.0.* Cologne: GESIS Data Archive.

Iversen, T. and J. D. Stephens. 2008. "Partisan Politics, the Welfare State, and Three Worlds of Human Capital Formation." *Comparative Political Studies* 41(4-5):600–637.

Iversen, Torben and David Soskice. 2001. "An Asset Theory of Social Policy Preferences." *The American Political Science Review* 95(4):875–693.

Iversen, Torben and David Soskice. 2006. "Electoral Institutions and the Politics of Coalitions: Why Some Democracies Redistribute More than Others." *American Political Science Review* 100(2):165–181.

Iversen, Torben and David Soskice. 2009. "Distribution and Redistribution: The Shadow of the Nineteenth Century." *World Politics* 61(03):438.

Iversen, Torben and David Soskice. 2012. Modern Capitalism and the Advanced Nation State: Understanding the Causes of the Crisis. In *Coping with Crisis*, ed. Nancy Bermeo and Jonas Pontusson. New York: Russell Sage Foundation chapter 2.

Iversen, Torben and Thomas R Cusack. 2000. "The Causes of Welfare State Expansion: Deindustrialization or Globalization?" *World Politics* 52(3):313–349.

Jenkins, Stephen P. 2010. "The British Household Panel Survey and its income data." *Institute for Social & Economic Research* 2010(33):1–43.

Johnston, Richard, Michael G. Hagen and Kathleen Hall Jamieson. 2004. *The 2000 Presidential Election and the Foundations of Party Politics.* Cambridge, UK: Cambridge University Press.

Joint Center for Housing Studies of Harvard University. 2014. *The State of the Nation's Housing.*

Kahneman, Daniel and Amos Tversky. 1979. "Prospect Theory: An Analysis of Decisions under Risk." *Econometrica* 47(2):263–292.

Katzenstein, Peter J. 1985. *Small States in the World Market: Industrial Policy in Europe.* Ithaca: Cornell University Press.

Kemeny, Jim. 1981. *The Myth of Home-ownership.* London: Routledge & Kegan Paul.

Kemeny, Jim. 2004. "Home ownership against the welfare state: The thesis and the evidence." *ENHR Conference, Cambridge University 2-6 July 2004* pp. 1–10.

Kenworthy, Lane and Jonas Pontusson. 2005. "Rising Inequality and the Politics of Redistribution in Affluent Countries." *Perspectives on Politics* 3(3):449–471.

King, Gary, Richard Nielsen, Carter Coverley, James E. Pope and Aaron Wells. 2011. "Comparative Effectiveness of Matching Methods for Causal Inference." *Working Paper* pp. 1–26.

King, Gary, Robert O. Keohane and Sidney Verba. 1994. *Designing Social Inquiry.* Princeton, NJ: Princeton University Press.

Kitschelt, Herbert and Philipp Rehm. 2006. *The Politics of Post-Industrial Welfare States, Adapting Post-War Social Policies to New Social Risks.* New York: Routledge.

Kriesi, Hanspeter. 1998. "The transformation of cleavage politics, The 1997 Stein Rokkan lecture." *European Journal of Political Research* 33:165–185.

Kumhof, Michael and Romain Rancière. 2010. "Inequality, Leverage and Crises." *IMF Working Paper* 10(268):1–37.

Library House of Commons. 2013. "Student Loan Statistics, Note for Members of Parliament, SN/SG/1079." *Social & General Section* pp. 1–17.

Lipset, Seymour M. and Stein Rokkan. 1967*a*. Cleavage Structures, Party Systems, and Voter Alignments: An Introduction. In *Party Systems and Voter Alignments: Cross-National Perspectives*. New York: The Free Press.

Lipset, Seymour M. and Stein Rokkan, eds. 1967*b*. *Party Systems and Voter Alignments: Cross-National Perspectives*. New York: The Free Press.

Lupu, Noam and Jonas Pontusson. 2011. "The Structure of Inequality and the Politics of Redistribution." *American Political Science Review* 105(2):316–336.

Mabbett, Deborah. 2012. "The Ghost in the Machine: Pension Risks and Regulatory Responses in the United States and the United Kingdom." *Politics & Society* 40(1):107–129.

Mahoney, James. 2009. "After KKV: The New Methodology of Qualitative Research." *World Politics* 62(01):120.

Mares, Isabela. 2003. *The Politics of Social Risk: Business and Welfare State Development*. Cambridge: Cambridge University Press.

Margalit, Yotam. 2013. "Explaining Social Policy Preferences: Evidence from the Great Recession." *American Political Science Review* 107(1):80–103.

Meade, James E. 1964. *Efficiency, Equality and the Ownership of Property*. Routledge ed. New York: Routledge.

Meltzer, Allan H. and Scott F. Richard. 1981. "A Rational Theory of the Size of Government." *Journal of Political Economy* 89(5):914–927.

Morton, Rebecca B. and Kenneth C. Williams. 2010. *Experimental political science and the study of causality*. New York: Cambridge University Press.

National Centre for Social Research. 2002. *British Social Attitudes Survey, 2000 [computer file]*. Colchester, Essex: UK Data Archive [distributor].

National Centre for Social Research. 2003. *British Social Attitudes Survey, 2001 [computer file]*. Colchester, Essex: UK Data Archive [distributor].

National Centre for Social Research. 2004. *British Social Attitudes Survey, 2002 [computer file]*. Colchester, Essex: UK Data Archive [distributor].

National Centre for Social Research. 2005. *British Social Attitudes Survey, 2003 [computer file]*. Colchester, Essex: UK Data Archive [distributor].

National Centre for Social Research. 2006. *British Social Attitudes Survey, 2004 [computer file]*. Colchester, Essex: UK Data Archive [distributor].

National Centre for Social Research. 2007. *British Social Attitudes Survey, 2005 [computer file]*. Colchester, Essex: UK Data Archive [distributor].

National Centre for Social Research. 2008. *British Social Attitudes Survey, 2006 [computer file]*. Colchester, Essex: UK Data Archive [distributor].

National Centre for Social Research. 2009. *British Social Attitudes Survey, 2007 [computer file]*. Colchester, Essex: UK Data Archive [distributor].

National Centre for Social Research. 2010. *British Social Attitudes Survey, 2008 [computer file]*. Colchester, Essex: UK Data Archive [distributor].

National Centre for Social Research. 2011. *British Social Attitudes Survey, 2009 [computer file]*. Colchester, Essex: UK Data Archive [distributor].

National Centre for Social Research. 2012. *British Social Attitudes Survey, 2010 [computer file]*. Colchester, Essex: UK Data Archive [distributor].

National Institute for Education Statistics, Institute of Education Sciences. 2012*a*. "Digest of Education Statistics: 2011.".

National Institute for Education Statistics, Institute of Education Sciences. 2012*b*. "Integrated Postsecondary Education Data System (IPEDS) 1987-2010.".

National Institute for Education Statistics, Institute of Education Sciences. 2013. "Digest of Education Statistics: 2012.".

OECD. 2009*a*. *Economic Outlook*. Paris: OECD.

OECD. 2009*b*. *Household wealth and indebtedness*. Vol. 18 Paris: OECD.

OECD. 2009*c*. *Private Pensions Outlook 2008*. Paris: OECD.

OECD. 2012. *National Accounts at a Glance 2013*. Paris: OECD.

OECD. 2013. *Pension at a Glance 2013*. Paris: OECD.

OECD. 2014*a*. *Debt of households and NPISHs, as a percentage of NDI*. Paris: OECD.

OECD. 2014*b*. *Household wealth and indebtedness*. Paris: OECD.

Oesch, Daniel. 2006. *Redrawing the Class Map*. Basingstoke: Palgrave Macmillan.

Office for National Statistics. 2013*a*. *Main Report: The Burden of Property Debt in Great Britain, 2006/08 & 2008/10*. London: ONS.

Office for National Statistics. 2013*b*. *Summary of Pension Trends*. London: ONS.

Office for National Statistics. 2014. *House Price Index (HPI), Reference Tables, Annual Tables 20 to 39*. London: ONS.

Olson, Mancur. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard University Press.

Pew Research Center. 2014. *The Rising Cost of Not Going to College*. Washington, D.C.: Pew Research Center.

Pierson, Paul. 1996. "The New Politics of the Welfare State." *World Politics* 48(2):143–179.

Piketty, Thomas. 2014. *Capital in the Twenty-First Century*. Cambridge, MA: Harvard University Press.

Pontusson, Jonas. 2005. *Inequality and Prosperity, Social Europe vs. Liberal America*. Ithaca: Cornell University Press.

Pontusson, Jonas and Damian Raess. 2012. "How (and Why) Is This Time Different? The Politics of Economic Crisis in Western Europe and the United States." *Annual Review of Political Science* 15:13–33.

Pontusson, Jonas and David Rueda. 2010. "The Politics of Inequality: Voter Mobilization and Left Parties in Advanced Industrial States." *Comparative Political Studies* 43(6):675–705.

Prasad, Monica. 2011. "Tax "Expenditures" and Welfare States: A Critique." *Journal of Policy History* 23(2):251–266.

Prasad, Monica. 2012. *The Land of Too Much: American Abundance and the Paradox of Poverty*. Cambridge, Massachusetts: Harvard University Press.

Rawls, John. 1971. *A Theory of Justice, Revised edition [1999]*. Cambridge, MA: Harvard University Press.

Rawls, John. 2001. *Justice as Fairness: A Restatement*. Cambridge, MA: Harvard University Press.

Rehm, Philipp. 2009. "Risks and Redistribution: An Individual-Level Analysis." *Comparative Political Studies* 42(7):855–881.

Rehm, Philipp, Jacob S. Hacker and Mark Schlesinger. 2012. "Insecure Alliances: Risk, Inequality, and Support for the Welfare State." *American Political Science Review* 106(02):386–406.

Reinke, Raphael. 2014. *The Politics of Bank Bailouts (thesis).* Florence: European University Institute.

Roberts, Kevin W S. 1977. "Voting over Income Tax Schedules." *Journal of Public Economics* 8:329–340.

Rodrik, Dani. 1998. "Why Do More Open Economies Have Bigger Governments?" *Journal of Political Economy* 106(5):997–1032.

Roemer, John E. 1998. "Why the poor do not expropriate the rich: an old argument in new garb." *Journal of Public Economics* 70(3):399–424.

Roemer, John E. 2001. *Political Competition: Theory and Applications.* Cambridge, Massachusetts: Harvard University Press.

Roemer, John E. 2005. "Distribution and politics: a brief history and prospect." *Social Choice and Welfare* 25(2/3):507–525.

Roemer, John E. 2006. *Democracy, Education, and Equality.* New York: Cambridge University Press.

Romer, Thomas. 1975. "Individual Welfare, Majority Voting, and the Properties of a Linear Income Tax." *Journal of Public Economics* 4:163–185.

Rosenbaum, Paul R and Donald B Rubin. 1983. "The Central Role of the Propensity Score in Observational Studies for Causal Effects." *Biometrika* 70(1):41–55.

Rothstein, Jesse and Cecilia Elena Rouse. 2011. "Constrained after college: Student loans and early-career occupational choices." *Journal of Public Economics* 95:149–163.

Rueda, David. 2005. "Insider-Outsider Politics in Industrialized Democracies: The Challenge to Social Democratic Parties." *The American Political Science Review* 99(1):61–74.

Rueda, David. 2006. "Social Democracy and Active Labour-Market Policies: Insiders, Outsiders and the Politics of Employment Promotion." *British Journal of Political Science* 36(3):385–406.

Rueda, David. 2008. "Left government, policy, and corporatism, Explaining the influence of partisanship on inequality." *World Politics* 60(3):349–389.

Rueda, David. 2014. "Dualization, crisis and the welfare state." *Socio-Economic Review* 12:381–407.

Schelkle, Waltraud. 2012. "A Crisis of What? Mortgage Credit Markets and the Social Policy of Promoting Homeownership in the United States and Europe." *Politics & Society* 40(1):59–80.

Scheve, Kenneth and David Stasavage. 2006. "Religion and Preferences for Social Insurance." *Quarterly Journal of Political Science* 1(May):255–286.

Scheve, Kenneth and David Stasavage. 2009. "Institutions, Partisanship, and Inequality in the Long Run." *World Politics* 61(2):215–253.

Schwartz, Herman. 2009. *Subprime nation: American power, global capital, and the housing bubble.* Ithaca: Cornell University Press.

Schwartz, Herman. 2010. Property Bubbles, Housing Provision and Welfare State Reorganization in the United States and Europe. In *Welfare State Reform in the United States and the European Union - Policy Choices and the Constitution of the New Welfare Society*, ed. Joseph Cordes and Christian Toft. New York: Oxford University Press chapter 15.

Schwartz, Herman and Leonard Seabrooke. 2008. "Varieties of residential capitalism in the international political economy: Old welfare states and the new politics of housing." *Comparative European Politics* 6(3):237–261.

Schwartz, Herman and Leonard Seabrooke. 2009. *The Politics of Housing Booms and Busts.* New York: Palgrave Macmillan.

Scruggs, Lyle and James P. Allan. 2004. "Political Partisanship and Welfare State Reform in Advanced Industrial Societies." *American Journal of Political Science* 48(3):496–512.

Shiller, Robert. 2007. *Irrational Exuberance.* Princeton: Princeton University Press.

Stegmueller, D. 2013. "Modeling Dynamic Preferences: A Bayesian Robust Dynamic Latent Ordered Probit Model." *Political Analysis* 21(3):314–333.

Steinmo, Sven. 2015. Historical Institutionalism and Experimental Methods. In *The Oxford Handbook of Historical Institutionalism*, ed. Orfeo Fioretos, Tulia Falletti and Adam Sheingate. Oxford: Oxford University Press.

Streeck, Wolfgang and Kathleen Thelen, eds. 2005. *Beyond Continuity, Institutional Change in Advanced Political Economies*. Oxford: Oxford University Press.

Strom, Kaare. 1990. "A Behavioral Theory of Competitive Political Parties." *American Journal of Political Science* 34(2):565–598.

Stuart, Elizabeth A. 2010. "Matching Methods for Causal Inference: A Review and a Look Forward." *Statistical Science* 25(1):1–21.

Student Loans Company. 2012. "Income contingent repayments by cohort and tax year 2000/01 to 2010/11 inclusive (provisional)." *Department for Business, Innovation and Skills* pp. 1–21.

Student Loans Company. 2014. "Student Loans in England, Financial Year 2013-14." *Department for Business, Innovation and Skills* pp. 1–31.

Svallfors, Stefan. 2006. *The Moral Economy of Class, Class and Attitudes in Comparative Perspective*. Stanford: Stanford University Press.

Taylor-Gooby, Peter and Jens Zinn, eds. 2006. *Risk in Social Science*. Oxford: Oxford University Press.

The Institute for College Access & Success. 2013. *The Project on Student Debt*. Washington, D.C.: The Institute for College Access & Success.

Trumbull, Gunnar. 2012. "Credit Access and Social Welfare: The Rise of Consumer Lending in the US and France." *Politics and Society* 40(1):9–34.

University of Essex, Institute for Social, Economic Research and National Centre for Social Research. 2009. *British Household Panel Survey, Waves 1-48, 1990-2008 [computer file]*. Colchester, Essex: UK Data Archive (distributor).

University of Essex, Institute for Social, Economic Research and National Centre for Social Research. 2012. *Understanding Society: Waves 1-3, 2009-2011 [computer file]*. 4 ed. Colchester, Essex: UK Data Archive (distributor).

U.S. Census Bureau. 2014. *Current Population Survey: Housing Vacancy Survey, Series H-111.* Washington, D.C.: U.S. Census Bureau.

U.S. Department of Labor. 2014. *Private Pension Plan Bulletin Historical Tables and Graphs.* Washington, D.C.: U.S. Department of Labor.

Watson, Matthew. 2008. "Constituting Monetary Conservatives via the 'Saving Habit': New Labor and the British Housing Market Bubble." *Comparative European Politics* 6(3):285–304.

Zhang, Nan, Giulia Andrighetto, Stefania Ottone, Ferruccio Ponzano and Sven Steinmo. 2014. "Willing to Pay? An Experimental Analysis of Tax Compliance in Britain and Italy." *Manuscript Draft* pp. 1–46.