WHEN WELFARE STATES RETRENCH: THE RELATIONSHIP BETWEEN MEDIAN VOTER PREFERENCES, GOVERNMENT DEBT AND WELFARE STATE OUTCOMES IN ESTABLISHED DEMOCRACIES

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# TABLE OF CONTENTS

Acknowledgements...........................................................................................................ii

List of Tables and Figures.................................................................................................iv

Abstract..............................................................................................................................v

Introduction.........................................................................................................................1

Chapter

1. Economic Incentives to Cut Social Spending and Political Incentives to
   Maintain the Status Quo.................................................................................................5

2. Government Debt, the Median Voter and Welfare State Outcomes.......................10

3. Data and Methods..........................................................................................................16

4. Empirical Results..........................................................................................................23

5. Conclusion.....................................................................................................................27

Appendix

1. Tables............................................................................................................................29

2. Figures..........................................................................................................................32

Reference..........................................................................................................................33
LIST OF TABLES AND GRAPHS

Tables

1. Government Debt, the Median Voter Policy Position and Overall Welfare Spending
   ..................................................................................................................................29
2. The Median Voter Policy Position on Old-age Pensions and Unemployment
   ..................................................................................................................................30
3. Government Debt and Government Spending on Old-age Pensions and Unemployment
   ..................................................................................................................................31

Figures

1. Figure 1: Marginal Effects of Government Debt on Overall Welfare Spending
   ..................................................................................................................................32
ABSTRACT

Welfare state spending cuts constitute one of the most economically efficient ways to achieve fiscal consolidation, but some policymakers prefer other methods of fiscal consolidation when government debt levels are high. In this paper I examine this phenomenon and hypothesize that the economic incentive to cut welfare spending when government debt levels are high can be undermined by the political incentive to stay in power. Specifically, I hypothesize that government debt and median voter preferences interact to shape welfare state outcomes; high levels of government debt lead to welfare retrenchment, but only if the median voter does not oppose cuts in welfare spending.

Using data on government spending and median voter preferences from 18 OECD countries, I estimate a series of regressions, showing that government debt does lead to overall welfare spending cuts when the median voter does not oppose overall welfare retrenchment, and that government debt has a negative impact on unemployment spending, but not on old age pension spending. This is consistent with the theoretical framework as unemployment spending is consistently less popular with the median voter than old age pension spending because unemployment benefits protect against labor market risks, whereas old age pensions protect against life course risks.
INTRODUCTION

In the prominent new politics school of welfare reform the conventional wisdom holds that welfare state retrenchment is difficult to implement because retrenchment initiatives are deeply unpopular among electorates (Pierson 1994, 1996). This explains instances of welfare state resilience, but the question still remains when and why retrenchment takes place (Starke 2006: 104). In the economics literature the conventional wisdom holds that government debt creates an economic incentive to cut social spending for consolidation purposes (Alesina, Ardagna and Galí 1998; Alesina and Perotti 1997; Ardagna 2009; European Commission 2007; McDermott and Wescott 1996). This explains why welfare retrenchment may occur, but leaves open the question why, if spending cuts are so effective, policymakers do not always engage in such consolidation efforts (Alesina and Perotti 1997).

The purpose of this paper is to introduce a single parsimonious theory of welfare state outcomes that is capable of explaining both welfare state retrenchment and resilience. Building on core insights from the new politics and economics schools I argue that government debt creates an economic incentive for policymakers to cut social spending, but that this incentive will manifest itself in welfare state retrenchment only if it does not conflict with the political incentive to stay in power. I theorize that retrenchment will conflict with the political incentive to stay in power when the median voter opposes retrenchment because of the median’s pivotal role in creating a legislative majority (Downs 1957; Laver and Schofield 1991). Unlike the new politics theory, however, the theoretical framework of this paper does not assume that the general public,
and hence the median voter, is always opposed to retrenchment because there are cross-
national differences in voter attitudes toward welfare programs (Busemeyer et al. 2009;
Fraile and Ferrer 2005) and overall welfare retrenchment (Dallinger 2010; Jæger 2009),
which have real effects on welfare state spending (Brooks and Manza 2006).

Consequently, I argue that government debt causes retrenchment to the extent that the
median voter does not oppose welfare spending cuts. This implies that retrenchment will
occur when government debt is high, and when the median voter does not oppose
spending cuts.

The theoretical framework also implies that the adverse effect of government debt
will be stronger in those welfare programs that are least popular with the median voter.
There is reason to believe that the median voter favors welfare programs that protect
against life course risks, such as old-age pensions, rather than welfare programs that
protect against labor market risks such as unemployment benefits (Elmelund-Præstekær
and Klitgaard 2012; Jensen 2011). Consequently, I argue that the adverse effect of
government debt should be stronger on unemployment spending than on old-age pension
spending. The theoretical framework is tested empirically in a series of regressions in 18
established democracies from 1980 to 2007 using cross-national survey data to measure
the policy position of the median voter.

The central contribution of this work is the introduction of a parsimonious theory
that is capable of explaining welfare state resilience and reform both for the welfare state
as a whole and for individual welfare programs. Further, the theoretical framework also
makes two other major contributions to the welfare state literature. First, by theorizing
about the critical constraints on reform resulting from the policy position of the median
voter, I introduce a narrower and more precise conceptualization of voter constraints than
the new politics theory, which broadly theorizes that the policy constraints result from
opposition from ‘interest groups’ and ‘voters’ (Pierson 1996: 144). A few other recent
studies have also based their theories of welfare state reform on the assumption that
median voter preferences differ between welfare programs (Elmelund-Præstekær and
Klitgaard 2012; Jensen 2011), but these studies do not actually measure the policy
position of the median voter in their empirical tests.

Secondly, the paper contributes to the welfare state literature by theorizing about
how a specific economic variable, government debt, influences welfare state outcomes.
This is an important contribution because most existing retrenchment studies take an
unfavorable economic environment as a theoretical constant and do not differentiate
between countries. In fact, to the author’s knowledge, no other study so far has theorized
about, and empirically examined, how government debt influences welfare state
outcomes in established democracies other than as a control variable. The few studies that
have examined how government debt influences social spending have focused on
developing countries (Chauvin and Kraay 2005; Dessy and Vencatchellum 2007; Lora
and Olivera 2007), and the results have been mixed.

The main empirical results can be boiled down to the following important finding:
It is only when the median voter is not in favor of welfare state expansion that
government debt is associated with social spending cuts. The empirical analysis also
demonstrates that government debt exerts a statistically significant negative impact on
government unemployment spending, but not on government old-age pension spending.
Finally, the cross-national survey data reveal that old-age pension spending is consistently more popular with the median voter than unemployment spending.

The rest of the article is organized into five chapters. The first chapter reviews the relevant literature. The second chapter develops the theory by integrating core arguments in the literature on fiscal consolidation, median voter convergence, and redistribution. The third chapter describes the data that have been merged to test the hypotheses generated by the theoretical framework and addresses methodological issues. The fourth chapter discusses the empirical results, and how they relate to the hypotheses. The fifth chapter concludes with a summary of the main findings and a discussion of issues for future research.
CHAPTER 1: ECONOMIC INCENTIVES TO CUT SOCIAL SPENDING AND
POLITICAL INCENTIVES TO MAINTAIN THE STATUS QUO.

Economic incentives to cut welfare spending

This essay’s central claim is that high levels of government debt pressure policymakers to cut back social spending, but that the effects of this pressure is sometimes modified by median voter preferences. Consequently, this section begins with a discussion of how government debt creates an economic incentive to cut social spending.

There is very little empirical research on how government debt influences welfare state outcomes. To the author’s knowledge no study so far has examined the impact of government debt on welfare state outcomes in established democracies other than as a control variable, but there are a few studies which have examined the relationship in developing countries. Lora and Olivera (2007) examine 58 developing countries for the period from 1985-2003 and find that government debt exerts a negative impact on social spending. Similarly, Dessy and Vencatachellum (2007) find that debt relief in Africa has had a positive impact on the share of resources allocated to the social sectors. Other studies, however, have found that social expenditures are generally shielded from retrenchment when highly indebted developing countries engage in spending cuts (Hicks 1989; Hicks and Kubisch 1984), and Chauvin and Kraay (2005) find little evidence that debt relief has had any impact on the level or composition of public spending in developing countries. In sum, the existing literature on the impact of government debt on
welfare state outcomes is inconclusive and does not examine the relationship in established democracies.

While there are no studies that systematically examine the impact of government debt on social spending in established democracies, there is a considerable body of literature on policymakers’ incentives to cut social spending when government debt is high. Running deficits is widely recognized as an appropriate policy response to financial crises or recession, but such a strategy does not come without costs, and economists and policymakers have stipulated that several negative effects of government debt exist. The most direct effect of government debt is that it leads to an increased interest rate on government bonds. This is because an increase in government debt leads to an increase in the risk premium as debt holders demand a higher interest rate to compensate for the risk that the country may not honor its repayment obligations (Alesina et al. 1992; Bernoth et al. 2006; Codogno et al. 2003; Gómez-Puig 2008; Lemmen and Goodhart 1999; Lønning 2000). Faced with higher interest rates, it is of course more costly for governments to loan money.

When repayments are due, policymakers have different options available. One option is additional borrowing. This option is not necessarily unsustainable in the long run if the rate of gross domestic product (GDP) growth is higher than the interest rate on government loans, because under such circumstances the ratio of debt to GDP falls. The option of rolling over the debt, however, can be somewhat problematic for highly indebted countries because high levels of government debt tend to have a negative impact on economic growth. Scholars have found several channels through which government debt can exert a negative influence on economic growth, such as private saving, private
investment rates, public investment rates, and the total factor productivity (Checherita and Rother 2010). The effect may be quite substantial; in a recent and widely cited study, Reinhart and Rogoff (2010) analyzed the relationship empirically, using a sample of twenty advanced democracies from 1946 to 2009, and found that countries with a high level of government debt (over 90% of GDP) had a median growth rate that was roughly 1 percent lower than lower debt burden countries and a mean level of growth almost 4 percent lower.

Since additional government loans have the double effect of making loans more expensive and slowing the economic growth that would otherwise help finance debt repayments, the consequence is that the higher the government debt, the higher the economic incentive to implement a consolidation package. Such a package can consist of spending cuts, tax increases or a mix of the two, but the conventional wisdom in the economic literature is that spending cuts are the most effective way to consolidate, and that cuts in social spending are particularly successful in lowering debt and deficits in the long run (Alesina and Perotti 1997; Alesina, Ardagna and Gali 1998; Ardagna 2009; European Commission 2007; McDermott and Wescott 1996). This is because social spending cuts are permanent, they show that policymakers are serious about the fiscal adjustments, and they do not necessarily have contractionary effects (Alesina and Perotti 1997). This indicates that when government debt is high, unconstrained policymakers have an economic incentive to cut social spending. For the purposes of this paper, however, it is important to keep in mind that when policymakers in highly indebted countries are constrained, they can also implement consolidation packages that consist of tax increases or spending cuts that are not in social sectors.
The New Politics of the Welfare State

While economists tend to agree that spending cuts are a very effective way to consolidate, they have been less successful in explaining the logical follow-up question raised by Alesina and Perotti (1997): Why, if spending cuts are so effective, do policymakers not always engage in such consolidation efforts? The answer could very well be voter preferences. If a large majority of voters oppose social spending cuts, it may not be politically feasible for policymakers to engage in such policies.

The argument that voter preferences constrain policymakers from implementing retrenchment policies is a familiar one in the political science literature. The scholarly debate about this issue became a hot topic when Paul Pierson introduced his theory of ‘the new politics of the welfare state’ in the mid-1990s (Pierson 1994, 1996). Pierson observes that a common trend across established democracies is that economic challenges have shifted the political attention away from questions of welfare state expansion and onto the prospects for extended austerity. Building on this observation Pierson develops the argument that the new politics of welfare state retrenchment is not simply the mirror image of the old politics of welfare state expansion. This is because welfare policies have broad public support, so while the expansion of social benefits was generally a process of political credit claiming, political advocates of retrenchment must persuade the majority of welfare supporters that the price of reform is manageable. Pierson argues that popular opinion generally tends to be opposed to retrenchment because massive welfare programs have led to strong popular attachments to particular policies, which present considerable obstacles to welfare reform.
The distinction between old and new politics is now widely accepted in the literature (Green-Pedersen and Haverland 2002; Kersbergen 2002; Palier 2001), and several scholars argue that cutting back social policies is politically difficult because of persistent voter attachments (Anderson 2001; Boeri et al. 2001; Elmelund-Præstekær and Klitgaard 2012; Pierson 2001). Voters are expected to oppose retrenchment because individuals react more strongly to losses than gains (Kahneman and Tversky, 1979), and because retrenchment policies impose tangible losses on concentrated groups in return for diffuse gains (Klitgaard 2008: 482; Pierson 1996: 145). Consequently, policymakers engage in retrenchment policies only if they have incentives to take electoral risks (Vis 2010; Vis and van Kersbergen 2007).
CHAPTER 2: GOVERNMENT DEBT, THE MEDIAN VOTER AND WELFARE

STATE OUTCOMES

While the economics approach focuses on how government debt creates an economic incentive to cut social spending, the new politics approach focuses on political incentives for policymakers to retain the status quo. So far the two approaches have coexisted in relative isolation from one another, but they are far from mutually exclusive. The economics approach provides insight into the cases where retrenchment does take place, and the new politics theory provides insight into the cases where it does not. Consequently, a synthesis of the two approaches appears promising.

The relationship between government debt and the median voter on overall welfare spending

The economics approach alone cannot explain instances of welfare state resilience because it leaves out political constraints such as popular opinion. The new politics theory explains welfare state resilience by taking into account voter constraints, but leaves the issue of welfare state retrenchment unresolved because it does not take into consideration that some countries are facing harsher economic challenges than others, and it further assumes that the public is always opposed to retrenchment.\(^1\) Pierson (1996: 144) refers to the global economic environment as a climate of permanent fiscal austerity.

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\(^1\) To be sure, Pierson (1994: 50) argues that retrenchment may occur when institutional structures and existing policy designs allow policymakers to pursue the politics of blame avoidance through compensation, obfuscation and division. However, according to Pierson, such instances are rare, and Pierson’s clearly emphasizes that welfare states are resilient to reform because retrenchment is an unpopular endavour (Starke, 2006: 106).
and argues that welfare reform is nonetheless rare because of the critical constraints on reform resulting from the role of supportive interest groups and voters. However, governments have different economic situations depending on their level of government debt, and several studies have shown that there are cross-national differences in voter attitudes toward welfare programs (Busemeyer et al. 2009; Fraile and Ferrer 2005) and overall welfare retrenchment (Dallinger 2010; Jæger 2009), which has real effects on welfare state spending (Brooks and Manza 2006).

Given the limitations of both the economics and new politics approaches, a fruitful synthesis should recognize real country differences in the economic environment and in voter constraints. It is clear from the economics approach that the severity of the economic environment can be conceptualized as the country’s level of government debt. Conceptualizing country differences in voter constraints, on the other hand, is more ambiguous. The new politics theory emphasizes “the critical constraints on reform resulting from the role of supportive interest groups and, ultimately, voters” (Pierson 1996: 144). To generate a parsimonious and testable theory of contemporary welfare state outcomes I argue that a more precise definition of voter constraints is needed. I further argue that a particularly promising avenue for conceptualizing the degree of voter constraint is through the policy position of the median voter.

Scholars have long theorized about the potential impact of the median voter on welfare state outcomes, so while the new politics school’s emphasis on (the lack of) retrenchment is a theoretical innovation, the argument that voter preferences matter for welfare state outcomes is far from new. Meltzer and Richard (1981) popularized the argument that the policy position of the median voter influences welfare state outcomes
in the early 1980s by theorizing that the level of redistribution in a given polity should be a function of the distance between the mean and median voter on the income scale. More generally, the Meltzer and Richard model is based on a Downsian framework which assumes that political candidates seek to win office, and that each voter will vote for the candidate or party that is closest to his or her political position (Downs 1957). This means that political candidates and parties have an incentive to converge to the policy position of the median voter because any majority has to include the median per definition. Downs allows for non-convergence in multi-party systems, but the centrist appeal also applies in such systems because of the median’s pivotal role in creating a legislative majority (Laver and Schofield 1991). Empirically, Huber and Powell (1994) and McDonald and Budge (2005) find that while government policy positions generally tend to represent the preferences of the median voter, this is particularly true in countries that use PR electoral systems, which comprise the majority of established democracies. For welfare state outcomes specifically, Iversen and Cusack (2000) find that a more leftist median voter leads to more government consumption in the short term, and McDonald and Budge (2005) find that the median voter, through the parliamentary median, influences welfare state outcomes in the long term.

Using the concept of the median voter it is possible to synthetize the insights from the economics and new politics approaches into an integrated theory of welfare state outcomes in established democracies. I argue that policymakers have an economic incentive to cut social spending when government debt levels are high, because social spending cuts are particularly effective for consolidation purposes. This economic incentive, however, will not manifest itself in spending cuts if policymakers perceive that
such cuts will result in a political backlash. This is because policymakers can also opt to consolidate by raising taxes or cutting spending that is not social. Policymakers perceive that there is an electoral risk associated with implementing social spending cuts when the median voter is opposed to retrenchment due to the median’s pivotal role in creating a majority. Consequently, it will only be rational for policymakers in highly indebted countries to implement welfare state retrenchment policies when the median voter is not opposed to welfare state retrenchment. If the median voter is opposed to welfare retrenchment, it will instead be rational for such policymakers to implement one or more consolidation packages that focus on increased tax revenue and spending cuts in public sectors that are not social to avoid electoral sanctions from the median voter.

*Hypothesis 1:* The higher the government debt, the higher the likelihood that governments will cut social spending, but only to the extent that the median voter does not oppose such policies.

**The relationship between government debt and the median voter on welfare program spending**

Hypothesis 1 applies to social spending in general, but the theoretical framework is also capable of predicting the particular welfare programs that are most likely to be cut. This is a question that has generated much scholarly debate in recent decades (Allan and Scruggs 2004; Esping-Andersen 1999; Hicks 1999; Korpi 2006; Korpi and Palme 1998, 2003), and the theoretical framework of this paper predicts that welfare program retrenchment is a function of the relationship between government debt and the policy position of the median voter on the relevant program.
Two types of welfare programs that have received particular attention from scholars interested in welfare state outcomes are unemployment benefits and old-age pensions (e.g. Anderson, 2001; Esping-Andersen 1990; Pampel and Williamson 1985; Scruggs 2008). An important reason for this is that appropriate control variables are readily available for these two types of welfare programs, which makes the statistical results more reliable and comparable across countries. For the purposes of this paper there is good reason to believe that the median voter favors old-age pensions over unemployment. This is because individuals tend to favor welfare state policies that protect them from economic uncertainty, and different welfare programs protect against different kinds of risks (Kitschelt and Rehm 2006). Esping-Andersen (1999) distinguishes between labor market risks, which are risks associated with individuals’ position in the labor market, and life course risks, which are risks that everybody faces. The distinction is important because the median voter’s likelihood of experiencing risks that stem from the life course of individuals, such as old age, is higher than the median voter’s chance of experiencing labor market-related risks such as unemployment, which is skewed towards low-income individuals. This gives the median voter an incentive to favor old-age pension spending over unemployment spending.

Hypothesis 2: The median voter opposes spending cuts in old-age pension programs more than spending cuts in unemployment programs.

The hypothesis that welfare programs that protect against life course risks are more popular with the median voter has received some empirical support. Jensen (2011) finds that political and institutional variables have no impact on life course-related welfare programs, presumably because only few actors fight against these programs. Similarly,
Elmelund-Præstekær and Klitgaard (2012) find that reforms in life course-related welfare programs tend to be less transparent than reforms in labor market-related welfare programs, presumably because political actors attempt to avoid sanctions from the median voter. Both these studies, however, simply assume that their results are due to differing median voter preferences as they do not actually measure whether median voter preferences are different for the different types of programs.

If the median voter favors old-age pensions over unemployment benefits, then the theoretical framework of this essay predicts that spending cuts as a consequence of government debt are more likely to occur in unemployment programs than old-age pension programs. This is because government debt creates an economic incentive to cut spending for any given welfare program, but since policymakers have a political incentive to take into consideration the policy preferences of the median voter, it will be rational for office-seeking policymakers to cut spending in those welfare programs where the median voter is less opposed to retrenchment.

*Hypothesis 3*: The adverse effect of government debt is stronger on unemployment spending than on old-age pensions spending.
CHAPTER 3: DATA AND METHODS

To evaluate the three hypotheses I have assembled a dataset that merges data from the Organization for Economic Co-operation and Development (OECD), World Values Survey (WVS), and the International Social Survey Program (ISSP). This allows for a test of the hypotheses in an analysis of 18 established democracies\(^2\) during the period from 1980 through 2007 with the unit of analysis being the country-year.

The dependent variable

The dependent variables of the empirical analysis are annual changes in overall social spending, annual changes in unemployment spending, and annual changes in old-age pension spending. All spending measures are expressed in percent of GDP.

Using spending as a percent of GDP as the dependent variable is in accordance with the majority of studies in the literature (Brooks and Manza 2006; Garrett 1998; Huber and Stephens 2001; Iversen 2005; Kittel and Obinger 2003; Kwon and Pontusson 2010). Some scholars have pointed to the limitations of using spending data as a proxy for welfare state efforts because conflict over social policy pertains to attributes of the welfare state that may not be captured by spending measures (Allan and Scruggs, 2004; Castles; 2004; Esping-Andersen, 1990). However, I argue that spending measures are appropriate for the present study because the theoretical framework emphasizes the economic side of the welfare conflict. Specifically, the theoretical framework predicts

\(^2\) These countries are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, Norway, New Zealand, Sweden, Switzerland, the United Kingdom, and the United States.
that when government debt is high, there is an economic incentive to cut social spending, which makes spending the appropriate measure for the empirical test. In addition, social spending measures have the important quality of being strong predictors of inequality and poverty within democracies (Brady, 2003; Kenworthy, 2004; Moller et al., 2003).

The spending data come from the OECD’s Social Expenditure Database (SOCX), which contains data on government social spending by individual welfare programs from 1980. My measure of ‘overall social spending’ includes public spending on social assistance, health care, care for the elderly and disabled, child care, family allowances, active labor market programs, housing subsidies, parental leave insurance, unemployment insurance, sick pay insurance and public pensions. My measure of old-age pension spending excludes other types of old-age spending such as residential care and also excludes other types of pension spending such as early retirement transfers.

*Independent variables*

The measure of the median voter policy position towards the welfare state as a whole is extracted from the World Values Survey (WVS). The median voter policy position is operationalized as the median respondent on the following question where respondents were asked to place their views on a 1 to 10 scale, and where 1 meant agreeing completely with the first statement and 10 meant agreeing completely with the second statement: ‘People should take more responsibility to provide for themselves.’ ‘The government should take more responsibility to ensure that everyone is provided for.’ Thus, a higher median voter score means that the median voter favors more government social effort.
The WVS survey question is particularly relevant for measuring public opinion towards social policy because it asks about relative rather than absolute preferences on government redistribution, and relativistic questions are particularly informative when examining dynamic preferences (Stimson, 2004; Dallinger, 2010). The question is relative in the sense that respondents are asked whether they want *more* or *less* redistribution rather than how much. This means that the variable measures not so much the respondents’ ideals about redistribution, but rather their judgments against the circumstances of current government effort.

The WVS question is asked in 5 survey waves from 1990 to 2007. This means that there are missing observations for some country-years. To address this issue I interpolate between observations. This approach is theoretically justified because one of the most consistent findings in the literature is that public opinion on the welfare state is slow moving. In fact, this is the underlying assumption regardless of whether one takes the approach of Esping-Andersen that “a theory that seeks to explain welfare-state growth should also be able to understand its retrenchment or decline” (1990: 32), or Pierson’s approach that “retrenchment is not simply the mirror image of welfare state expansion” (1996: 151).³

My measure of the median voter’s policy position towards unemployment spending and old-age pension spending is extracted from the International Social Survey Program's (ISSP) Role of Government I, II, III and IV surveys (1985, 1990, 1996, and 2006). Two survey questions are used for each survey wave, one on government

³ In the course of the analysis I compared a number of different interpolation procedures and it is comforting that they all revealed the same substantive results.
unemployment spending and one on old-age pension spending. Respondents were directed in the following way: ‘Listed below are various areas of government spending. Please show whether you would like to see more or less government spending in each area. Remember that if you say "much more", it might require a tax increase to pay for it.’ Respondents were then asked to show whether they would like to see more or less government spending by placing themselves on a 1 to 5 scale for unemployment benefits and old age pensions. 1 corresponded to the opinion that the government should ‘spend much more’ on the welfare program, and 5 corresponded to the opinion that the government should ‘spend much less’ on the welfare program. Similar to the WVS question, these ISSP questions ask about relative rather than absolute questions. In the result section I reverse the scale for the two ISSP questions for presentational purposes.

Data for debt stocks, the other main explanatory variable, are from OECD’s National Accounts Statistics Database. Debt data are expressed as a percent of GDP and are available from 1980 onwards. An important feature of these data is that they cover both external and domestic debt, but exclude state and local government debt. This measure is similar to the one used by Lora and Olivera (2007) who, to the author’s knowledge, have made the most comprehensive study on the impact of government debt on welfare state outcomes so far.

_control variables_

In addition to the theoretical variables I control for a series of political and socio-economic factors. All control variables are from OECD unless specifically stated otherwise.
First, since the dependent variables are social spending measured in percent of GDP, it is essential to control for real economic growth, the dependency ratio and the unemployed. Real GDP growth must be included because when spending remains constant, GDP growth automatically translates into a decline in social spending due to the nature of the dependent variable. The dependency ratio is defined as the share of the population below the age of 15 and above the age of 64 and is included because a large proportion of total social spending in established democracies target children and the elderly. When the dependent variable is spending for old-age pensions, I control for the population over 65 rather than the dependency ratio for obvious reasons. The unemployment rate is also included as a control variable because the unemployed are another large, and easily measurable, target group for social spending, and the variable is obviously essential when the dependent variable is unemployment spending.

The empirical models also control for budget balance, trade openness, the female labor force and government partisanship. The budget balance is included to ensure that it is the level of government debt rather than the change in government debt that causes the observed relationship. Trade openness is measured as imports + exports relative to GDP and is included because an open economy may cause demand for risk protection. Female labor force participation is included because a high proportion of women in the workforce mean that a high proportion of voters have a direct interest in certain kinds of benefits, making it electorally dangerous for policymakers to implement retrenchment policies. Finally, government partisanship data come from the Comparative Manifesto Project (CMP), which determines governments’ policy positions based on content analysis of quasi-sentences for individual parties. This measure is particularly appropriate
for time-series cross-section analyses because it tracks changes in policy positions over
time while tracing real ideological differences between governments in different
countries. To avoid the inclusion of an excessive number of control variables I do not
control for other political factors such as union density or institutional veto points in the
final models. However, it is comforting that including Vesser’s measure of union density
(Visser, 2009) and Huber et al’s (2004) measure of constitutional veto points does not
change the substantive results.

Statistical model specifications

The data have a time-series cross-sectional structure, which raises a number of
estimation issues that have the potential to produce misleading results if they are not dealt
with properly. These issues include the possibility of serially correlated errors and
heteroskedasticity. To deal with these issues all models are specified with a random
effects estimator, a differenced dependent variable, and robust standard errors clustered
according to country.

Many studies use a fixed effects approach to account for omitted variable bias and
other nonrandom error structures. I opt to specify my models with a random effects
estimator because fixed effects require a purely within-country analysis, which only
captures variation across time. This is inappropriate for the purposes of this paper
because the theoretical framework predicts that, depending on the policy position of the
median voter, it should matter when one country has a higher level of government debt
than another country.4 The dependent variable is differenced because the theoretical

4 In the course of the analysis I also estimated the models with a fixed effects estimator. The substantive
results were generally similar to those produced with the random-effects estimator. The only major
framework concerns change in social spending. This is convenient because a differenced dependent variable also addresses issues of nonrandom error structures. I use the robust clustering approach because clustering eliminates country-specific effects in the error term not dealt with by the random effects estimator, and robust standard errors reduce potential problems of heteroskedasticity.

Finally, I lag all independent variables that may cause a government to implement policies that create a change in welfare spending. This reduces any potential endogeneity issues, and it makes sense theoretically that there is a lag between a policy change and its substantive effect. I do not lag real economic growth, the dependency ratio or the unemployment rate because these variables have a direct and immediate impact on the dependent variable. Instead, I difference the latter two variables because it is the change in the dependency ratio and the change in the unemployment rate that have a direct impact on the change in spending. I do not difference GDP growth because it is already measured as the change in GDP.

With the model specification laid out above serial correlation does not appear to be a serious issue as the Durbin-Watson test indicates no significant autocorrelation. All models were also checked for stationarity using the Maddala and Wu (1999) test, which rejected the null hypothesis of nonstationarity. Furthermore, including a time trend in the model does not change the substantive results.

| difference is that government debt appears to have statistically significant impact on old-age pension spending with the fixed effects estimator, which is not the case with the random effects estimator. However, regardless of whether the models are estimated with fixed or random effects, the substantive effect of government debt appears to be substantively larger for unemployment than for old-age pensions (although only slightly with the fixed effects estimator) consistent with hypothesis 3. This is remarkable given that old-age pension spending constitutes a larger percentage of GDP than unemployment spending, meaning that the substantive effect of a policy change should be larger for old-age pensions than for unemployment. |
The impact of government debt on overall welfare spending depending on the policy position of the median voter

Table 1 reports the findings from the regression analyses where the dependent variable is the change in social spending for the welfare state as a whole. The period covered in this table is from 1990 to 2007. Model 1.1 reports the findings from the baseline estimation, and model 1.2 reports the findings when an interaction term between government debt and the median voter policy position is added to the equation. Figure 1 depicts the marginal effects of government debt at various levels of median voter policy positions.

Collectively Table 1 and Figure 1 report evidence in favor of hypothesis 1. The coefficient for the lagged level of government debt is negative and significant in model 1.1, indicating that government debt has a negative effect on social spending. The interaction term in model 1.2 is significant, indicating that this effect is contingent on the median voter policy position. Figure 1 shows that the estimated negative impact of government debt on social spending is substantively stronger when the median voter policy position is low (when the median is unopposed to retrenchment), and that the impact of government debt is not statistically significant when the median voter policy position is 6 or higher (when the median voter is opposed to retrenchment). All median voter observations lie between 2 and 7, and they are relatively normally distributed with
roughly 19 percent of the observations falling between 2 and 3.99, roughly 60 percent of the observations falling between 4 and 5, and roughly 21 percent of the observations falling between 5.01 and 7.

The results presented in table 4 also reveal that the substantive effect of government debt can be quite large when the median voter is not strictly opposed to spending cuts. For illustrative purposes consider a country where the median voter favors retrenchment (a country with a median voter policy position of 2). For such a country the estimated effect of a 10 percent higher level of government debt to GDP is a cut in social spending equal to 0.24 percent of GDP every year. This is quite substantial as the average welfare effort in the sample is 22.5 percent of GDP. The estimated effect of a 10 percent higher level of government debt to GDP for a country with a median voter policy position of 3 is cuts in social spending equal to 0.17 percent of GDP per year, 0.11 percent to GDP for a country with a median voter policy position of 4, and 0.05 percent to GDP for a country with a median voter policy position of 5.

The control variables in table 1 behave more or less as expected as they are either consistent with the theoretical expectations or not statistically significant. GDP growth has an immediate negative effect on social spending because it corrects for changes in the denominator of the variable, and an increase in the unemployment rate has a positive impact on total spending because more people are receiving government transfers. The only control variable that does show a somewhat surprising result is the female labor force, which is actually associated with less social spending. Since the size of the female labor force was found to exert a positive influence on welfare state size during the period of welfare expansion, this finding can be interpreted as if countries with a high female
labor force overly expanded the scope of the welfare state during the postwar economic boom, and that they have therefore been forced to retrench more in recent decades.

**The impact of government debt on unemployment and old-age pensions**

Table 2 reports the median voter’s attitude towards unemployment spending relative to old-age pension spending for the 4 ISSP surveys (1985, 1990, 1996 and 2006). The results are clear-cut: The median voter consistently favors old-age pension spending over unemployment spending in established democracies (hypothesis 2). For all survey waves the unemployment median is 3 or very close to 3. In fact, out of the 40 country-year observations only 4 median voter observations on unemployment spending were above 3 indicating that it is very rare that the median voter favors expansion on unemployment spending. For old-age pensions, on the other hand, the average median voter score is closer to 4 than 3 for all survey waves, meaning that the median voter tends to favor an increase in government old-age pension spending. 30 of the 40 old-age pensions observations were 4 or higher. Also, it is illustrative that 27 country-year observations had a higher score on old-age pensions than unemployment, and that the median voter score was never higher on unemployment than on old-age pensions. Finally, the mean voter score was higher on old-age pensions than on unemployment for all observations.

Given the findings in table 2 the theoretical framework predicts that the adverse effect of government debt should be stronger on unemployment (hypothesis 3). Table 3
reports the findings from the regression analyses where the dependent variable is the change in social spending for old-age pensions (model 3.1) and unemployment (model 3.2). The period covered is from 1980 to 2007 for the 18 countries in the dataset.

The results from table 3 report evidence in favor of hypothesis 3. Consistent with the theoretical expectations the coefficient for the lagged level of government debt is negative in both models, but only significant for unemployment spending in model 3.2. Furthermore, the negative coefficient is much larger for government debt on unemployment spending than for government debt old-age pension spending. The estimated substantive effect of a 10 percent higher level of government debt is a cut in unemployment spending equal to 0.008 percent of GDP every year. This is quite substantial as the average unemployment effort in the sample is only 1.5 percent of GDP

The control variables are again generally either consistent with the theoretical expectations or not statistically significant. GDP growth is negative and significant because it corrects for changes in the denominator of the dependent variable. An increase in the proportion of the population over 65 has a positive impact on old-age pension spending because it leads to an increase in the proportion of the population receiving old-age pension benefits. An increase in the unemployment rate has a positive impact on unemployment spending for the same reason. Finally, the female labor force has a negative impact on unemployment spending. I am again hesitant to infer that it is a large female labor force per se that is causing the observed relationship. Instead, I suspect that it is something else about the countries that have a high female labor force that is causing these countries to retrench such as the relatively large expansion of the scope of the welfare state before the ending of the postwar economic boom.
CHAPTER 5: CONCLUSION

The existing scholarly literature on welfare state reform focuses mainly on the lack of welfare state retrenchment while a large part of the economics literature simultaneously focuses on economic incentives to cut social spending. The purpose of the present study has been to bridge these two pieces of the welfare state reform puzzle by introducing a single parsimonious theory that is capable of explaining when retrenchment does and does not occur, and which welfare programs are most likely to be hit the hardest.

The study has sought to consider government debt as an important source of overall welfare state retrenchment, but only to the extent that the median voter does not oppose spending cuts. Furthermore, I have suggested that welfare programs that protect against labor-market risks, such as unemployment benefits, are less popular with the median voter than welfare programs that protect against life-course risks such as old-age pensions. I have employed a comparative research design that examines the implications of this theoretical framework using cross-national survey data to measure the policy position of the median voter on the welfare state as a whole and on individual welfare programs, while taking into account a range of established factors behind welfare state outputs. The empirical analyses suggest that government debt has a negative effect on the welfare state as a whole when the median voter does not oppose retrenchment (hypothesis 1), and that the adverse effect of government debt is stronger on unemployment spending than it is on old-age pension spending (hypothesis 3) because
the median voter opposes old-age pension retrenchment more than unemployment retrenchment (hypothesis 2).

Overall, I argue that the theoretical integration between economic incentives to cut social spending and political incentives to stay in power has proven fruitful. Consequently, I emphasize the need to pay attention to cross-national variation in the strength of those incentives. The present study explains why the median voter favors old-age pension spending over unemployment spending, but not why the median voter is more opposed to overall welfare retrenchment in certain countries than in others. The new politics theory emphasizes positive policy feedback effects, which implies that larger welfare states should foster more opposition to retrenchment. However, in the present study the median voter policy position is not significantly correlated to the overall level of welfare state spending. Future research should address this issue.

Finally, while the level of government debt is an important indicator of economic incentives to cut social spending, this proxy can be developed further. First, the level of government debt is obviously not the only economic variable that policymakers pay attention to when implementing welfare policies, and secondly government debt can be distinguished between domestic and foreign debt. Lora and Olivera (2007) for example find that only the effect of foreign debt is significant in developing democracies. Examining the impact of different types of government debt on welfare state outcomes in established democracies is beyond the scope of this paper, but it constitutes an exciting avenue for future welfare state research.
## APPENDIX: TABLES

Table 1: Government Debt, The Median Voter Policy Position and Overall Welfare Spending

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Model 1.1</th>
<th>Model 1.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt-1</td>
<td>-0.00421*</td>
<td>-0.0367**</td>
</tr>
<tr>
<td></td>
<td>(0.00243)</td>
<td>(0.0151)</td>
</tr>
<tr>
<td>Median voter-1</td>
<td>-0.0914</td>
<td>-0.411**</td>
</tr>
<tr>
<td></td>
<td>(0.0582)</td>
<td>(0.166)</td>
</tr>
<tr>
<td>Debt*Median voter-1</td>
<td>-</td>
<td>0.00632**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.00276)</td>
</tr>
<tr>
<td>Government partisanship-1</td>
<td>-0.00379</td>
<td>-0.00293</td>
</tr>
<tr>
<td></td>
<td>(0.00329)</td>
<td>(0.00302)</td>
</tr>
<tr>
<td>Female labor force-1</td>
<td>-0.0198***</td>
<td>-0.0209***</td>
</tr>
<tr>
<td></td>
<td>(0.00733)</td>
<td>(0.00790)</td>
</tr>
<tr>
<td>ΔUnemployment level</td>
<td>0.211**</td>
<td>0.216**</td>
</tr>
<tr>
<td></td>
<td>(0.0827)</td>
<td>(0.0844)</td>
</tr>
<tr>
<td>ΔDependents</td>
<td>0.122</td>
<td>-0.0896</td>
</tr>
<tr>
<td></td>
<td>(0.399)</td>
<td>(0.331)</td>
</tr>
<tr>
<td>GDP growth</td>
<td>-0.164***</td>
<td>-0.163***</td>
</tr>
<tr>
<td></td>
<td>(0.0606)</td>
<td>(0.0545)</td>
</tr>
<tr>
<td>Budget balance-1</td>
<td>0.0207</td>
<td>0.0252</td>
</tr>
<tr>
<td></td>
<td>(0.0252)</td>
<td>(0.0251)</td>
</tr>
<tr>
<td>Trade openness-1</td>
<td>-0.00255</td>
<td>-0.00132</td>
</tr>
<tr>
<td></td>
<td>(0.00199)</td>
<td>(0.00194)</td>
</tr>
<tr>
<td>Constant</td>
<td>2.635***</td>
<td>4.235***</td>
</tr>
<tr>
<td></td>
<td>(0.641)</td>
<td>(1.113)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.36</td>
<td>0.38</td>
</tr>
<tr>
<td>$N$</td>
<td>221</td>
<td>221</td>
</tr>
</tbody>
</table>

***P<0.01 **p<0.05 *p<0.1, two-tailed test
<table>
<thead>
<tr>
<th>Year</th>
<th>Number of country-year observations</th>
<th>Average median voter score on unemployment</th>
<th>Average median voter score on old-age pensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>6</td>
<td>3</td>
<td>3.67</td>
</tr>
<tr>
<td>1990</td>
<td>6</td>
<td>3</td>
<td>3.83</td>
</tr>
<tr>
<td>1996</td>
<td>13</td>
<td>3.08</td>
<td>3.69</td>
</tr>
<tr>
<td>2006</td>
<td>15</td>
<td>3</td>
<td>3.87</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>3.03</td>
<td>3.78</td>
</tr>
</tbody>
</table>

Note: Countries included in the 1985 survey: Australia, Austria, Germany, Italy, United Kingdom, United States. Countries included in the 1990 survey: Australia, Germany, Italy, Norway, United Kingdom, United States. Countries included in the 1996 survey: Australia, Canada, France, Germany, Ireland, Italy, Japan, Norway, New Zealand, Sweden, Switzerland, United Kingdom, United States. Countries included in the 2006 survey: Australia, Canada, Denmark, Finland, France, Germany, Ireland, Japan, Netherlands, Norway, New Zealand, Sweden, Switzerland, United Kingdom, United States.
Table 3: Government Debt and government spending on old-age pensions and unemployment

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Model 2.1 (old-age pensions)</th>
<th>Model 2.2 (Unemployment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt_{t-1}</td>
<td>-0.000397 (0.000607)</td>
<td>-0.000868*** (0.000251)</td>
</tr>
<tr>
<td>Government partisanship_{t-1}</td>
<td>-0.000476 (0.000980)</td>
<td>-0.000487 (0.000728)</td>
</tr>
<tr>
<td>Female labor force_{t-1}</td>
<td>0.000078 (0.00141)</td>
<td>-0.0149*** (0.00504)</td>
</tr>
<tr>
<td>ΔUnemployment level</td>
<td>0.00883 (0.0163)</td>
<td>0.159*** (0.0244)</td>
</tr>
<tr>
<td>ΔDependents</td>
<td>-</td>
<td>-0.00492 (0.0511)</td>
</tr>
<tr>
<td>Population over 65</td>
<td>0.411*** (0.146)</td>
<td>-</td>
</tr>
<tr>
<td>GDP growth</td>
<td>-0.0411*** (0.0112)</td>
<td>-0.0228** (0.00950)</td>
</tr>
<tr>
<td>Budget balance_{t-1}</td>
<td>0.000812 (0.00414)</td>
<td>0.00213 (0.00312)</td>
</tr>
<tr>
<td>Trade openness_{t-1}</td>
<td>0.000354 (0.000756)</td>
<td>0.000297 (0.000302)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.0746 (0.135)</td>
<td>0.172*** (0.0531)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.22</td>
<td>0.61</td>
</tr>
<tr>
<td>$N$</td>
<td>356</td>
<td>356</td>
</tr>
</tbody>
</table>

***P<0.01 **p<0.05 *p<0.1, two-tailed test
Figure 1: Marginal effects of government debt on overall welfare spending
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