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**The Politics of Middle Class Decline and Growth
in Industrialized Democracies, 1980 to 2010**

by

Young-hwan Byun

A dissertation submitted to the Graduate Faculty in Political Science in partial fulfillment
of the requirements for the degree of Doctor of Philosophy, The City University of New
York

2016

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This manuscript has been read and accepted for the Graduate Faculty in
Political Science to satisfy the dissertation requirement for the degree of
Doctor of Philosophy

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THE CITY UNIVERSITY OF NEW YORK

Abstract

The Politics of Middle Class Decline and Growth in Industrialized Democracies, 1980 to 2010

by

Young-hwan Byun

Adviser: Professor Janet C. Gornick

This research explains why some industrialized democracies have experienced middle class decline while others have experienced middle class growth since the 1980s. The prevailing political science literature based on the median voter theory predicts that middle class decline should not occur in democracies, whereas economic theories fail to explain national variation of middle class decline by attributing the decline to common developments such as globalization or technological change. I analyze data from the Luxembourg Income Study Database, the Comparative Welfare States Dataset, and the Comparative Welfare Entitlement Dataset, and demonstrate a significant partisan effect on middle class decline. I argue that middle class decline is contingent on the type of right party that is dominant in the country. Christian Democratic parties differ from secular right parties in shaping the institutions of social insurance and wage-settings over the course of neoliberal policy reforms since the 1980s. Due to their ideological orientation, Christian right parties have been much less receptive to the neoliberal turn than secular right parties. Christian Democrats have tempered income polarization and income insecurity by supporting broad bargaining coverage and maintaining generous income-related social insurance policies.

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Table of Contents

Chapter One: Introduction.....	1
Chapter Two: The Concept of Middle Class.....	15
Chapter Three: Theoretical Framework.....	23
Chapter Four: Cases, Data, Measures, and Methods.....	40
Chapter Five: Description of Middle Class Decline.....	65
Chapter Six: Middle Class and the Welfare State.....	86
Chapter Seven: Determinants of Middle Class Decline and Growth.....	100
Chapter Eight: Cases.....	117
Chapter Nine: Conclusion.....	153
Datasets.....	170
Bibliography.....	171
Appendix: Summary Statistics for Dependent and Independent Variables.....	180

List of Charts, Tables and Figures

Chart 3.1 Theoretical Framework.....	25
Table 3.1 Party Control in Government between Christian Democratic and Secular Right Parties.....	35
Table 5.1 The Gini and Middle Class Size Comparison.....	76
Table 7.1 Key Factors that Affect Middle Class Decline in 17 OECD countries, 1967-2010.....	107
Table 7.2 Partisan Effects on Middle Class Size in 17 OECD countries, 1967-2010.....	109
Figure 3.1 Right Party Control in Government in 19 OECD countries, 1980-2010.....	33
Figure 5.1 Distribution of Population by Market Income in Germany, 1973, 2007, and 2010.....	67
Figure 5.2 Distribution of Population by Disposable Income in Germany, 1973, 2007, and 2010.....	68
Figure 5.3 Distribution of Population by Market Income in the US, 1974, 2007, and 2010.....	69
Figure 5.4 Distribution of Population by Disposable Income in the US, 1974, 2007, and 2010.....	69
Figure 5.5 Distribution of Population by Market Income in Germany, 1973, 2007, and 2010 (Working Age Population under 60).....	70
Figure 5.6 A Global Trend in Middle Class Size Change-Disposable Income and Market Income.....	72
Figure 5.7 Overall Population Distribution Change across Income Classes Between 2007 and 2010.....	73
Figure 5.8 Middle Class Size in the mid-2000s.....	75
Figure 5.9 Middle Class Size in the Years around 1980.....	77
Figure 5.10 Middle Class Size Change in 19 OECD Countries between 1979 and 2005 (Disposable Income).....	79
Figure 5.11 Middle Class Size Change in the US, Sweden, and Switzerland.....	80
Figure 5.12 Middle Class Size Change in the UK, Germany, and The Netherlands.....	81
Figure 5.13 Middle Class Size Change in the US and Switzerland (Working Age).....	83
Figure 6.1 Distribution of Population by Market and Disposable Income (Germany, 1973).....	88
Figure 6.2 Distribution of Population by Market and Disposable Income (Germany, 2010).....	88
Figure 6.3 Welfare Reliance of the Middle Class (22 OECD countries, Over time).....	90
Figure 6.4 Welfare Reliance of Working Age Middle Class (22 OECD countries, Over time).....	92
Figure 6.5 Change in Social Transfer Income Share between 2007 and 2010.....	94

Figure 6.6 Change in the Welfare Reliance of Low- and Middle-Income Households (20 OECD countries, Over time)	95
Figure 7.1 Right Party Control in Government and Middle Class Size Since 1980.....	110
Figure 7.2 Right Party Control in Government and Bargaining Coverage.....	113
Figure 7.3 Right Party Control in Government and Unemployment Benefit Generosity.....	114
Figure 7.4 Right Party Control in Government and Elderly Population Share.....	114
Figure 7.5 Right Party Control in Govt. and Female Employment Rate.....	115
Figure 8.1 Middle Class Size Change Overtime (The UK and Austria).....	118
Figure 8.2 GDP Growth Rates (The UK and Austria).....	120
Figure 8.3 Trade Openness (The UK and Austria).....	120
Figure 8.4 Capital Account Openness (The UK and Austria).....	120
Figure 8.5 Share of Immigrant Population (The UK and Austria).....	120
Figure 8.6 Share of High-skilled Labor (The UK and Austria).....	121
Figure 8.7 Elderly Population Share (The UK and Austria).....	121
Figure 8.8 Female Employment Rate (The UK and Austria).....	121
Figure 8.9 Pension Benefit Generosity (The UK and Austria).....	121
Figure 8.10 Bargaining Centralization (The UK and Austria).....	123
Figure 8.11 Bargaining Coverage (The UK and Austria).....	123
Figure 8.12 Unemployment Benefit Generosity (The UK and Austria).....	124
Figure 8.13 Sickness Benefit Generosity (The UK and Austria).....	124
Figure 8.14 Right Party Government and Bargaining Coverage (The UK and Austria).....	125
Figure 8.15 Right Party Government and Unemployment Benefit Generosity (The UK and Austria).....	127
Figure 8.16 Right Party Government and Sickness Benefit Generosity (The UK and Austria).....	127
Figure 8.17 Middle Class Size Change over Time (The Netherlands and Germany).....	129
Figure 8.18 GDP Growth Rates (The Netherlands and Germany).....	131
Figure 8.19 Capital Account Openness (The Netherlands and Germany).....	131
Figure 8.20 Trade Openness (The Netherlands and Germany).....	131
Figure 8.21 Share of Immigrant Population (The Netherlands and Germany).....	131
Figure 8.22 Share of High-skilled Labor (The Netherlands and Germany)	132
Figure 8.23 Elderly Population Share (The Netherlands and Germany).....	132
Figure 8.24 Female Employment Rate (The Netherlands and Germany).....	132
Figure 8.25 Unemployment Benefit Generosity (The Netherlands and Germany).....	132
Figure 8.26 Sickness Benefit Generosity (The Netherlands and Germany).....	133
Figure 8.27 Bargaining Coverage Change (The Netherlands and Germany).....	134
Figure 8.28 Pension Benefit Generosity (The Netherlands and Germany).....	135
Figure 8.29 Right Party Government on Unemployment Benefit Generosity (The Netherlands and Germany).....	136
Figure 8.30 Right Party Government on Sickness Benefit Generosity (The Netherlands and Germany).....	136
Figure 8.31 Right Party Government and Bargaining Coverage (The Netherlands and Germany)	139

Figure 8.32 Right Party Control in Government and Bargaining Coverage (The Netherlands and Germany)	139
Figure 8.33 Middle Class Size Change Overtime (Denmark and Switzerland).....	141
Figure 8.34 Right Party Government and Unemployment Benefit Generosity (Denmark and Switzerland).....	143
Figure 8.35 Right Party Government and Sickness Benefit Generosity (Denmark and Switzerland).....	144
Figure 8.36 Female Employment Rate (Denmark and Switzerland).....	144
Figure 8.37 Diachronic Change in Middle Class Size (The US and Canada).....	145
Figure 8.38 Diachronic Change in Bargaining Coverage (The US and Canada).....	147
Figure 8.39 Diachronic Change in Sickness Benefit Level (The US and Canada).....	149
Figure 8.40 Diachronic Change in Pension Benefit Generosity (the US and Canada)...	142
Figure 8.41 Right Party Government on Bargaining Coverage (The US and Canada)...	150

Chapter 1: Introduction

This dissertation studies an important yet understudied type of income inequality—middle class decline or polarization in income distribution. While most current literature focuses on change in the “income space” of income distribution, I focus on change in the “people space” of income distribution.¹ This is because middle class contraction in absolute numbers is more alarming politically than its decline in terms of income share. By middle class decline, I mean that the population share of households that have around the median income declines, while the population share of affluent and poor households in the population increases.

Whereas the prevailing literature conceives middle class decline as an economic outcome driven by developments common to industrialized countries, such as global market integration or technological change, I argue that it is also a politically induced outcome shaped by the partisan steering of government policies. My alternative political explanation is that different party control in government can make a difference in the degree and direction of middle class decline by shaping wage bargaining-settings and social insurance policies distinctively.

Based on household income datasets from the Luxembourg Income Study (LIS) Database, I first descriptively analyze middle class decline since the late 1970s in 22 industrialized democracies. Then, I offer my alternative explanation for cross-national and diachronic variation of middle class decline based on a statistical analysis using data derived from the LIS, the Comparative Welfare State Dataset (CWS), the Comparative Welfare Entitlement Dataset (CWED), and the Organization for Economic Cooperation and Development

¹ Foster and Wolfson (2010) coined the term “people space” and “income space” in their analysis of the Lorenz Curve. People space refers to the changing number of people who belong within certain income boundaries, while income space presents the changing amount of income that belongs to certain income boundaries in a given

(OECD) International Migration Dataset. Finally, I illustrate the regression outcomes in specific country cases.

In this introductory chapter, I introduce the research background and the limits of existing theories before posing the formal research question. I then elaborate my argument and close with an outline of the dissertation.

1. Why Does Middle Class Decline Matters?

Since the 2008 global financial crisis, social critics and political figures have expressed concern about growing economic inequality and insecurity in the US and other wealthy democracies, as well as the inability of democratic governments to address the issue effectively. Whereas economic inequality and insecurity are certainly not new phenomena in the history of industrialized democracies, the effects of inequality and insecurity are now experienced more widely among the populations of industrialized democracies, including among middle class households.

The concern about the shrinking middle class is well expressed by an evicted American homeowner who appeared in Michael Moore's 2009 film, *Capitalism: A Love Story*.

“There are no more in-betweens: There are people who got them all, and people who got nothing.”

Commentators, trade unions, think tanks, and policy makers began to publicize various, yet inconsistent causes for middle class decline, and have offered a variety of policy solutions to address the problem.² Public attention to the issue in the US led the first Obama administration to

² For example, the Center for American Progress published a report, “Unions make the middle class: without unions, the middle class withers” (Madland et al. 2011), and another report, “The Three Faces of Work-Family Conflict:

form the White House Task Force on the Middle Class to help foster middle class growth. In the 2012 Presidential election, the theme of middle class decline became even more prevalent, with both Republican and Democratic candidates arguing that their contrasting policy proposals would benefit the struggling middle class.

Recent research (Alderson et al. 2005) confirms this concern empirically, showing that middle class contraction has occurred in at least in two countries, the UK and the US. More importantly, it shows that this polarization in income distribution is not an immediate consequence of the 2008 financial crisis, but a long-term development since the 1980s.³ In 2014, The International Conference of the Association for Public Policy and Management (APPAM) was organized with this very theme: “The Decline of the Middle Classes around the World?” Researchers attending the conference found that middle class decline is an international phenomenon experienced across developed countries. However, what exactly middle class decline means differs significantly among scholars.⁴

Economists were the first to raise alarm about middle class decline. Based on Internal Revenue Service data, Piketty and Saez (2006) showed that median real income has stagnated since the 1970s, while the top income earners have reaped the most from gains in economic growth in the US. Some leading economists and the 2015 IMF report claim that middle class decline may harm economic growth because economic growth relies significantly on the middle class’s consumption power; the poor do not have income to spend beyond their basic necessities,

The Poor, the Professionals, and the Missing Middle” (Williams and Boushey 2010). The latter report shows how the middle class family is excluded from American welfare system although they need its services desperately.

³ Alderson et al. (2005, 410-412) measured percentage of households in each income decile in the US between 1974 and 2000, in the UK between 1969 and 1999. They showed that the population share of households in middle deciles has declined in both countries, while the population share of households in bottom or top deciles has increased.

⁴ The Program of the 2014 International Conference of APPAM is accessible at:
http://umdcipe.org/conferences/DecliningMiddleClassesSpain/Documents/UNED_Agenda.pdf

while the rich cannot spend their whole income for consumption and are small in number.⁵

Others discuss the psychological effects of middle class decline such as anxiety and relative deprivation (Frank 2007). Following economists, sociologists raised alarms about middle class contraction from a broader framework of inequality and intergenerational mobility, highlighting issues such as sorting in school choice and marriage between the rich and the poor and their degenerating effects on social mobility (Putnam 2015).

Economists mainly focus on one dimension of middle class decline, that is, stagnated income growth for middle class households rather than the shrinking population share of middle class households. Although there are a few exceptions (Wolfson 1994; Foster and Wolfson 2010; Pressman 2007; 2010), economists mainly focus on a change in “income space” rather than a change in “people space” in income distribution. They, therefore, define middle class decline as the declining income share of the middle-income group compared to the high-income group during the same year or to the same middle-income group in the past.

Middle class decline is as alarming to political scientists as it is to economists and sociologists because the middle class has long been believed to be a bulwark for stable democracy (Lipset 1959). To political scientists, however, middle class decline in absolute numbers is as alarming as its declining income share—that is, a change in “people space” rather than in “income space” in income distribution.

According to Seymour M. Lipset (1959), stable democracy requires a large middle class because their moderate worldview and participation in cross-class civil society associations contribute to compromises between the class interests of the poor and the rich, and thus, also to the stability of democracy. A modest income level beyond subsistence is necessary for the

⁵ For this effective-demand based argument on the effects of middle class decline, see, Joseph Stiglitz (2013), Robert Reich (2010, 2011), and Dabla-Norris, Era et al. (2015) IMF Staff Discussion Note.

education and civic participation of each middle class household. Equally important is that the middle class needs to be physically present between the poor and the rich and across various civil society organizations, and this requires a middle class with a large share of the population. For the first thirty years after World War II, most industrialized democracies experienced middle class growth—both in terms of population share and income share, the result of the social mobility of poor working class families to the middle class. One of the most important political implications of Lipset's work (1959) is that this growing middle class offered political stability and legitimacy to post-WWII democratic capitalism as it competed ideologically with communist regimes.

On top of the concern about democratic stability, disappearing middle classes raise two additional political concerns. First, as Gilens and Page (2014) demonstrate, affluent influence on legislation in the US has become dominant through the lobbying activities of interest groups and through campaign contributions to elected officials. Hacker and Pierson (2010) argue that the rich have increased their influence on government policies by investing more and more material resources into politics. At the same time, ordinary people's influence on government policies has declined as unions, their traditional organizational power, have declined dramatically. Middle class decline can, therefore, facilitate the political dominance of the rich as fewer and fewer people have the material and organizational resources to influence legislation.

Second, income polarization can lead to political polarization and policy gridlock. McCarthy, Poole, and Rosenthal (2006) claim that as income distribution becomes increasingly polarized, compromise between the two parties on redistributive policies become even more difficult, as each party represents contrasting ideological positions and constituents regarding tax and social policy issues. As a result, only trivial policy issues have had reasonable chances to be

legislated, while policy gridlock on critical distributive and redistributive policies has become the norm in the US.

2. Theoretical Paucity and Puzzle

In spite of all the warnings about the various negative effects of middle class decline, its causes remain either understudied or underspecified. Current political science scholarship suffers from theoretical paucity regarding this phenomenon. First, classic partisan theory claims that government policies vary depending on which party or parties control government. It proposes that leftist parties, which represent the economic interests of the working class or the poor, pursue more egalitarian distributive and redistributive policies than right-wing parties, which represent the interests of the business class or the rich.⁶ As Anthony Atkinson (2013) writes, the middle class is a “forgotten” class in distributional studies because the literature has focused either on the poor, at one end, or on the rich, at the other end, leaving out the middle class.

In addition, current political economy literature does not distinguish two conceptually distinct types of economic inequality—general inequality and income polarization. As Wolfson (1994) shows, income polarization (and middle class decline) can happen without any change in the general inequality level, commonly measured by the Gini index.⁷ However, whereas prevailing political science literature uses the Gini index as the dependent variable when it studies political effects on income inequality, there is little research that employs income polarization or middle class decline as the dependent variable.

⁶ For classic partisan theory in political economy, see Hibbs (1977), Boix (1997), Bradley et al. (2003), Brady (2003), Brady and Leicht (2008).

⁷ For example, if the increase in population shares of upper income households and lower income households are proportional, a decline in population share of middle income households does not result in an increase in the general income inequality level, measured by the Gini index.

Second, middle class decline is not simply a neglected subject, but also an unexplainable phenomenon according to one conventional political economy theory. According to the median voter theory, middle class decline should not occur in democracies. The theory first assumes that both political parties and voters behave rationally based on their material interests. It then posits that distributional outcomes are determined by left and right parties' electoral competition to accommodate the policy preferences of the median voter, who is at the center of the income distribution. The median voter's preference is critical for electoral victory because it represents much of the middle class. That is, regardless of which party or parties control the government, all elected governments should pursue the material interests of the middle class. Specifically, whenever the median income becomes significantly lower than the mean income, governments are expected to function as equalizers by enacting more egalitarian redistributive policies—taxes on the rich to benefit the rest.⁸ Therefore, middle class decline, if it occurs continuously, is a problematic case that the median voter theory cannot explain.

More importantly, the fact that the middle class declines challenges a very basic assumption of the median voter theory. The theory presupposes that income distribution follows a normal distribution curve, where middle-income households comprise a plurality of the population, outnumbering, or at least equaling, the number of affluent or poor. However, if the middle has declined up to a point where its number becomes smaller than the poor or the affluent, major political parties have much less incentive to accommodate the interests of the middle class to win the election. It would be rational for parties to move to the position where the affluent or the poor are clustered in a bipolar income distribution.

⁸ For the median voter theory, see Black (1948), Downs (1957), Meltzer and Richard (1981) Milanovic (2000), Iversen and Soskice (2006), and Lupu and Pontusson (2011).

Because of the theoretical paucity in conventional political economy literature, economic and sociological theories have filled the lacuna. According to these theories, the main causes of middle class decline are the globalization of market and skill-biased technological change. Often these two theories are combined because globalization and technological change mutually reinforce each other's advancement. Information and transportation technology facilitate the process of global market integration, which in turn stimulates the process of technological change at global scale.

First, the prevailing economic theory on middle class decline is skill-biased technological change (SBTC) theory. Technological change, associated with the development of personal computers and related information technologies, has led to the replacement of low-skilled workers in the production and service industries with machines and computers. People who work in low-skilled jobs are being displaced because the demand for these jobs decreases with the introduction of new technologies, while those who have high-skilled jobs reap higher earnings because the supply for this kind of job falls short of its demand. ATM machines (which replaced bank tellers) and word processing software (which replaced typists and secretaries) are often cited as typical examples for this change.⁹ This change is universal across country and time because firms and individuals cannot abandon the productivity gains from technology in an increasingly competitive globalized market. And if middle class decline is caused by skill-biased technological change in the labor market, it should also be a universal phenomenon.

Second, according to sociological theories, global market integration is the main culprit causing middle class decline. Global market integration of trade, capital, and labor, which has dramatically increased since the late-1970s, contributes to greater income differentials and

⁹ For skill-biased technological change (SBTC) theory in economics, see Katz and Murphy (1992), Autor and Dorn (2009), Acemoglu and Autor (2010), and Cowen (2013).

income volatility within all countries. The increased mobility of capital across national borders undermines the bargaining power of labor and the capacity of governments to regulate the market and tax businesses. The reduced power of labor and government vis-à-vis business has resulted in the reduction of labor's share of income vis-à-vis business, on one hand, as well as in higher income inequality among workers, on the other hand (Bradley et al. 2003; Kristal 2010). Increased trade between countries threatens the wage levels and jobs of workers in high-income countries who have to compete with workers in low-income countries (Alderson and Nielsen 2002). Furthermore, the influx of low-skilled migrants increases wage differentials between low-skilled and high-skilled workers by displacing low-skilled native workers or depressing their wages (Borjas 1994).

The increased movement of goods and services, capital, and labor has increased, not only between developed and developing countries, but also between advanced economies (Brady et al. 2005; Brady and Beckfield 2005). As Marx (1848) and Schumpeter (1942) point out, the market is a force of creative destruction, which first destroys and reconfigures previous economic orders, devaluing existing wealth in order to create greater efficiency and new wealth. Economic globalization is a process that amplifies this creative destruction process as competition extends to the regional and global scale. Thus, the negative effects of globalization are not restricted to unskilled labor in advanced economies, but rather extend to skilled workers who have greater chances of unemployment and depressed wages.

Indeed, a recent empirical study found that economic insecurity extended to the broader population, including the middle class. According to Jacob Hacker (2006), since 1980, the number of households that experienced a 50 percent or greater reduction of household income over the past two years has increased in all income groups in the US. As increased job insecurity

has spread “from the manufacturing sectors beginning in the 1970s to the lower- and higher-end service sectors by the 2000s” (O’Rand 2011, 5), income insecurity has extended to the broader population. Increased income insecurity can result in downward class mobility from the middle- to the lower-income strata if a country lacks a generous social insurance system.

In sum, global market integration can contribute to a decline of the middle class by increasing income differentials and income insecurity. Middle class decline should be a converging trend across industrialized countries as global market integration proceeds. However, the empirical findings from cross-national and diachronic analyses of middle class decline in industrialized countries demonstrate that decline varies significantly by country and time, challenging both globalization and technological change theories.

If globalization and technological change have been common developments in industrialized countries since the 1980s, why have some countries experienced a greater contraction of the middle class, while others have experienced a much smaller decline and even an expansion? Why has the middle class grown and declined over time within particular countries despite continuing advances in computer technology and global market integration? These are the main puzzles driving this dissertation.

3. Argument

Why have some countries have experienced a larger contraction of the middle class, while others have experienced a much smaller decline, or even growth, since the 1980s? I argue that middle class decline is not an immediate consequence of the 2008 global financial crisis, but rather a long-term development of the past three decades, shaped by the interaction between

global market integration and national politics. Middle class decline varies significantly across countries and time depending on party control of government, which shapes wage-setting institutions and social insurance policies distinctively.

Specifically, due to distinctive ideological orientations of dominant right parties, whether Christian Democratic or secular (liberal or non-Christian conservative) right parties, governments have taken distinctive approaches to neoliberal policy reform ideas since the 1980s when monetarism emerged as an alternative economic policy blueprint for right-wing parties. Because of their ideological orientation, cross-class electoral base, and electoral competition within the political right spectrum, Christian right parties in government have been much less receptive to neoliberal policy ideas than secular right parties in government.

Christian Democrats have tempered income polarization by supporting broad coverage of collective bargaining agreements or by maintaining generous income-related social insurance benefits. As a result, countries where Christian Democratic parties dominate the political right spectrum have experienced a relatively smaller decline of the middle class, and even middle class growth, whereas countries where secular right parties dominate the political right spectrum have experienced substantially larger declines in the middle class. However, the prevention of drastic declines in the middle class has not been due to any intentional effort by Christian right governments to help the middle class grow. It has been rather due to their relative passivity or status quo-oriented conservatism toward newly emerged neoliberal policy ideas.

4. Research Goals and Outline of the Dissertation

This dissertation has two main goals—descriptive analysis of middle class decline and causal analysis of cross-national and diachronic variation of middle class decline since the 1980s. First, the descriptive analysis is a necessary step to prepare the statistical causal analysis by generating the dependent variable for causal analysis, i.e. the population share of the middle class. In addition, the descriptive analysis provides useful guidance to review existing causal explanations and to articulate an alternative one. More importantly, the descriptive analysis is necessary in its own right because the current literature generates controversy and confusion as to whether middle class decline (in terms of its population share) has actually occurred and, if so, 1) which part of the middle class has declined, 2) whether the decline is converging or diverging across countries and time, and 3) if it diverges, how variation looks among 22 industrialized democracies in Europe, America, and the Asia-Pacific region between the 1970s and 2010.

In terms of measurement, compared to existing measures of middle class decline (Wolfson 1994; Alderson et al. 2005; Pressman 2007), my measure offers a more comprehensive measure of the change in “people space.” My unique contribution is to show which particular income group (between extreme poor, poor, lower middle, middle, upper middle, affluent, and very affluent) has experienced a decline or expansion of its population share, something that is not possible using Wolfson’s polarization index or Pressman’s middle class measurement. Although Alderson’s metric allows one to measure the population share within each income group, it is less precise than mine. Recent empirical research (Piketty and Saez 2006) rejected the basic assumption of Alderson’s measure—that the growth rate of the median income between two time periods (e.g. 1970 and 2000) is the same as the growth rate of the top or the bottom income. I will explain my measure in detail in Chapter 4.

In Chapter 2, I will review various previous efforts to conceptualize and measure the middle class and clarify my concept and measure in detail. In Chapter 3, I explain the theoretical framework of this dissertation research. I introduce my data, measurement, and research methods in Chapter 4.

Chapters 5 and 6 present the empirical findings of two descriptive analyses. In Chapter 5, I compare the different population shares of middle class households in 22 industrialized countries between the 1970s and 2010. Middle class decline is presented in two distinctive income dimensions—the market income dimension and disposable income dimension in order to compare the role of market and the welfare state in affecting middle class decline.

Chapter 6 is also a descriptive analysis. It focuses on the economic insecurity of middle class rather than middle class decline in absolute numbers. I compare the extent to which middle class households depend on social transfer incomes provided by the welfare state in different countries and at different times. I will show that the income insecurity of the middle class has increased across countries between the late-1970s and 2010 and that the welfare state is increasingly critical for the middle class to maintain its economic status.

In Chapter 7, I present findings from statistical analysis to explain the extent to which party control of government, particularly between Christian Democratic parties and secular right parties in government, explains middle class decline across countries and time. I also identify the key policy-related variables that affect middle class size based on regression outcomes.

In Chapter 8, I illustrate the regression findings in specific country cases. In comparative analysis of four pairs of countries—the UK and Austria, Germany and the Netherlands, Switzerland and Denmark, and the US and Canada, I will show how two countries that once had

a similar size of middle class came to have very diverging outcomes—one experienced middle class decline, whereas the other had middle class growth.

In Chapter 9, I discuss the theoretical contribution and policy implications of my research findings. I conclude with the limits of this research and the future direction of research on middle class decline.

Chapter 2: The Concept of Middle Class

There is no consensus among scholars regarding what constitutes the middle class or how to define it—not to mention how the public defines their socio-economic status subjectively (Sosnaud et al. 2013). Therefore, it is necessary to begin by clarifying how I define and measure the middle class. First, following the economics literature, I employ an income-based conceptualization of the middle class. I define the middle class as those households that have income sufficient to purchase necessities, but not enough to hire a full-time (domestic) employee. By this definition, I measure the middle class as those households that have between 75 percent and 200 percent of the median income of the population. Second, I measure the population share of the middle class in the population rather than its income share of the national income. Third, I measure the population share of the middle class in terms of a market income dimension and a disposable income dimension separately. In this chapter, I explain why I chose specific definitions and measures as opposed to the alternatives.

1. Income-based Concept of Middle Class

Although an income-based class concept is widely used in public opinion polls, media, political discourse, and the threshold for welfare benefits, it is not commonly accepted among scholars. Whereas economists define the middle class purely in terms of the income dimension (Atkinson and Brandolini 2013), many sociologists have the view that income alone does not constitute social class, and give weight to other socio-economic factors. Among sociologists, the Marxist approach defines class in terms of its position in the capitalist mode of production and

labor market relations, while the Weberian approach defines class in terms of certain criteria that enable access to life chances, such as education and occupation (Wright 1997). Political scientists are mixed, using one of these three conceptualizations depending on their theoretical framework.

In the Marxist approach, the middle class is defined as a sub-stratum of the bourgeoisie class (*petite bourgeoisie*), which includes small business owners, independent land-owning farmers, and professionals in managerial positions. The Marxist concept is particularly useful for analyzing the power balance between business and labor (e.g. Kristal 2010). However, it is a difficult task to adequately define the middle class purely in Marxist terms (Wright 2005). This is primarily because the Marxist approach posits a dichotomous class division—capitalist (*bourgeoisie*) and working class (*proletariat*), depending on their relationship to the means of production, i.e. capital. In this framework, the *petite bourgeoisie* is assumed to reflect the ideological and material position of the capitalist. More importantly, the Marxist class concept is limited in its ability to analyze government actions based on non-material interests, such as religious interests or powerful policy ideas derived from scientific legitimacy and expert communities.

In the Weberian approach, social class is defined by occupation, education, and skill. According to Weber (1968, 927), a group of people belongs to a class when they have in common a specific causal component of their life chances. That causal component is not necessarily restricted to the material market relations; it need only be the basis of access to and exclusion from certain economic opportunities. The middle class can be defined as those who have medium-level skills (occupations), have achieved a medium-level of education, and have a

medium-level of income and social status. Goldthorpe and McKnight (2006, 110)'s occupation-based conceptualization of class is an example of this approach.

One of the problems of this approach is the comparability of the concept across countries and time. Among three countries where data are available from the LIS dataset, 496 different occupation categories are reported in the US, 280 in Germany, and only 31 in France (Atkinson and Brandolini 2013). More problematic still is the relevance to the current trend in social stratification. A recent report (Kurtz 2013) based on the Bureau of Labor Statistics data casts doubts on the relevance of Weberian stratification because stratification based on occupation, education, and skill level do not necessarily coincide with income-based stratification. Whereas less than one percent of taxi drivers had a college degree in 1970, about 15 percent of taxi drivers had at least a bachelor's degree in 2010. However, this does not mean that a taxi driver's income or skill-level has increased in correspondence with the value of the college degree. Recent research (Vedder et al. 2013) has shown that about 37 percent of employed college graduates in the US are working in jobs that require no more than a high school diploma.

I find the income-based class concept most appropriate for my analysis of middle class decline based on the following assumptions and research purpose. First, although I admit that income alone does not constitute social class, I still assume that income is the key factor that determines socio-economic class. An income beyond basic necessities can allow savings and the accumulation of wealth as well as better education and job opportunities. In this regard, the Weberian concept, which attributes social status to education, skill, and occupation, has limits, as these three factors do not coincide with each other or with income-based stratification (Atkinson and Brandolini 2013). Furthermore, I assume that modest income affords the middle class greater opportunities to acquire political knowledge through education, newspapers, books, and

associational activities. In other words, material conditions allow the middle class to participate more fully in the various activities associated with civil society and politics.

Second, compared to the Marxist concept, the income-based concept of middle class can better capture government policy effects on income distribution. This is particularly true for the period since the 1980s, as class-based traditional leftist politics have become less salient. In addition, the Marxist class concept is less useful for my interest in the ideological difference between right-wing parties—Christian Democratic parties and secular right parties—both of which represent business interests.

Lastly, I assume that government policy can affect the formation and maintenance of socio-economic status, independent of individual attainment, such as education and skill-level. In this respect, an income-based concept can better capture the effects of government policy on the fortune of the middle class, because redistributive policies are based on income-based tax and social transfer systems. For instance, policy debates about middle class tax cuts assume a middle class concept based on a certain level of household income. In other instances, social assistance and insurance benefits are also determined based on income level, rather than occupation or educational attainment. An income-based concept is particularly useful to differentiate the policy effects on the middle class by three types of social welfare system: the universalist system found in the Nordic countries, the previous earnings-related system employed in Continental Europe, and the means-tested system popularized in Anglo-American countries.

I acknowledge that, whereas my income-based concept of the middle class is understood among economists without controversy, from a sociological perspective, it is best understood as middle-income strata.

2. Income Boundaries of Middle Class

The income boundaries of the middle class are essentially relative and residual—neither poor nor rich. Still, the boundaries can be determined either by relative terms or fixed terms.

The most simplistic way to measure the middle class is to measure the median income based on the assumption that the income at the center of the income distribution represents the middle class income. However, the median income household's situation does not necessarily represent the middle class as a whole.

As an alternative, the economics literature measures middle class using fixed-income boundaries. Middle class is defined as the middle third, middle 40 percent, or middle 60 percent of the population when the population is lined up according to income.¹⁰ Here, the size of the middle class is a given value, whether it is 33, 40, or 60 percent of the population. This measure is used to capture the change in the income share of the middle class. Next, the income share of middle class is compared with the income share of the affluent (e.g. the top 20 percent of the population) or the income share of the poor (e.g. the bottom 20 percent of the population) or the income share of the middle class in previous years.

Alternatively, to measure change in the population share of the middle class, researchers use relative income boundaries around the median income. For example, the middle class can be measured as those households that have between 75 and 200 percent of the median income of the population. This relative measure makes it possible to capture the change in the population share of the middle class. Because I am interested in change in “people space” rather than “income space” in income distribution, I adopt this relative boundaries measure.

¹⁰ For example, Robert Solow defines middle class as middle 60 percent of the population, on the cover of Estache and Leipziger (2009).

However, it remains an issue whether the boundaries should be between 50 and 150 percent or between 75 and 200 percent of the median income. Previous research has employed various thresholds to set middle class boundaries. Among these, I use Atkinson and Brandolini (2013)'s relative boundaries measure, which is between 75 and 200 percent of the median income of the population. There are two reasons for this choice.

First, Atkinson and Brandolini's rationale for income boundaries is more reasonable than the existing alternatives. They set the lower boundary of the middle class as the income sufficiently beyond what is necessary to purchase necessities, or 75 percent of the median income. The poverty line threshold used by the Organization for Economic Cooperation and Development (OECD) is 50 percent of the median income of the population. Atkinson and Brandolini assume that if a household has 150 percent of the poverty line income, the household can maintain a living sufficiently beyond necessities. 150 percent of the poverty line income is 75 percent of the median income. This "sufficiently beyond poverty line" component is important because previous research often divides income groups into three—the poor, the middle, and the affluent—and then sets the threshold between the poor and the middle as the poverty line income. The problem with the measure with no buffer zone is that if a household receives a dollar beyond the poverty line income, the household is counted as a middle class household.

The upper threshold of the middle class is set as 200 percent of the median income because this household income enables the household to become an employer, that is, to hire a full-time (domestic) employee, which allows the family a qualitatively different life than a family with less income. With more than 200 percent of the median income, a family can hire a domestic employee paid at the minimum wage (assumed as 50 percent of the median income),

while maintaining a comfortable living with the remaining 150 percent of the median income. Using Atkinson and Brandolini's measure, the US middle class comprises those households that have income between \$34,453 and \$91,876 in 2013 (measured in terms of disposable household income).¹¹

My descriptive analysis in Chapter 5 will show that actual middle class decline has occurred in most country cases within the income boundaries of 75 percent and 200 percent of the median income of the population. This coincides Atkinson and Brandolini's middle class boundaries.

3. Market Income and Disposable Income

I measure the middle class along two distinctive income dimensions, separately: the market income dimension, which measures pre-tax and pre-social transfer income, and the disposable income dimension, which measures post-tax and post-social transfer income. This is for the purpose of comparing outcomes from market distribution and redistribution via welfare states (Bradley et al. 2003).

Market income means income earned from the market and includes labor income from wages, self-employment income, and capital income from rents, interest, dividends, and royalties.¹² Disposable income is the income remaining after paying income taxes and social insurance contributions (that is, direct taxes) and after receiving social transfer incomes. Social

¹¹ The author's calculation based on the LIS Database. The US data in the LIS Database are based on the US Current Population Survey. The dollar amount represents the value in 2013.

¹² Although market income in the economics literature includes private transfer incomes, such as family transfers and alimony, I exclude private transfers in order to determine the effects of market globalization and labor market institutions more precisely. Thus, market income in this study actually means factor income in the economics literature. However, I use the term market income to indicate factor income for the purpose of contrasting market outcomes with welfare state outcomes.

transfer incomes include both social assistance and insurance benefits for the poor, the retired elderly, the injured, the sick, the disabled, the unemployed, and for those who take maternity or family leave.

Chapter 3: Theoretical Framework

1. Overarching Framework

Middle class decline is a phenomenon that cannot be explained by the current political economy literature based on classic partisan theory or median voter theory. Alternative theories attribute the cause of middle class decline to common global developments such as globalization and technological change. However, both globalization and technological change theories are limited because they cannot explain national and diachronic variation in middle class decline. National variation, for example, is better explained by governments' economic and social policies in response to global market competition and technological change. I addressed the limits of the current literature in Chapter 1.

In this chapter, I propose an alternative political explanation to account for variation in middle class decline across countries and time. My explanation begins with the basic assumption of classical partisan theory that government policies vary depending on which party or parties control government. However, I revise classical partisan theory in terms of the specific historical context of neoliberal policy reforms since the 1980s. Unlike the conventional approach, which focuses on the dichotomous distinction between left and right political parties, I focus on the distinctive partisan effects of different types of right-wing parties in government—Christian Democratic parties and secular right parties. Secular right parties include liberal right parties and non-Christian conservative right parties. In revising partisan theory, I rely on the current policy studies literature on ideational politics, which emphasizes the influence of monetarist economic

ideas on neoliberal reform politics faced with stagflation in the 1970s (Hall 1993; Krugman 1995; Blyth 2001).

Of many possible ways that party control of government can influence policies differently, the existing literature suggests two specific policy arenas that are relevant to middle class decline—policies on wage-bargaining institutions and social insurance benefits. First, the existing literature on labor market institutions finds that the structure of wage bargaining settings affects wage differentials among wage earners—the more centralized the wage-bargaining processes (and the broader the coverage), the narrower the resulting wage differentials (Wallerstein 1999). If wage differentials widen, market income distribution becomes polarized and, as a result, the population share of the middle class declines. In addition, collective bargaining affects non-wage benefits as well as wage, such as social insurance benefits. Although global market integration and technological change may facilitate widening wage differentials among employees,¹³ government policies can counteract such widening wage differentials in the market by steering wage-setting institutions differently. Governments can either support or undermine existing centralized wage-settings and bargaining coverage (Thelen 2014).

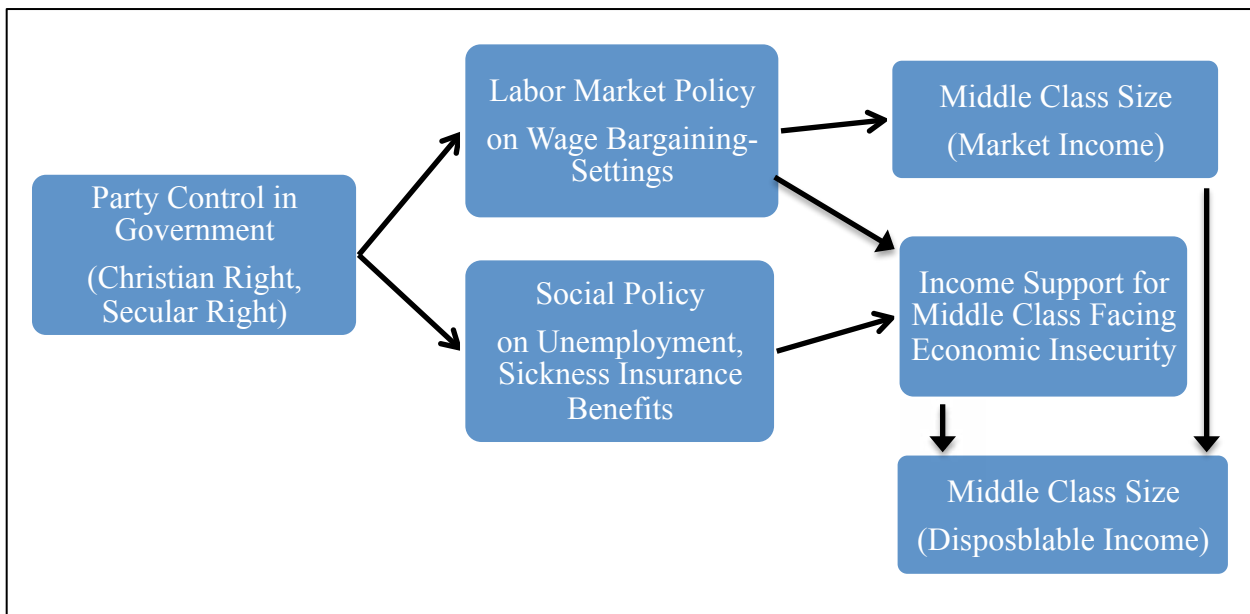
Second, the literature on welfare regime theory suggests that each country can have different redistributive outcomes depending on historically established institutional settings of the welfare state. Even though market income distribution becomes polarized, middle class decline may not occur if the welfare state supports broader swaths of the population, including the middle class (Pressman 2010). Although governments cannot make drastic changes to the existing institutional settings of welfare states, they can still make substantial changes to existing

¹³ For technological change theory, see Katz and Murphy 1992; Autor and Dorn 2009; Acemoglu and Autor 2010; Cowen 2013. For globalization theory, see Borjas 1994; Kristal 2010; Bradley et al. 2003; Alderson and Nielsen 2002.

social welfare programs in terms of benefit generosity and eligibility. Furthermore, governments can affect income distribution by ignoring newly emergent types of social risks, such as increased contingent and temporary employment, aging population, single parent families, working poor, immigrant workers, or increased job insecurity for middle class.

The chart below presents the basic structure of my theoretical framework.

Chart 3.1 Partisan Effects on Middle Class Decline



Middle class decline is a problematic case for existing partisan theories based on class interests, because they tend to examine partisan effects from a dichotomous framework of left and right, neglecting the diversity on each side of the political spectrum. In particular, they ignore the difference between Christian Democratic parties and secular right parties. As the left's power has diminished significantly since the 1980s, it is especially important to investigate diversity within the political right spectrum. Faced with the stagflation of the 1970s, secular right parties surged by advancing a neoliberal policy alternative and continued to rise with the

worldwide collapse of communist regimes in the late 1980s and early 1990s. Even in the Nordic countries, known as the most social democratic among industrialized democracies, secular right parties (liberal or non-Christian conservative) have been able to form governments by themselves or with centrist parties as junior coalition partners since 1980.¹⁴

Below, I will explain how Christian Democratic parties and secular right parties have diverged in their government policy orientations since the 1980s and then explain how these distinctive policy orientations can affect middle class decline.

2. The Ideational Turn in Economics and the Rise of Secular Right Parties

According to recent policy literature (Blyth 2001; Schmidt 2008), ideas matter in policy formation, often independent of material interest or structural conditions. Ideas help to explain changes in policy, political behavior, and institutions. Ideas matter particularly under conditions of uncertainty, when the preexisting policy paradigm fails to predict, explain, or prescribe solutions to emergent economic crises and lose the credibility. In that circumstance, it is scientific legitimacy endorsed by academics that gives credibility to a certain alternative policy paradigm (Krugman 1995). Ideas function as blueprints to build alternative institutions (Blyth 2001), political weapons to attack incumbent governments (Hall 1993), or as means to communicate directly with the public (Schmidt 2008).

Faced with stagflation, monetarist policy idea emerged as a viable alternative to Keynesian idea (Hall 1993). Following the early initiative by the Thatcher government in the UK and the Reagan administration in the US, secular right parties in industrialized democracies

¹⁴ For example, Denmark in 1982-1992, 2002-2010, and Sweden in 1992-1993, 2007-2011.

began to pursue dramatic neoliberal shifts in policy paradigms, extending the lessons of the monetarist idea on macro-economic policy arena into broader policy arenas.

2.1. The Ideational Turn in Economics: From Keynesian to Monetarism

The ideational turn in economics had preceded the neoliberal turn in policy. Monetarist economic ideas began to challenge Keynesian ideas in the late 1960s and became dominant theory in the 1970s in academic economics (Krugman 1995). Monetarist ideas challenged preexisting Keynesian ideas in their diagnosis and prescription for recession, depression, and stagflation (combined inflation and high unemployment).

According to Keynesian theory, recessions occur when business leaders lose confidence and start to hesitate to invest, leading them to accumulate cash instead, while households cut purchases and increase their holdings of cash, worrying about job loss. This generates a downward spiral of shrinking spending and income. The Keynesian prescription on recession is expansionary monetary policy. In depression, government itself should spend with borrowed money rather than just increasing money supply (Krugman 1995).

Monetarists criticized that Keynesian policies on the business cycle are unnecessary and even harmful. First, expansionary monetary policy will get reflected in the economy only after a long and unpredictable time period. As a result, monetary policy that attempted to smooth out the business cycle would actually end up making it worse. Second, expansionary fiscal policy is counterproductive because it would pull savings away from private investments into the purchase of government debt. The monetarist prescription on recession and depression is that no active

fiscal or monetary policy is needed. Instead, government only needs to keep the money supply steady.

Monetarists also predicted the emergence of stagflation, attributing it to expansionary government policies to reduce unemployment rates at the cost of a higher inflation.¹⁵ According to Milton Friedman, an increase in money gets reflected only in prices with no change in outputs because firms and workers would build that inflation rate into prices and wages. Thus expansionary policy to lower unemployment would end up with higher inflation without lowering unemployment. This prediction of Friedman actually happened during the 1970s across industrialized countries (Krugman 1995).

Friedman's monetarist idea was extended by Robert Lucas's rational expectations theory. According to the theory, recessions would be self-correcting because rational people will adjust their behavior to recover the economy. Once firms and workers realize that it is a recession, they would reduce prices and wage demands. As a result, the purchasing power of the money will be increased, with no need for government's monetary policy (Krugman 1995).

Given the complex mathematical approach and technicality of the monetarist theory, its economic policy prescription is simple and straightforward: government should not intervene in the market because any active government policy would be ineffective or harmful.

2.2. Monetarism: From an Idea to a Policy Paradigm of Secular Right Parties

Friedman's receipt of the 1976 Nobel Prize in economics epitomized the paradigm shift in academics. However, the ideational turn in academics does not necessarily result in real-world

¹⁵ The trade-off relationship between unemployment and inflation based on Phillips curve was accepted in Keynesian economics.

policy change. The ideational turn in policy was made possible because right-wing political parties and business communities found that the new economic idea fits to the traditional liberal ideology—a smaller role of government, but a bigger role of the market in the economy. Since the late-1970s business communities joined the effort to promote the newly emergent pro-market economic idea. They began to organize conservative think tanks, foundations, and media, and develop networks among them.¹⁶ In addition to ideological affinity, the scientific legitimacy of monetarism was a powerful resource to attack the incumbent government, particularly in countries where leftist governments could not manage the economy well. The political right brought the idea on the business cycle into a comprehensive neoliberal policy paradigm. They extended the theory on macro-economic policy to other labor and social policy arenas, undermining preexisting political economy institutions.

The monetarist theory became influential in economic policy making in the US because their theory “confirms and supports the traditional conservative political idea, which opposes big government role in the market” (Krugman 1995, 52). In Britain, monetarism provided “a new rationale for many measures the political right had long supported”: that public spending, the role of the state in the economy, the power of the trade unions should be reduced (Hall 1993, 286).

The Thatcher and Reagan governments are typical examples of right-wing governments that transformed policy paradigms in the 1980s. Both secular right governments pursued a common policy package that refuted the active role of government in the market, including anti-

¹⁶ The US case is well documented by Andrew Rich (2005a and 2005b) and Krugman (2009). For Swedish case see Blyth (2001). The Swedish Employer Association (SAF) raised revenue for propaganda and research in 1980s. They established the Center for Business and Policy Studies (SNS) and Timbro to support research that delegitimizes the social democratic Swedish model and disseminates the monetarist ideas to the press to influence the public opinion.

union labor policy, deregulation on business, privatization of public services, and freer trade and capital movement, and retrenchment of welfare states. (Hall 1993; Krugman 1995).

Their early initiative and electoral success opened the neoliberal path to the right-wing parties in other countries. In Denmark, “a confirmed neoliberal” reformer, Poul Schlüter led a center-right coalition government in 1982 (Thelen 2014, 61). He implemented a number of dramatic changes in macroeconomic and labor market policies, including diminishing union influence and weakening coordination through the social partners (Scheuer 1992). In Sweden, a conservative government in 1991 led by Carl Bildt pursued the economic policy prescribed by monetarism and rational expectations theory (Blyth 2001).

3. Christian Democratic Parties on Neoliberal Reforms

Not all rightist governments took advantage of the new policy ideas to pursue neoliberal economic and social reforms. Political enthusiasm for the new policy paradigm can vary between two types of right-wing parties—Christian Democratic or secular right parties.¹⁷ For Christian Democratic parties it is no big difficulty to take the lessons of monetarism on expansionary monetary policy and deficit spending. But, Christian Democratic parties are much more reluctant to take the wholesale neoliberal reforms for labor and social policy arenas than the secular right parties. Although both Christian Democratic parties and secular (liberal) right parties represent business interests, current literature offers two major reasons for Christian Democratic parties to

¹⁷ I classify both of them as right-wing parties in the sense that both Christian Democratic parties and secular right parties represent business interests. Secular right party is a residual category, which includes all right-wing parties except Christian Democratic parties. Secular right parties include liberal parties based on classic liberal ideology (different from American liberal represented by US Democratic Party), non-Christian conservative parties, and populist right-wing parties. Because the key independent variable of this dissertation research is the religious and historical components of Christian Democratic parties that work as an ideological restraint to pursue neo-liberal labor and social policy reforms, I categorize all other right-wing parties into a single category—secular right.

be less susceptible to neoliberal reforms in social and labor policy arenas—1) the religious component of party ideology, 2) historically formed cross-class constituents and the welfare state of their own creation. And I add a third reason: 3) electoral competition within the political right spectrum.

First, according to historical analysis of van Kersbergen (1995), the ideological foundation of Christian Democratic parties is Catholic social doctrine. Pope Leo XIII formulated Catholic social doctrine in his 1891 encyclical letter on rights and duties of capital and labor, *Rerum novarum*. The document often titled as *On the Condition of the Working Classes*, emphasized social justice, charity, solidarity, and subsidiarity to protect human dignity in capitalist order (Gabor 2012). In response to the rising socialist forces in late 19th century Europe, the doctrine intended to offer a non-socialist and non-liberal alternative to the widespread social and economic problems of capitalism. While the doctrine essentially embraced the capitalist order, it advocated Catholic versions of anti-capitalist ideas such as fair wages and corrections of social problems of capitalism such as poverty (van Kersbergen 1995). Initially, Christian Democratic parties emerged based on religious conflicts between the liberal state and members of the Catholic and Lutheran Church during the late-19th century. In addition to this religious cleavage, Catholic social doctrine allowed Christian Democratic parties to establish a popular electoral base. They made great success in electoral politics, offering Christian rather than socialist alternatives to liberalism (van Kersbergen and Manow 2009).

Of Catholic social doctrine, two principles are particularly relevant to understand Christian Democratic parties' response to neoliberal reforms in social and labor policy arenas. One is the Catholic principle of subsidiarity. It prefers a community and family-based approach to industrial issues through negotiations between trade unions and employer associations as

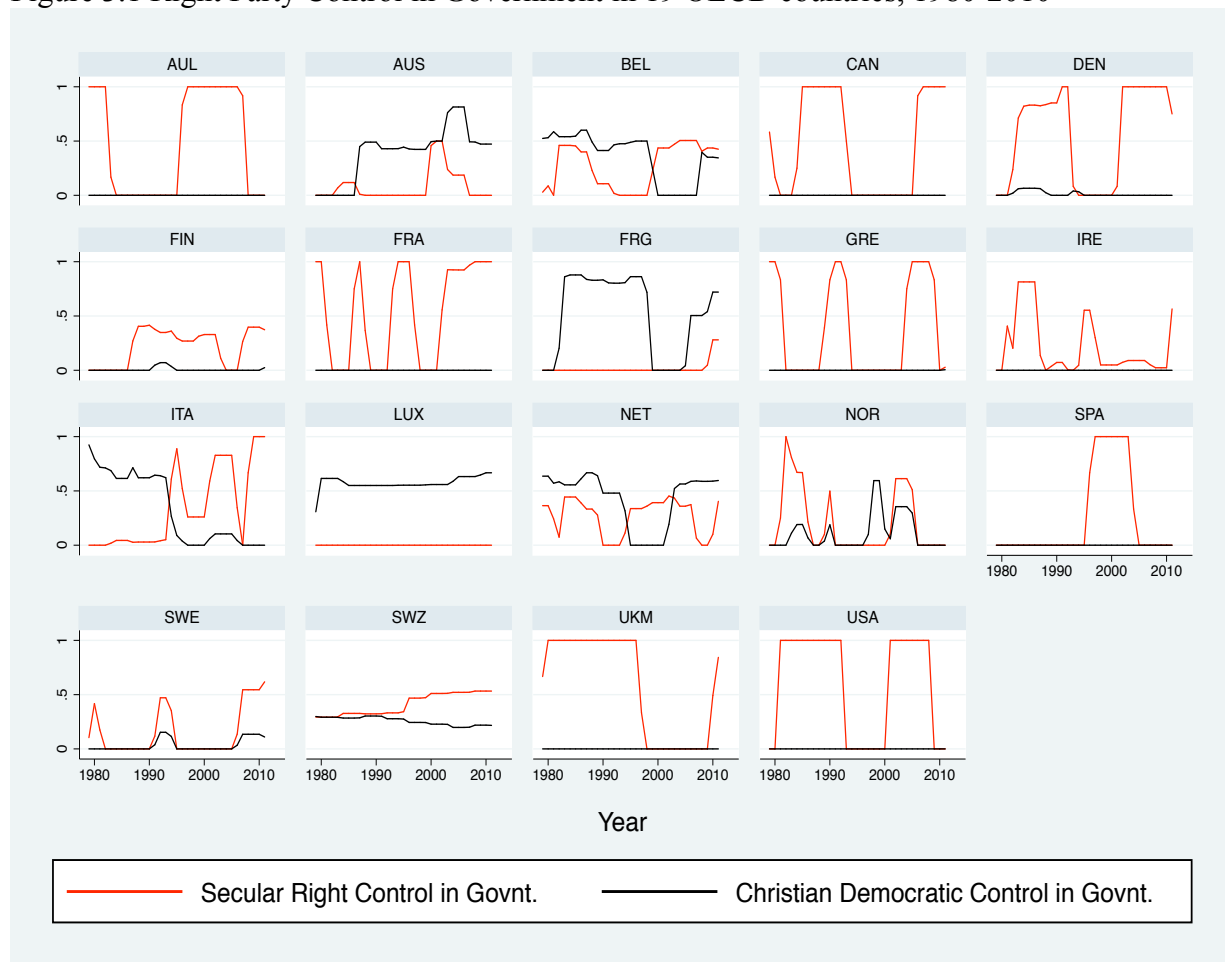
opposed to an individualist or statist approach (Van Kersbergen and Manow 2009; Gabor 2012). The principle of subsidiarity provides ideological ground to Christian Democratic parties' recognition of trade unions and centralized wage bargaining between social partners. To discipline and undermine trade unions, one of the key policy prescriptions of neoliberal policy reforms, is ideologically much less susceptible policy to Christian Democratic parties than is to secular right parties.

The other relevant principle of Catholic social doctrine is charity and solidarity. During the post-World War II period, Christian Democratic parties have not opposed welfare states, but rather have embraced them, as Catholic social doctrine provided legitimacy to state support for the poor and constraints against the excessive gains to the rich. The welfare state literature has posited that it was the combination of Christian Democracy and Catholic social doctrine that explains the generous Christian Democratic welfare states (Esping-Andersen 1990; Van Kersbergen 1995). Again, Christian Democratic parties have ideological constraints to enact another key policy prescription of neoliberal policy reforms, the retrenchment of welfare states.

Second, Christian Democratic parties have supported the interests of labor as well as of business because of their historically formed cross-class constituents, which include Catholic trade unions. Although Christian Democratic parties had been initiated by church elites aligned with conservative politicians, the leadership of the parties was soon taken over by lay Catholic members based on Catholic trade unions (Kalyvas 1996). Since then, these parties have continued to operate in the political center and right, while seeking the working-class vote. And relatively generous welfare provision via social insurance programs reflects the Christian Democratic parties' working class electoral base (Huber et al. 1993).

Third, the question of whether a country has a Christian Democratic government or secular right government is explained in large measure by political history of the country. Once a Christian Democratic party was established as the mainstream right party in the country, it continued to dominate the right spectrum. The same dynamic holds true for the countries where a secular right party dominates the right spectrum, such as Sweden or Denmark.

Figure 3.1 Right Party Control in Government in 19 OECD countries, 1980-2010



Source: Author's calculation based on CWS dataset.

The vertical axis represents party control—1 indicates full control of government; 0 indicates no control of government. Red line represents secular right party control; black line represents Christian Democratic control. Country abbreviations: Australia (AUL), Austria (AUS), Belgium (BEL), Canada (CAN), Denmark (DEN), Finland (FIN), France (FRA), Germany (FRG), Greece (GRE), Ireland (IRE), Italy (ITA), Luxembourg (LUX), The Netherlands (NET), Norway (NOR), Spain (SPA), Sweden (SWE), Switzerland (SWZ), the UK (UKM), and the US (USA)

However, as Figure 3.1 shows, among those countries where Christian Democratic parties are established as a major political party, some Christian Democratic parties face political competition within the political right spectrum. In the Netherlands, Belgium, Norway, and Austria, it gets less likely that these two parties preside in the same government since 1980.

Additionally, from a simple correlation analysis, I found that the relationship between the two right-wing parties has become more of a zero-sum rather than a symbiotic. Of 19 countries in Figure 3.1, I examine 12 countries, excluding seven countries where one type of right-wing party is absent whether it is Christian Democratic or secular right.¹⁸ Based on data from the Comparative Welfare State Dataset, I measured the party share in government on a 0 to 1 scale for each country for the years between 1960 and 2010. I classified parties into three different categories—leftist, Christian Democratic, and secular right.¹⁹ Then I compared the party share in government, which represents relative political power of the party in government policy-making. The party share in government can result from either electoral outcomes or coalition strategy.

Table 3.1 presents the correlation between parties' shares in the government in two periods: pre-1990 and the post-1990 period. Whereas Christian Democratic parties' share and leftist parties' share have become much less negatively correlated (-0.5186 to -0.3637), Christian Democratic parties' share and secular right parties' share have become more negatively correlated over time (from -0.2321 to -0.3007). This means that an increase in Christian Democratic Party share in government reduces secular right party share as much as the leftist party share in the post-1990 period.

¹⁸ The excluded seven countries are Australia, Canada, Ireland, Luxembourg, Spain, the UK, and the US.

¹⁹ I basically follow the CWS's classification of party identification—Christian Democratic, leftist, and secular Right. What I change from the CWS is that I combine all Christian Democratic parties into one category, while the original CWS scheme divides Christian Democratic parties into four groups: Christian center, Catholic center, Christian right, and Catholic right.

This can be explained by an increasingly intense electoral competition between Christian Democratic parties and secular right parties. Or it may be the outcome of a coalitional strategy to maintain distinctive political identity between different right-wing parties. In either case, the relationship between Christian Democratic power and secular right party power in government has become a more zero-sum-like relationship than symbiotic in the post-1990 period.

Table 3.1 Party Control in Government between Christian Democratic and Secular Right Parties

	Years	Secular Right Party Share in Government	Leftist Party Share in Government
Christian Democratic Party Share in Government	1960≤1990	-0.2321*	-0.5186*
	1990>2010	-0.3007*	-0.3637*

Source: the author's calculation based on the Comparative Welfare State dataset.

* p<0.01

4. Centralized Wage Bargaining and Conservative Welfare Regimes

Previous research suggests that centralized wage bargaining and the welfare state regimes can affect middle class decline. Centralized wage bargaining may produce a larger middle class by reducing income differentials among wage earners. At the same time, the welfare states pursued by social democratic and conservative welfare regimes can effectively prevent middle class decline by compensating the income loss of the middle class with generous social insurance programs such as unemployment insurance, sickness insurance, and pensions.²⁰

²⁰ By pensions, I mean mandatory public programs only, excluding occupational pensions. Following the Comparative Welfare Entitlements Dataset's formula, Finnish earnings-related fund is included because it is nominally private but run as public. Mandatory private savings schemes in Australia and Switzerland are not included because of variable returns.

4.1. Centralized Wage Bargaining and Middle Class Decline

Centralized wage bargaining has been studied for its wage-constraining and wage-equalizing effects (Wallerstein 1999). Centralized bargaining settings restrain wage increases in a more productive sectors while helping to increase wage levels in less productive sectors (Calmfors and Driffill 1988; Busemeyer and Iversen 2012). Although centralized wage setting is mostly a European institution, the US also experienced a similar institution during the World War II period. Goldin and Margo (1991) found a great wage-compression in the US during the 1940s. They attribute this great wage-compression to the National War Labor Board's centralized wage setting during the wartime.

Centralized wage bargaining has two components to produce wage-equalizing effects. One is the degree of centralization: whether the wage bargaining is coordinated at national level, industry level, or firm level. The more centralized, the higher the wage-equalizing effects. The other component is the bargaining coverage, the share of employees covered by wage bargaining agreements or the share of employees with the right to bargaining. The more employees covered by the bargaining, the higher the wage-equalizing effects.

This distinction is increasingly important because the degree of centralization has not changed much, while the coverage of collective bargaining has declined substantially in many countries throughout the liberal reforms since the 1980s. In this regard, the centralized wage bargaining do not necessarily produce wage-equalizing effects because the bargaining outcome now covers only a part of wage earners, in David Rueda's term (2005), labor market insiders, excluding growing number of labor market outsiders such as part-timers, temporary jobs, and subcontractors. Thelen (2012) also discusses this dual development in labor markets between

secure and insecure labor, which undermines the solidarity among workers even in a coordinated market economy like Germany.

4.2. The Welfare State and Middle Class

The welfare state literature suggests that the middle class is not necessarily excluded from social welfare benefits. The welfare state is not just a tool to transfer economic resources from the wealthy to the poor, but about “pooling various risks across the class lines” (Baldwin 1990). As a social insurance system against the various risks of industrial society—unemployment, sickness, disability, and retirement—the welfare state includes the middle class as an important component. Furthermore, because its encompassing design includes both the poor and the middle class, the welfare state is made politically and fiscally sustainable. The political left in the Nordic countries strategically pursued this encompassing design (Korpi and Palme 2003). However, a strong political left is not a necessary condition for this encompassing design. It can also be made possible due to a universal desire for welfare policies that transcend leftist politics because “risk incidence and the capacity to shoulder the risk go beyond class lines” (Baldwin 1990).

Welfare regime theory offers an explanation for the varying effects of the welfare state on the middle class depending on welfare regime types: liberal, conservative, and social democratic (Esping-Andersen 1990). Each type has developed distinctive welfare programs and institutions. And once the regime is historically developed, countries maintain their distinctive institutional features.

First, the liberal welfare regime provides welfare benefits mainly to low-income households, through its means-tested social assistance programs. Its modest social insurance benefits are not sufficient for the middle class to rely on. Moreover, most welfare entitlements are not considered as a social right, but rather as a stigma, normatively undesirable. Therefore, the middle class seeks social protection from market-based insurance rather than from the state.

In the conservative welfare regime, social rights are not seriously contested, but social rights are attached to class, status, or gender roles for the purpose of preserving existing status differentials. This is why the literature named it as the “conservative” welfare regime. Whereas the literature focuses on the negligible redistributive effects of the conservative welfare regime, I focus on its social protection for the middle class. Its earnings-related social insurance benefits are sufficiently reliable when the middle class needs social protection. I expect that the very conservative design to preserve status differentials should keep the middle class from declining when they would face various social risks such as job displacement or sickness. However, because these theoretically expected effects of social insurance policies on middle class decline are not empirically tested yet, I first analyze to what extent middle class households actually depend on social transfer incomes in Chapter 6 and then statistically test the social insurance policy effects on middle class decline in Chapter 7.

Third, in social democratic welfare regimes, a universalist social welfare system is pursued for all workers including those in the middle class for the purpose of de-commodification and social rights. Services and benefits were increased to support the new middle class [white-collar workers]. In turn, this encompassing institutional design of the social insurance system generates broad political support for the system (Pierson 1996; Korpi and Palme 2003).

In sum, while both social democratic and conservative welfare regimes are expected to provide social protection to the middle class, albeit with different aims and mechanisms, the liberal regime usually provides limited social protections to the middle class. Thus, I expect that the effects of the welfare state in attenuating middle class decline in the market income dimension will be larger in social democratic and conservative welfare regimes than in liberal welfare regimes.

In addition, although the welfare regime literature emphasizes the deterministic nature of institutional characteristics for each regime type, I focus on the partisan effects on social policy change that influence middle class decline. For instance, unemployment insurance is a typical social insurance program that covers the middle class as well as the poor. Whereas the secular right government in the UK (a liberal welfare regime country) decreased the generosity of its unemployment benefits when their unemployment rates went up during the 1980s, the Christian Democratic government in Germany (a conservative welfare regime country) did the opposite by increasing benefits for the same period. This time-variant social change within the country is not fully explained by the time-invariant typology of welfare regimes. I expect that the ideological difference between the two dominant types of right-wing parties explain social policy change, particularly since the 1980s, and the following chapters examine this issue.

Chapter 4: Cases, Data, Measures, and Methods

In this chapter, I explain the data, data sources, measurement, and methodology that I use for three stages of empirical analysis—descriptive analysis, statistical analysis, and case study—on middle class decline in industrialized democracies between the late-1970s and 2010. In the descriptive analysis stage, I use household survey data from the Luxembourg Income Study (LIS) Database, which is a cross-sectional time-series dataset. The descriptive analysis comprises two parts—an analysis of the population share of the middle class (middle class size) and an analysis of the economic insecurity of the middle class. In the first part of the descriptive analysis, I analyze middle class decline by measuring the population share of the middle class in 22 industrialized democracies over the past three decades. In the second part, I analyze how the economic insecurity of middle class has changed across countries over time by measuring the social transfer income-share of middle class household income, which I term the “welfare reliance of (or the welfare state contribution to) the middle class” for the same countries and time period.

In the statistical analysis stage, I produce independent, control, and dependent variables based on data from LIS Database, the Comparative Welfare State Dataset (CWS), the Comparative Welfare Entitlement Dataset (CWED), and the Organization for Economic Cooperation and Development (OECD) International Migration Dataset. First, I estimate key explanatory variables except party control of government, using both fixed effects and random effects models. Second, I estimate the effects of party control of government on middle class size against other explanatory variables for two different time periods—all years and the post-1990 period, using random effects models. Third, I examine the effects party control of government on

key explanatory variables including wage-bargaining coverage and social insurance benefit levels.

In the final case study stage, I illustrate the findings of these regression analyses in four paired country cases, using the method of difference.

Below, I provide a detailed explanation of the data, data sources, measurement of variables, and methodology for the descriptive analyses and statistical analyses, sequentially.

I. Descriptive Analysis

1. Middle Class Decline in Terms of Population Share

1.1. Data from the Luxembourg Income Study (LIS) Database

The descriptive analysis is based on household income survey datasets from the LIS Database. The LIS staff collects income survey datasets from high- and middle-income countries and makes them comparable across countries and time (harmonization). The LIS Database contains detailed information on household and individual characteristics and their income sources.

Currently, LIS provides income data from 48 countries, of which I have chosen 22 industrialized democracies, categorized as high-income countries by the World Bank.²¹ The data are cross-sectional time series data, but LIS does not provide annual data. Instead, income data are provided in “waves.” The first wave—data year—is the years around 1980; the second is the

²¹ For the 2016 fiscal year, high-income economies are those with a gross national income (GNI) per capita of \$12,736 or more. See the World Bank classification at <http://data.worldbank.org/about/country-and-lending-groups>.

years around 1985; the third is the years around 1990, the fourth is the years around 1995; the fifth is the years around 2000; the sixth is the years around 2004; the seventh is the years around 2007; the eighth is the years around 2010; the ninth is the years around 2013. My analysis includes datasets from the first wave to the eighth. I do not include the ninth wave data because it is currently in the process of harmonization. Additionally, for the period before the first wave (datasets from the late-1960s through the 1970s), LIS provides data for five countries, based on the historical databases of those countries. These five cases are the UK, the US, Sweden, Germany, and Canada.

The LIS data are publically accessible for researchers of financially contributing countries and institutions, and for students worldwide after a registration procedure.²² Given the careful harmonization of national income surveys, use of the LIS data to study income trends is widely accepted (Bradley et al. 2003). Despite these advantages, the LIS data have some limitations. LIS provides unbalanced panel datasets, with countries providing different numbers of observations according to data availability; e.g. there are a minimum of one and a maximum of eleven observations per country. In addition, the starting year of each dataset differs across countries; some countries have datasets as far back as 1967, while others have datasets beginning in 1987.

1.2. Cases

The 22 countries treated here include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, Norway,

²² The LIS database is accessible at <http://www.lisdatacenter.org>

Spain, South Korea, Sweden, Switzerland, Taiwan, the UK, and the US. The time period begins in 1967 and ends in 2010.

This selection of cases reflects the following considerations. First, I narrowed cases to those countries that were 1) economically industrialized and 2) established electoral democracies. Second, to the extent possible, I attempted to include theoretically relevant variation among the countries, such as 1) type of welfare regime, 2) European Union membership, 3) electoral system—proportional representation or single-member district system, and 4) type of labor market institutions—coordinated market economy or liberal market economy.

The resulting middle class size dataset comprises 160 observations on 22 countries. Each country has observations for at least five different time-points except South Korea and Japan, which have only one time-point observation each.

1.3. Measurement

I measure the population share of eight income groups on a continuum rather than simply measuring middle class share. I divide the population into eight income groups depending on income relative to the median income—deep poor (1), poor (2), near poor (3), lower middle (4), middle (5), upper middle (6), affluent (7), and very affluent (8). Of these eight income classes, I combine lower middle, middle, and upper middle-income class into a composite middle class group whose income is between 75 percent and 200 percent of the median disposable household income of the country in a given year. I measure the population share of households in each income class along with the population share of the middle class.

The deep poor class is defined as those households that have 25 percent of the median disposable household income or 50 percent of the poverty line income, which is equivalent to the official deep poverty line of the OECD, and also equivalent to a household income of \$11,484 in the US in 2013. The poor class is comprised of those households that have above the deep poverty line income but less than the poverty line income, which is measured as those households that have income between 25 percent and 50 percent of the median disposable household income. The income of the poor class is equivalent to income between \$11,484 and \$22,969 in the US. The near poor are those households that have beyond the poverty line income but less than 75 percent of the median household income, or income between \$22,969 and \$34,453.

The lower-middle class is defined as those households that receive between 75 percent and 100 percent of the median income, or between \$34,453 and \$45,938. The middle of the middle class is those households that have between 100 percent and 150 percent of the median disposable household income, or between \$45,938 and \$68,907. The upper-middle class is comprised of those households that have between 150 percent and 200 percent of the median disposable household income, or between \$68,907 and \$91,876.

The affluent class is comprised of those that have between 200 percent and 400 percent of the median income and, finally, the very affluent have more than 400 percent of the median disposable household income, or above \$183,752 in the US in 2013.

1.4. Methods

The first part of the descriptive analysis has two purposes. The first is to find out what happened to the middle class in terms of its population share change. It aims to tell whether the middle class is actually hollowing out and, if so, whether it is a converging trend across countries driven by a common development of global market integration and skill-biased technological change or not. If middle-class decline varies, how does the variation differ depending on country and time? In addition, I aim to find how the change follows different patterns along two distinctive income dimensions—market income and disposable income.

1.4.1. Alternative Methods to Measure the Middle Class Decline

Descriptive analysis is necessary before conducting a causal analysis because whether the middle class has declined or not needs to be established empirically. Part of the controversy comes from conceptual confusion among scholars depending on whether their interest is in change in the income share or in the population share of the middle class and what relative boundaries should be taken to measure the middle class. However, a more critical issue is the methodological limits of the previous measures to describe middle class decline.

The methods employed in the current literature (Wolfson 1994; Alderson et al. 2005; Pressman 2007) are insufficient or too imprecise to determine whether the middle class population is actually hollowing out (via income polarization). Wolfson's research (1994) was the first study to demonstrate the conceptual and empirical difference between general income inequality and income polarization. He also offered a method to measure the degree of income polarization. However, Wolfson's polarization index does not allow us to measure where along the income distribution decline (or growth) has occurred. In addition, it does not allow us to

measure whether middle class decline has resulted in an increase of the affluent class or the poor income class.

More recently, Alderson et al. (2005) employed the method that Handcock and Morris (1999) developed for a different research purpose, in order to identify where distributional changes have occurred. For the UK and the US cases, they compare the population share of households in the baseline year (1970) to the share of households in the comparison year (2000) in each decile of the income distribution. They first divide households in 1970 into deciles of the distribution of household income. Then, they deflate income in 2000 “by the ratio of the 1970 median to the 2000 median.” Finally, they fit the 1970’s decile boundaries to the 2000 distribution of households. In this way, they distinguish between growth, stability, and decline at specific points along the distribution. They concluded that the decline occurred in the middle deciles of the income distribution more drastically in the UK than in the US.

Although Alderson, et al. (2005)’s measure makes it possible to measure the population share in each income decile, it turned out not to be a precise measure. Recent empirical research (Piketty and Saez 2006) rejected the basic assumption of Alderson et al.’s measure that the growth rate of the median income is the same as the growth rate of the top or the bottom income between two time periods (e.g. 1970 and 2000). In fact, the income of the top income class has grown much faster than the incomes at the middle and the bottom have declined in the US between 1970 and 2000.

Finally, Pressman’s research (2007; 2010) is the one of the first studies that measured the population share of the middle class directly and analyzed middle-class decline in a number of countries. Drawing on the LIS datasets, he measured middle-class size as the population share of households that have between 75 and 125 percent of the median disposable household income.

However, like Wolfson's polarization index, Pressman's measure cannot tell at which points on the income distribution middle-class decline has occurred. It could be between 75 and 100 percent of the median income or between 100 and 125 percent of the median income. It also cannot tell whether the result of middle-class shrinkage is upward moving (an increase in the share of the affluent at the cost of middle-class contraction) or downward moving (an increase in the share of the poor at the cost of middle-class decline).

Another issue regarding Pressman's measure is that the upper threshold of the middle class, 125 percent of the median income, is conceivably too low. In 2013, it would amount to \$65,000 for a household income in the US. Pressman took these boundaries following Lester Thurow's precedent in a *New York Times* article (1984), "The Disappearance of the Middle Class," but neither he nor Thurow provides any coherent logic for these boundaries other than a mechanical calculation of plus and minus 25 percent of the median income. Thurow (1984)'s reasoning is that the boundaries were frequently used, but did not provide further explanation regarding who frequently used this middle-class measure and why. Without a coherent logic supporting this measure, it seems arbitrary.

As a more accurate alternative, I measure and graphically illustrate the population share of the households in eight income classes on a continuum from the deep poor to the very affluent. Because the income classes are distinguished by their ratio relative to the median income, not by fixed income deciles or quintiles, my measure avoids the empirically incorrect extrapolation employed by Alderson, et al. In this unique fashion, my analysis measures the change in the people space of income distribution more comprehensively and systematically than did previous measures. I show which particular income class (deep poor, poor, lower middle, middle, upper middle, and affluent) has experienced stability, a decline, or an expansion of its

population share. In addition, the middle-class boundaries between 75 percent and 200 percent of the median household income are backed by the coherent reasoning of Atkinson and Brandolini (2013) and by the empirical outcomes from my descriptive analysis.

1.4.2. Design of Analysis

The first task of the descriptive analysis of middle-class decline is to find out whether and how an overall trend of the change across countries is different between the two income definitions. I intend to test Pressman (2010)'s claim that the middle class has declined in terms of market income, whereas it has not declined in terms of disposable income due to the effects of welfare states policies. I graphically illustrate the population share of the middle class in each country-year in terms of market and disposable income dimensions and compare the overall trend between the two income dimensions among countries.

The second task is to focus on divergence across countries and time rather than an overall global trend. To show national variation, I compare the population share of the middle class in different countries at one time point (first at around 1980 and then at around 2005). Then, to find national variation, I compare the two time points within each country. Finally, I compare the rankings of countries in terms of their relative middle-class sizes (the larger the middle class, the higher the ranking) at different time points—around 1980, around 1995, and around 2005. In this way, I aim to analyse cross-national and diachronic change together, illustrating where the middle class has declined and where it has grown over the past three decades.

The third task is to assess the descriptive outcome in terms of its theoretical implications—whether cross-national variation in middle-class size follows welfare regime

theory's typology and whether it coincides with the general inequality index, the Gini coefficient.

2. Middle Class Insecurity and the Welfare State

The second part of descriptive analysis aims to assess whether the middle class has become economically insecure and to what extent social insurance protections are needed to maintain its economic status. There is a lack of empirical research establishing the economic insecurity of the middle class. Although Hacker (2006) finds that economic insecurity has increased in all income groups including the middle class in the US since 1980, his analysis has not focused on the middle class and is limited to the US case.

I expect that globalization and technological change have increased income volatility in all income groups, including the middle class, based on the existing literature (Hacker 2006; O'Rand 2011). I also expect that as the middle class has more chances of job displacement or unemployment, the role of social insurance policy has become increasingly important for middle class households faced with incidents of income loss to maintain their economic status.

I measure the share of social transfer incomes in total household income for middle class households, which I term the "welfare reliance of the middle class" or "the welfare state's contribution to the middle class." I compare the outcomes from different countries and different time periods. I also compare welfare reliance (or the welfare state contribution) between the middle and the poor classes. By making these comparisons, I aim to show the varying relationship between the welfare state and the middle class across time and countries.

2.1. Data

I use data from the LIS Database for this analysis. LIS provides detailed information on the income composition of household income, including social transfer incomes. The unit of analysis is the country-year.

2.2. Cases

The case includes 20 industrialized democracies between the 1970s and 2010 in the first part of descriptive analysis—Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, Norway, Spain, South Korea, Sweden, Switzerland, Taiwan, the UK, and the US. This selection of cases considers a diversity of welfare regime types. For the Korean and Japanese case, cross-time analysis is not possible because these two countries only have one time-point observation.

2.3. Measurement

I develop a unique measurement to analyse the income insecurity of the middle class in relation to the role of welfare states, particularly the income contribution of social transfer programs to the maintenance of the economic status of the middle class. I measure the average share of social-transfer incomes in disposable household income for middle-class households for each country-year.

By this “welfare state contribution” measure, I aim to determine to what extent middle-class households depend on the welfare state to maintain their economic middle-class status and how the degree of the middle class’s welfare reliance has changed over time in different countries. This measure represents the welfare state contribution to the middle class as well as

the welfare reliance of the middle class. Although the welfare reliance measure is not a direct measure for the income insecurity of the middle class, it represents a compensated part of the insecurity. The welfare reliance measure also represents the welfare needs of the middle class, though it only constitutes the supported part of welfare needs.

2.4. Methods

In the household-level micro-data analysis, I first describe cross-national and diachronic variation in the welfare reliance of middle-class households. Through this analysis, I can tell whether the middle class has become economically insecure between 1969 and 2010 and to what extent social insurance policies have become important determinants of middle-class decline. Based on the LIS data, I calculate the welfare reliance of the middle class at two different time points: the earliest and latest observations available for each country, where time point 1 begins between 1969 and the mid-1990s, depending on data availability, time point 2 is between the mid-2000s and 2010. The first comparison, between the two time points, finds long-term variation. In addition, I compare the welfare reliance of the middle class between 2007 and 2010 to assess the effects of the 2008 global financial crisis on the middle class' welfare reliance.

The second comparison is cross-class comparison between the poor and the middle class in terms of the welfare reliance. I calculate the average share of social transfer income in low-income households for the same two time points (the earliest and latest observations available for each country).

The last comparison is cross-age group comparison between all ages and working-age middle class. The working-age middle class is defined as those households whose age is under sixty. I compare the welfare reliance of the working-age middle class with that of all age groups.

This analysis expects to show to what extent non-pension social transfers contribute to middle-class income.

II. Regression Analyses

For the statistical analysis, I perform two sets of regression analyses to estimate the effects of party control in government on middle-class decline. The first set of regressions estimate the effects of policy variables including centralized wage bargaining and social insurance benefits, using fixed effects (FE) and random effects (RE) models. This is for the comparison between within-country variation and cross-country variation in explanatory variables. The second set of regressions estimate the effects of party control in government against other explanatory variables, for two time periods—all years and post-1990 period. I expect positive effects of Christian Democratic control in government and negative effects of secular right control in government on middle class size. In addition, I expect larger partisan effects in the post-1990 period.

Finally, I examine the partisan effects on key policy variables, including bargaining coverage and social insurance benefit generosity.

1. Data

For this regression analysis, I use data from the Comparative Welfare State Dataset (CWS), Comparative Welfare Entitlements Dataset (CWED), and the Organization for Economic Co-operation and Development (OECD) International Migration Dataset, in addition to the Luxembourg Income Study (LIS) Database. I generate the dependent variable from the LIS datasets. I produce explanatory variables from the CWS and the OECD. The unit of analysis is a country-year. The time period starts in 1967 and ends in 2010.

The CWS, produced by Evelyne Huber, John D. Stephens, and David Brady, is one of the most comprehensive datasets in welfare state studies. It is publicly accessible from the website of the Center for European Studies at the University of North Carolina.²³ It provides data on party control of government, wage-bargaining settings, and an index of the global market integration of trade and capital for 23 industrialized democracies from 1960 to 2011. Of those 23 countries in the CWS, 21 countries are matched with LIS. The OECD Statistics for Demography and Population provides the International Migration Dataset, from which I draw data on the immigrant population share in the 21 countries common to both LIS and CWS. The OECD dataset is also publicly accessible.²⁴

Produced by Lyle Scruggs, Kati Kuitto, and Detlef Jahn, the Comparative Welfare Entitlements Dataset (CWED) provides data on the structure and generosity of social insurance benefits in 33 countries around the world. CWED is also a publicly accessible dataset.²⁵ Of the 33 countries in the CWED, only 17 countries match the 21 countries where both LIS and CWS provide data. From CWED, I get data on the income-replacement rate of the three major social insurance programs—unemployment insurance, sickness insurance, and pensions.

²³ CWS dataset is accessible at <http://www.unc.edu/~jdsteph/common/data-common.html>

²⁴ OECD dataset is accessible at <http://stats.oecd.org/#>

²⁵ CWED dataset is accessible at <http://cwed2.org>

2. Cases

Of the 22 industrialized countries that I examine for the descriptive analysis, I examine 17 countries for the statistical analysis. Three East Asian countries are excluded. South Korea and Japan are excluded because each has only one time-point observation from LIS, making it impossible to conduct a time series analysis. Taiwan is excluded because CWS does not provide data for the country. There is also a theoretical reason to exclude the Taiwanese case. Taiwan's party politics are based primarily on ethnic and national identity rather than on political economy policies of distribution and redistribution, substantially distinct from the other industrialized democracies under study. In addition, Greece and Luxembourg are excluded because data on social insurance benefit generosity are not available for these countries. The finalized 17 cases include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland, the UK, and the US.

3. Methods

I seek to understand why some countries have larger or smaller middle-class sizes, and why middle-class size increases or decreases over time. I estimate the partisan effects on middle class size in terms of disposable income dimension, utilizing cross-sectional time series data on 17 advanced democracies from 1967 to 2010. Due to the limited observations for the dependent variables, cases are unevenly distributed across 17 countries and 44 years. Due to the limited observations for the dependent variables (N=95), cases are unevenly distributed, an average of 5.6 observations for 17 countries. Because of heteroscedasticity issue for this type of data,

ordinary least squares (OLS) regression is inappropriate (Hsiao 2003). To treat the issue, I employ fixed effects (FE) and random effects (RE) models.

I perform two sets of regression estimations—one without partisan effects, the other with partisan effects. For the first set of regression, I estimate explanatory variables except partisan control variables on middle class decline with a focus on the effects of centralized wage bargaining and social insurance benefit generosity. Here I employ both random effects and fixed effects models with robust errors. Although FE models are more robust than RE models, RE models perform better when both cross-national and time variations are essential because FE models remove the variation between countries with country-specific constants (Beck and Katz 2001; Brady and Leicht 2008). The main goal of this regression is to assess the effects of key explanatory variables along with control variables. In addition, by comparing the outcomes between FE and RE models, I expect to tell whether the effects are driven by national variation or time variation.

In the second set of regressions, I estimate the partisan effects on middle class decline. I include three types of party control in government—Christian Democratic Party, secular right party, and leftist party. When assessing each partisan effect, I regress for the two different time periods—all years and post-1990 period. This is because I expect that Christian right parties began to have diverging effects on middle class decline from secular right parties due to their reluctance to adopt neoliberal policy ideas since the 1980s.

I employ RE models with robust clustered errors to estimate the partisan effects because FE models are inappropriate when time-constant explanatory variables are essential.²⁶ Unlike the

²⁶ FE models are inappropriate when time-constant factors in X_{it} are included because there is no way to distinguish the effects of time-constant observables from the time-constant unobservable c_i . See Wooldridge (2010, 266).

other variables, Christian Democratic parties are not available for all cases, and thus, their effects are primarily driven by national variation rather than time variation.

In addition to the two sets of regressions, I examine the effects of party control of government on the key causal variables, including centralized bargaining and social insurance benefit generosity. Using scatter plots, I graphically illustrate the relationships between party control in government and specific variables. For party control in government variables, I use CWS's cumulative party share variable (cum variable in CWS) instead of yearly party share variable (cab variables in CWS) to reflect the general tendency between the party government and the key explanatory variables. The CWS's cumulative measure adds each year's score from 1946 to the year of the observation. I re-measure the cumulative measure for the years since 1980. If one party alone controlled the government for two consecutive years, the cumulative party share for the second year would be 2.

4. Variables and Measurement

4.1. The Dependent Variable

The dependent variable for both sets of regressions is the middle-class size in terms of disposable income distribution. It is measured as the percentage of those households that have income between 75 percent and 200 percent of the median disposable household income of the population in the observed year. The number of observations is 95 for all models that estimate for the all year period since 1967, an average of 5.6 observations each for the 17 countries. The number of observations is 76 for models that estimate for the post-1990 period only.

4.2. The Independent Variables

▪ **Party Control in Government**

According to CWS's formula, I measure party control in government by each party category's share in parliament seats as a percentage of all seats held by the government in each year. I measure three party categories—Christian Democratic, secular right, and leftist parties. I first measure each party category's share in parliament seats as a percentage of all seats held by the government in each year. Each year's party share ranges from 0 to 1. If a party fully controlled the government without coalition partners, it scores 1 for the year. For the US case, the president's party scores 1 and the opposition party scores 0 for each year. CWS provides data for this variable from 1960 to 2010.

Government partisanship is initially coded into seven different groups according to CWS's categorization—leftist, secular right, Catholic right, Christian (Protestant right), secular centrist, Catholic center, Christian (Protestant) center. Non-Catholic Christian-democratic parties originate primarily from the Lutheran state church. I combine these four sorts of Christian-Democratic parties into a single category of Christian-Democratic party. The American Democratic Party is coded as a secular center party.

▪ **Centralized Wage Bargaining**

From the CWS, I employ two measures of centralized wage bargaining—bargaining coverage and bargaining centralization—as the explanatory variables. Bargaining coverage is measured by the percentage of employees covered by collective wage bargaining agreements.

Bargaining centralization is coded on a scale of 1 to 5, for which 5 represents the most centralized. 1 indicates fragmented wage bargaining, confined largely to individual firms or plants. 2 indicates fixed or alternating industry- and firm-level bargaining, with weak enforceability of industry agreements. 3 indicates industry-level bargaining with no or irregular pattern setting, limited involvement of central organizations, and limited freedoms for firm-level bargaining. 4 indicates mixed industry and economy-wide bargaining in which a) central organizations negotiate non-enforceable central agreements (guidelines) and/or b) key unions and employers associations set the pattern for the entire economy. 5 indicates economy-wide bargaining, based on a) enforceable agreements between the central organizations of unions and employers affecting the entire economy or the entire private sector or based on b) government imposition of a wage schedule, freeze, or ceiling.

Of the two measures, I expect the effects of bargaining coverage to be more significant and positive than the degree of centralized bargaining because labor-market liberalization since the 1980s has undermined existing centralized bargaining primarily by reducing bargaining coverage, while maintaining the formal structure of centralization in wage bargaining (Thelen 2014).

The original sources of data for bargaining coverage and the centralization of wage settings are the Database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts (ICTWSS), produced by Jelle Visser²⁷, although the data are also accessible from CWS. The data cover the years from 1960 to 2011 with some missing years for some countries.

²⁷ Visser, Jelle. *ICTWSS* (database, v 3.0 and v 4.0), <http://www.uva-aias.net/207>

- **Social Insurance Benefit Generosity**

Social insurance benefit generosity variables are included because I expect that welfare benefits for the middle class will be mainly through social insurance rather than social assistance. Although social assistance certainly provides social protection to the middle class when they face income loss due to unemployment, sickness, or retirement, its benefit level may be sufficient for preventing these middle class households from falling into poverty, but not enough to maintain their previous economic status. This is why I focus on the effects of social insurance program on middle class decline.

The generosity of social insurance is measured by the income replacement rates of the benefits for the three major programs—unemployment insurance, sickness insurance, and pensions. I define and measure these variables following the CWED’s scheme. First, unemployment insurance covers only national insurance provisions earned without income testing. That is, unemployment insurance variable I use includes benefits paid through just unemployment insurance programs, while excluding benefits paid through unemployment assistance.²⁸ Second, sickness insurance is benefits paid in the event of short-term non-occupational illness or injury. This includes provisions for public insurance and mandatory employer-paid benefits. Third, public pensions include only mandatory public programs, which exclude occupational pensions.²⁹

CWED calculated the income replacement rates for a fictive average production worker in manufacturing sector, who is 40-years old with the 20 years’ work experience preceding the income loss or the benefit period. And this average worker cohabits with a dependent spouse

²⁸ Unemployment insurance excludes unemployment assistance in Germany or income-based Jobseeker’s Allowance in the UK; and it excludes any provisions for unemployment under collective bargaining contract.

²⁹ In CWED, the nominally private Finnish earnings-related fund is included, whereas mandatory private savings schemes (Australia and Switzerland) are not included due to variable returns.

with no earning and two children aged 7 and 12. The income replacement rates are calculated by annualizing the benefit for an initial six-months spell of unemployment, illness or pension beneficiary.

I expect social insurance benefit generosity to affect the degree of middle class decline because of the increased income insecurity for the middle class since the late-1970s (Alderson and Nielsen 2002; Hacker 2006).

- **Global Market Integration**

To test the globalization hypothesis (Borjas 1994; Alderson and Nielsen 2002; Bradley et al. 2003; Kristal 2010), three measures of global market integration are included as control variables—trade openness, capital account openness, and the share of the immigrant population. Trade openness is measured as the sum of exports and imports as a share of GDP, while capital account openness is based on the Chinn-Ito index.³⁰ The share of the immigrant population is measured by the percentage of the foreign population in the country.³¹ International immigrants are equated with foreign citizens based on citizenship except for in settler countries, including Australia, Canada, and the US. For the settler countries, immigrant share is measured by the percentage of the population that is foreign-born. Because they confer citizenship primarily on the basis of place of born (*jus soli*), children born to international immigrants are excluded from the immigrant's population share.

³⁰ CWS provide data on trade openness, GDP growth rates, elderly population share, female employment rates, and high-skilled labor share. Original source of capital account openness data is Chinn, Menzie D. and Hiro Ito. 2008. "A New Measure of Financial Openness." *Journal of Comparative Policy Analysis* 10, no. 3: 309-322, http://web.pdx.edu/~ito/Chinn-Ito_website.htm.

³¹ The immigration population share is based on data from the OECD International Migration Dataset, at <http://stats.oecd.org/#>[data access: Jan. 10. 2014]

- **Gross Domestic Product (GDP) Growth**

GDP growth rate is included because general economic conditions are widely perceived to influence market income distribution directly, as it saying that rising tides lift all boats.

- **The Share of Elderly Population**

Elderly population share is measured by the percentage of the population whose age is 65 and older, and it controls for the effects of the relative size of retired people, whose market income is less likely to reach the level of the middle class compared to working age population.

- **Female Employment Rate**

Female employment rate is included because it affects household-income distribution. As in the Dutch case in the 1980s, it is often the case that female employment increases as a household-level coping strategy to compensate for the income loss of male breadwinners during the de-industrialization processes (Thelen 2014). I calculated the variable by dividing the total female population by the employed female population, using both numbers from CWS. The expectation on the effects of female employment is mixed. Although dual earners may prevent income polarization by compensating male breadwinners' income loss with newly gained female income like in Dutch case during the 1980s, the effects of female employment on income polarization are contested in current literature. Some argue that increase in female employment can also increase income polarization due to the tendency of sorting in marriage, in which high earners are more likely to marry high earners (Blossfeld and Buchholz 2009). In contrast, others

(Harkness 2013) found that women's earnings reduce inequality between households. According to recent research (Nieuwenhuis et al. 2013), although the positive correlation between spouses' earnings increased over time, the women's employment increasingly reduces the inequality between households as inequality among women decreases.

- **The Share of High-skilled Labor**

The share of high-skilled labor is included to test the technological change hypothesis that attributes middle class decline to the insufficient supply of high-skilled labor in technologically changing economies (Katz and Murphy 1992; Autor and Dorn 2009; Cowen 2013). To measure high-skilled labor share, I use a proxy variable—percentage of the population aged 25 and over with tertiary schooling. This variable is available in CWS.

- **European Union (EU) membership**

EU membership is included as an explanatory variable, not only because the EU pursues a single European market (regional market integration), but also because EU research claims that national partisan effects are significantly constrained by policy making at the supra-national EU institutions. Recent studies on the European Union have assessed the effects of the emergence of supra-national political institutions on national policy-making. As some of the authority of individual governments is handed over to EU institutions, where more technocratic policy-making prevails, the effects of representation and democratic control grow weaker (Schmidt 2006). Specifically, whereas market-integration policies are under the exclusive competence of

EU institutions, market-correcting social policies remain largely under member states' legal competence (Joerges and Vos 1999). The market-integration policy areas include competition policy by the European Commission. EU membership is coded as a dummy variable—1 for member states, 0 for non-members of the year.

III. Case Studies

Using the method of difference (Mill 1994), I illustrate the findings of these regression analyses in specific country cases. For the selected pairs of country cases that have different outcomes in middle class size over the past three decades, I assess the extent to which the variables are the same, or different. I identify these explanatory variables based on the literature and the regression analyses of this study. Then, I show how these differences in the variables correspond to the differences in the outcomes in paired countries.

To graphically illustrate the differences and similarities in key explanatory variables, I perform scatter plot analyses on the selected country cases (the UK & Austria, Germany & the Netherlands, the US & Canada, Switzerland & Denmark). I select four pairs of countries for comparison because whereas these two countries had a similar size of the middle class (disposable income) in the 1980s, they came to have very different outcomes in the 2000s—one experienced dramatic decline of middle class size, while the other had minor decline or even growth.

Using the key variables that I find significant from the regression analyses, I draw scatter plots that show diachronic change in these key variables between the paired countries. The expected key variables include middle class size in terms of disposable income, trade openness,

capital account, population share of immigrants, female employment rate, population share of the elderly, population share of high-skilled labour, bargaining coverage, income replacement of unemployment benefits, sickness benefits, and pension benefits, and party control in government (Christian Democratic and secular right party).

For party control in government variables, I use CWS's cumulative party share variable to include time dimension in scatter plot analyses. I calculated the cumulative party share score since 1960 based on the CWS's cumulative party share score.

The main purpose of these case studies is to confirm the findings of the regression analyses in specific country cases, by showing how the change in the key variables corresponds to the diverging outcomes between the paired cases. A detailed analysis on the specific causal process in the historical context of each case is beyond the task of this dissertation research.

Chapter 5: Description of Middle Class Decline

In this chapter, I present the descriptive analysis outcomes of national and diachronic variation in middle class decline in 22 industrialized democracies in Europe, North America, and the Asia-Pacific from 1967 to 2010.³² I present outcomes during the recent Great Recession period (between 2007 and 2010) separately. For further detailed analysis, I compare the outcomes between two distinctive income measures (market income and disposable income) and two separate age groups (the working-age group, i.e., under the age of 65, and the all ages group). Whereas the former (income measure) comparison shows to what extent welfare states play a role in buffering market-generated income polarization, the latter (age group) comparison shows to what extent middle-class decline is attributed to factors other than the aging population. Below, I first illustrate middle class decline in selected countries based on my unique measure of population share distribution by income groups. Then I present the overall long-term global trend and a detailed analysis of national and diachronic variation in middle class decline.

1. Middle Class Decline (Population Share Change by Income Classes)

In this section, I present five figures (Figure 5.1, 5.2, 5.3, 5.4, and 5.5) to show whether middle class decline has actually occurred over the past three decades and how income distribution has changed based on my measure of population distribution by income groups. I divide the population into eight income groups depending on their income relative to the median income: the deep poor (less than 25 percent of the median income), the poor (between 25 and 50 percent of the median income), the near poor (between 50 and 75 percent of the median income),

³² For South Korea and Japan, only cross-national comparison is feasible because of the data availability.

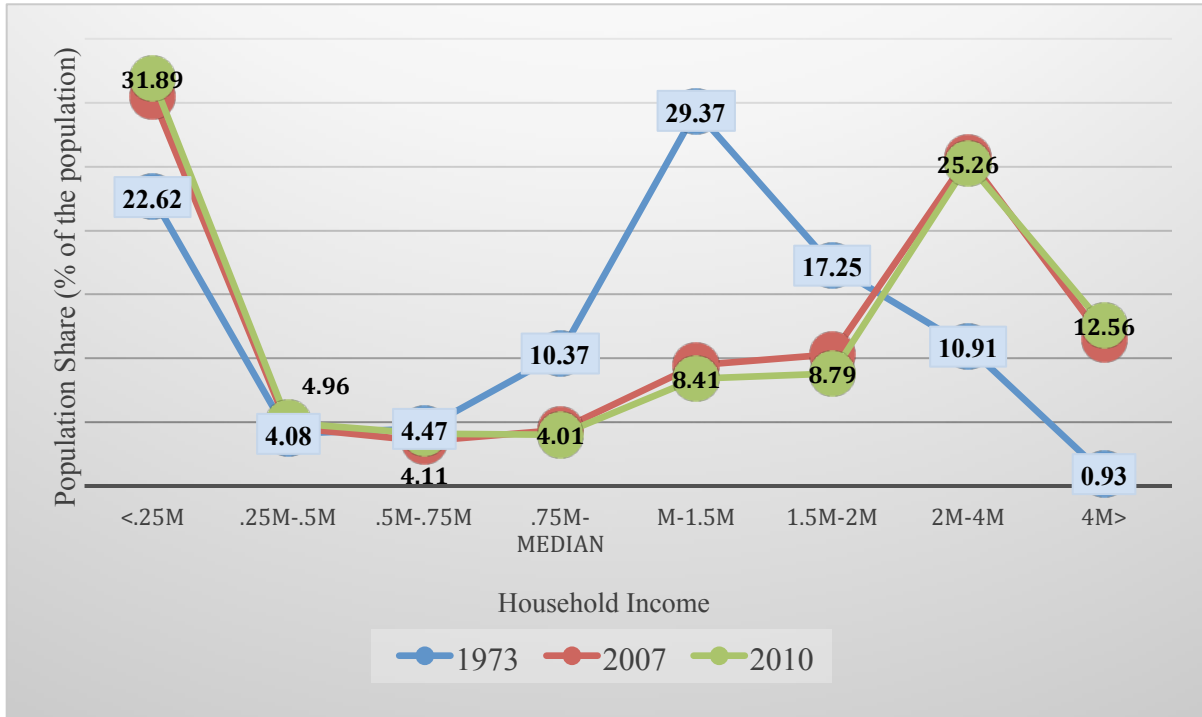
the lower middle (between 75 and 100 percent of the median income), the middle (between 100 and 150 percent of the median income), the upper middle (between 150 and 200 percent of the median income), the affluent (between 200 and 400 percent of the median income), and the very affluent (more than 400 percent of the median income). Of these eight income classes, I combine the lower middle, middle, and upper middle-income classes into a composite middle-income class whose income is between 75 percent and 200 percent of a country's median income in a given year. I measured the population share of the households in each income class along with the population share of the middle class.

Using the German and U.S. cases for illustration, I first present the population distribution by income in Germany for the three time points—1973, 2007, and 2010 (Figure 5.1 for the market income dimension, Figure 5.2 for the disposable income dimension). Then, Figures 5.3 and 5.4 illustrate the US case. Figure 5.5 presents the income distribution change for the German working age population.

First, in the German case, I find that decline in population share occurred mainly in the middle of the income distribution, particularly those households that have between 75 percent and 200 percent of the median income. The Great Recession since 2008 has had almost no effect on Germany's income distribution. The most drastic decline was located in the income group whose household income was between 100 percent and 150 percent of the median income.

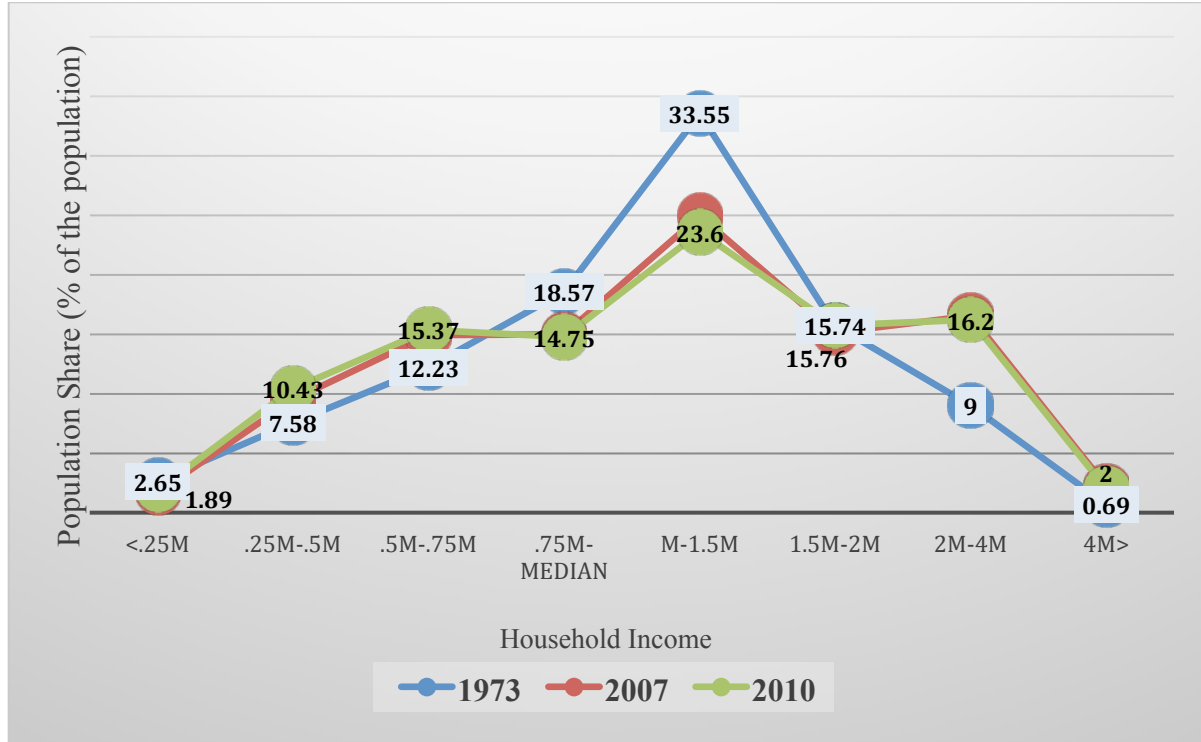
In terms of the market income distribution (Figure 5.1), the middle class comprised 57.0 percent of the population in 1973, but had contracted to 21.2 percent of the population by 2010. Meanwhile, the population shares of the extreme poor (22.6 to 31.9 percent), the affluent (10.9 to 25.3 percent), and the very affluent (0.9 to 12.6 percent) have increased dramatically.

Figure 5.1 Population Distribution by Market Income in Germany, 1973, 2007, and 2010



Middle class decline is much smaller in terms of the disposable income dimension, where the government’s redistributive mechanism (tax and social transfers) has taken place (Figure 5.2). Middle class households have declined from 67.9 to 54.1 percent of the population between 1973 and 2010. The disposable income distribution still remains a normal curve. The middle class comprises majority of the population (54.1 percent of the population) even though it comprises only 21 percent of the population in terms of market income distribution. Notably, the population share of the deep poor has diminished dramatically, from 31.9 to 1.9 percent of the population, by virtue of government redistribution. The decline in population share is concentrated in the middle of middle class households, those receiving between the median and 150 percent of the median income. Their population share has declined from 33.6 to 23.6 percent of the population between 1973 and 2010.

Figure 5.2 Distribution of Population by Disposable Income in Germany, 1973, 2007, and 2010



In the US case, the change in population shares follows a similar pattern to the German case. Figure 5.3 and 5.4 present the change in population share by income for the US case between 1974 and 2010. A decline in population share has occurred mainly in the middle of the income distribution, between 75 percent and 200 percent of the median income. The Great Recession since 2008 has had almost no effect on income distribution. In terms of the market income dimension, the middle class has contracted substantially from 44.6 to 32.7 percent, whereas the population shares of deep poor (21.5 to 23.8 percent), affluent (10.9 to 14.1 percent), and very affluent (1.7 to 6.7 percent) households have increased. However, the degree of income polarization is much smaller than in the German case. In terms of disposable income distribution, the middle class size has declined only modestly, from 53.1 to 47.6 percent of the population between 1974 and 2010.

Figure 5.3 Distribution of Population by Market Income in the US, 1974, 2007, and 2010

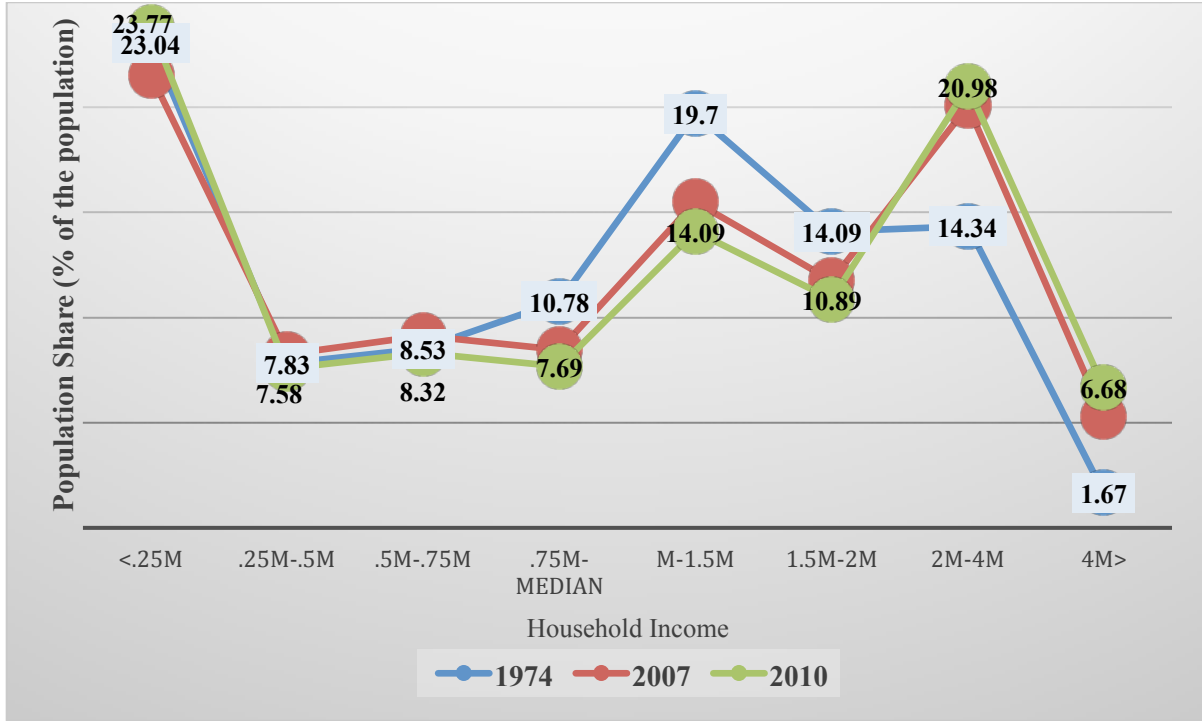
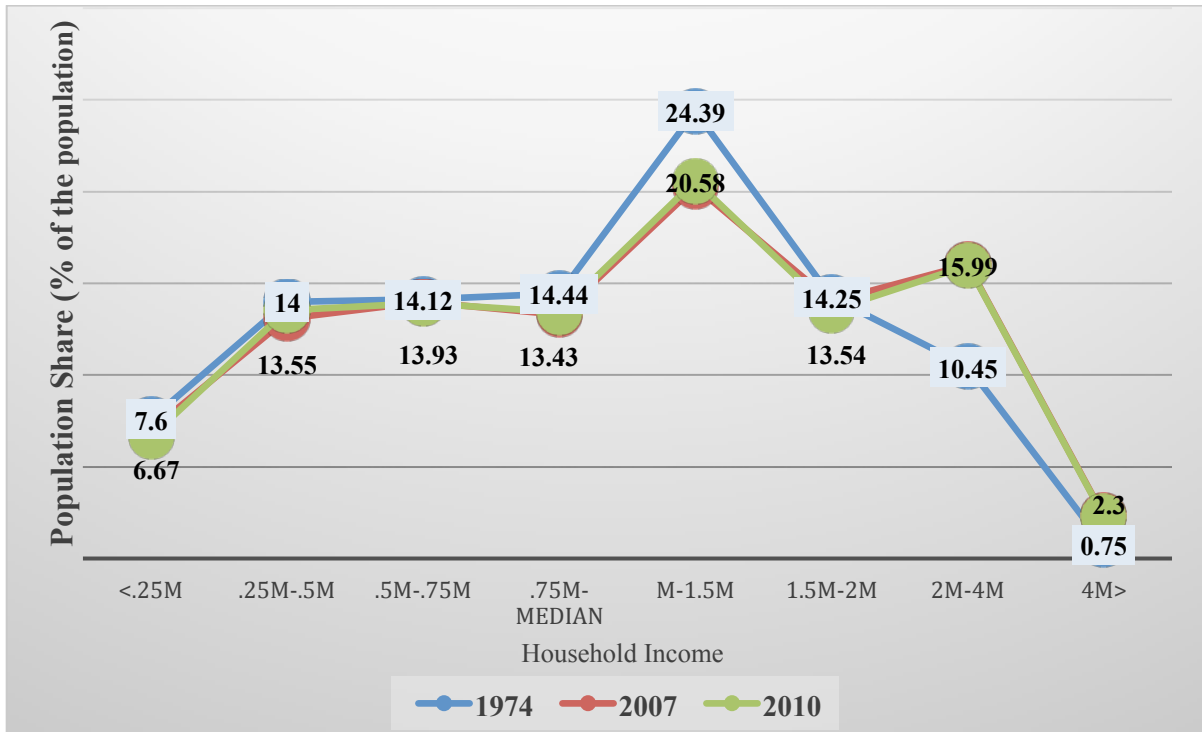
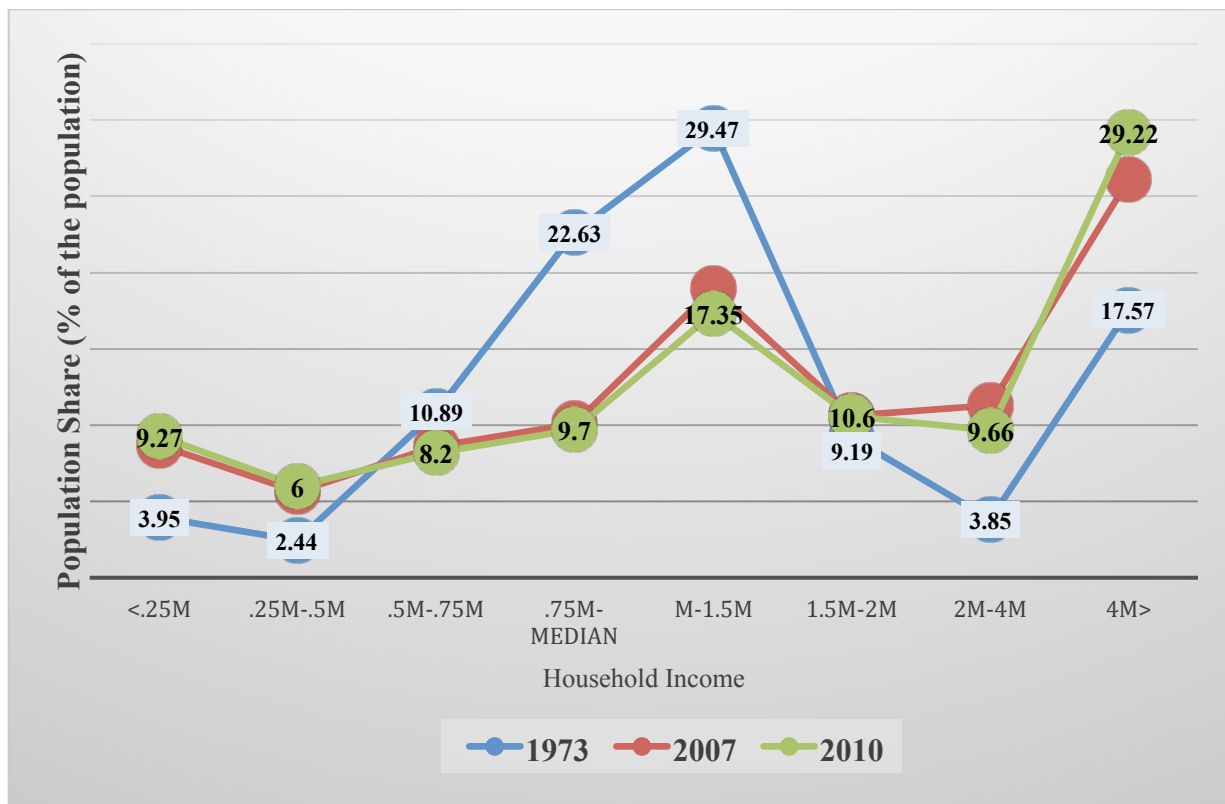


Figure 5.4 Distribution of Population by Disposable Income in the US, 1974, 2007, and 2010



Middle class decline has occurred for the working age group under 60 in a similar pattern to the decline for the “all ages” group. Figure 5.5 illustrates the market income distribution in Germany between 1973 and 2010. On one hand, a drastic decline took place in the households whose income is between 75 percent and 150 percent of the median income, from 52.1 to 27.1 percent of the population. On the other hand, a substantial increase has occurred in the affluent (from 3.9 to 11.3 percent of the population) and the very affluent (from 17.6 to 29.2 percent of the population) income groups. This suggests that income polarization (or middle class decline) cannot be explained by demographic change only.

Figure 5.5 Distribution of Population by Market Income in Germany, 1973, 2007, and 2010 (Working Age Population under 60)



2. Middle Class Decline: A Long-term Global Trend

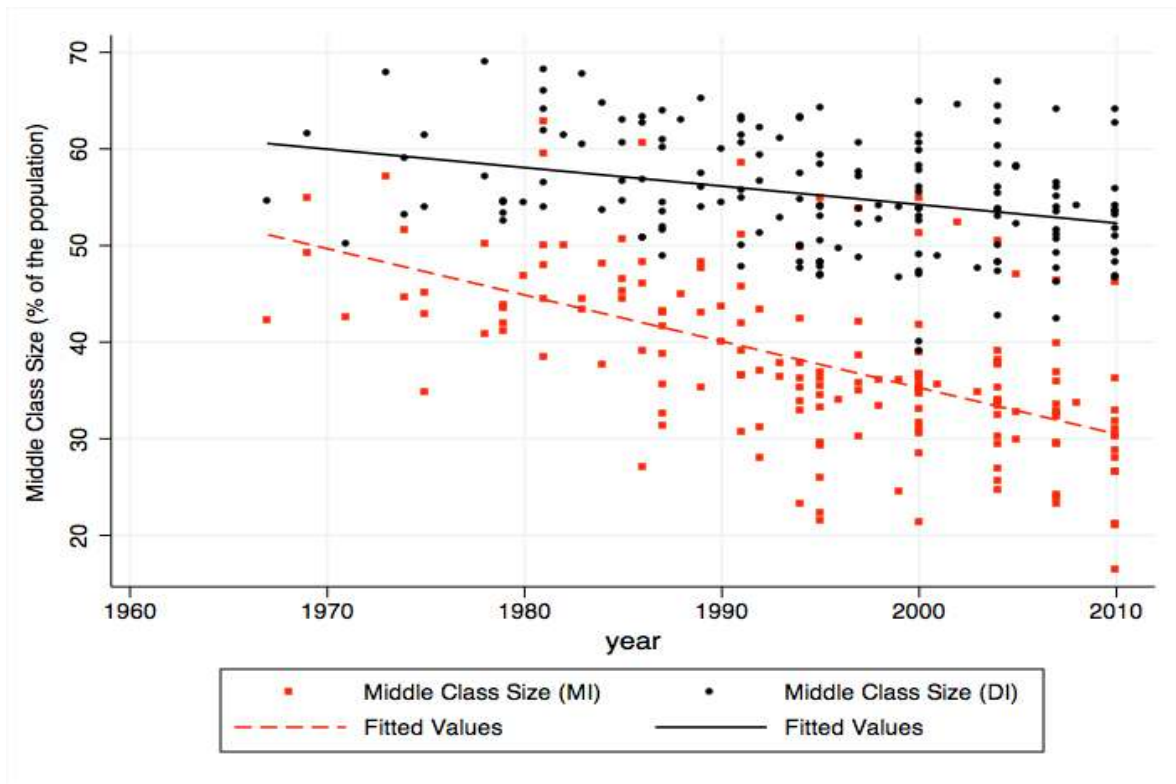
Overall, the population share of the middle class has declined dramatically in terms of the market income dimension, whereas it has contracted modestly in terms of the disposable income dimension between 1970 and 2010. In Figure 5.6, I illustrate the size of the middle class in 22 industrialized democracies for two different income dimensions over the past three decades. In this scatter-plot figure, the vertical axis indicates the population share (percentage) of the middle class, while the horizontal axis indicates the year of the data. The black circle dots indicate middle class size in terms of disposable income distribution, while the red square dots indicate middle class size in terms of market income distribution. The number of observations is 161 for the market income dimension and 163 for the disposable income dimension.

The black line on the upper end and the red dashed line on the lower end present the fitted value (based on lineal prediction) of middle class size in the market income and disposable income dimensions, respectively. Although there are some exceptional cases, an apparent pattern is that middle class size in both income dimensions has declined since the 1970s in most countries in this study. The mean value of middle class size (the fitted value line) in terms of the disposable income measure has declined from 59 percent in the mid-1970s to 53 percent in 2010. The mean value of middle class size in terms of the market income measure has decreased from 46 percent to 29 percent over the same period.

More importantly, Figure 5.6 suggests that a substantial change has taken place regarding the relationship between the middle class and the welfare state over the last three decades. Redistributive mechanisms via welfare states have played increasingly bigger roles in keeping the population share of middle class from declining drastically. This suggests that middle class

households have become increasingly reliant on the welfare state. Alternatively, it may be said that the welfare state's contribution to the middle class has been increasingly important for middle class maintenance of economic status. This converging trend is supported by the micro-level analysis in Chapter 6, which presents the social transfer income share of the total household income for middle class households in industrialized countries.

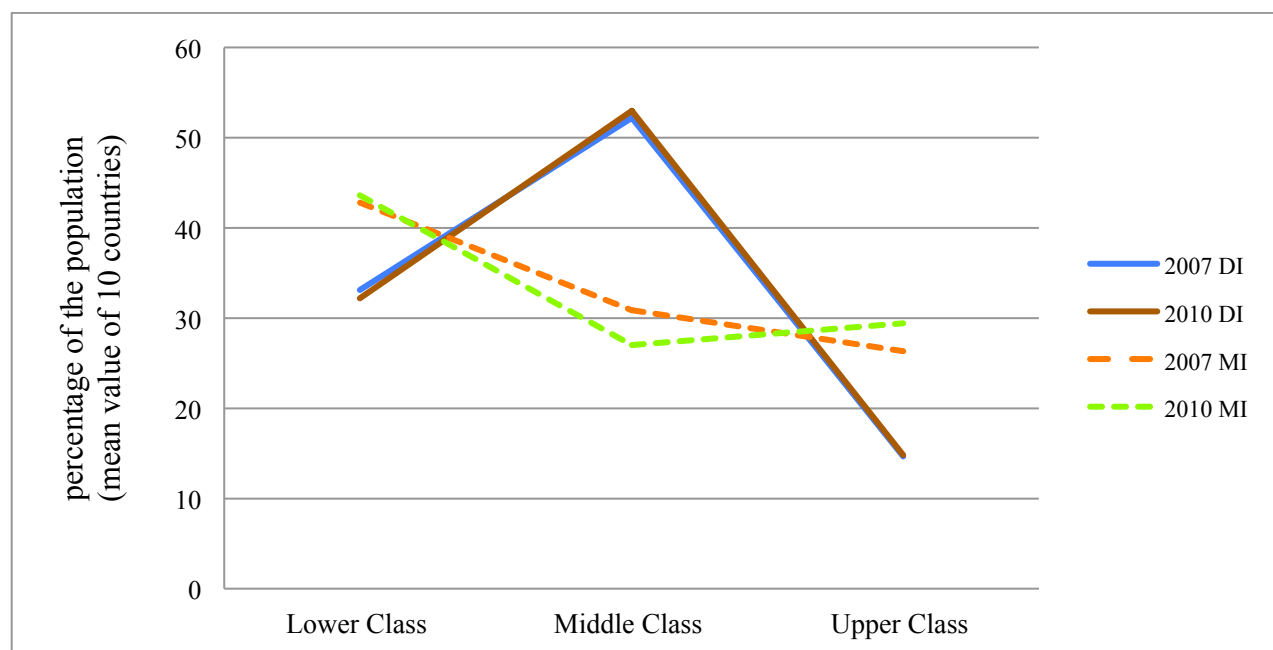
Figure 5.6 A Global Trend in Middle Class Size Change—Disposable Income (DI) and Market Income (MI)



Although middle class decline has emerged as a new issue during the 2008 financial crisis, the recent global recession has not affected the long-term evolution of middle class decline that much. Figure 5.7 illustrates overall changes in the income distribution across the lower, middle, and upper class in ten countries that have data available both before and after the 2008

financial crisis—the data for 2007 and 2010. The ten countries include Finland, Germany, Greece, Ireland, Luxembourg, Netherlands, Italy, Spain, UK, and the US.³³ On average, middle class size in terms of market income distribution decreased slightly during the first three years of the economic recession. However, in terms of disposable income dimension, there is almost no change in income distribution across income classes. The average size of the middle class in the ten countries has remained as large as 52 percent after the financial crisis of 2008. The size of the upper and lower classes remained almost the same during the recession period.

Figure 5.7 Overall Population Distribution Change across Income Classes, 2007 and 2010



Source: the author's calculation based on LIS Database

Abbreviation: 2007 DI: disposable income distribution in 2007, 2010 DI: disposable income distribution in 2010, 2007 MI: market income distribution in 2007, 2010 MI: market income distribution in 2010

In short, I find that middle class decline was not an immediate consequence of the 2008 Great Recession, but a long-term global development occurring over the past three decades. In addition, the role of the welfare state is important to maintain a sizable middle class population

³³ Only for Italy, I use the 2008 data because the 2007 data is not available for Italy.

in terms of the disposable income dimension. This confirms the findings of previous research (Pressman 2007). However, this overall trend is only part of the story. It conceals a more intriguing part of the change that occurred at the national level. In the next section, I report national and diachronic variation in middle class decline, which is neglected in the current literature.

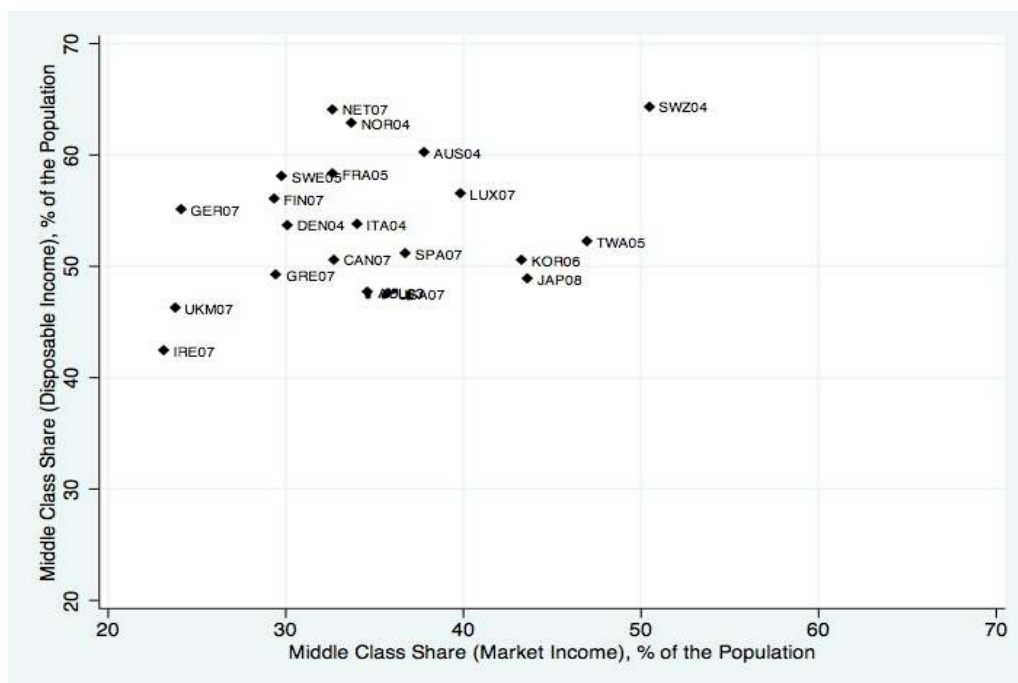
3. Middle Class Decline: National Variation

Figure 5.8 presents national variation in middle class size among 21 industrialized democracies in terms of market income and disposable income distributions in the mid-2000s. The horizontal axis is the middle class size in terms of market income, while the vertical axis is the middle class size in terms of disposable income.

In the mid-2000s the Netherlands, Switzerland, Austria, Norway, and had the largest middle classes in terms of the disposable income dimension, while the Anglo-American countries including the US, UK, Ireland, and Australia had the smallest middle classes. However, back in the early-1980s, the cross-national difference was not the same as the current variation.

This change in country rankings with respect to middle class size implies that national variation in middle class size is not explained by time-invariant national institutional settings, as suggested in the literature on the three worlds of welfare capitalism or varieties of capitalism. Instead, middle class growth or contraction may occur because of the changes in national institutional settings or national political and socio-economic conditions. Interestingly, Nordic countries, where the general inequality level is the lowest, do not appear in the top group in terms of middle class size regardless of income measures.

Figure 5.8 Middle Class Size in the mid-2000s



Source: the author's calculation based on data from LIS database.

Country abbreviations: Australia 2007 (AUL07), Austria 2004 (AUS04), Canada 2007 (CAN07), Denmark 2004 (DEN04), Finland 2007 (FIN07), France 2005 (FRA05), Germany 20007 (GER07), Greece 2007 (GRE07), Ireland 2007 (IRE07), Italy 2004 (ITA04), Japan 2008 (JAP08), South Korea 2006 (KOR06), Luxembourg 2007 (LUX07), The Netherlands 2007 (NET07), Norway 2004 (NOR04), Spain 2007 (SPA07), Sweden 2005 (SWE05), Switzerland 2004 (SWZ04), Taiwan 2005 (TWA05), the UK 2007 (UKM07), and the US 2007 (USA07)

Perhaps counter-intuitively, excluding Norway, the Nordic countries, where the general inequality level is the lowest, do not have the largest middle classes. Only Norway is among the countries with the largest middle classes, but it was the most unequal among the four Nordic countries during the mid-2000s. The ranking regarding middle class size departs from the ranking in terms of the Gini index, the most popular index to measure income inequality, according to which Nordic countries rank at the top (see Table 5.1). Although the Netherlands had the largest middle class in the mid-2000s, it had a more unequal income distribution than Sweden, Denmark, and Finland, according to the GINI index.³⁴ This supports Michael Wolfson

³⁴ The Gini index measures general inequality level with a range from 0 to 1: 0 expresses perfect equality, where everyone has the same income, while 1 represents maximal inequality only one person has all the income. The first

(1994)'s notion that income polarization (middle class decline) and income inequality are different concepts, and suggests that the determinant of middle class size may be different from that of the general level of inequality.

Table 5.1 The Gini and Middle Class Size Comparison (Disposable Income)

Ranking	Gini index in 2004 and 2005 (0 to 1 scale)		Middle class size in 2004 and 2005 (% of the population)	
	1	Denmark 05	0.232	The Netherlands 04
2	Sweden 04	0.234	Switzerland 04	64.31
3	Finland 04	0.254	Norway 04	62.80
4	Austria 05	0.260	Austria 04	60.16

Source: OECD statistics for the Gini index, the author's calculation based on LIS Database for middle class size

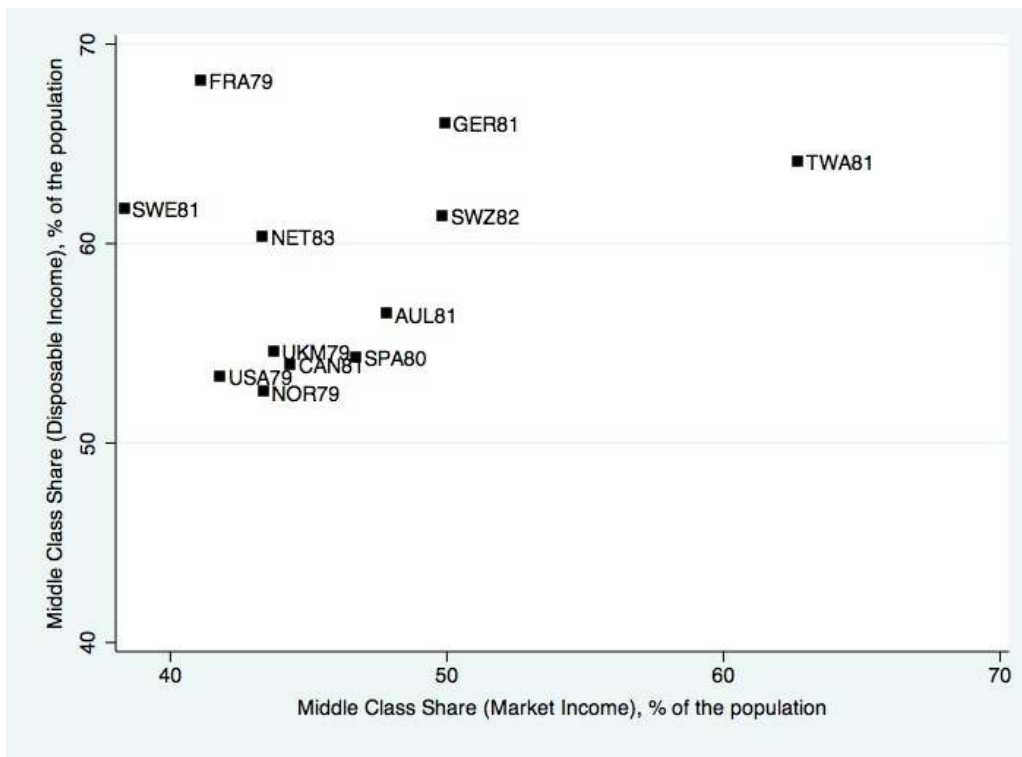
When measured by market income, Switzerland had an exceptionally large middle class, amounting to over 50 percent of the population in 2004. East Asian countries followed Switzerland, with the middle class sizes over 40 percent of the households. In most European countries and the three English-speaking countries—the US, Australia, and Canada—middle class size amounted to between 30 and 40 percent of the population. The smallest middle classes were found in Sweden, Finland, Greece, Germany, the UK, and Ireland, where less than 30 percent of the population belonged to the middle class. Interestingly, despite their egalitarian reputation, Finland, Germany, and Sweden had the smallest middle classes when measured by market income.

available Gini index for Switzerland is recorded in 2009. In 2009, while the Gini score was 0.298 for Switzerland and 0.283 for the Netherlands, the Gini score was 0.269 for Sweden, 0.255 for Finland, and 0.238 for Denmark is 0.238 (*source:* OECD Statistics, available at <http://stats.oecd.org/Index.aspx?DataSetCode=REV>).

4. Middle Class Decline: Time Variation

Figure 5.9 presents middle class sizes in the early-1980s. While 21 countries have available data for the mid-2000s, only 12 countries have available data for the years around 1980. Thus, cross-time comparison is possible only for those twelve countries, namely France, Germany, Sweden, Switzerland, Netherlands, Australia, UK, Spain, Canada, Norway, Taiwan, and the US.

Figure 5.9 Middle Class Size in the Years around 1980



Source: the author's calculation based on data from LIS Database.

Country abbreviations: Australia 1981 (AUL81), Canada 1981 (CAN81), France 1979 (FRA79), Germany 1981 (GER81), The Netherlands 1983 (NET83), Norway 1979 (NOR79), Spain 1980 (SPA80), Sweden 1982 (SWE82), Switzerland 1981 (SWZ81), Taiwan 1981 (TWA81), the U.K. 1979 (UKM79), and the US 1979 (USA79)

First, when measured by market income, middle class size in the early-1980s is quite different from the mid-2000s. France had the largest middle class in the early-1980s, followed by Germany and Switzerland. Except for Sweden, the middle class in these countries was at least 40 percent of total households even before government redistribution took place.

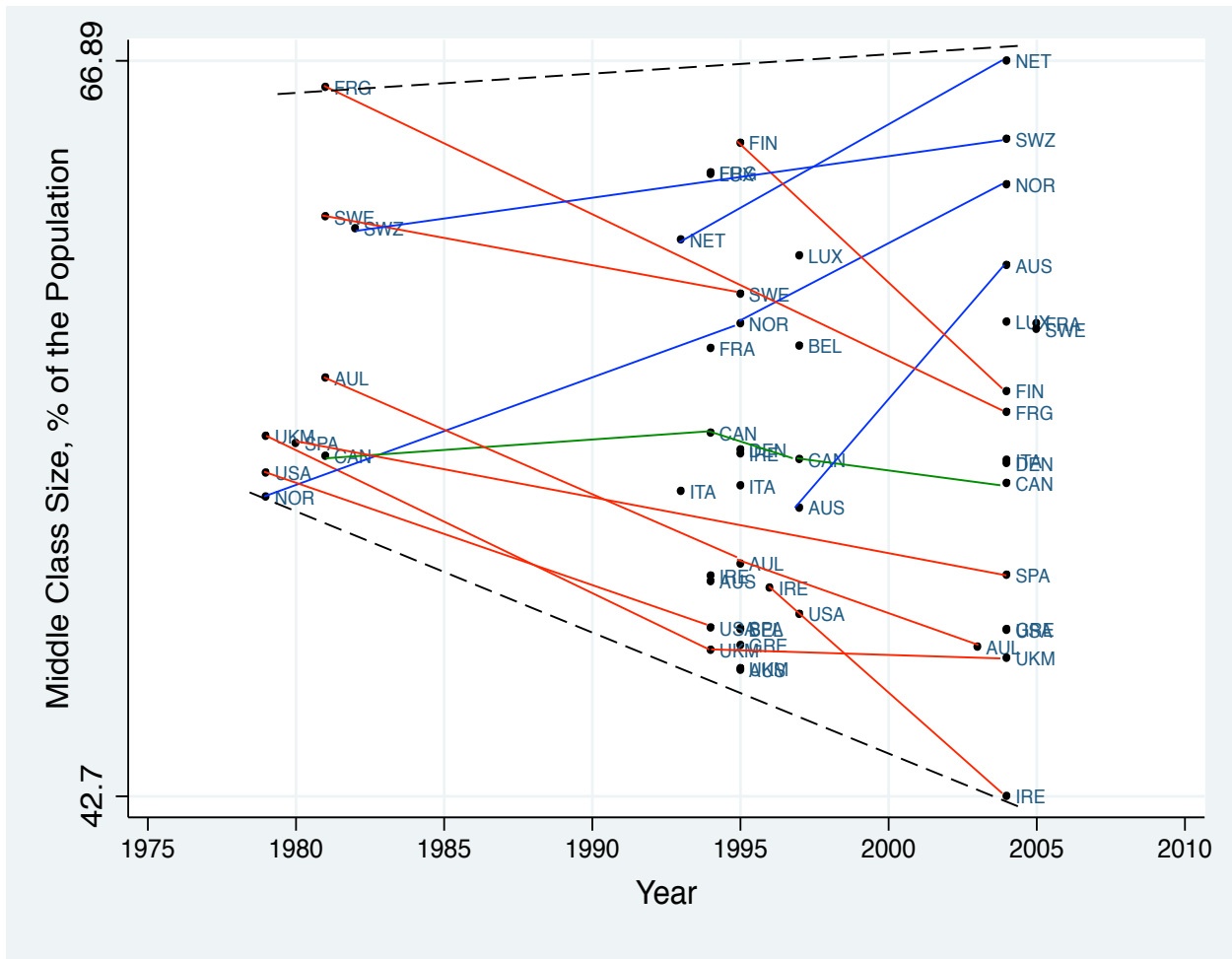
In most cases, by the mid-2000s middle class size in terms of market income had become much smaller than in the early-1980s. While Switzerland alone experienced middle class growth in terms of market income, all other countries experienced a middle class contraction by more than 10 percent. The average size of the middle class in terms of market income around 1980 was 47.6 percent of total households, and it dropped to 34.5 percent by the mid-2000s. The UK and Germany experienced the most remarkable declines in terms of market income—their middle classes were halved over this period. Although the Swiss middle class was the same population share as Germany's in the early-1980s, it had become twice as large as its German counterpart by 2004.

Second, in terms of the disposable income dimension, the country rankings of middle class size in the years around 1980 are quite different from the ones in the mid-2000s. Figure 5.10 presents middle class sizes in 19 industrialized democracies between 1979 and 2005. Some countries experienced greater contractions in the middle class such as the UK, while others experienced much smaller declines, or even expansion, including Norway, Austria, and the Netherlands. There was also significant diachronic change within individual countries.

Middle class sizes were not very different across countries in 1980—middle classes were over 50 percent of the population in all twelve countries. However, they diverged significantly in the mid-2000s, ranging from 42.6 percent to 66.9 percent of the population. The middle class size in Norway was smaller than that of the US in 1980, but grew to be 1.5 times larger than the

US middle class by 2005. In the mid-1990s, Austrian middle class size was similar to that of the UK—about 47 percent—but grew as large as 61 percent, while the UK middle class remained at 47 percent through the mid-2000s. This is due to the fact that middle class growth and decline occur differently among countries during the same period.

Figure 5.10 Middle Class Size Change in 19 OECD Countries between 1979 and 2005 (Disposable Income)



Source: the author's calculation based on data from LIS database.

Country abbreviations: Australia (AUL), Austria (AUS), Belgium (BEL), Canada (CAN), Denmark (DEN), Finland (FIN), France (FRA), Germany (FRG), Greece (GRE), Ireland (IRE), Italy (ITA), Luxembourg (LUX), The Netherlands (NET), Norway (NOR), Spain (SPA), Sweden (SWE), Switzerland (SWZ), the UK (UKM), and the US (USA)

5. Middle Class Decline: Country and Time Variation

In this section, I compare countries in terms of the population share of the middle class over the past three decades and report significant national and diachronic variation in middle class decline. I find that, rather than disappearing, the middle is actually growing in some countries and at certain times. Figure 5.11 shows how the middle class size has changed in three countries, the US, Sweden, and Switzerland, while Figure 5.12 shows the other three cases, the Netherlands, Germany, and the UK. In both figures, household income is measured in terms of disposable income. The vertical axis presents the population share of the middle class as the percentage of the population, while the horizontal axis presents the year of observations.

Figure 5.11. Middle Class Size Change in the US, Sweden, and Switzerland

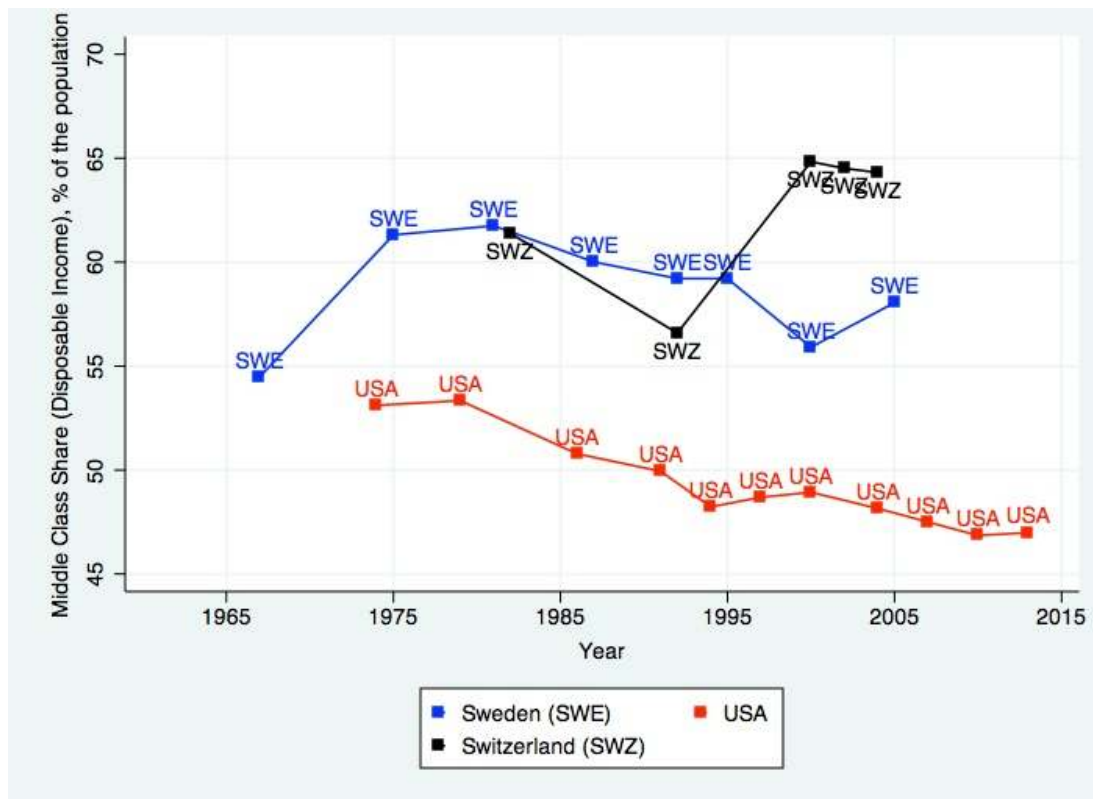
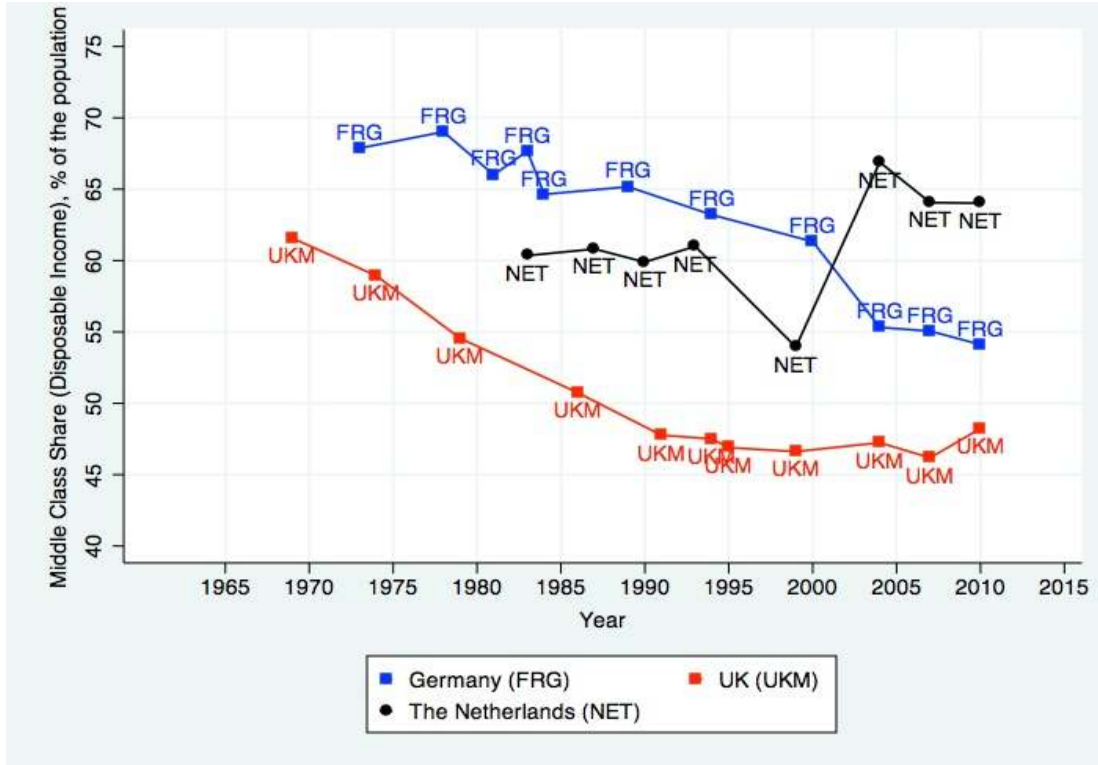


Figure 5.12 Middle Class Size Change in the UK, Germany, and the Netherlands



All six countries have experienced, not only middle class decline, but also periods of middle class growth between the 1970s and 2010. Further, due to the relative decline and growth, some countries have become countries with large middle classes, while others have become countries with small middle classes.

Figure 5.11 shows that Swiss middle class was smaller in size than the Swedish middle class between the late-1980s and the early-1990s. However, since the 2000s, Switzerland has had a much larger middle class population than Sweden has had. Although the US had a much smaller middle class size in the 2000s than Sweden or Switzerland, the US middle class size in 1975 was comparable to the Swedish middle class size in 1965.

Figure 5.12 indicates that the German middle class was much larger in size than the Dutch middle class until 2000. However, since 2000, the Netherlands has had a larger middle

class than Germany has had. The UK middle class size was much smaller than the Dutch middle class size in 2010. However, the UK middle class in 1970 was as large as the Dutch middle class in the 1980s.

It is worth noting that the time variation within a country is as revealing as national variation. In the US, there were certain periods when the middle class stopped declining. The US middle class expanded in the late-1970s, the mid-1990s, and the early-2010s. In the UK, the middle class stopped declining between the 1990s and the mid-2000s, and it was not until the early-2000s when Sweden and the Netherlands experienced middle class growth.

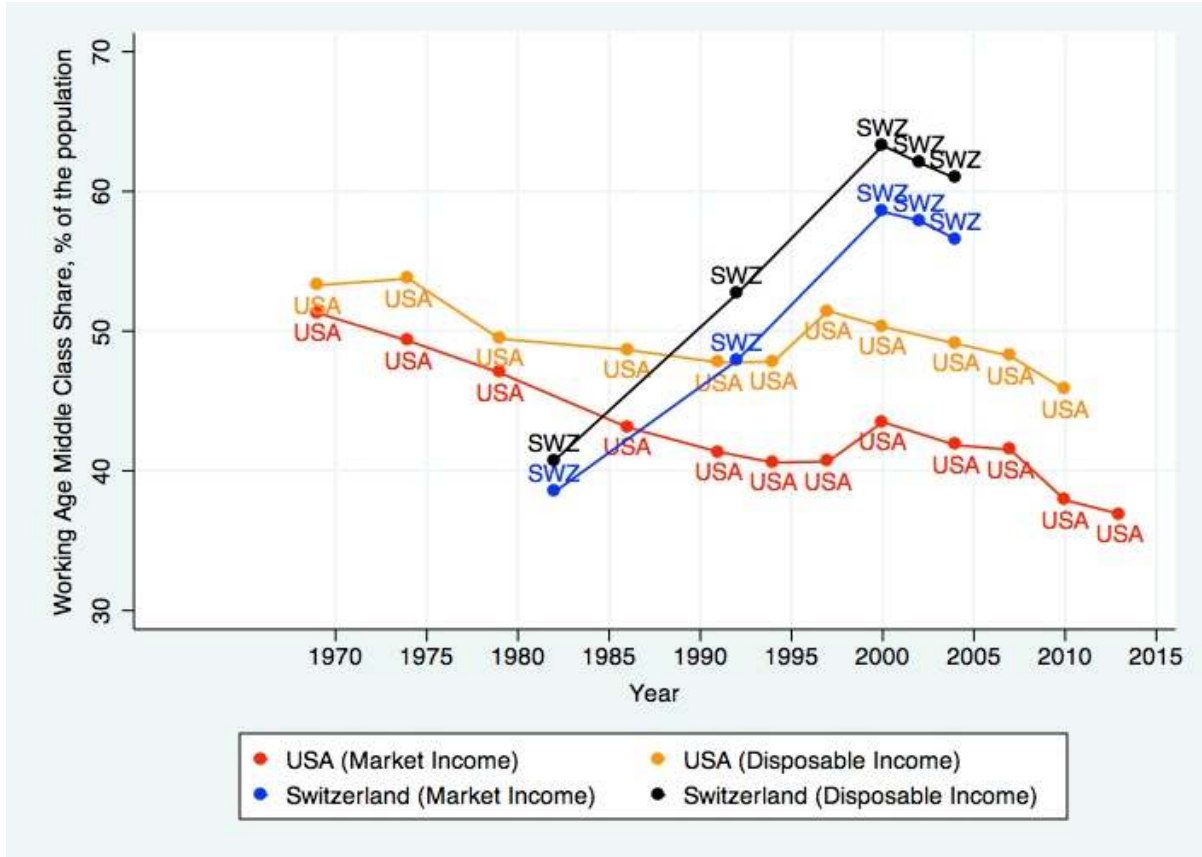
7. Middle Class Decline (Working Age Group): Country and Time Variation

Even after the effects of aging population are controlled, I find significant national and diachronic variation regarding the population share of the middle class.³⁵ Figure 5.13 presents my analysis on the US and Switzerland cases for the working age population.

Between 1980 and 2005, these two countries experienced the opposite in terms of middle class size, with respect to both income definitions. While Switzerland experienced a dramatic increase in its middle class population share, the US experienced a decline in its middle class population. As a result, the US, which had a larger middle class in 1980, had a smaller middle class than Switzerland in 2005.

³⁵ I set the age threshold for working age as 65, considering the fact that the average retirement age is older in the US than in most European countries.

Figure 5.13 Middle Class Size Change in the US and Switzerland for Working Age Population



8. Conclusion

In this chapter, I first established whether middle class decline occurred between the 1970s and 2010 by measuring the change in population share by income. I also showed where the population share has declined or increased in eight income classes on the continuum. Even after controlling for aging demography, middle class decline (or income polarization) occurred in most industrialized democracies. Next, I reported the outcomes of descriptive analyses, which compared the population shares of middle classes across countries and time periods. Counter-intuitively, the effects of the 2008 global recession on middle class decline were marginal along

both income dimensions. During the 2008 global recession, middle class size in terms of disposable income remained almost the same in the countries in this study, excluding Greece and Spain.

Clearly, middle class decline has occurred as a long-term development across industrialized democracies over the past three or four decades. Particularly, the population share of the middle class has declined dramatically in terms of market income in most wealthy democracies. Due to the existing redistributive mechanisms (progressive taxation and social transfers), middle classes have not declined drastically in terms of disposable income dimension. This suggests that the middle classes in most industrialized democracies have become increasingly reliant on social transfer incomes since the late-1970s. Even among working age middle class households, the welfare state's contribution to the middle class has become increasingly substantial. I will examine further this changing relationship between the middle class and the welfare state in the next chapter.

More importantly, I found significant national and diachronic variation in middle class decline among 22 industrialized countries. Some countries experienced drastic declines in the sizes of their middle classes, whereas others experienced much smaller declines and even expansions of their middle classes over the same period. Within countries, diachronic variation is significant. Many countries experienced middle class growth in certain years and declines in other years. In the mid-2000s, Switzerland, the Netherlands, Norway, and Austria comprised the largest middle class countries, but it was France, Germany, Taiwan, and Sweden that had the largest middle classes in the early-1980s. The US had a larger middle class than Switzerland in the 1980s, but it has become a country with a small middle class in the mid-2000s, while Switzerland has become the country with largest middle class.

Cross-national and diachronic variation in middle class size follows neither the variation in the general income inequality level (Gini index) nor the time invariant institutional typology such as the three worlds of welfare capitalism or varieties of capitalism. In Chapter 7, I will explain national and diachronic variation in middle class decline based on my statistical analysis outcomes.

Chapter 6: Middle Class and The Welfare State

In Chapter 5, I demonstrated that the population share of the middle class has become much larger in terms of the disposable income dimension than in terms of the market income dimension. This suggests that increasingly a substantial share of the middle class maintains its economic status due to the redistributive function of the welfare state. This outcome contradicts a common notion that the middle class is independent of the welfare state, on which only the poor rely. A substantial change has, therefore, developed in the relationship between the middle class and the welfare state over the past three decades.

Building on the findings from Chapter 5, in this chapter I present the changing relationship between the middle class and the welfare state over the past four decades. In particular, I demonstrate the extent to which the middle class relies on social transfer incomes to maintain their economic status in 22 different countries between 1969 and 2010.

The claim that the middle class is independent of the welfare state is an outdated reality. In actuality, middle class households in most industrialized countries have become increasingly reliant on social transfer incomes between the 1970s and 2010. Depending on one's perspective, this outcome can be interpreted either as a) the middle class has become reliant on the welfare state or b) the welfare state contribution to the middle class has become more important. Compared to the poor, welfare reliance (or the welfare state contribution) has increased more rapidly among the middle class. Welfare reliance has also increased for the working age middle class. As Baldwin (1990) argues, the welfare state is a social insurance system against the various risks of industrial society—unemployment, sickness, disability, and retirement—and the middle class is an important component of this system. As social risks for the middle class have

increased, the welfare state has become an increasingly critical institution for the maintenance of middle class economic security.

1. The Changing Relationship between the Middle Class and the Welfare State

Germany is an exemplary case that shows the changing relationship between the middle class and the welfare state between the 1970s and 2010. Figures 6.1 and 6.2 show the population distribution by income in Germany in 1973 and 2010, respectively. In both figures, I present both measures of income distribution—market income and disposable income—for comparison.

In the German case, I observed two important changes. First, the population share of households that maintain their middle class economic status through the welfare state has increased dramatically between 1973 and 2010. In 1973, the welfare-state generated middle class (69.4 percent of the population) is 25 percent larger than the market-generated middle class (55.5 percent of the population). In 2010, the former (53.1 percent of the population) is 2.55 times as large as the latter (21.2 percent of the population). A growing share of the middle class has become a net beneficiary rather than a net contributor of redistribution through the welfare state. In other words, the welfare state contribution to the middle class has become increasingly critical, or the middle class has become increasingly reliant on the welfare state.

Second, the population share of households that lose their affluent economic status through the welfare state has increased dramatically over the same period. In 1973, affluent households, those earning (in market share) more than twice the median income, comprised only 11.8 percent of the population. However, by 2010, affluent households had increased by more than threefold, comprising 37.8 percent of the population in terms of market income distribution.

Figure 6.1 Population Distribution by Market and Disposable Income in Germany, 1973

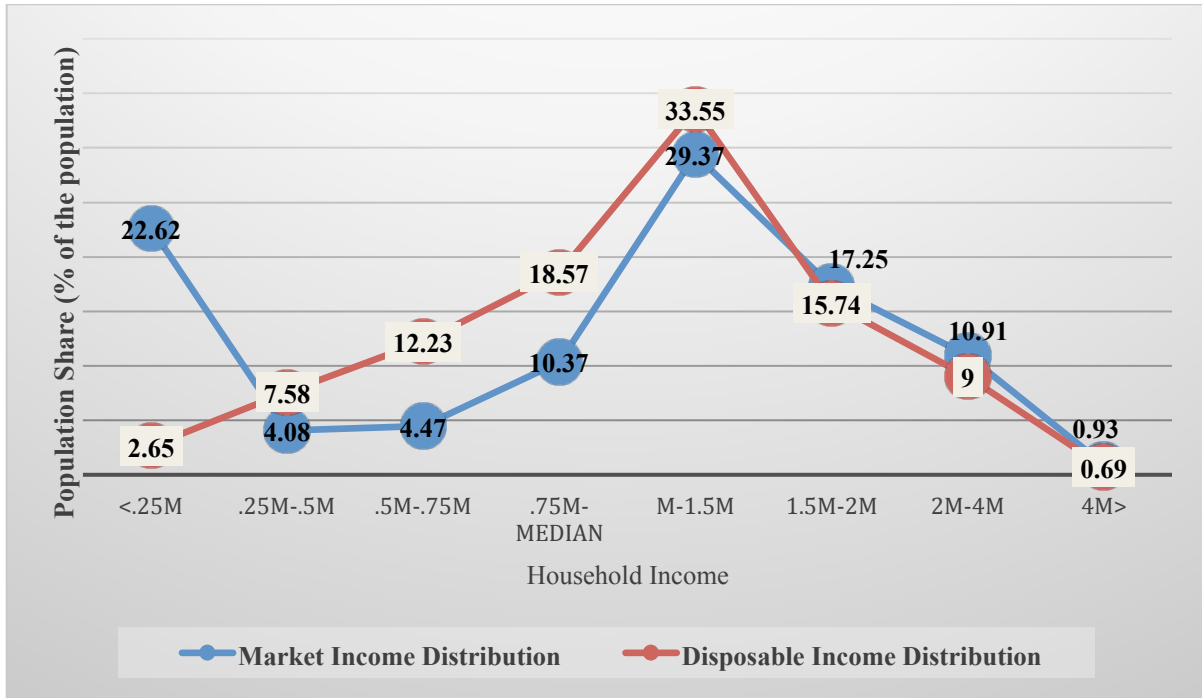
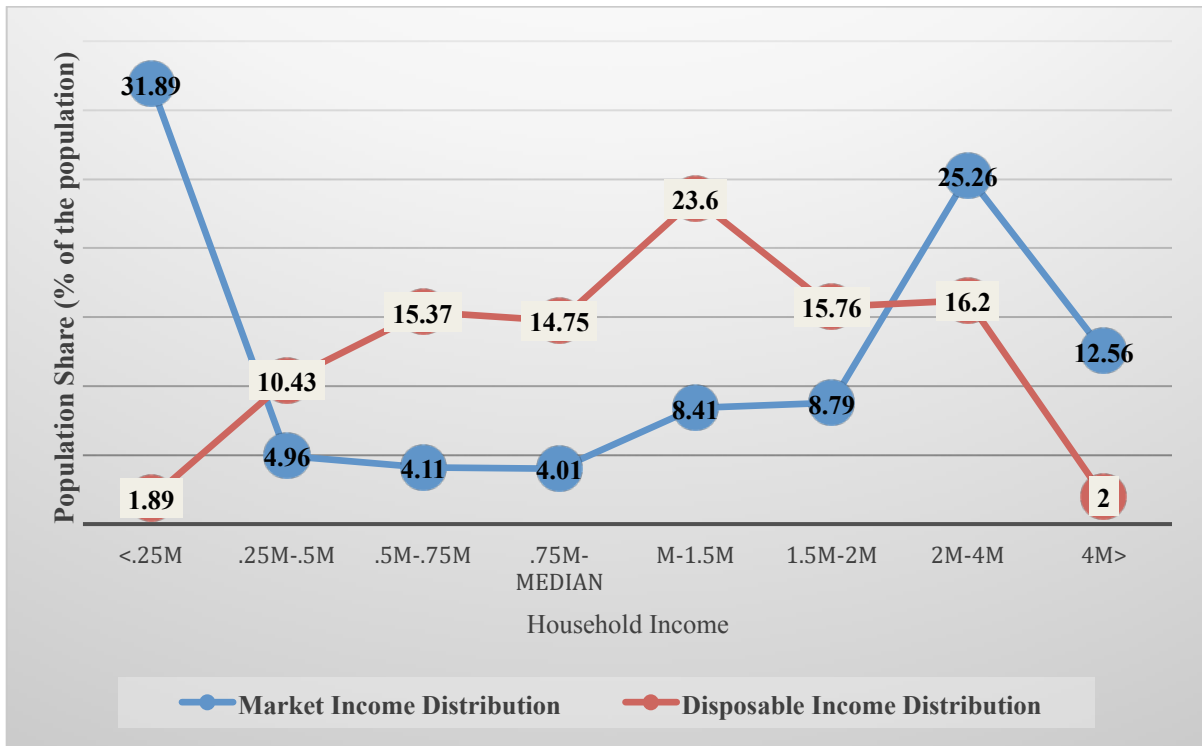


Figure 6.2 Population Distribution by Market and Disposable Income in Germany, 2010



The share of affluent households who are net contributors to the welfare state has increased dramatically. In 1973, the welfare state reduced the affluent population by only two percent, from 11.8 to 9.7 percent of the population. However, in 2010, the welfare state diminished more than half the population share of the affluent, from 37.8 to 18.2 percent of the population. The substantial rise of the affluent population who are net contributors to the welfare state challenges political support for the existing welfare state: they constituted only two percent of the population in 1973, but almost 20 percent of the population in 2010.

2. Welfare Reliance of the Middle Class

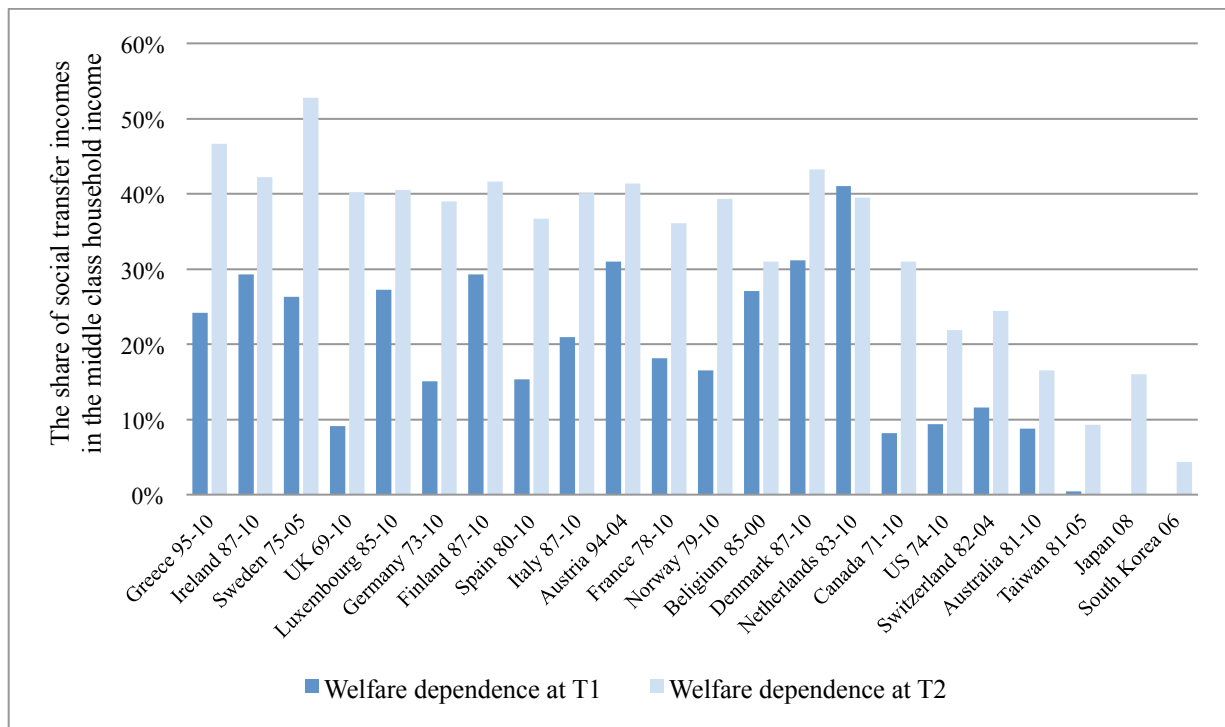
Over the last four decades, in most advanced democracies, the middle class has become increasingly reliant on social transfer incomes to maintain its economic status. Figure 6.3 illustrates the welfare reliance of the middle class in 22 industrialized democracies at two points in time: the earliest (T1) and latest observations (T2) available for each country. The vertical axis marks the average share (percentage) of social transfer incomes out of disposable household income among middle class households. The horizontal axis shows the country and the year of the observation.

For the UK middle class, social transfer incomes represented only 9.1 percent of total household income in 1969, but had increased by more than four times by 2010, comprising 40.2 percent of household income. Although the US middle class relied on social transfers for only 9.4 percent of its income in 1974, it received almost 21.9 percent of its income from social transfers in 2010.

Dramatic increases in the welfare reliance of the middle class were also found in Germany and Sweden. Whereas the German middle class relied on the welfare state for 15.1 percent of their income in 1973, they came to receive 39 percent of their income from social transfers in 2010. In Sweden, while the middle class relied on the welfare state for 26.3 percent of their income in 1975, they came to receive 52.8 percent of their income from social transfers in 2005.

In Ireland, Greece, Italy, Denmark, Finland, Luxembourg, Austria, and Sweden, more than 40 percent of middle class income came from social transfers in 2010. This growing and substantial welfare reliance of the middle class starkly contradicts a common notion that the middle class is independent of the welfare state.

Figure 6.3 Welfare Reliance of the Middle Class (22 OECD countries, Over time)



However, not all middle classes became more reliant on the welfare state. Interestingly, the Dutch middle class has become slightly less reliant on social transfers over the last three decades.³⁶ In Belgium, the welfare reliance of the middle class has increased by only a minor degree from 27.1 percent in 1985 to 31 percent in 2000.

In the US, Australia, and East Asian countries, the middle class remained relatively independent of social transfer incomes in the late-2000s, but this does not mean the middle class in these regions has fewer social risks or welfare needs than other countries in Europe. Although remaining at a relatively low level, welfare reliance among the middle classes in these countries has increased substantially over the past decades.³⁷

Still, the institutional design of the welfare state in the US, Australia, and East Asian countries primarily targets the poor for means-tested benefits. In cases when the middle class does benefit from social transfers, such as unemployment insurance benefits, its modest provision is not sufficient for the middle class to maintain its economic status (Esping-Andersen 1990; Stern and Axinn 2012). This institutional structure partly explains why the public in some countries such as the US perceives the welfare state narrowly as social assistance programs for the poor, rather than as a universal social protection system for all income groups (Gilens 2000). If they need social protection from common risks, such as unemployment, sickness, or retirement, the middle class is expected to seek protection from market-based insurance or family/relatives rather than from the state.

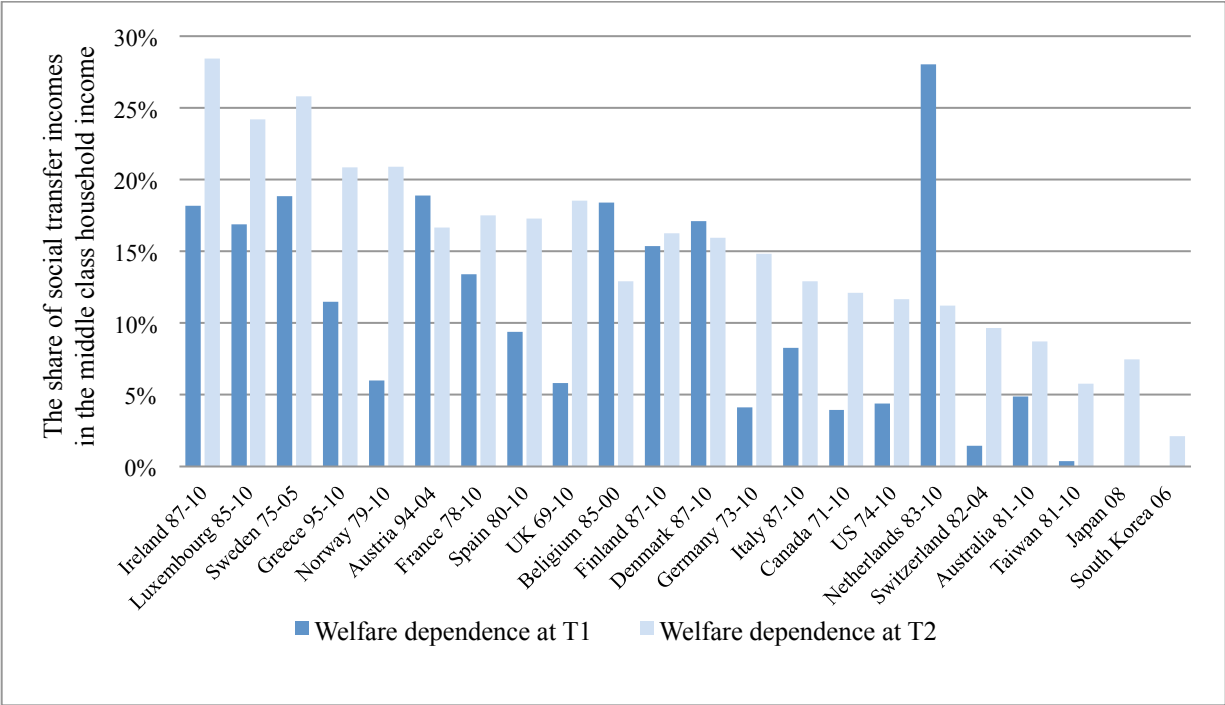
3. The Welfare Reliance of the Working Age Middle Class

³⁶ In the Netherlands, the middle class relied on the welfare state for 41 percent of their income in 1983, but they became less reliant on the welfare state in 2010 (39.5 percent of their income). The Dutch case might reflect its severely hard economic recession period in the early-1980s.

³⁷ Cross-time comparison is not available for South Korea and Japan because these two countries have only one year-observation.

Middle class welfare reliance can be caused by many different factors, among which age is one of the most important. As most retired households live with modest pensions, middle class welfare reliance is lower if measured for the working-age population only. The working-age middle class (under 60) is much less reliant on the welfare state than the middle class for all-age group. However, the social transfer income share of the working-age middle class (10 to 28 percent of the total income in 2010) is certainly not a negligible amount. In addition, the working-age middle class has experienced increasing reliance on social transfer incomes in most countries.

Figure 6.4 Welfare Reliance of Working-age Middle Class (22 countries, Over time)



While, in the UK, working-age middle class households relied on social transfers for only 5.8 percent of their income in 1969, their reliance on the welfare state has increased to 18.6 percent of their income in 2010. In the US, social transfers comprised only 4.4 percent of income

among working-age middle class households in 1974, but increased to 11.7 percent by 2010 (see Figure 6.4). By 2010, the middle classes in most countries, whether working or retired, had become more reliant on social transfer incomes than they were in the 1970s.

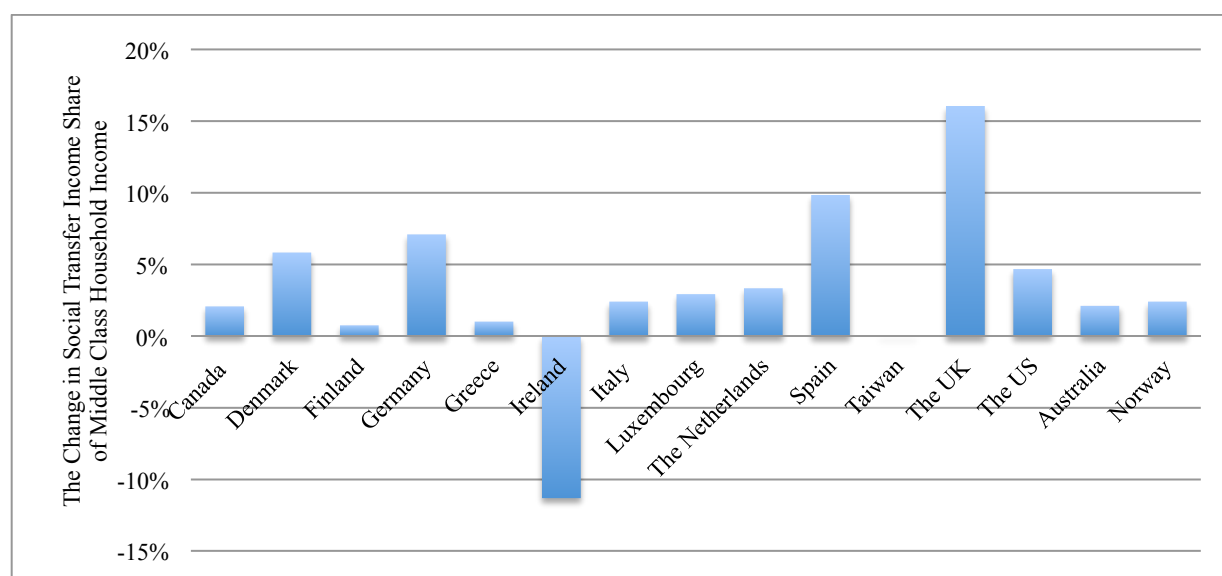
Interestingly, the working age middle class has become less reliant on social transfer incomes over time in Austria, Belgium, Denmark, and the Netherlands, and there was only a small change in Finland and France. In 2010, the Irish working-age middle class was the most heavily reliant on social transfers (28.5 percent of the disposable household income), while the South Korean working-age middle class received almost no social transfer income (2.1 percent of the household income).

4. The Effects of the 2008 Global Recession on Middle Class' Welfare Reliance

Figure 6.5 presents the change in the social transfer income share of middle class household income between 2007 and 2010. The vertical axis indicates the percentage of change during the period, while the horizontal axis identifies the country. Only 15 out of 22 countries in this study have data available for comparison between pre- and post-2008 financial crisis.

In all countries except Ireland and Taiwan, the social transfer share of household income has, to varying degrees, increased during the period of global recession. It declined in Ireland because economic crisis hit the country prior to the 2008 global financial crisis. There was no change in Taiwan. The 16 percent increase in the UK is the most dramatic. In Spain, Germany, and Denmark, middle class households have experienced more than five percent increase in the share of social transfer incomes during the recession period.

Figure 6.5 The Change in Social Transfer Income Share of Middle Class Household Income between 2007 and 2010



5. Welfare Reliance in Low and Middle Income Households

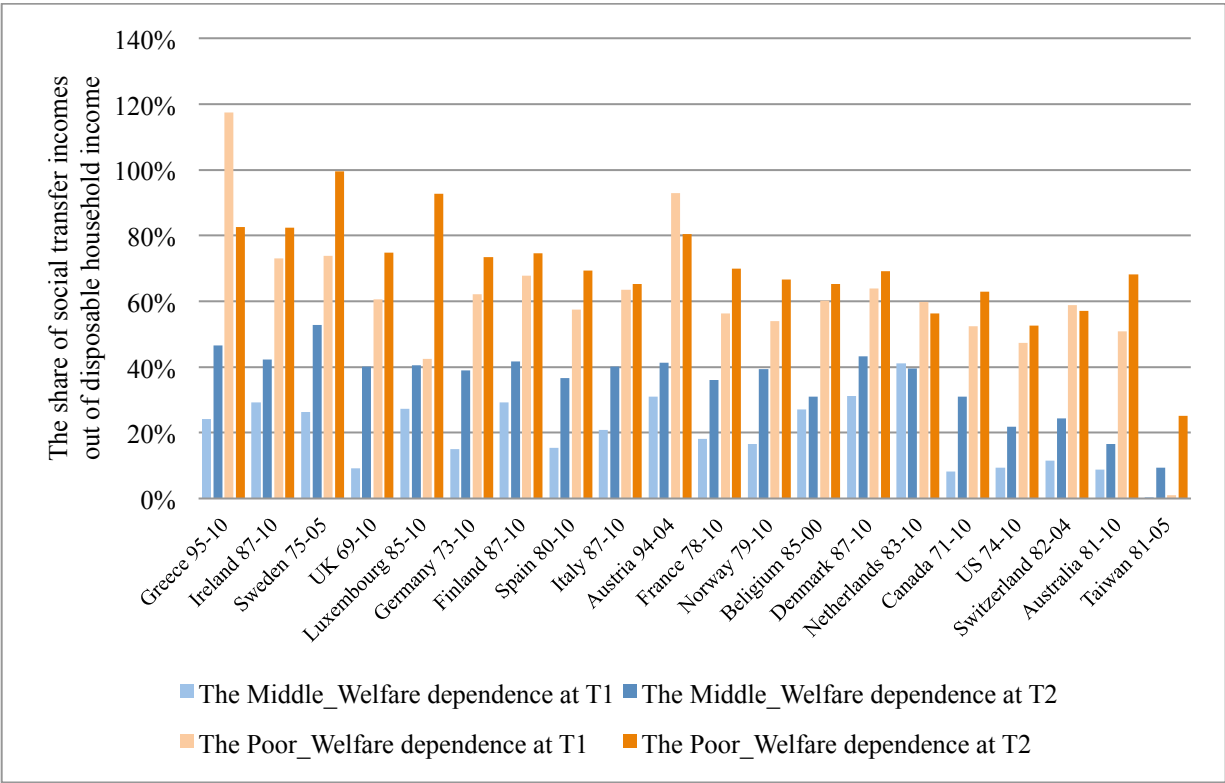
This section presents the change in welfare reliance over time in 20 OECD countries for two income groups: low and middle.³⁸ Although the middle class is still much less reliant on social transfer incomes than the low-income class, it relied on social transfers for more than 20 percent of its disposable household income in 2010 in most countries. More importantly, welfare reliance in percentages of disposable household income has increased much more rapidly among middle-income households than among low-income households over the past few decades.

In Figure 6.6, the vertical axis indicates the percentage of social transfer income in household income, while the horizontal axis indicates country-year. The time change is presented

³⁸ Compared to Figure 6.3, which presents 22 country cases, South Korea and Japan are excluded in Figure 6.6 because these two countries have only one year-data and are not available for cross-time comparison.

between time points 1 and 2. Time point 1 (T1) years range from 1969 to 1995, while the time point 2 (T2) years are between 2004 and 2010, depending on data availability. The first two bars in each country's column (light blue and dark blue bars) present the welfare reliance of the middle class, while the third and the fourth bars (light green and orange bars) in each country present the welfare reliance of the low-income households, whose income is less than 75 percent of the median income.

Figure 6.6 Change in the Welfare Reliance of Low- and Middle-Income Households over Time in 20 OECD countries



Not surprisingly, welfare reliance is much higher in the low-income households than in the middle-income households at both time points and in all countries. For instance, in 2010

Germany, whereas the low-income class relies on social transfers for 69.4 percent of their income, the middle class depends on social transfers for 39 percent of their income. In 2010 in the US, social transfer incomes account for 52.6 percent of income in low-income households and 21.9 percent in middle-income households. More importantly, in 18 out of 20 countries except Australia and Taiwan, more than 20 percent of middle class income came from social transfers in 2010.

In addition, the increase in welfare reliance is much larger in the middle-income households than in the low-income households. For instance, the US low-income households' welfare reliance has increased by only 10 percent between 1974 and 2010. In contrast, the US middle-income households' welfare reliance has increased by 133 percent over the same period. In the UK, the increase rate of welfare reliance was 14 times higher among the middle-income households than among the low-income households for the same period. While the rate of increase was only 23.6 percent for the UK low-income class, it was 341.8 percent for the UK middle class. The same pattern is found across most of the countries. Consequently, the difference between the middle and low-income class welfare reliance has become smaller over the last few decades.

6. National Variation in the Welfare State Contribution to the Middle Class

I find mixed support for the prediction of the welfare regime theory—cross-country variation supports the theory, while time variation does not. It is true that the welfare reliance of the middle class is relatively low in most liberal welfare regime countries including the US, Ireland, Australia, and Canada in 2010. However, the UK and Ireland cases look quite different

from other liberal welfare regime countries. Their middle classes have become as highly reliant on the welfare state as other conservative and social-democratic welfare regime countries.

More importantly, in contradiction to the predictions of welfare regime theory, as their middle classes have become more economically insecure, all liberal welfare states have substantially increased their support to middle class households over the past few decades. Among the four countries with data between the 1970s and 2010, the welfare reliance of the middle class in liberal UK has increased to a larger degree than in social-democratic Sweden and Norway, and in conservative Germany and France. The increase in the U.S. is also significant. This finding contradicts the static image of welfare regimes projected by welfare regime theory.

The newly industrialized East Asian countries are not adequately explained by welfare regime theory. While some view East Asian countries as similar to conservative welfare regimes, others consider them a distinct fourth type of welfare regime (Kwon 1997). In the analysis of the Taiwan case, I find that although its welfare provision for the middle class is extremely low compared to countries in other regions, its welfare support for the middle class has increased exponentially from near zero in 1981 to 9.3 percent of disposable household income in 2010.

In sum, the changes in the welfare reliance of the middle class over time do not fit welfare regime theory neatly. In all types of welfare regimes, the middle class has become more reliant on social transfer incomes. In other words, all welfare regimes have increased their social transfer income support to middle class households, though these supports have proven insufficient in preventing middle class decline.

7. Conclusion

In this chapter, I established empirically that the middle class has become increasingly reliant on social transfer income since the 1970s. By 2010, the amount of middle class income coming from social transfers increased from about 20 percent to about 40 percent across industrialized democracies. Although the welfare reliance of middle-income households is not as high as that of low-income households, the rate of increase in welfare reliance was much larger in the middle-income households than in the poor or near poor households. Even among the working-age middle class, welfare reliance has increased substantially over the past three or four decades. In other words, the welfare state is an indispensable component of a middle class that has become increasingly vulnerable to a globalized and technologically advancing economy.

Change in the relationship between the welfare state and the middle class does not accord with welfare regime theory. The theory suggests that the middle class should not receive substantial support in liberal welfare regimes and that this institutional regime structure is static. However, welfare support for the middle class has dramatically increased in all liberal welfare states, including the US, the UK, Ireland, Canada, and Australia over the past few decades. Particularly, during the Great Recession period, the middle classes in all but Ireland relied more on social transfers to maintain their middle class income.

These findings have implications for current policy debates on welfare cuts. In the wake of austerity politics, critiques of the welfare state have become more influential. King and Ross (2010) identify three major streams of critiques—neoliberal, conservative, and social democratic. All three critiques call for welfare cuts and privatization for different reasons. Drawing on the economic theories of Von Mises, Hayek, and Friedman, neoliberal critiques claim that welfare states distort market equilibrium and efficiency. Accordingly, the welfare state generates a negative impact on economic growth as it discourages labor force participation. Furthermore,

conservatives claim that the welfare state is immoral because it makes recipients reliant upon other taxpayers' money without working. For social democrats, the welfare state is fiscally unsustainable in times of low growth, high unemployment, and aging populations.

Despite the growing reliance of the middle class on social welfare, the middle class is not yet recognized as a major welfare recipient and, thus, is neglected in current debates on welfare politics. The substantial degree of welfare reliance in the middle class suggests that welfare state retrenchment can undermine the economic security of the middle class as much as that of the low-income class, resulting in a decline of middle class and a growth of low-income populations.

Chapter 7: Determinants of Middle Class Decline and Growth

In this chapter, I first analyse the extent to which competing theories can explain the change in middle class size, with focus on the effects of centralized bargaining and social insurance benefits. The dependent variable in all of regression analyses in this chapter is the size of the middle class with respect to middle class households' disposable income. In the first set of regression outcomes (Table 7.1), I identify the key variables that affect middle class size, using a fixed effects model (model 1) as the baseline model. I also present the regression outcomes using a random effects model (model 2) for comparison. Then, I present the second set of regression outcomes estimated for the different partisan effects—Christian Democratic, secular right, and leftist party control in government. Partisan effects are estimated for the two time periods—all years and post-1990 years (models 3 to 8 in Table 7.2). Finally, I present several scatter plots to illustrate the relations of partisan control in government with four key variables that I identify from the first set of regression outcomes.

1. The Causes of Middle Class Decline

1.1. Effects of Centralized Bargaining

In model 1, I find that the effects of bargaining coverage are positive and statistically significant. A ten percent increase in bargaining coverage results in a 1.6 percent increase in the population share of the middle class. On the contrary, a ten percent decline in bargaining coverage (like the US during the 1980s) can result in a 1.6 percent decline of middle class size.

Between two countries, if country A has an 80 percent higher bargaining coverage than country B (e.g., Sweden and the US in 2010), the positive effect of bargaining coverage is an eight percent larger middle class in country A than country B, if all the other conditions are controlled for.

The effects of bargaining coverage are positive in both fixed effects and random effects models, but they are statistically significant only in the fixed effects model (model 1). This is because there are larger time variations within a country than variations across countries for these effects. This means that bargaining coverage effects explain diachronic change better than cross-national variation in middle class size. As for bargaining centralization, I only find negative and statistically insignificant effects.

This outcome supports my hypothesis on the effects of centralized wage bargaining. At the same time, it supplements the findings of previous literature (Wallerstein 1999) by finding different effects between the bargaining coverage and the degree of centralization in bargaining. My findings show that bargaining coverage has a positive effect on middle class size, whereas bargaining centralization does not have a statistically significant effect, although the effect is negative.

The negative effects of bargaining centralization may be explained by the case that experienced a substantial decline in bargaining coverage, while maintaining the degree of centralization, such as Germany. In this case, collective bargaining covers labor-market insiders only and increases income differentials rather than reduces them.

1.2. Effects of Social Insurance Benefit Generosity

Of the three major social insurance program benefits, both unemployment insurance benefits and sickness benefits have positive effects on middle class size. While unemployment insurance benefit generosity explains both cross-national and time variation in middle class size, sickness benefit generosity explains cross-national variation only. On the contrary, pension benefit generosity has a negative, but statistically insignificant effect on middle class size.

A one percentage point increase in the income replacement rate of the unemployment insurance benefit results in a 0.199 percent increase in middle class size (model 1, Table 7.1). For example, the 40-percent difference in the unemployment benefit level between Switzerland and the UK in 2010 results in an 8 percent difference in middle class size.

For sickness benefits, a one percent difference in the income replacement rate can explain a 0.185 percent difference in middle class size (model 2, Table 7.1). The difference in sickness benefit generosity between Germany and the UK was almost 70 percent in 2010. This scale of difference can explain the 12.95 percent difference in their respective middle class sizes. Between 1979 and 2003, the UK experienced a 50 percent drop in sickness benefits from 75 percent to 25 percent of income. This scale of decrease in sickness benefits resulted in a 9.25 percent decline in middle class size.

The negative and statistically insignificant effects of pension benefit generosity are puzzling. It may be related to the fact that whereas both unemployment and sickness benefit generosity have a positive and strong correlation with their coverage, pension generosity (income-replacement rate) has a negative and strong correlation with pension coverage.³⁹ The correlation coefficient between these two variables is -0.16 ($p < 0.01$). That is, public pension

³⁹ Pension coverage is measured by the portion of those above official retirement age who are in receipt of a public pension. The variable is drawn from CWED. The correlation coefficient between unemployment benefit generosity and its coverage is 0.10 ($p < 0.05$), while the correlation coefficient between sickness benefit generosity and its coverage is 0.35 ($p < 0.01$).

program is not as protective as other two social insurance program because it becomes less widespread as it becomes more generous.

Overall, this outcome supports my hypothesis that the welfare state as social insurance programs has become increasingly critical for middle class household maintenance of economic status. Particularly, generous unemployment and sickness benefits have influential and positive effects on middle class size.

1.3. The Population Share of Elderly (65 years and up)

The effects of elderly population share are negative and statistically significant. A one percent increase in the elderly population is associated with more than a two percent decline in middle class size. Although the elderly population share has increased gradually, its influence on middle class decline is critical. The effects of the elderly population are statistically more significant in model 1 than in model 2. This suggests that the effects explain diachronic change in middle class size better than cross-national variation. The change in elderly population share may be influenced by many factors, including extended life expectancy, immigration flow, and birth rates. Policy differences between the two right-wing parties may influence some of these factors as well. I will discuss the effect of policy difference on elderly population share later in this chapter.

1.4. The Effects of Female Employment Rate

The effects of female employment are positive and statistically significant in both model 1 and 2. A one percentage point increase in women's employment results in a 0.422 percent increase in middle class size. In the Netherlands, the female employment rate has increased dramatically, from 20 percent in the mid-1970s to 50 percent in the late-2000s. This 30 percent increase was associated with a 12.7 percent increase in middle class size. Over the same period, the female employment rate increased only 13 percent in both Germany and the US, and 12 percent in the UK, less than one third of the increase in the Netherlands. Therefore, the positive effects of female employment are much smaller in these three countries than in the Netherlands.

I do not exclude the possibility that the homogamy trend in marriage might have some negative effects on middle class size (or positive effects on income polarization). However, overall, the effects of female employment on middle class size are positive and significant.

National variation in female employment rates among industrialized countries has been explained by previous studies in political science, sociology, and policy studies (Gornick et al. 1998; Gornick and Meyers 2003; Morgan 2013). Policies that promote gender equality in employment and pay and that reconcile the conflicts between work and family can facilitate female employment. Female employment not only affects woman's socio-economic status, but also affects household-income distribution. As in the Dutch case in the 1980s, it is often the case that female employment increases as a household-level coping strategy to compensate for the income loss of male breadwinners during the de-industrialization processes (Thelen 2014, 164).

The welfare regime literature (Esping-Andersen 1990) claimed that the conservative welfare regimes in continental European countries discouraged women's labor market participation. Much of that explanation is based on the Christian Democratic Party's family and

labor policy, which emphasized traditional gender roles. Later in this chapter, I will demonstrate whether partisan difference in right-wing government affects the female employment rate.

1.5. The Effects of Global Market Integration

In both model 1 and 2, all three aspects of global market integration have no statistically significant effects on middle class size when other policy-related variables are controlled for. This outcome challenges the prediction of the prevailing globalization theory.

Given that all industrialized countries experienced dramatic increases in trade openness, capital account openness, and immigrant population share since the 1980s and the variation in these effects are primarily driven by diachronic change rather than by the national difference, the effects of globalization are better estimated in model 1 (FE model). The effect of capital account openness is negative, whereas the effects of trade openness and immigrant population share are positive, although all these effects are statistically insignificant. To specify the causal mechanism how trade openness and immigrant population share can have positive effects on middle class size can make genuine contribution to the debates on the effects of globalization, but it is a task beyond this study.

Although it is still possible that global market integration might have either positive or negative effects in some countries for a particular period of time, these effects of globalization are not common to all 17 cases over the whole period when other variables are controlled for.

1.6. The Effects of Skill-biased Technological Change

The effects of high-skilled labor share are negative, but statistically insignificant in both model 1 and 2. Although statistically insignificant, these effects are negative as opposed to the prediction of skill-biased technological change theory that middle class decline is the outcome of a shortage of high-skilled labor in a technologically advancing economy. This outcome has a critical policy implication because increased investment in higher education is often suggested as a policy solution to middle class decline (Cowen 2013). My findings suggest that alternative policy solutions should include a more generous social insurance benefits, a more comprehensive bargaining coverage, and a higher female employment, rather than a more investment in skill-level upgrading.

1.7. GDP Growth and EU membership

In model 1 and 2, neither GDP growth rate nor EU membership has a statistically significant effect on middle class size when other explanatory variables are controlled for.

In sum, I identified four variables that have statistically significant effects on middle class size. Among them, the elderly population share has a negative effect, whereas positive effects are found in bargaining coverage, unemployment and sickness insurance-benefit generosity, and female employment.

Table 7.1 Key Factors that Affect Middle Class Decline in 17 OECD countries, 1967-2010

	(1)	(2)
	Fixed Effects	Random Effects
Bargaining Coverage	0.157*** (0.05)	0.05 (0.05)
Bargaining Centralization	-0.365 (0.62)	-0.981** (0.48)
Unemployment Benefit Generosity	0.199*** (0.07)	0.143** (0.06)
Sickness Benefit Generosity	0.122 (0.12)	0.185*** (0.07)
Pension Benefit Generosity	-0.036 (0.07)	-0.021 (0.05)
Trade Openness	0.04 (0.06)	-0.046 (0.03)
Capital Account Openness	-0.267 (0.77)	0.236 (0.61)
Immigrant Population Share	0.111 (0.24)	-0.211 (0.16)
High-skilled Labor Share	-0.114 (0.20)	-0.045 (0.16)
GDP Growth	-0.066 (0.12)	-0.003 (0.09)
Elderly Population (>65) Share	-2.267*** (0.41)	-1.359*** (0.34)
Female Employment Rate	0.422** (0.17)	0.289* (0.16)
EU Membership	0.518 (2.22)	-0.052 (2.44)
_Cons	40.267*** (10.53)	46.563*** (6.18)
R ² within	0.4298	0.343
R ² between	0.2367	0.6306
R ² overall	0.3085	0.5386
N	95	95

Notes: Standard errors are in parentheses

* p<0.1, ** p<0.5, *** p<0.01

2. The Effects of Party Control of Government on Middle Class Decline

Table 7.2 presents regression estimates on the effects of party control of government on middle class size. For each party category, Christian Democratic, secular right, and leftist, I

present the outcomes for two different time periods: all years from the late 1970s to 2010 and the post-1990 years. As I expected, the partisan effects of the two major right-wing party governments are distinctive and become more distinctive in the post-1990 period.

I find that the effect of Christian Democratic control in government is positive and statistically significant (model 3), and the positive effect is larger for the post-1990 period (model 4). On the contrary, the effect of secular right control in government is negative and statistically significant (model 5), and the negative effect is almost twice as large in the post-1990s period than the “all years” period (model 6). The effect of leftist government control is statistically insignificant for both periods (model 7 and 8).

Full control of government by a Christian Democratic party results in a 7.5 percent increase in middle class population share, compared to the absence of Christian Democratic party control in government. In the post-1990 years, these positive effects are even larger. A full Christian Democratic party control in government resulted in an 8.7 percent increase in middle class size, when the other explanatory variables were controlled for.

Full control of government by a secular right party resulted in a 1.3 percent decrease in middle class population share, compared to the absence of secular right party control in government. In the post-1990 years, these negative effects were even larger. A full secular right party control in government resulted in middle class decline by two percentage points.

This supports my hypothesis that secular right-wing governments had larger negative effects on middle class size from the 1980s onward as they actively pursued neoliberal policy reforms, whereas Christian Democratic governments had positive effects on middle class size.

Table 7.2 Partisan Effects on Middle Class Size in 17 OECD countries, 1967-2010

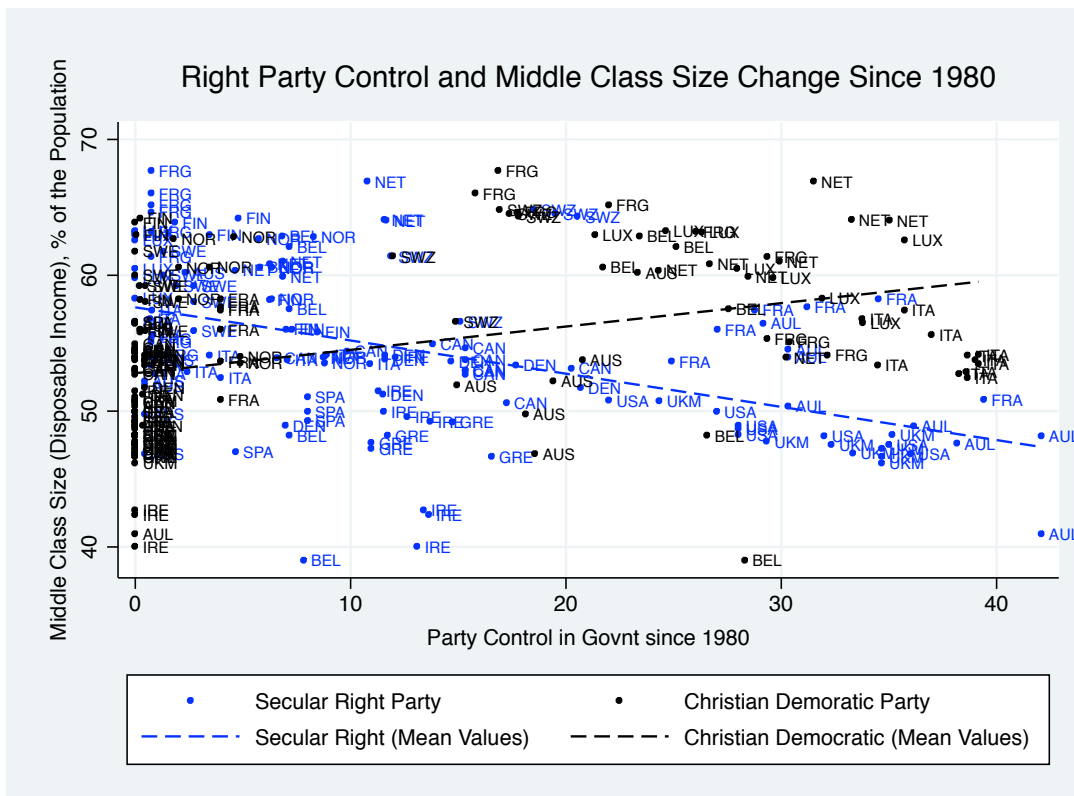
	1	2	3	4	5	6
	Christian Democratic		Secular Right Effects		Leftist Govt. Effects	
	All years	Post-1990	All years	Post-1990	All years	Post-1990
Christian Democratic						
Control in Govt.	7.493** (3.68)	8.706*** (3.24)				
Secular Right						
Control in Govt.			-1.305* (0.73)	-2.009** (0.89)		
Leftist						
Control in Govt.					-0.775 (0.89)	-1.284 (0.96)
Bargaining Coverage	0.077 (0.06)	-0.027 (0.04)	0.015 (0.05)	-0.009 (0.05)	0.051 (0.05)	-0.003 (0.05)
Bargaining Centralization	-1.059** (0.49)	-2.758*** (0.54)	-1.614*** (0.52)	-2.721*** (0.47)	-0.929* (0.53)	-2.765*** (0.42)
Unemployment Benefit	0.199*** (0.07)	0.196*** (0.06)	0.163*** (0.05)	0.157** (0.07)	0.141** (0.06)	0.157** (0.08)
Sickness Benefit	0.111 (0.08)	0.234*** (0.05)	0.216*** (0.06)	0.261*** (0.04)	0.185*** (0.06)	0.269*** (0.04)
Pension Benefit	-0.033 (0.04)	-0.015 (0.04)	-0.054 (0.05)	-0.062 (0.06)	-0.025 (0.05)	-0.067 (0.05)
Trade Openness	-0.036 (0.03)	-0.051*** (0.02)	-0.054* (0.03)	-0.052** (0.02)	-0.048 (0.04)	-0.046* (0.03)
Capital Account	0.278 (0.66)	1.333 (0.96)	0.513 (0.67)	1.819*** (0.54)	0.252 (0.61)	2.012** (0.94)
Openness						
Immigrant Population	-0.183 (0.17)	-0.572*** (0.12)	-0.379*** (0.14)	-0.563*** (0.13)	-0.201 (0.16)	-0.612*** (0.13)
High-skilled Labor	-0.054 (0.18)	0.053 (0.13)	0.014 (0.15)	0.094 (0.12)	-0.043 (0.16)	0.147 (0.13)
GDP Growth	0.036 (0.09)	-0.203 (0.15)	-0.065 (0.11)	-0.352** (0.16)	0.018 (0.08)	-0.271 (0.18)
Elderly Population (>65)	-1.130*** (0.35)	-0.769*** (0.26)	-1.106*** (0.28)	-0.740** (0.30)	-1.341*** (0.33)	-0.686** (0.34)
Female Employment Rate	0.285 (0.17)	0.316*** (0.10)	0.178 (0.12)	0.271*** (0.09)	0.292* (0.16)	0.245** (0.10)
EU Membership	-0.993 (2.30)	-0.511 (1.69)	-0.739 (2.44)	-0.789 (2.08)	0.077 (2.60)	-1.305 (2.27)
_Cons	42.290*** (7.27)	38.822*** (5.68)	52.362*** (5.46)	43.667*** (6.59)	46.525*** (6.28)	42.258*** (7.44)
R ² within	0.435	0.388	0.279	0.266	0.345	0.209
R ² between	0.675	0.910	0.759	0.839	0.636	0.859
R ² overall	0.584	0.749	0.613	0.682	0.543	0.673
N	95	76	95	76	95	76

Notes: Standard errors are in parentheses

* p<0.1, ** p<0.5, *** p<0.01

Figure 7.1 presents the relationship between party control of government and middle class size since 1980, using scatter plot. Black dots represent Christian Democratic control in government and blue dots represent secular right control in government. This scatter plot also shows that Christian Democratic government had a positive association with middle class size, whereas secular right government had a negative association with middle class size.

Figure 7.1. Right Party Control in Government and Middle Class Size Since 1980



The negative yet statistically insignificant effects of leftist control in government are puzzling. One possible explanation is related to the leftist parties' accommodation of the interests of organized labor (labor-market insiders) against the interests of unorganized labor (labor-market outsiders). Rueda (2005) claimed that due to the trend of labor-market dualization, the interests between the labor-market insiders and the outsiders have diverged, and that leftist

governments accommodate policy preferences of the labor-market insiders because they are politically organized, whereas the outsiders are not politically organized. This leftist government's political position facilitated labor-market dualization between protected workers and unprotected workers. Although the extension of bargaining coverage has positive effects on middle class size (Table 7.1), it is one of the key policy issues, in which labor-market insiders and outsiders have increasingly contrasting interests.

Another possible explanation regards with the leftist parties' pursuit of the Third Way since the 1990s, exemplified by the Blair's UK Labor Party government and the Schröder's German Social Democratic government. The current literature (Karreth et al. 2013) finds that major leftist parties have adopted policy positions increasingly similar to major right-wing parties as a winning strategy in elections. The Third Way embraced liberal reforms such as deregulation, a freer trade, privatization of public services, and the retrenchment of welfare states. In Germany, bargaining coverage has decreased substantially in the early 2000s during the Schröder government and welfare benefits were cut through the Hartz IV reform.

The third possible explanation can be the difference in institutional design of the welfare state pursued by Christian Democratic parties and Social Democratic parties. Christian Democratic parties pursue the conservative welfare regimes, which aims to preserve the existing social status and develop previous-earnings related social insurance programs, whereas Social Democratic parties pursue the universalist welfare regimes, which aims an egalitarian redistribution. The former can provide sufficient benefits for the middle class to maintain their economic status when they face economic risks, while the latter may not provide sufficient benefits for the middle class. In social democratic welfare regimes, the redistribution might be

sufficient for the poor to get out of the poverty (50 percent of the median income), but not enough for them to become a middle class (75 percent of the median income).

These three possible explanations have not been tested yet. The puzzling leftist government's effect on middle class size should be explained by following empirical studies.

3. The Partisan Effects on Key Causal Variables

I present several scatter plots to illustrate the relationship between partisan control in government and four key variables identified from the first set of regression outcomes—bargaining coverage, unemployment (and sickness) benefit generosity, elderly population share, and female employment rate. Blue dots represent a cumulative score of secular right control in government, while black dots represent a cumulative score of Christian Democratic control in government since 1980.

First, in terms of bargaining coverage, Christian Democratic control in government has a positive relationship with bargaining coverage. On the contrary, as secular right control in government is extended, bargaining coverage is reduced. In addition, the governments where secular right control is absent tend to have higher bargaining coverage than governments where Christian Democratic control is absent (Figure 7.2).

Second, in terms of unemployment benefit generosity, Christian Democratic control in government has a positive association with unemployment benefit generosity. In contrast, as secular right control in government increases, unemployment benefits become less generous. Furthermore, the governments where secular right control is absent tend to have higher unemployment benefits than those where Christian Democratic control is absent (Figure 7.3).

Right party association with sickness benefit generosity follows the same pattern as right party association with unemployment benefit generosity.

Third, in terms of the elderly population share, partisan effects are not apparent. Although Christian Democratic control in government has a slightly more positive association with elderly population share than does secular right control in government, an increase in elderly population is a common phenomenon regardless of partisanship in government. The main reason why Christian Democratic government is more positively associated with elderly population is illustrated by two extreme cases, Italy and Germany, where elderly populations have increased dramatically. In both the Italian and German cases, much of the increase in elderly population share occurred without any increase in Christian Democratic control in government (Figure 7.4).

Figure 7.2 Right Party Control in Government and Bargaining Coverage

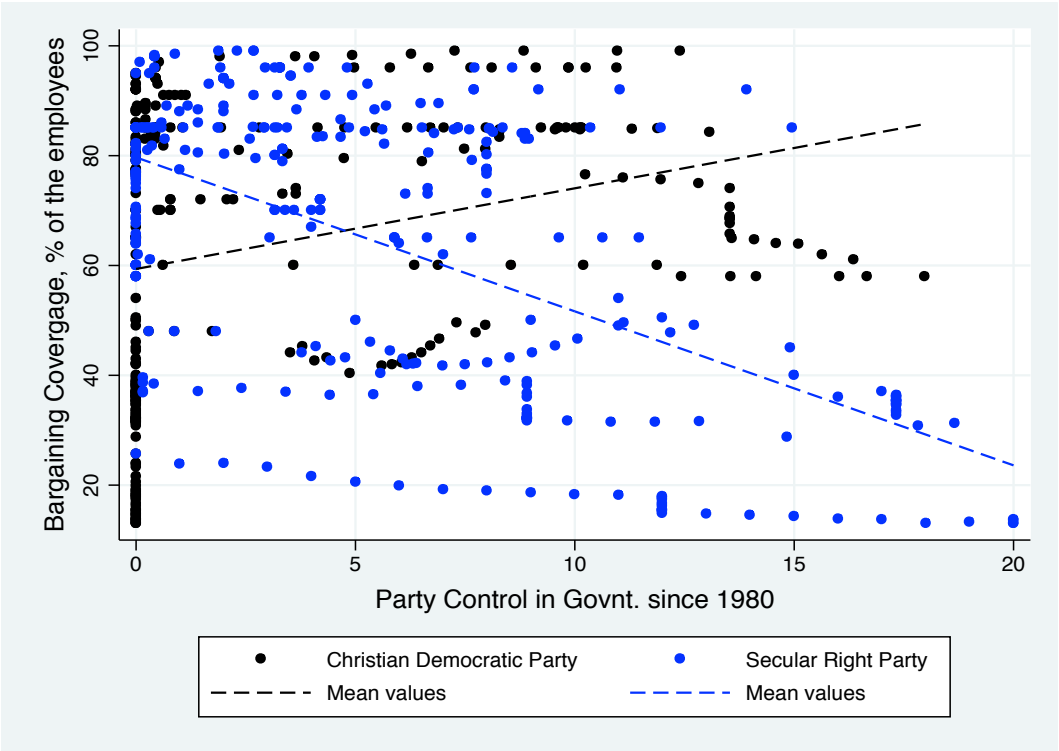


Figure 7.3 Right Party Control in Government and Unemployment Benefit Generosity

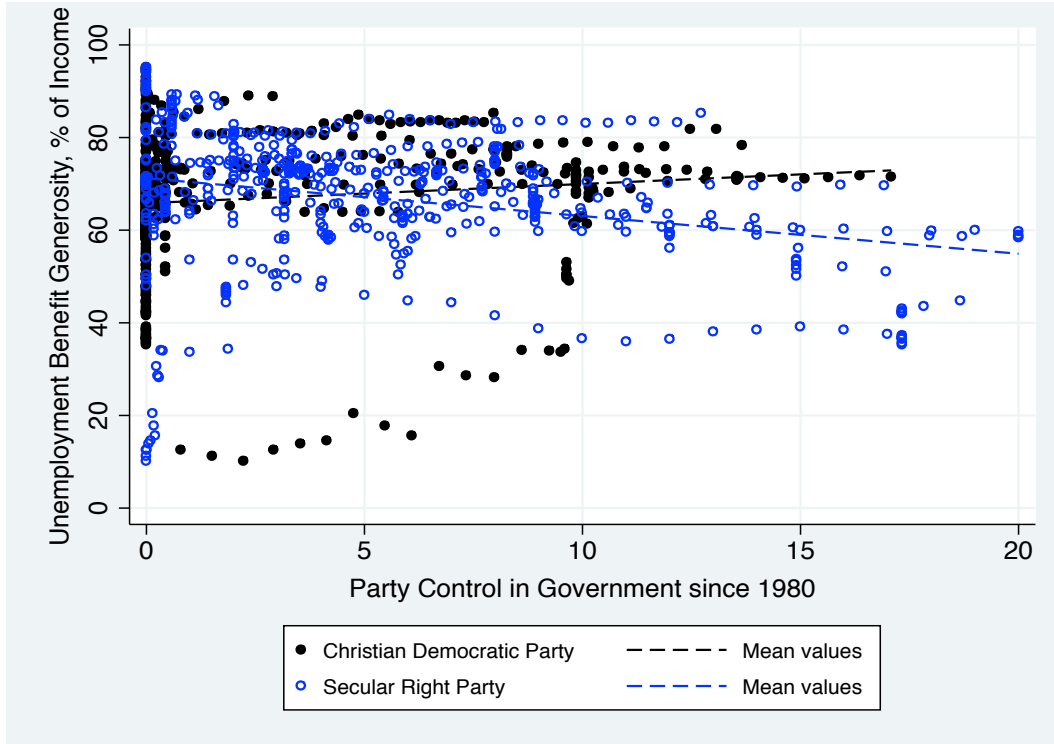
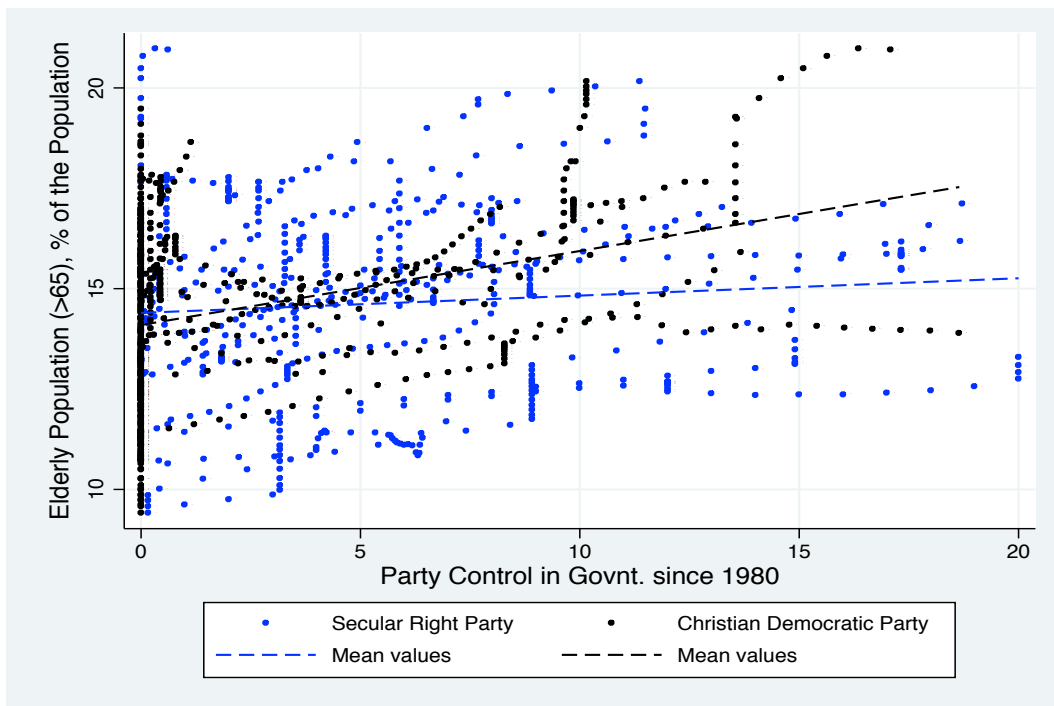
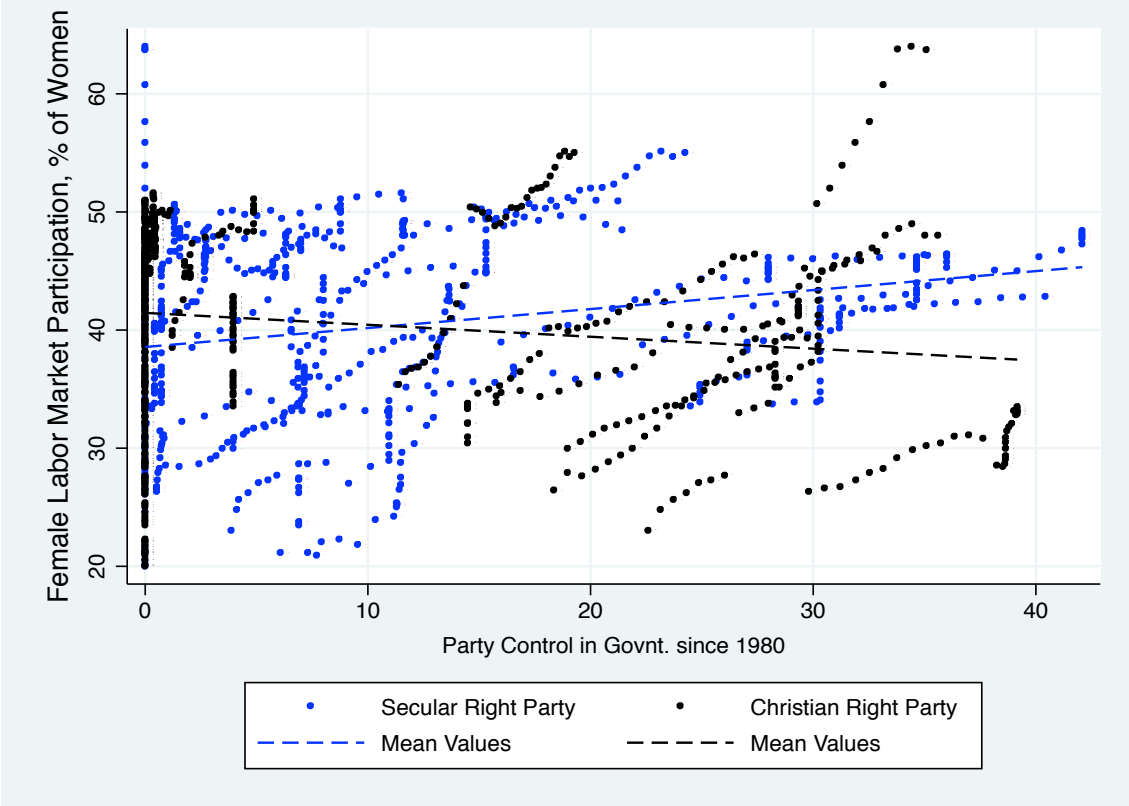


Figure 7.4 Right Party Control in Government and Elderly Population Share



Fourth, in terms of women's employment, both right-wing governments have experienced continuous increases in women's employment rates over time. However, mainly due to cross-national variation, Christian Democratic government is negatively associated and secular right government is positively associated with rates of female employment (Figure 7.5).

Figure 7.5 Right Party Control in Government and Female Employment Rate



4. Conclusion

The outcomes of the statistical analyses help identify four key variables that affect middle class decline and growth in 17 industrialized democracies between 1967 and 2010. These key

factors include bargaining coverage, unemployment (and sickness) insurance benefit generosity, the share of the elderly population, and female employment.

I also found that different party control in government affects middle class size. Whereas Christian Democratic party control in government had a positive effect, secular right party control in government had a negative effect. The effect of leftist government was not statistically significant.

Finally, I illustrated the partisan relationship to the key causal variables. Christian Democratic government is positively associated with bargaining coverage and unemployment (sickness) benefit generosity, whereas secular right government is negatively associated with those variables. Both elderly population and female employment have increased over time regardless of partisan difference in government. However, countries where the dominant right party is a Christian Democratic party have a relatively higher elderly population share and lower female employment rates.

In the next chapter, I use the key findings of the statistical analyses to compare four pairs of countries that once had similarly sized middle classes, but ended up with very divergent outcomes.

Chapter 8: Cases

In this section, I demonstrate the extent to which the regression findings explain middle class decline and growth in specific country cases, using the method of difference. I illustrate the differences in the explanatory variables that correspond to the difference in each country's middle class size. I present four pairs of country cases that once had similarly sized middle classes, but arrived at very different outcomes over the past two or three decades: 1) the UK & Austria, 2) the Netherlands & Germany, 3) Switzerland & Denmark, and 4) the US & Canada.

I present 16 scatter plots to compare the first two paired cases, the UK and Austria on one hand, and Germany and the Netherlands on the other. In the scatter plot figures, the vertical axis represents a single explanatory variable, and the horizontal axis represents year. The first scatter plot shows the diachronic change in middle class size. In turn, the following 12 figures present diachronic changes in each explanatory variable, including: 1) the GDP growth rate, 2) trade openness, 3) capital account openness, 4) the population share of immigrants, 5) the female employment rate, 6) the elderly population share, 7) the population share of high-skilled labor, 8) bargaining coverage, 9) bargaining centralization, 10) unemployment benefits, 11) sickness benefits, and 12) pension benefits. I combine these 12 figures into two sets: figures that show the similarities and figures that show the differences between these two countries. The last three figures show the association between the two major right-wing governments and the explanatory variables that show differences between the two countries.

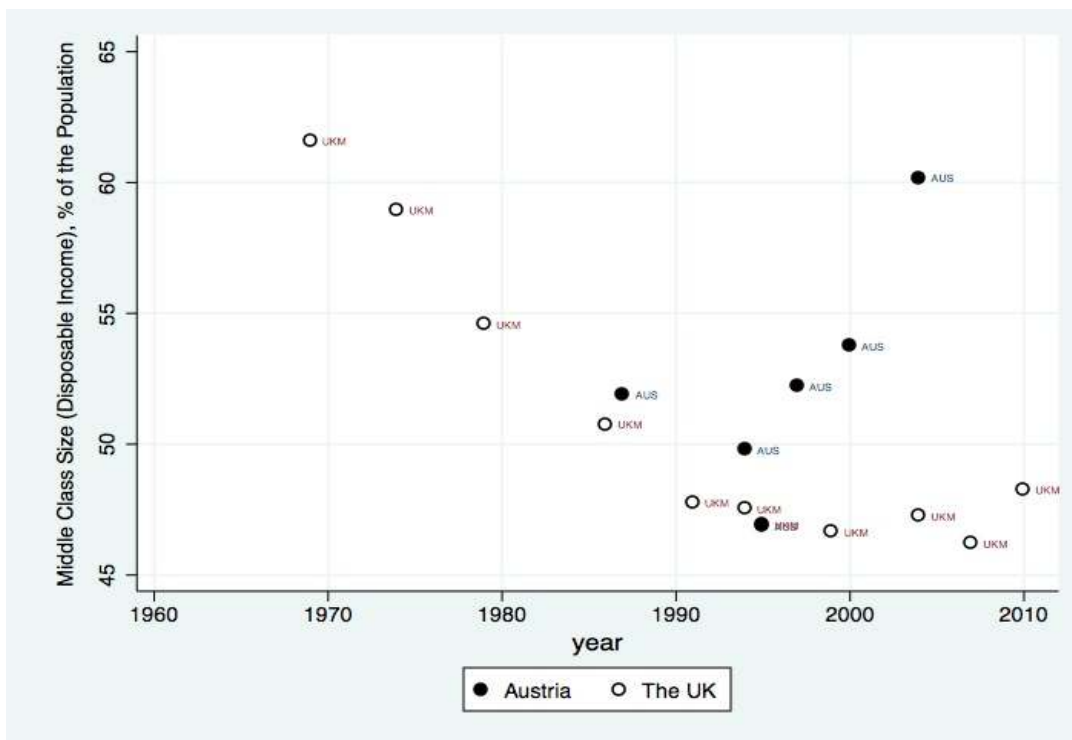
For the remaining two pairs of comparison, rather than presenting all 16 figures for each pair of comparisons, I report only a few selected scatter plots that are most relevant for illustration.

1. The UK and Austria

1.1. Middle Class Size Change Overtime

Figure 8.1 presents diachronic change in middle class size in these two countries. Black filled circles represent Austria; black hollow circles represent the UK. In the mid-1980s the UK and Austria had similarly sized middle classes (51 versus 52 percent), but in the mid-2000s, Austria's middle class had a much larger population share than did the UK's (60 versus 47 percent). In Austria, middle class size has increased consistently and dramatically since the mid-1990s. In the UK, the middle class declined rapidly throughout the 1970s and 1980s and remained at this lowered level.

Figure 8.1 Middle Class Size Change Overtime (The UK and Austria)



1.2. Similarities between The UK and Austria

Of the 11 explanatory variables, all the variables related to globalization, skill-biased technological change, demography, and gender role followed a similar pattern of change between 1960 and 2010. Therefore, these seven common variables cannot explain the diverging middle class size between the UK and Austria.

In terms of GDP growth rate, there is no divergent diachronic trend (Figure 8.2). In terms of global market integration, Austria is more integrated into the global market than the UK. Both trade openness and the population share of immigrants are higher in Austria than the UK (Figures 8.3 and 8.4). Capital account openness in the two countries converged in the same degree in the mid-1990s (Figure 8.5). That is, the potential negative effects of globalization influenced Austria more than the UK. High-skilled labor share increased dramatically in both countries. Although the UK has always had a higher score for this variable than Austria, this did not affect middle class growth in the UK (Figure 8.6).

Although the elderly population share increased dramatically in both countries, since the early-2000s, it increased more rapidly in Austria than in the UK (Figure 8.7). Thus, the negative effects of an aging population were larger in Austria than in the UK. In terms of female employment rates, both countries experienced substantial growth and now have almost the same female employment rate. The direction of change was the same in both countries (Figure 8.8). In terms of pension benefit generosity, these two countries experienced the same pattern of change (Figure 8.9).

Figure 8.2 GDP Growth Rates

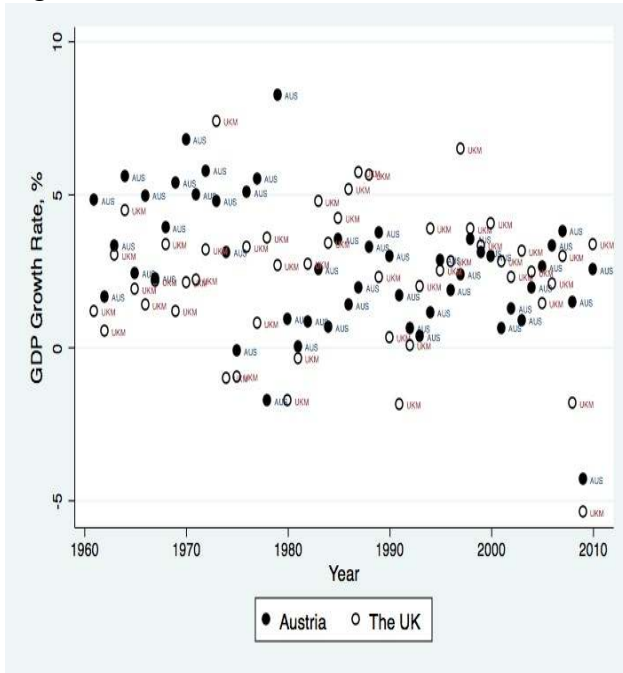


Figure 8.3 Trade Openness

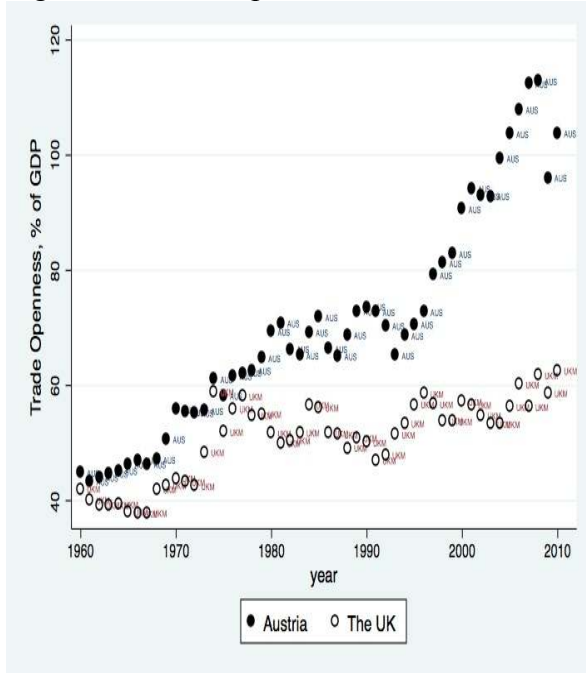


Figure 8.4 Capital Account Openness

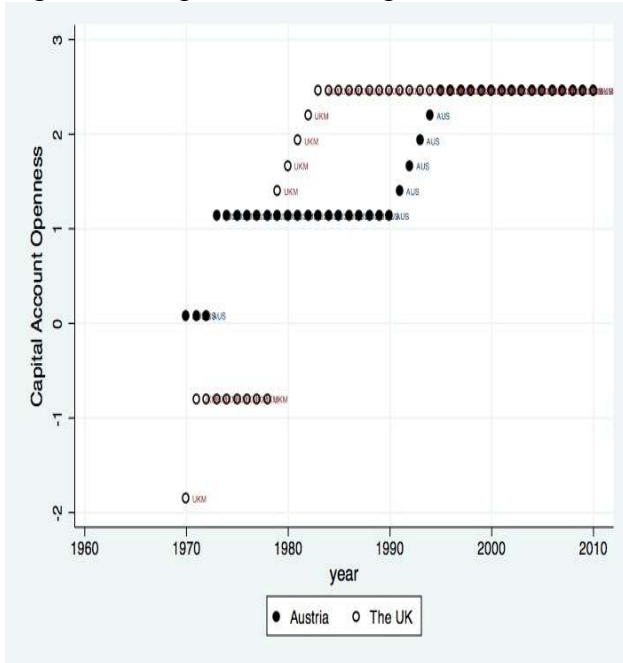


Figure 8.5 Share of Immigrant Population

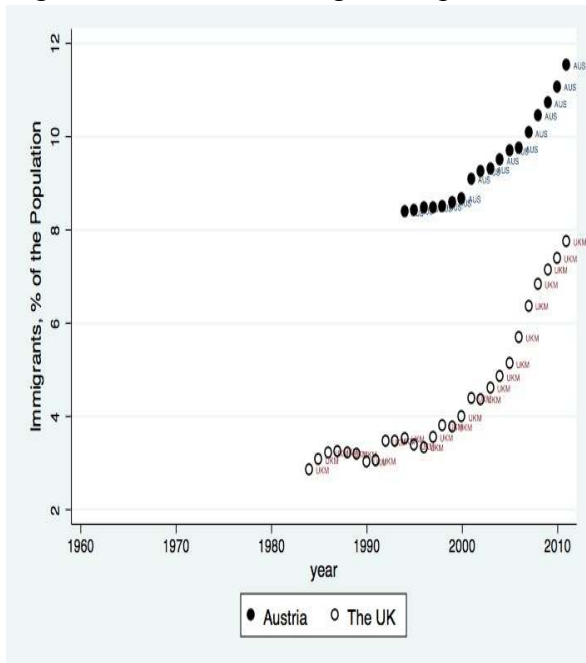


Figure 8.6 Share of High-skilled Labor

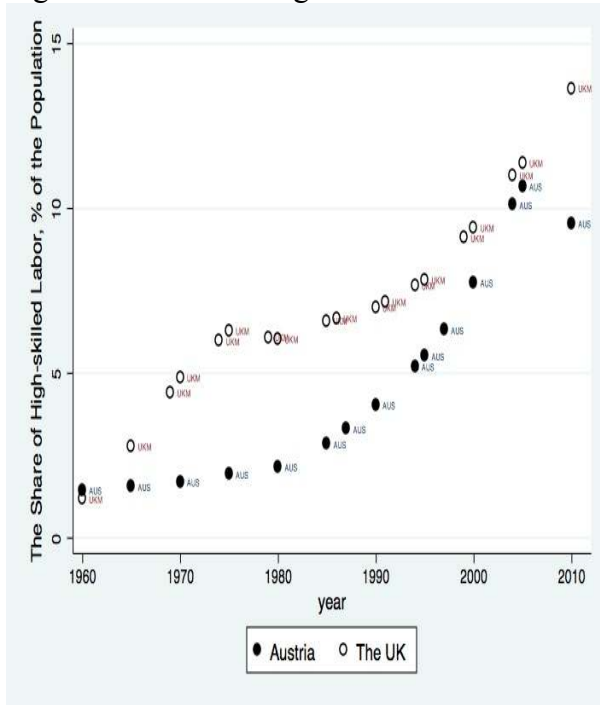


Figure 8.7 Elderly Population Share

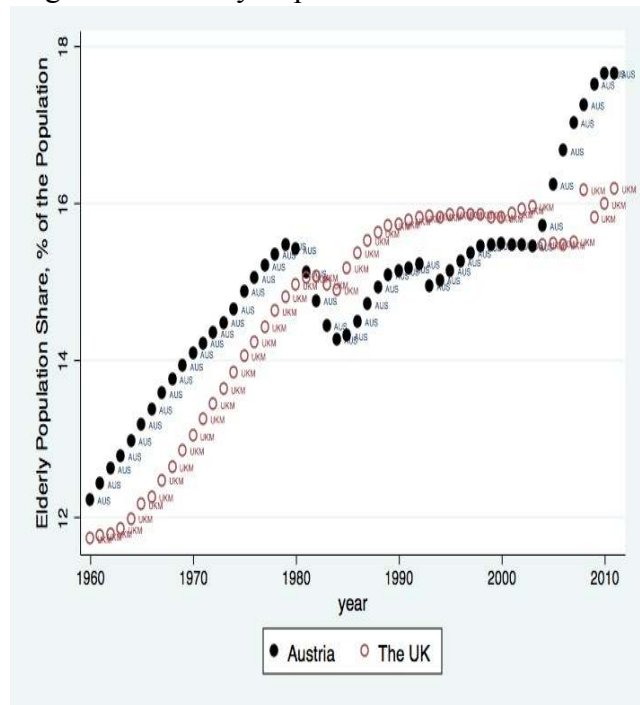


Figure 8.8 Female Employment Rate

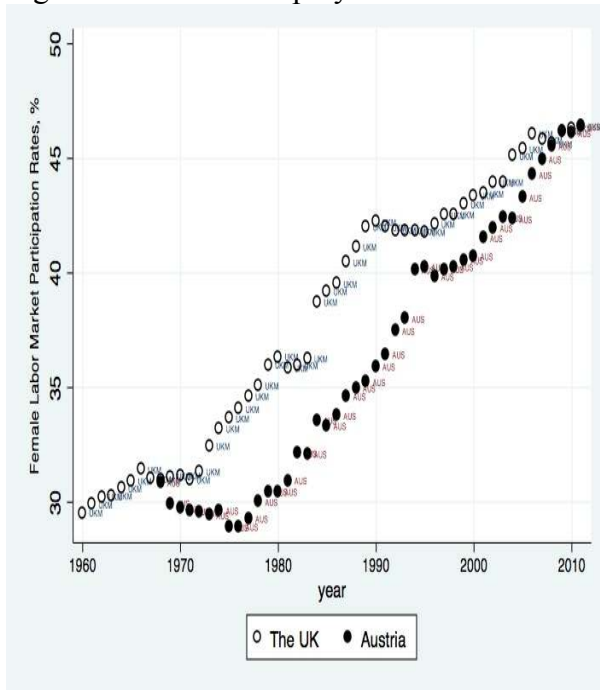
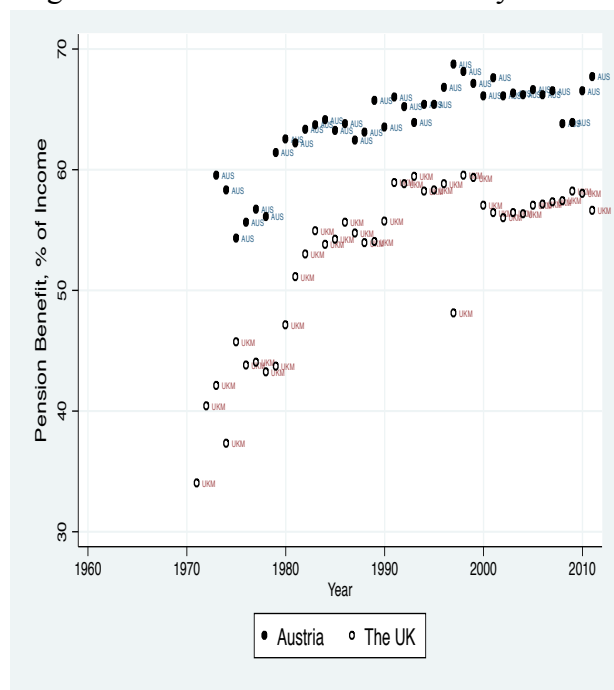


Figure 8.9 Pension Benefit Generosity



1.3. Differences between the UK and Austria

The UK and Austria have experienced very distinctive changes since the 1980s in terms of the four variables related to centralized bargaining and social insurance: bargaining coverage, bargaining centralization, unemployment benefit generosity, and sickness benefit generosity. Furthermore, the direction of change in these explanatory variables corresponds to the direction of change in middle class size within each country.

In terms of bargaining centralization, both countries experienced decentralization. However, the degree of decentralization was larger in the UK than it was in Austria, which maintained a much higher degree of bargaining centralization (Figure 8.10). In terms of bargaining coverage, the UK and Austria have diverged since 1980. The UK experienced a drastic drop in bargaining coverage, while Austria increased its already high bargaining coverage to almost 100 percent (Figure 8.11).

In terms of social insurance benefit generosity, the UK and Austria followed very different paths in the 1980s. While the income replacement rates of unemployment and sickness benefits increased in Austria, these rates were reduced steeply in the UK. In 1980, the two countries were not so different in terms of unemployment insurance benefit levels (both had an income-replacement rate of about 65 percent), but became very different from the 1990s onward.

In 1990, UK unemployment insurance covered only 37 percent of a worker's previous income, whereas Austrian unemployment insurance covered 67 percent (Figure 8.12), and Austria increased the benefit level again in 2000. Although the UK also increased the unemployment benefit level in the early-2000s, the gap between the two countries remained large in 2010 (72 percent in Austria versus 45 percent in the UK).

In terms of sickness benefits levels, there have been ups and downs in Austria, and continuous decreases in the UK since 1980. In the early-1970s, the two countries had similar levels of sickness insurance benefits, but became very different from the 1980s onward (Figure 8.13).

As the regression analyses show, the UK and Austrian case comparison also finds that bargaining coverage, unemployment and sickness benefits facilitate middle class decline in one country, while helping the middle class growth in the other.

Figure 8.10 Bargaining Centralization

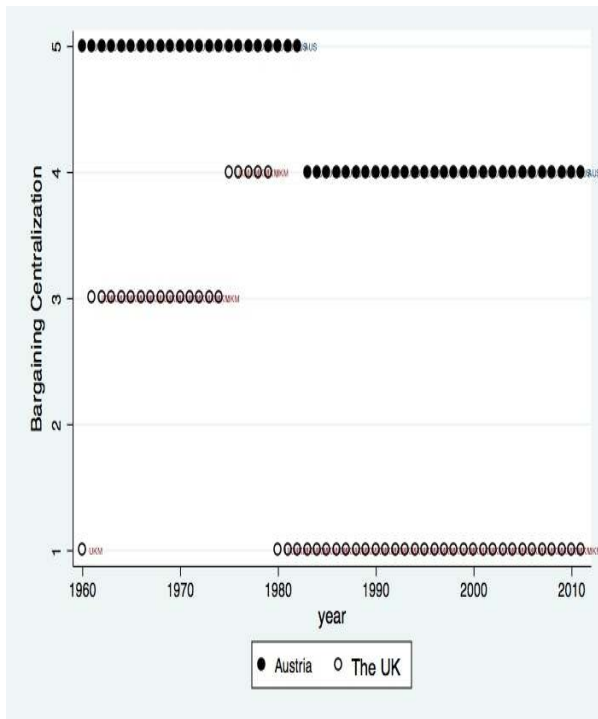


Figure 8.11 Bargaining Coverage

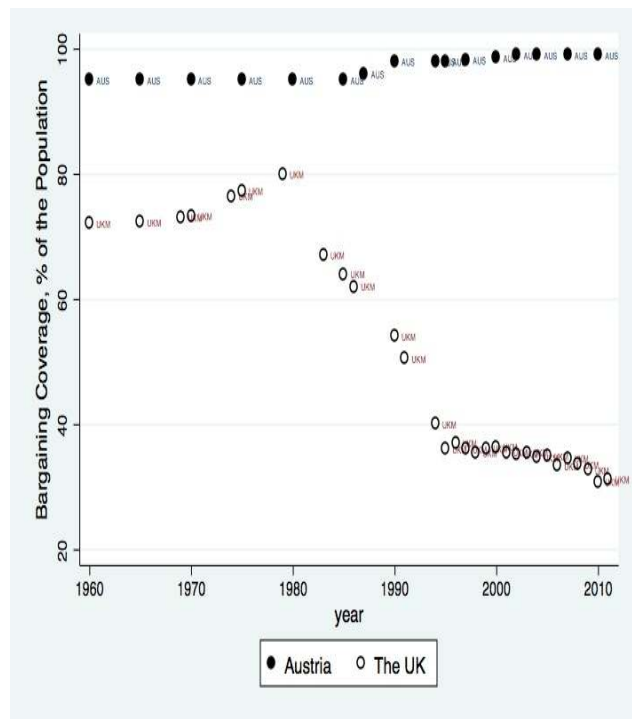


Figure 8.12 Unemployment Benefit Generosity

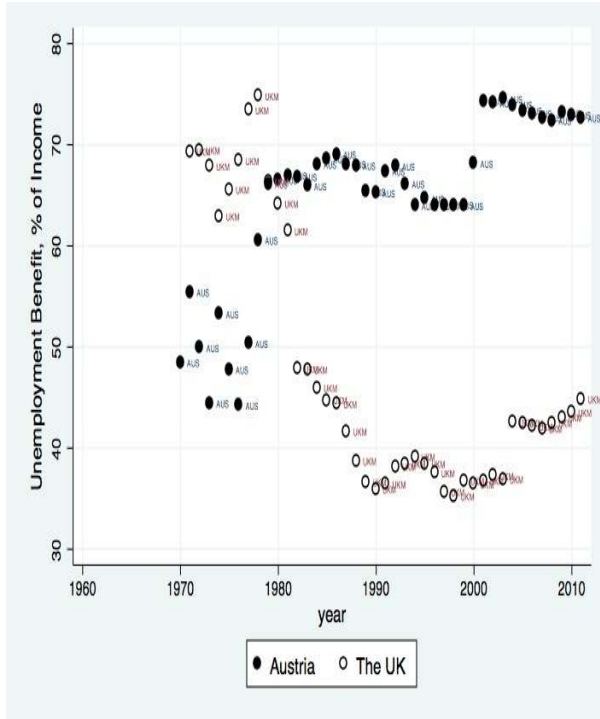
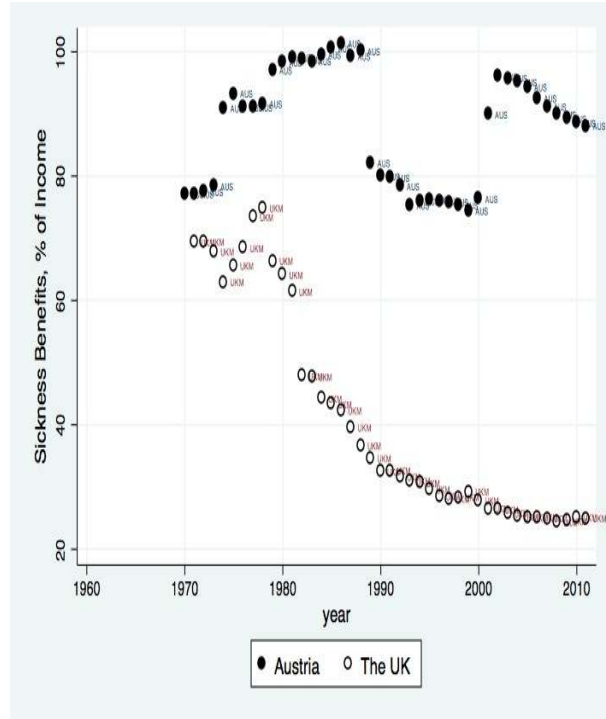


Figure 8.13 Sickness Benefit Generosity



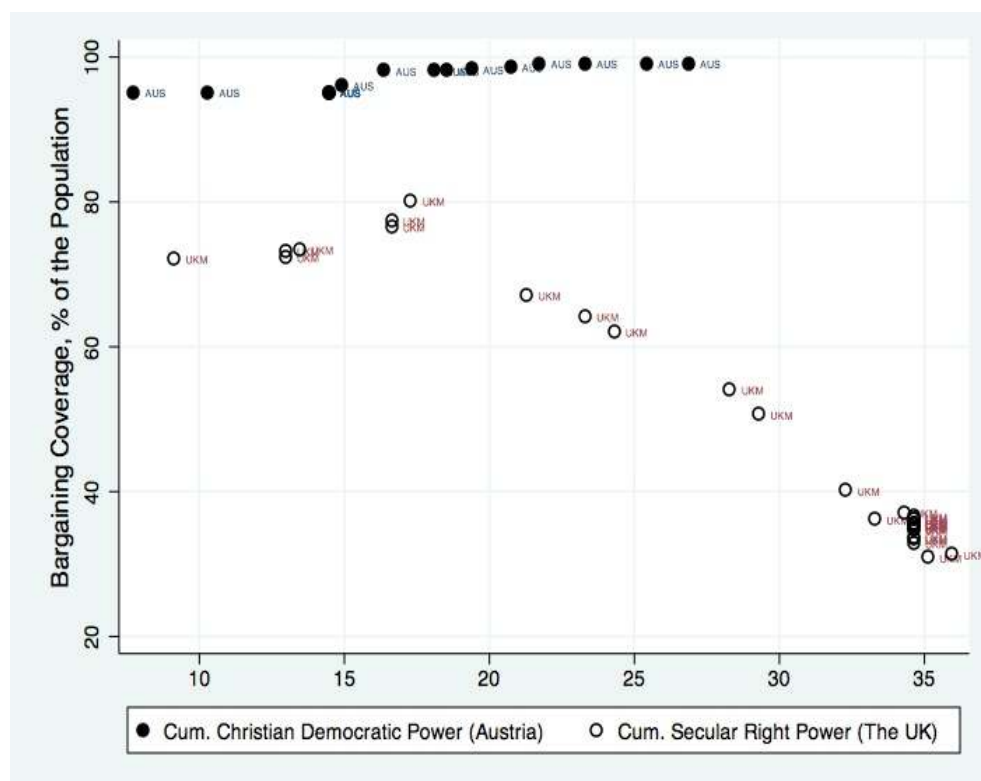
1.4. The Effects of Right-wing Parties on the Differences in Key Variables

In this section, I compare the UK and Austria in terms of their dominant right-wing parties' distinctive association with the differences in bargaining coverage and unemployment and sickness insurance benefit levels. The dominant right-wing party in the UK is a secular right party, the Conservative Party, whereas the dominant right-wing party in Austria is a Christian Democratic party, the People's Party (ÖVP).

In the following three scatter plots, the horizontal axis represents the cumulative score of party control in government between 1960 and 2010. The cumulative score means that if the party in government in a given year remains in government the following year, the plot moves to the right, even if the current year's share is smaller than that of the previous year. However, if the party loses control of government, its position on the horizontal axis comes to halt. The

vertical axis in the three figures below represents bargaining coverage (Figure 8.14), unemployment benefits level (Figure 8.15), and sickness benefits level (Figure 8.16), respectively. Black filled circles represent Austrian data; hollow circles represent the UK data.

Figure 8.14 Right Party Government and Bargaining Coverage



In the UK, during the period when the Conservative Party controlled the government, bargaining coverage declined constantly after 1979. This negative relationship between the Conservative Party and bargaining coverage was not established before the Thatcher government. Between 1970 and 1973 when the Conservative Party controlled the UK government, bargaining coverage increased from 73 to 76 percent. However, during the next Conservative government, between 1979 and 1996, bargaining coverage declined from 80 to 36 percent.

In contrast, in Austria, right-wing party control in government did not bring a decline in bargaining coverage. Instead, bargaining coverage increased to an even higher percentage when the Christian right People's Party (ÖVP) controlled the government.

In terms of unemployment and sickness benefits, quite distinctive outcomes occurred in the UK and Austria under the control of different brands of right-wing government. The pattern of change followed that of bargaining coverage. Whereas benefit levels drastically declined in the UK under the Conservative government after 1979, they declined by only a minor degree, and at times even increased in Austria under the People's Party government. Social insurance benefits levels that were similar in the late-1970s became drastically different from the 1980s onward (Figures 8.15 and 8.16).

In Austria, it was the social democratic party (SPÖ), not the Christian right party, that increased benefit levels from 40 to 70 percent of income during the 1970s, but it was the Christian right party government that increased benefit levels from 65 to 75 percent of the income in the early-2000s.

Although both the People's Party and the Conservative Party in my paired comparison are right-wing parties, what happened under these two party governments in terms of social insurance provision was in stark contrast.

Figure 8.15 Right Party Government and Unemployment Benefit Generosity (Austria and the UK)

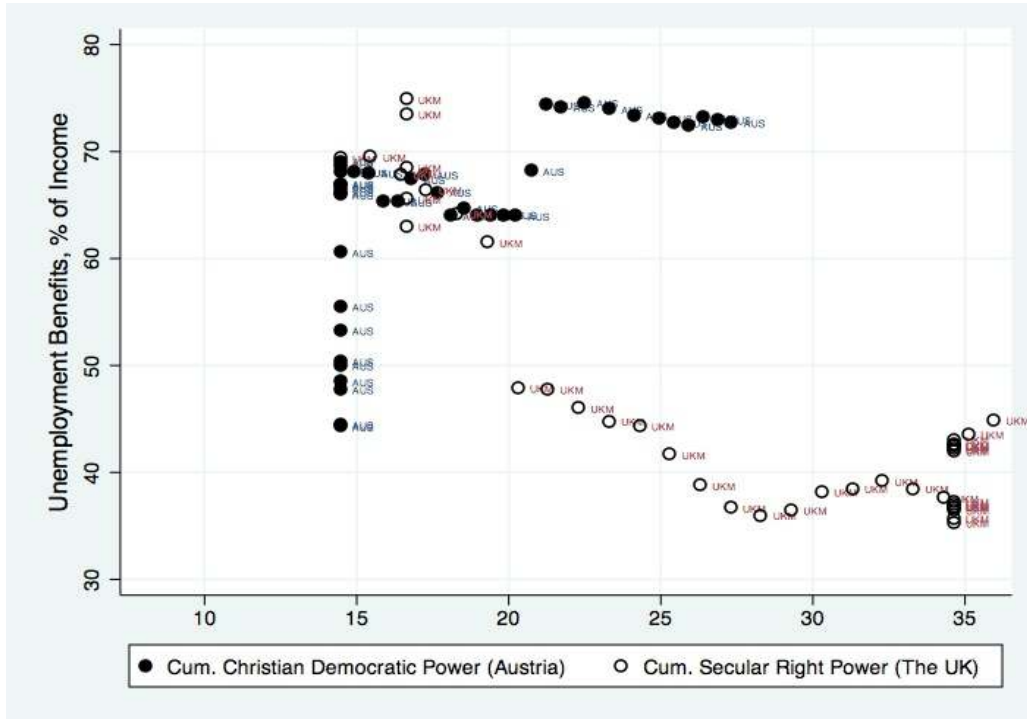
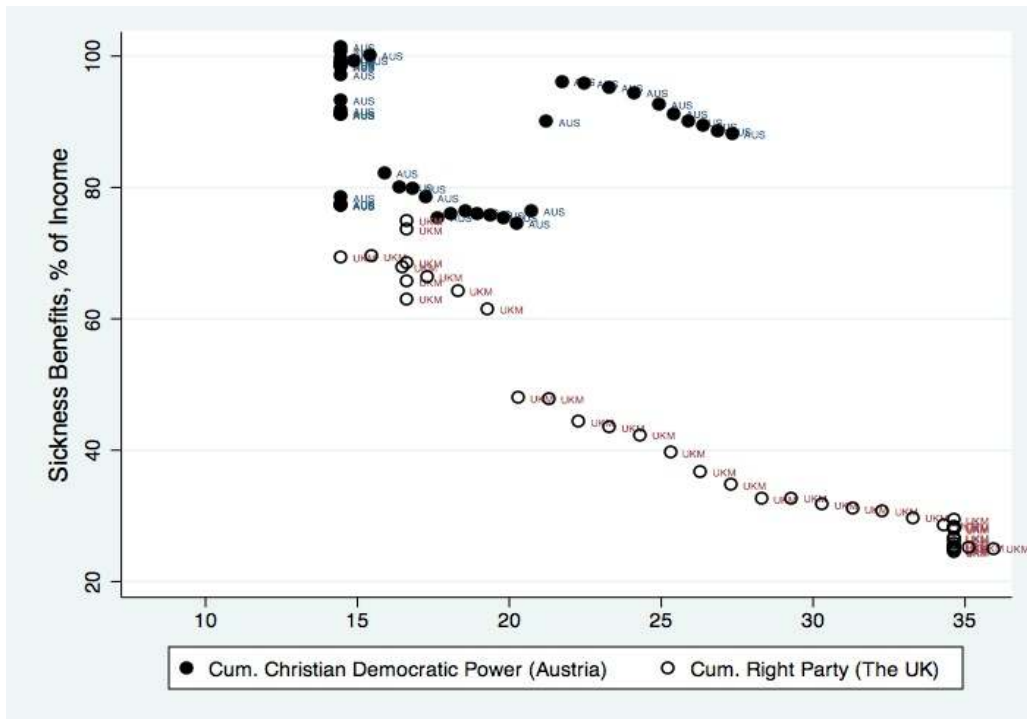


Figure 8.16 Right Party Government and Sickness Benefit Generosity (Austria and the UK)



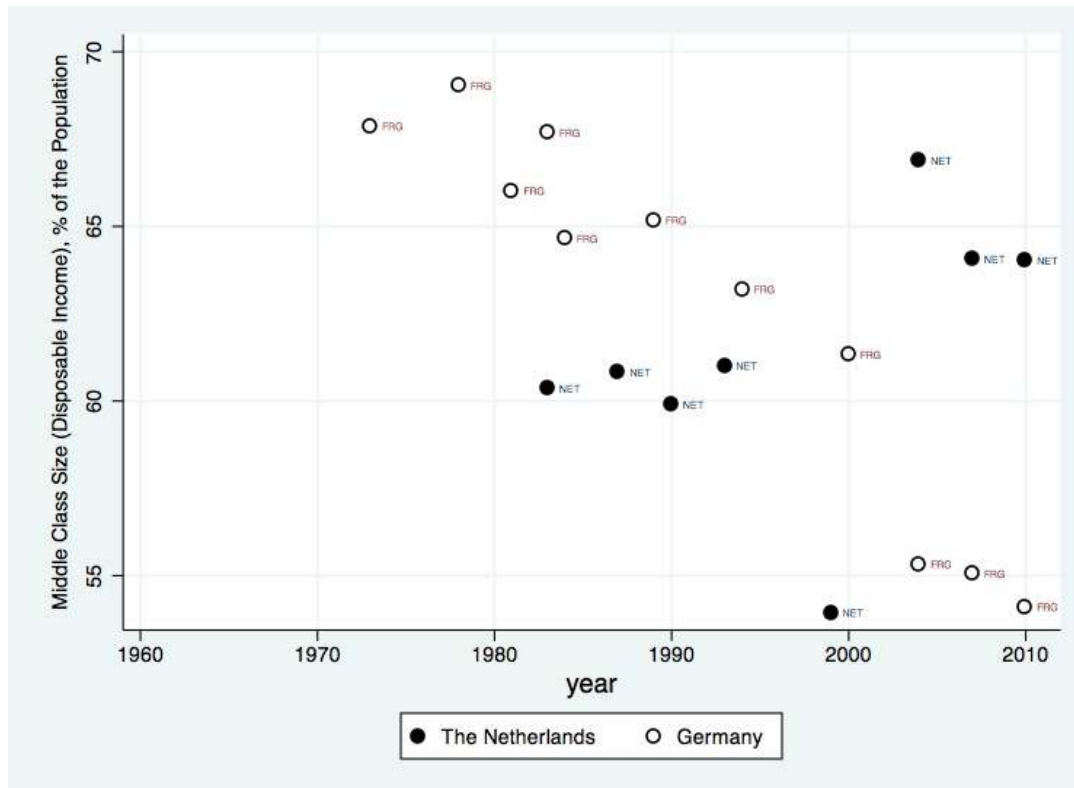
2. The Netherlands and Germany

The second pair of comparisons is the Netherlands and Germany. These two EU member countries are categorized into the same group in the current political economy literature. Both are coordinated market economies (in the varieties of capitalism literature), or conservative welfare regimes (in the welfare regime literature). In addition, the dominant right party is a Christian Democratic Party in both countries: Christian Democratic Appeal (CDA) in the Netherlands, Christian Democratic Union/Christian Social Union (CDU/CSU) in Germany. However, these two countries experienced quite contrasting developments in terms of middle class size. Does German divergence from the Netherlands challenge my explanation of middle class decline based on the effect of variation in right party type?

2.1. Middle Class Size Change Overtime

Figure 8.17 presents diachronic change in middle class size in the Netherlands and Germany. Hollow circles represent Germany; black filled circles represent the Netherlands. Although the Netherlands had a much smaller middle class than Germany in the 1980s (61 percent versus 68 percent in 1983), it currently has a much larger middle class than Germany (64 percent versus 54 percent in 2010). Prior to the early-1980s, the middle class comprised almost 70 percent of the German population. However, Germany experienced a dramatic decline in the size of its middle class from 1990 onward. In the early-2000s, Germany experienced another large decline in middle class size.

Figure 8.17 Middle Class Size Change over Time (The Netherlands and Germany)



2.2. Similarities Between the Netherlands and Germany

In terms of GDP growth rate, there is no divergent diachronic trend between the two countries (Figure 8.18). In terms of global market integration, the Netherlands is more integrated in the global market than Germany. Both trade openness and the population share of immigrants are much higher in the Netherlands than in Germany (Figures 8.20 and 8.21). Capital account openness in the two countries converged to the same degree in the mid-1990s (Figure 8.19). That is, the claimed negative effects of globalization, if any, influenced the Dutch middle class more than German one. High-skilled labor shares increased dramatically in both countries (Figure 8.22).

In terms of elderly population share, although the elderly population has increased rapidly in both countries, it increased more rapidly in Germany than in the Netherlands since 1990 (Figure 8.23). In terms of female employment rate, both countries experienced substantial growth, although the growth rate was much higher in the Netherlands than in Germany (Figure 8.24).

In terms of social insurance benefit generosity, Germany and the Netherlands did not show clearly distinctive patterns of change. In Germany, unemployment benefit levels remained stable at an income-replacement rate of 70 percent. In the Netherlands, unemployment insurance benefits declined in the early-1980s from 90 to 80 percent of income, and then fluctuated between 76 and 82 percent of income between 1990 and 2010 (Figure 8.25). In spite of this, the Netherlands has always had a higher unemployment benefit level than Germany.

For sickness benefit levels, Germany experienced fluctuations between 95 and 90 percentage of income, but maintained its extremely high benefit level. In the Netherlands, the benefit level declined from 90 to 80 percent of income in the early-1980s, and had small degrees of change between 76 and 82 percentage of income since the mid-1980s (Figure 8.26). Unlike with unemployment benefits, Germany has always had higher sickness benefit levels than the Netherlands.

More importantly than the difference between two countries, both Germany and the Netherlands maintained high levels of benefits in unemployment and sickness insurance compared to other countries. For example, in 2010, the German unemployment benefit level (72 percent) was lower than the Dutch level (82 percent), but much higher than the UK level (44 percent). Likewise, the Dutch sickness benefits level (82 percent) was lower than the German level (90 percent), and much higher than the UK level (25 percent) in 2010.

Figure 8.18 GDP Growth Rates

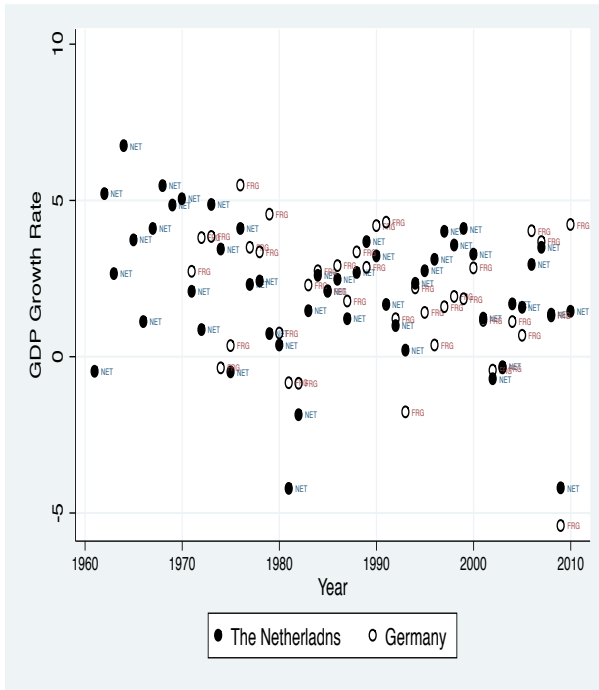


Figure 8.19 Capital Account Openness

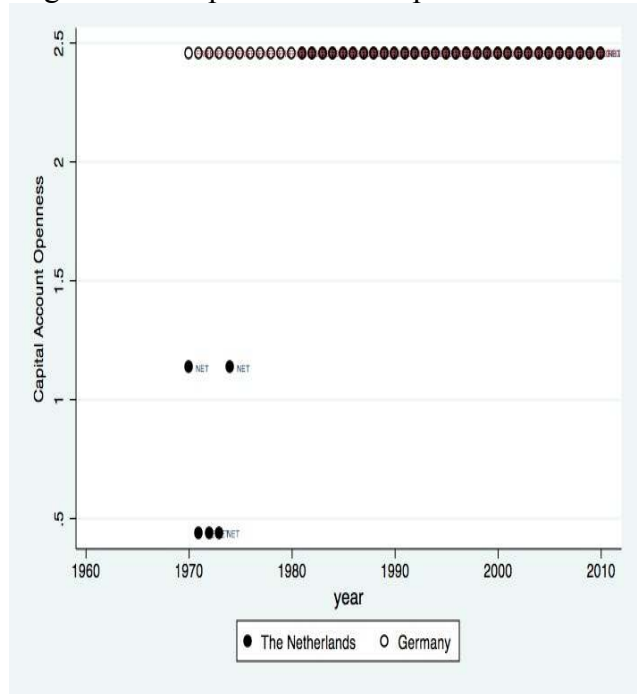


Figure 8.20 Trade Openness

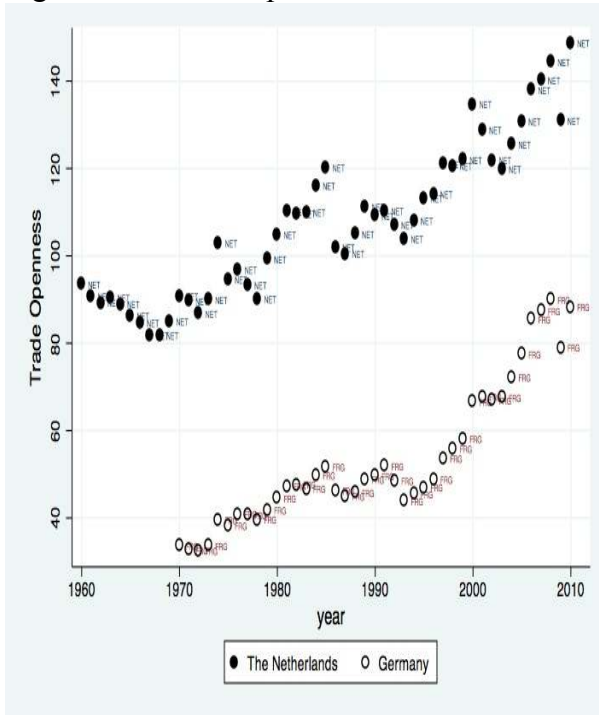


Figure 8.21 Share of Immigrant Population

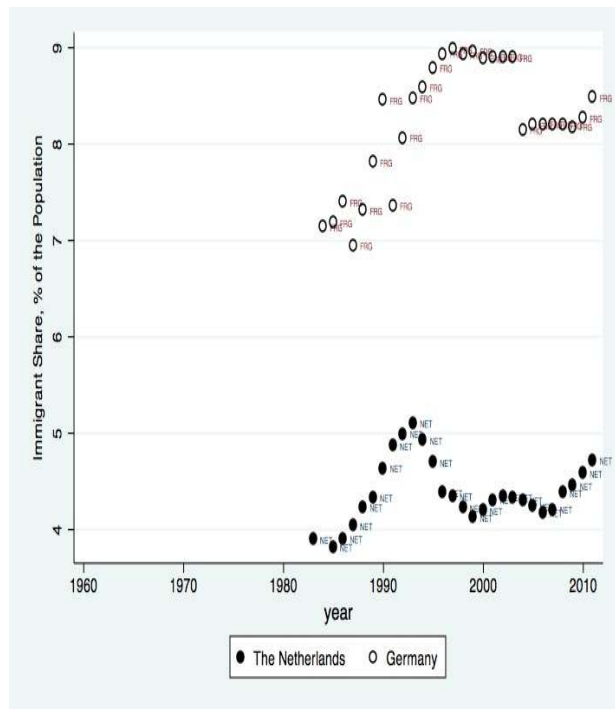


Figure 8.22 Share of High-skilled Labor

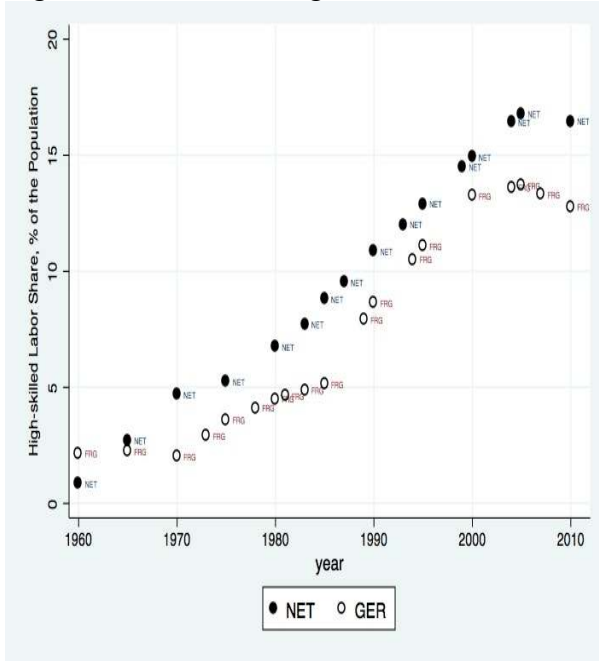


Figure 8.23 Elderly Population Share

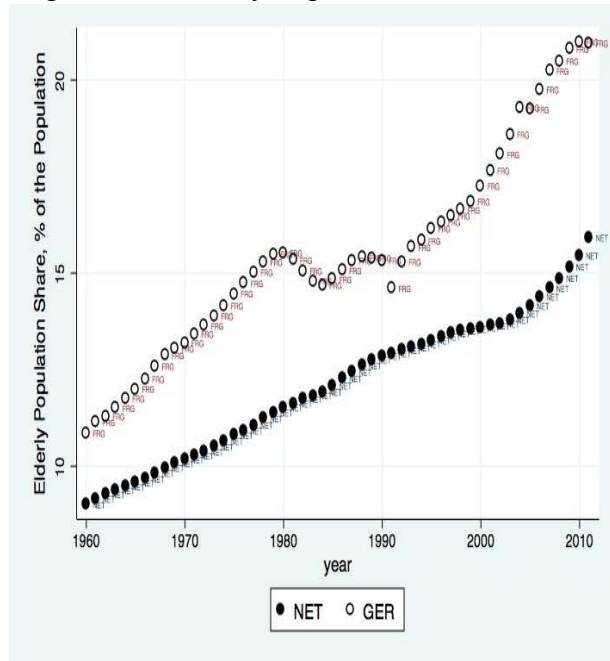


Figure 8.24 Female Employment Rate

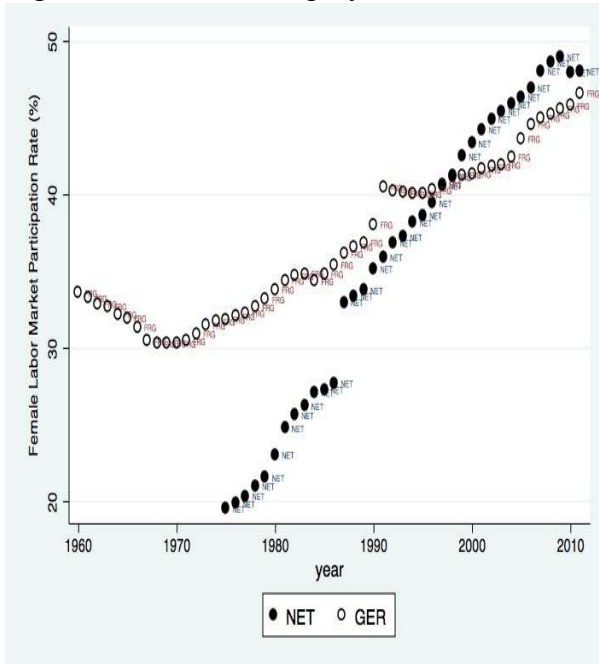


Figure 8.25 Unemployment Benefit Generosity

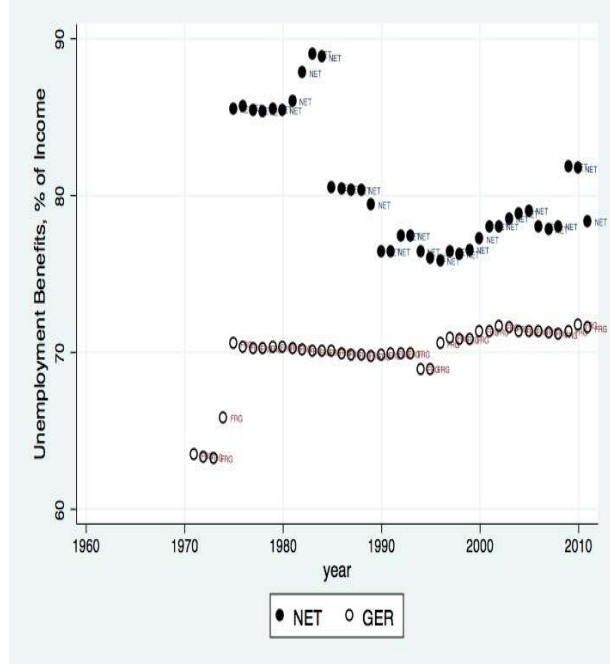
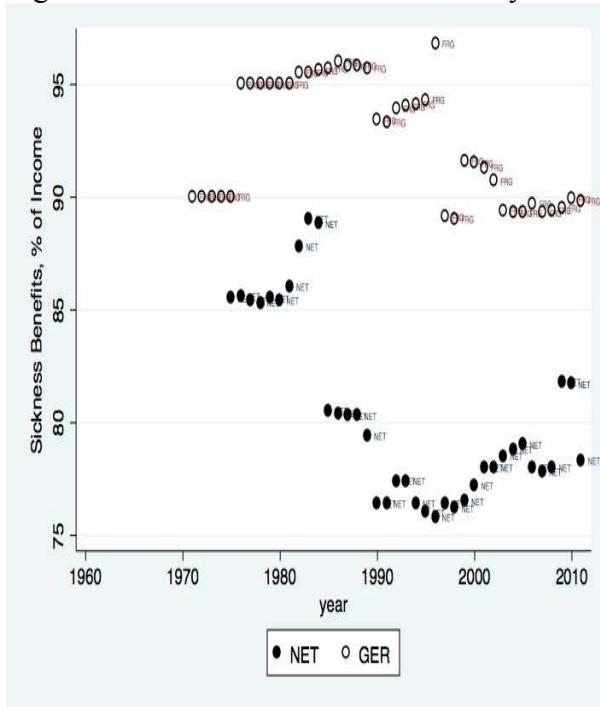


Figure 8.26 Sickness Benefit Generosity

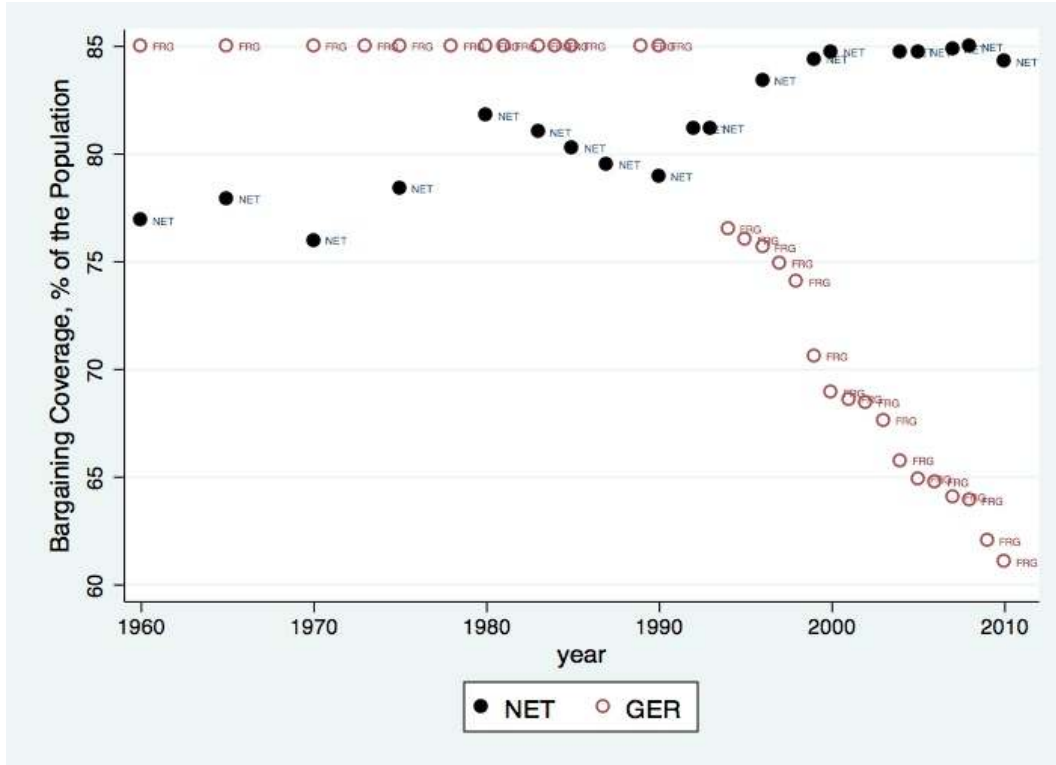


2.3. Differences between the Netherlands and Germany

Germany and the Netherlands experienced an apparently distinctive pattern of change with respect to two variables: bargaining coverage and pension benefit generosity. The direction of change in these explanatory variables corresponds to the change in middle class size between the two countries.

Bargaining coverage was higher in Germany than in the Netherlands until 1990. Since then, the Netherlands has experienced an increase in bargaining coverage from 79 to 85 percent, while Germany experienced a steep decline, from 85 to 61 percent (Figure 8.27). The drastic decline in bargaining coverage in Germany can be attributed to the exogenous shock in the labor market that resulted from German unification in 1990. Germany had maintained 85 percent bargaining coverage for more than 30 years, but this broad coverage suddenly collapsed in 1990.

Figure 8.27 Bargaining Coverage Change (the Netherlands and Germany)

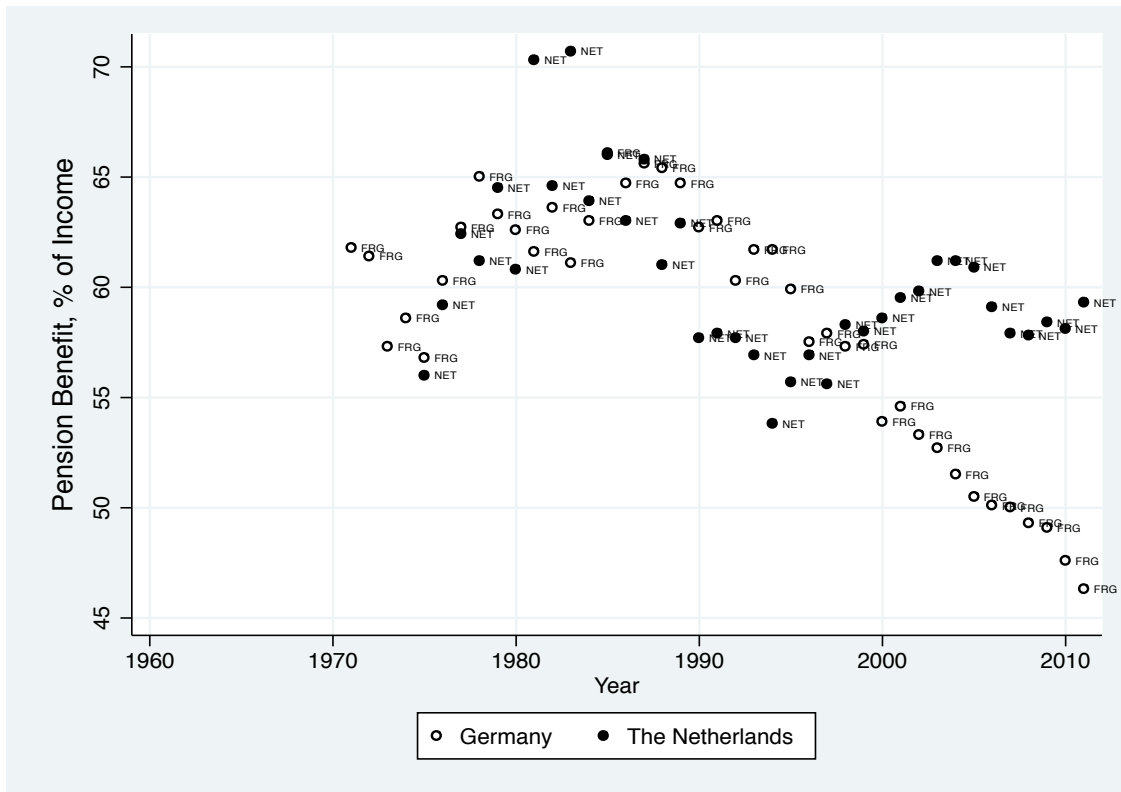


In terms of pension benefit, these two countries had the same level of benefit until the mid-1990s. However, since then, the Netherlands experienced both increase and decline in benefit level, while Germany experienced continuous decline in the benefit generosity. In 2010, the income-replacement rate of pension benefit was about 59 percent in the Netherlands, whereas it was about 46 percent in Germany (Figure 8.28). Although the regression analysis found that the effects of pension benefit generosity are statistically insignificant, the change in pension benefit generosity corresponds to the change in middle class size in these two countries since the 1990s. Germany increased the coverage at the cost of reducing the benefit level.⁴⁰ This change in

⁴⁰ The correlation coefficient between pension benefit generosity and coverage is -0.67 ($p < 0.05$) in Germany, while it is -0.48 ($p < 0.01$) in the Netherlands.

Germany may help more retired people avoid poverty, but it also can make less German households to maintain middle class status after their retirement.

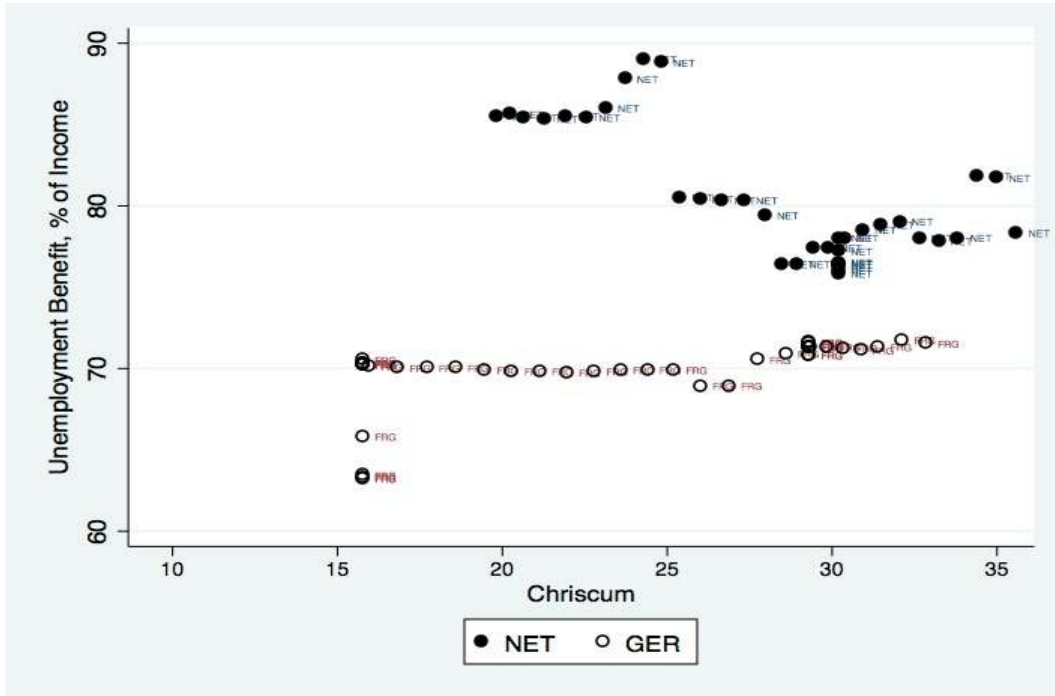
Figure 8.28 Pension Benefit Generosity (the Netherlands and Germany)



2.4. Right Party Control in Government and Policy Change

In both Germany and the Netherlands, the dominant right party is a Christian Democratic party—the Christian Democratic Appeal (CDA) in the Netherlands, and the Christian Democratic Union/Christian Social Union (CDU/CSU) in Germany. In terms of social insurance benefit levels, these two parties’ control in government did not make significant differences. For unemployment and sickness insurance, the benefit level remained at previous levels or even increased under Christian Democratic government in both countries (Figures 8.29 and 8.30).

Figure 8.29 Right Party Government and Unemployment Benefit Generosity (the Netherlands and Germany)



The main difference between the two Christian Democratic party governments occurred in terms of bargaining coverage. Bargaining coverage declined when the CDU/CSU controlled the government in Germany, but it increased when the CDA controlled the Dutch government in the early-1990s and early-2000s (Figures 8.31).

Bargaining coverage facilitates middle class growth. Policies that extend bargaining coverage to labor market outsiders who are not covered by the same collective bargaining as labor market insiders can induce larger middle class. Unlike Germany, part-time jobs in the Netherlands are subject to the same rules as standard full time jobs since the 1996 legislation.⁴¹ By law in 1996, “employers may not discriminate on the basis of working hours, so part-timers are covered by the same collective contracts regulating wages, wage supplements, bonuses, and holidays” (Viebrock and Clasen 2009, 9-11; Thelen 2014, 155). The 1996 law guaranteed the collective bargaining agreements for part-time jobs, where the newly added female labor was largely concentrated (Thelen 2014, 155). This not only facilitated female employment but also growing middle class in the country. The 1996 legislation was passed under a coalition government composed of social democrats and liberals, but it was based on the New Course agreement signed under the previous coalition government of Christian Democrats and Social Democrats (Thelen 2014, 168).

In the German case, it is difficult to conclude that the Christian Democratic Party control in government has negative effects on bargaining coverage. Germany experienced large declines in bargaining coverage on two separate occasions: the first in 1990 (from 85 to 75 percent) and

⁴¹ A year after the Netherlands passed the 1996 legislation on part-time employment parity, the EU passed the 1997 Directive on Part-time Work (Directive 97/81/EC), which required all member states to guarantee the parity between part-time and full-time work. However, the scope and impact of the EU directive vary across the EU countries. For example, in the UK and Germany, part-time work has not reached the same normalized status as in the Netherlands. In specific, collective bargaining rights are limited for part-time employees. In addition, the employees’ right to adopt work hours is controversial because the decision is largely under the discretion of employees. In Germany, the quality of part-time work is undermined by ‘mini-jobs’, which are extremely precarious and unprotected. See Yerkes and Visser (2006) and Roeters and Craig (2014).

the second between 1999 and 2004 (from 75 to 65 percent). While the first big drop may be attributed to German unification, the second big decline occurred when the Social Democratic Party (SPD) controlled the German government in the early 2000s. Except for the years after German unification, the decline in bargaining coverage was modest and incremental under CDU/CSU government, quite unlike the radical decline in the UK under the Conservative Party government.

Given the labor market shock from German unification, the divergent outcome between Germany and the Netherlands does not contradict the positive effects of Christian Democratic control in government on bargaining coverage and social insurance benefits.

On top of bargaining coverage, another difference between the two Christian Democratic party governments occurred in terms of pension benefit generosity, which substantially declined in Germany when the CDU/CSU controlled the government, but it decreased only in a minor degree when the CDA controlled the Dutch government since the 1990s. In Germany both SPD and CDU/CSU governments reduced pension benefit generosity, whereas leftist control in government in the Netherlands increased pension benefit generosity (Figure 8.32).

In addition to drastic declines in bargaining coverage in Germany, the difference in female employment rates and elderly population shares can explain the divergent outcomes in the two countries. Although both countries experienced increases in these two variables, the Netherlands had a higher female employment rate and a much lower elderly population share than Germany. In the Netherlands, the 1996 part-time parity legislation facilitated female employment and its contribution to middle class growth. In Germany, the negative effects of its aging population were reinforced by substantial decline in pension benefits.

Figure 8.31 Right Party Government and Bargaining Coverage (the Netherlands and Germany)

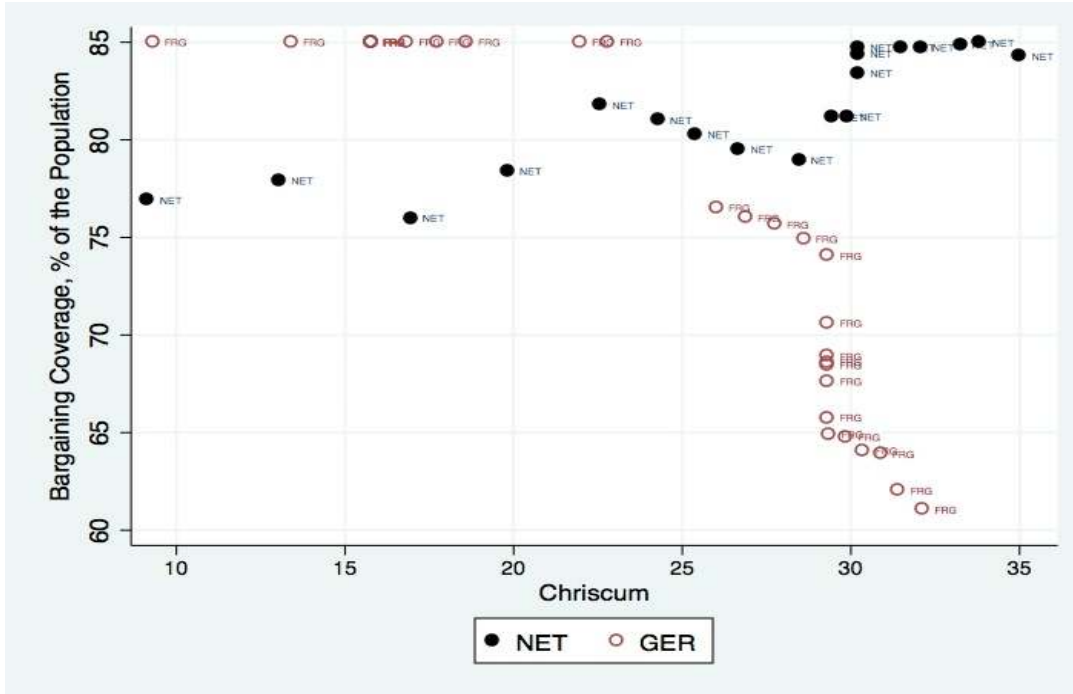
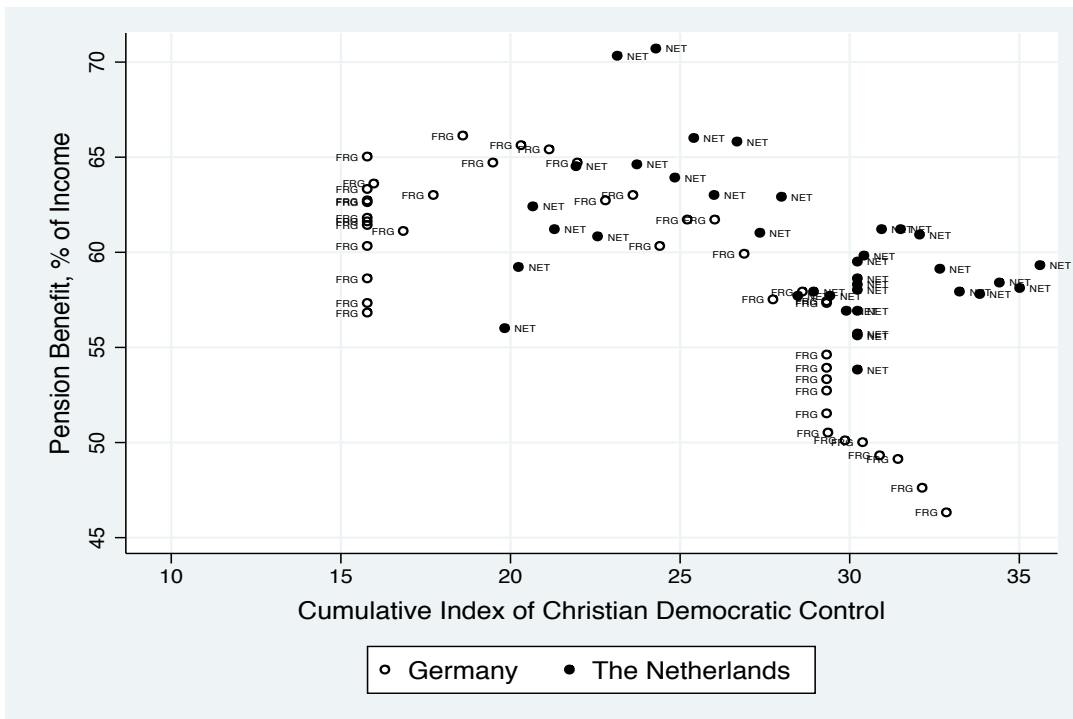


Figure 8.32 Right Party Government and Pension Benefit Generosity (the Netherlands and Germany)



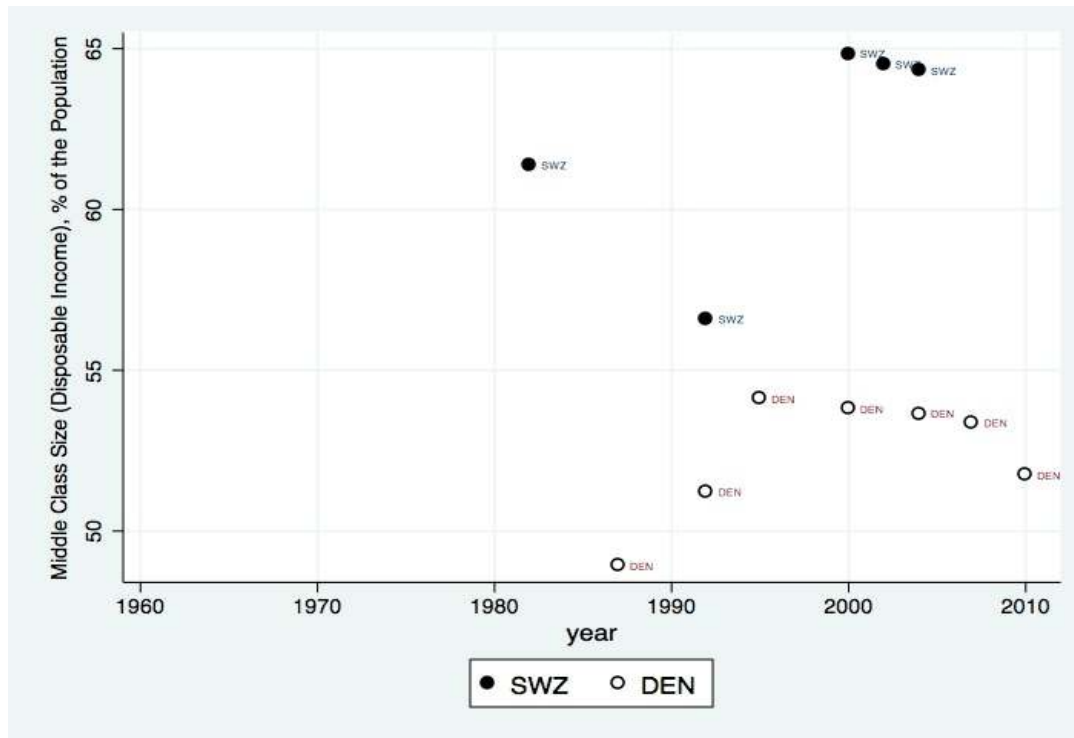
3. Switzerland and Denmark

The Switzerland and Denmark comparison shows the different effects of conservative and social democratic welfare regimes on middle class decline. Switzerland is a typical conservative welfare regime, while Denmark is a representative case of a social democratic welfare regime. As I showed in Chapter 5, in terms of general inequality level (Gini Index), Denmark is the most equal country, whereas in terms of population share of the middle class, Switzerland ranked at the top of the world. As in the first two sets of comparisons, I illustrate the key differences and similarities between Switzerland and Denmark in four figures.

3.1. Middle Class Size Comparison

In the early-1990s, Switzerland and Denmark were similar in terms of middle class size. The Swiss middle class size was 57 percent of the population, and the Danish middle class size was 54 percent of the population. Since then, however, Switzerland has experienced middle class growth, whereas Denmark experienced a gradual middle class contraction. In the mid-2000s, the Swiss middle class comprised almost 65 percent of the population, whereas the Danish middle class has remained at 54 percent of the population. Figure 8.33 presents diachronic change in middle class size in these two countries between 1980 and 2010. Black filled circles represent Switzerland (SWZ), while black hollow circles represent Denmark (DEN).

Figure 8.33 Middle Class Size Change Overtime (Denmark and Switzerland)



3.2. Differences between Switzerland and Denmark

The most distinctive difference between Denmark and Switzerland concerns changes in their social insurance benefit levels: when Denmark decreased both unemployment and sickness benefit levels, Switzerland maintained its benefit levels or even increased them gradually. In Switzerland, the income-replacement rate of unemployment benefits was 82 percent, while the sickness benefits rate was 100 percent in 2010. In Denmark, the unemployment benefit rate was 59 percent, and the sickness benefit rate was 58 percent that same year. However, Denmark used to have similar rates to Switzerland. In the 1970s, the Danish unemployed and sick received 95 percent of their income from both social insurance programs.

Partisan differences in social insurance benefit levels also correspond to changes in middle class size. As middle class households were exposed to increased risks of loss of income,

generous social insurance benefits were influential in helping the middle class grow in Switzerland.

Figures 8.34 and 8.35 present the right party governments' association with benefit level changes in unemployment insurance and sickness insurance programs, respectively. In terms of unemployment benefits, secular right parties in Denmark were responsible for the decline of benefit levels that occurred during the time when they controlled government, from 1983 to 1992 and from 2002 to 2011. For these two periods, the unemployment benefit level declined substantially from 85 to 59 percent.

In Switzerland, unemployment benefit levels were as low as 38 percent in 1974. Between 1974 and 1977, they raised income replacement rates to 82 percent. Since then, Switzerland has maintained a very high benefit level. Although the benefit level has increased during the time when the Christian Democratic party controlled the government, due to the consociational nature of the Swiss democracy, it is always difficult to determine which party is responsible for certain policy changes (Lijphart 1969; Bohn 1980). In 1974, the Christian Democratic People's Party (CVP/PDC) had 30 percent control in a grand-coalition government, which included parties along the political spectrum from the left, center, and secular right. The change in sickness benefits follows the exact same pattern as that in unemployment benefits in these two countries.

The second key difference between Switzerland and Denmark is the change in the female employment rate. The Switzerland and Denmark cases challenge welfare regime theory. According to the theory, conservative welfare regimes discourage female employment mainly due to their Christian Democratic political power. However, social democratic regimes have had positive effects on female employment. That story was true until the mid-1990s. However, since the mid-1990s, a typical conservative regime country, Switzerland, has outpaced a typical social

democratic country, Denmark, in terms of female employment rate (Figure 8.36). The divergence between Switzerland and Denmark regarding middle class size may be attributed to the rapid increase in female employment in Switzerland.

In terms of aging demography, although both countries experienced continuous increases in elderly population share, Switzerland has exhibited greater negative effects from elderly population share than Denmark since the mid-1990s. However, the increase in pension benefit generosity in Switzerland from 55 percent to 63 percent in the mid-1990s helped to attenuate the negative effects from its growing elderly population. In addition, the positive effects from generous unemployment and sickness insurance benefits and female employment canceled out the negative effects of the elderly population in Switzerland.

Figure 8.34 Right Party Government and Unemployment Benefit Generosity (Denmark and Switzerland)

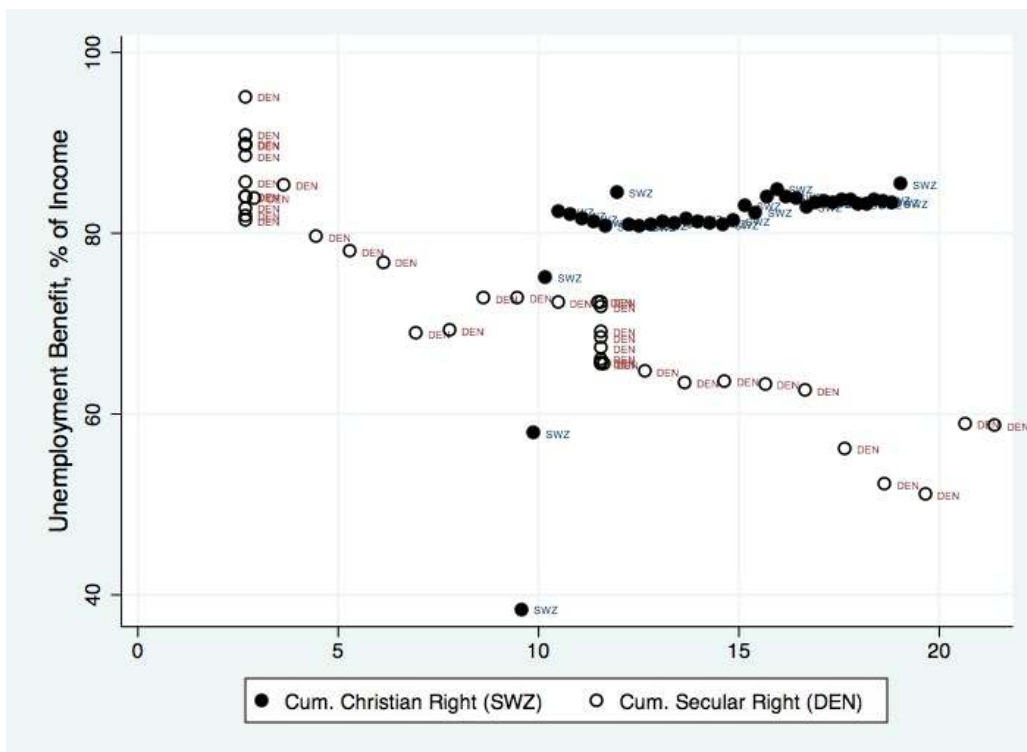


Figure 8.35 Right Party Government and Sickness Benefit Generosity (Denmark and Switzerland)

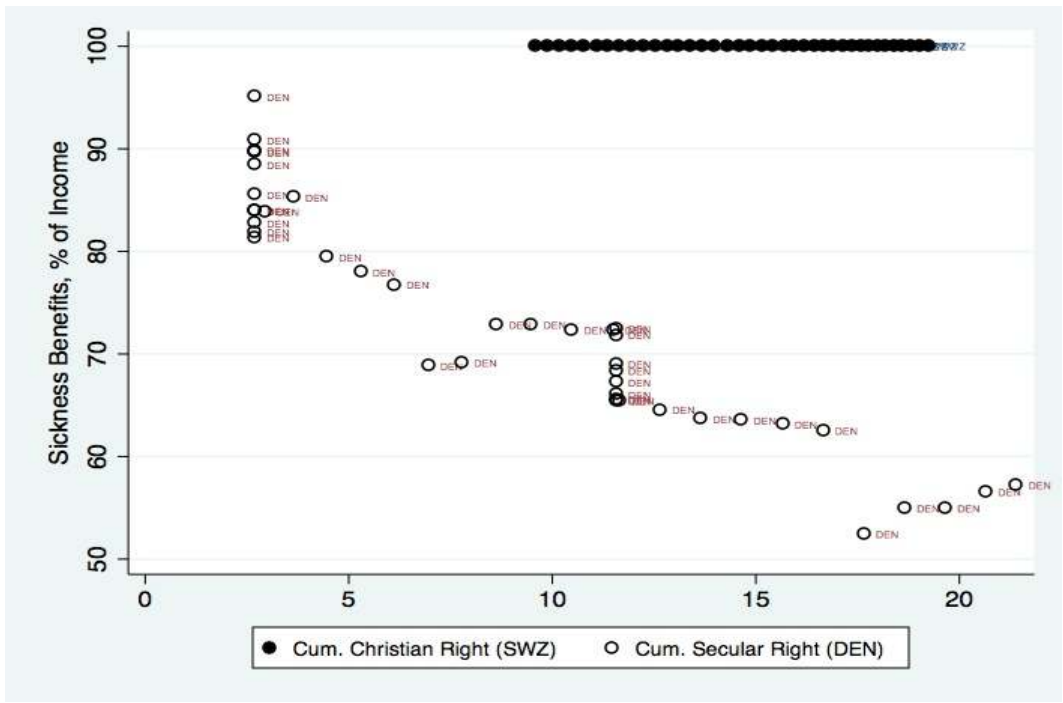
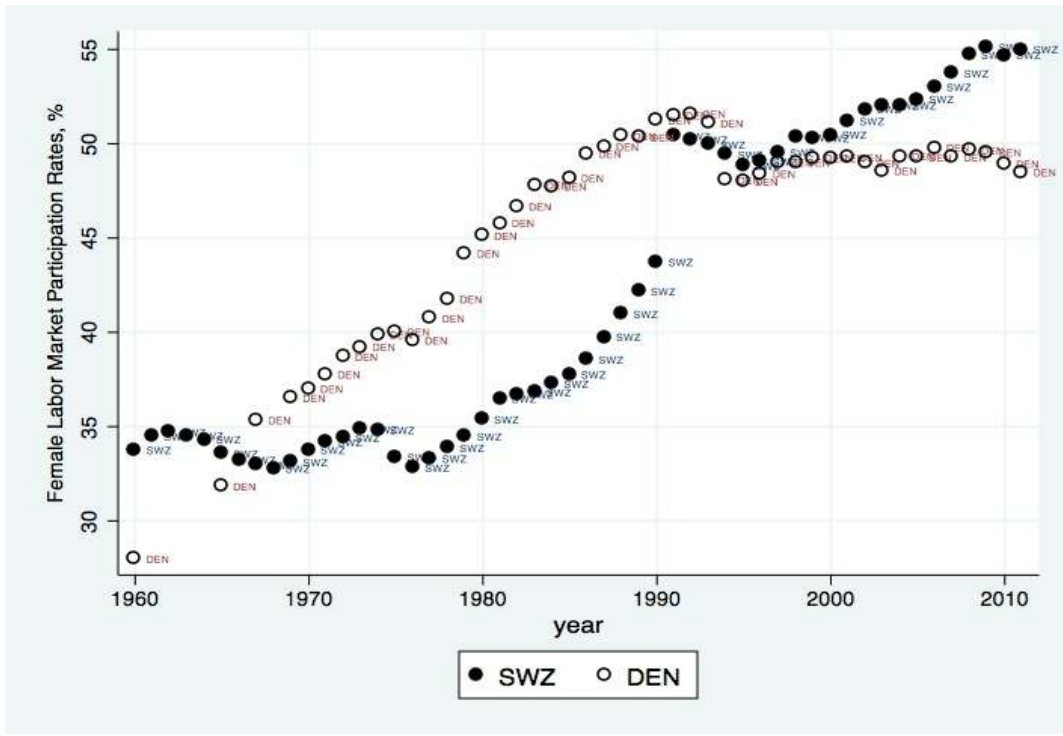


Figure 8.36 Female Employment Rate (Denmark and Switzerland)



4. The US and Canada

The last comparison is the US and Canada. The existing political economy literature classifies these countries into the same group, either liberal market economies (according to the varieties of capitalism literature) or liberal welfare regimes (according to the welfare regime literature). Because both countries have secular right parties as their dominant right party, with no Christian Democratic option, I compare the key factors that affect middle class size without invoking Christian Democratic effects.

4.1. Middle Class Size Change over Time in the US and Canada

Figure 8.37 Diachronic Change in Middle Class Size (the US and Canada)

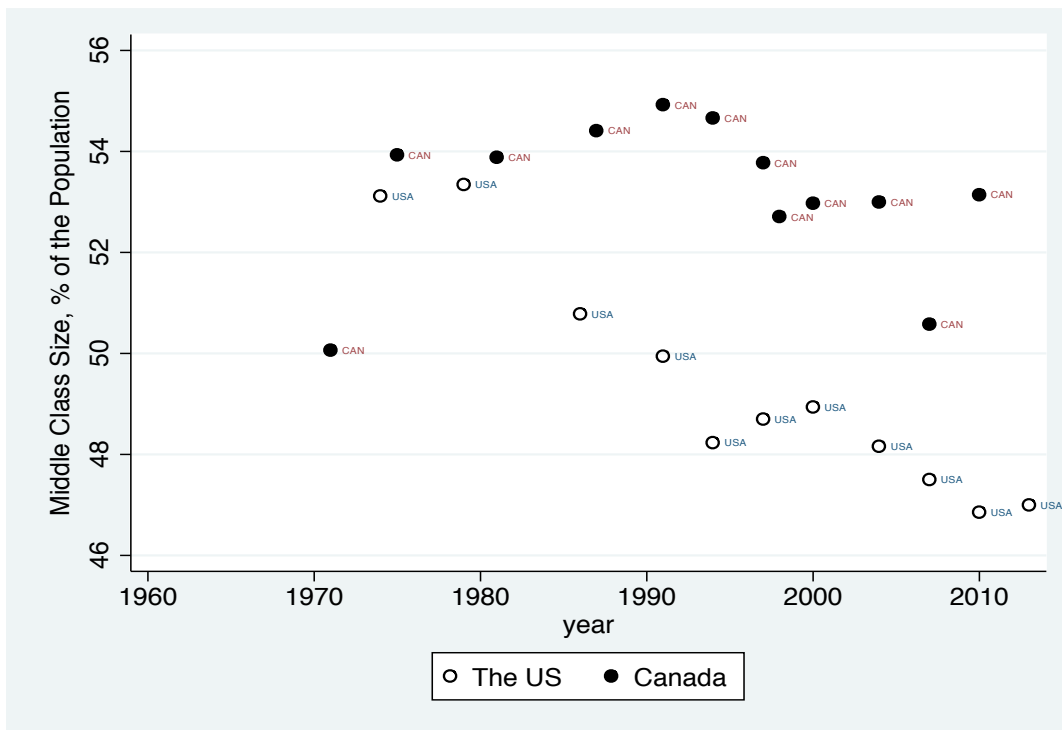


Figure 8.37 presents diachronic change in middle class size in the US and Canada between 1970 and 2013. Hollow circles represent the US; black filled circles represent Canada. In 1980, the US and Canada had almost the same sized middle classes—53 percent in the US and 54 percent in Canada. After three decades, the US middle class was reduced to 47 percent, whereas the Canadian middle class size remained the same at 53 percent.

In terms of the claimed negative effects globalization, Canada was always more exposed to the risks of global market integration. Although trade openness and immigrant population share have increased in both countries over the past three decades, Canada always had a higher trade openness and immigrant population share than did the US. Capital account openness was the same in both countries.

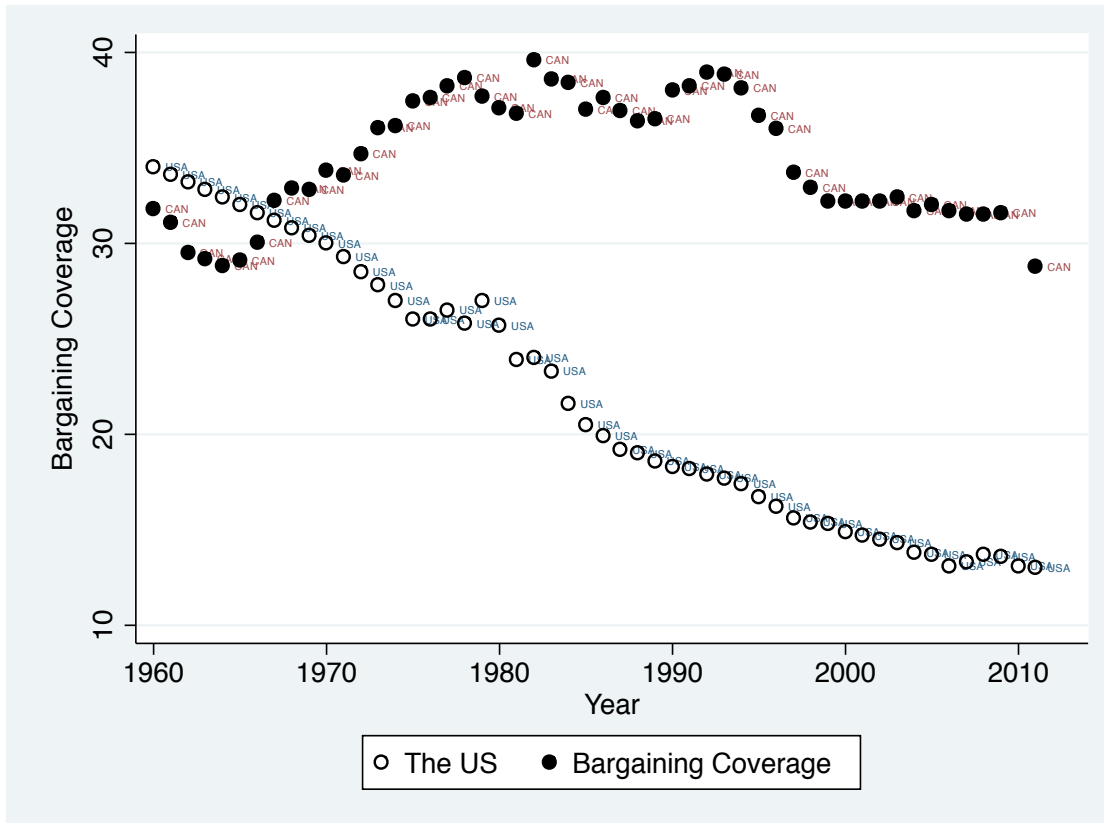
In terms of demographic change, Canada has been more exposed to the negative effects of a growing elderly population than the US since 2000. Before 2000, the elderly population share was larger in the US. Both high-skilled labor share and the female employment rate have increased consistently in both countries. GDP growth has not had any distinctive variation between two countries. Each country's bargaining centralization score has always the same. These are the common developments that fail to explain the divergent outcomes.

In terms of social insurance benefit generosity, Canada used to have more generous unemployment insurance benefits than did the US. However, the benefit level in Canada was reduced and converged with the US level (around 60 percent of income) in the mid-2000s. Thus, the positive effects of generous unemployment benefits are less likely to be experienced in Canada.

4.2. Bargaining Coverage, Sickness Benefits, and Pension Benefits

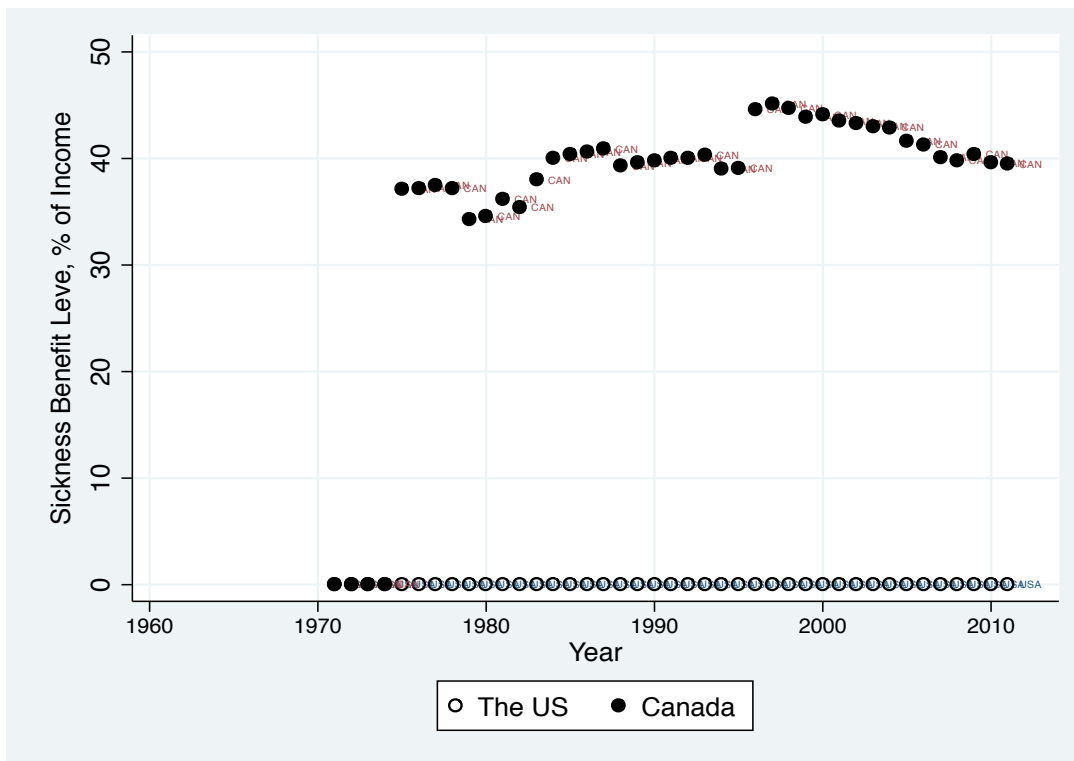
The three differences between the two countries are bargaining coverage, paid sick leave, and pension benefit. First, the change in bargaining coverage corresponds almost perfectly to the change in middle class size. Figure 8.38 presents diachronic change in bargaining coverage in the US and Canada between 1960 and 2010. This graph is surprisingly similar to the graph on middle class size change. The US bargaining coverage was higher than Canada's in the 1960s, but has been reduced continuously up to the present except for a very small increase in the late-1970s and the late-2000s. US bargaining coverage was 34 percent in 1960, but fell to 13 percent by 2010. In Canada, after several ups and downs, the current bargaining coverage rate is again at its 1960 level of 32 percent.

Figure 8.38 Diachronic Change in Bargaining Coverage (the US and Canada)



Second, sickness benefit levels are another major difference corresponding to changes in middle class size. Figure 8.39 illustrates diachronic change in sickness benefit levels in the US and Canada. The sickness benefit level in Canada remained stable at around 40 percent, while the US had no legally mandated national paid sick leave program. Although the Canadian benefit level is relatively modest compared to Austria or Germany, it is still significantly different from that of the US.

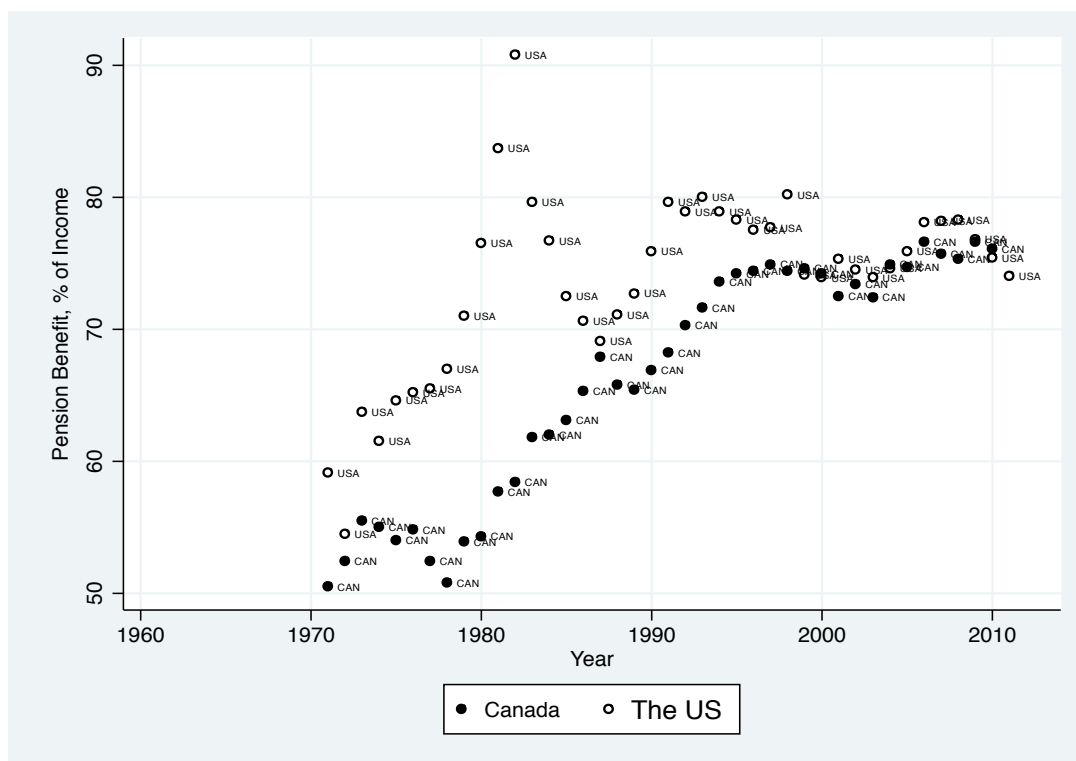
Figure 8.39 Diachronic Change in Sickness Benefit Level (the US and Canada)



Third, pension benefit levels are the last difference corresponding to changes in middle class size. Figure 8.40 presents diachronic change in pension benefit levels in the US and Canada. In 1980, the pension benefit level was much higher in the US than in Canada, it became the same in 2010. Whereas the US experienced a drastic drop in the early 1980s from 91 percent

to 61 percent of income, Canada experienced continuous increase in pension benefit level since 1980. In Canada, an increase in both the pension benefit generosity and coverage may have attenuated the negative effects of aging population. In the US, a drastic cut in pension benefit generosity in the early 1980s may have facilitated the negative effects of aging population.⁴²

Figure 8.40 Diachronic Change in Pension Benefit Generosity (the US and Canada)



Although Canada was more negatively affected by global market integration and elderly population share, it came to have a larger middle class size than the US. In the Canadian case, positive effects came from modest, but stable bargaining coverage, sickness, and pension benefit levels, with which the US experienced continuous decline or total absence.

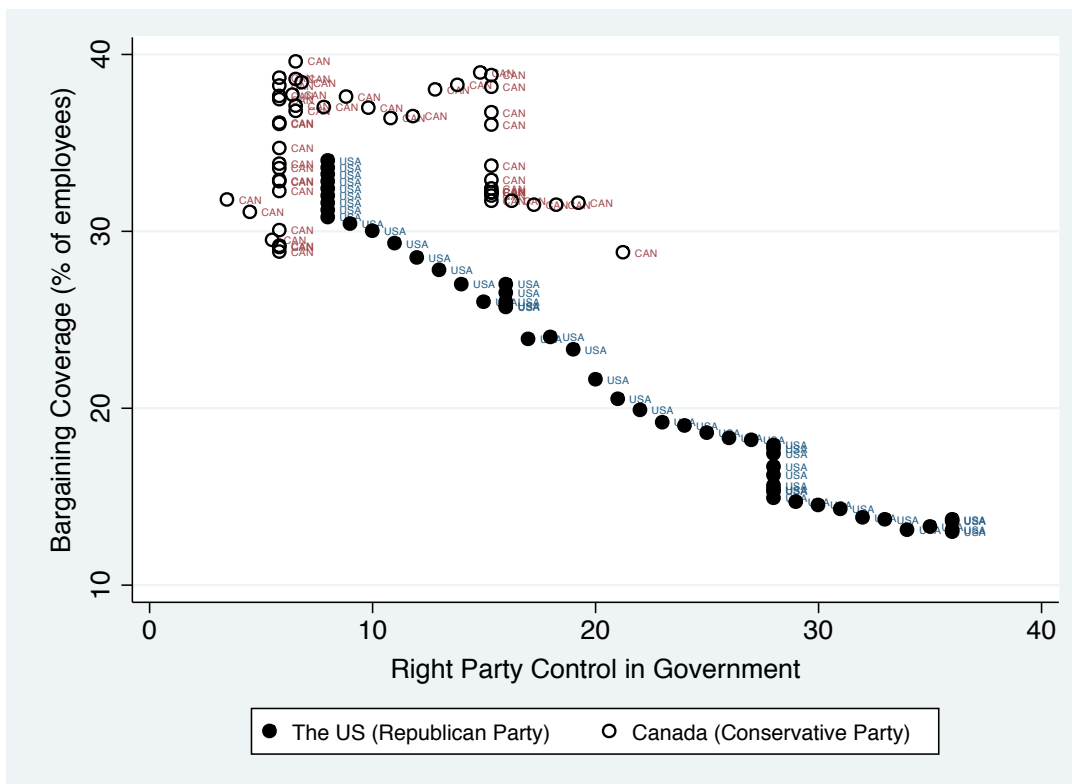
⁴² In these two countries, the negative correlation between pension benefit generosity and coverage are not found. In Canada I found the positive correlation between these two variables ($p < 0.01$), while in the US I found no statistically meaningful relationship ($p < 0.1$).

4.3. Right Party Government and Bargaining Coverage

Whereas Canadian secular right party control in government did not have any consistent effect on bargaining coverage, US secular right party control in government had consistent negative effects on bargaining coverage. During the years when the Canadian Conservative Party controlled the government, bargaining coverage either fluctuated or maintained the status quo.

In contrast, in each year since 1980 that the US Republican Party has controlled the government there has been no increase in bargaining coverage at all. In particular, there was a steep drop during the first two years of the Reagan administration. Figure 8.41 shows that as Republican control in government has been extended (as the dots move to the right), bargaining coverage has declined (the dots move downward).

Figure 8.41 Right Party Government on Bargaining Coverage (the US and Canada)



The US and Canada comparison supports the regression findings that bargaining coverage and social insurance benefits have positive effects on middle class size. At the same time, it raises the question whether variation exists among secular right parties' effects on key explanatory variables such as bargaining coverage and social insurance benefits. Conservative control in Canada did not have any consistent negative effect on bargaining coverage. A (2 percent) decline in bargaining coverage occurred during the first four years of Conservative Party government led by Brian Mulroney, but an increase occurred during the next four years of the same government. Like the Reagan administration in the US, the Mulroney government pursued free trade agreements and less government intervention in the economy. However, their effects on bargaining coverage were not consistent.

5. Conclusion

In this chapter, I illustrated the regression findings in four paired country cases that once had similarly sized middle classes, but arrived at very different outcomes over the past few decades. The regression findings hold true in large measure, but their application varies depending on the context of the paired cases.

In the UK and Austria, the diverging outcome on middle class size is explained by their contrasting patterns of change in bargaining coverage, unemployment, and sickness benefits under different types of right-wing government. Since the Thatcher government, the UK Conservative Party government has implemented neo-liberal reforms that diminished trade unions and bargaining coverage as well as the welfare state. This has widened income differentials among wage earners, while failing to address increasing economic insecurity of the

middle class by cutting unemployment and sickness insurance benefits. On the contrary, the Austrian Christian right government prevented middle class decline by maintaining its high level of bargaining coverage and generous social insurance benefits.

In the Netherlands and Germany, the divergent outcomes can be explained by the different policy response to increasingly widespread non-standard jobs. In the Netherlands, 1996 legislation on part-time parity not only increased bargaining coverage but also facilitated female employment by improving wages and benefits for the part-time jobs: where the newly added female employees were concentrated. The increase in both bargaining coverage and female employment has contributed to middle class growth since the late 1990s. In Germany, a drastic decline in bargaining coverage following German reunification (an exogenous shock in labor market) explains its substantial decline in middle class size. In addition, the mini-jobs (part-time jobs) have been widespread since the 1990s, but they remained outside of collective bargaining agreements even after the 1997 EU Directive on Part Time Work.

In Switzerland and Denmark, the most distinctive difference concerns changes in their social insurance benefit levels: when Denmark decreased both unemployment and sickness benefit levels, Switzerland maintained benefit levels or even increased them in the period when economic insecurity increased among the middle class. In Denmark, secular right parties in government were responsible for the drastic decline of social insurance benefit levels.

In the US and Canadian case, decline in bargaining coverage on the US side explains in large part the divergent outcomes between these two countries. In addition, absence of paid sick leave in the US made its middle class more vulnerable to increased income insecurity than the Canadian middle class.

Chapter 9: Conclusion

1. Summary of findings

In this dissertation, I researched an understudied yet increasingly widespread type of income inequality—middle class decline or income polarization. On one hand, as Atkinson (2013) writes, the middle class was a “forgotten” class in distributional studies, which have typically focused on either the poor, at one end, or the rich, at the other. On the other hand, as Wolfson (1994) found, general income inequality (measured by the Gini index) fails to capture income polarization conceptually or empirically.

First, I described middle class decline in 22 industrialized democracies in Europe, North America, and Asia since the late 1970s, based on household income data from the LIS Database. Whereas the economics literature on middle class decline measures the income share of the middle class, I measured the population share of middle-income households because, I argue, the change in “people space” has more important implications for politics than the change in “income space.” Unlike other studies that have attempted to measure the population share of middle class decline, my methodology enabled me to find where on the income distribution middle class decline occurred and whether middle class decline resulted in a larger affluent class or a larger poor class.

I found two general trends regarding middle class decline in my cases. First, middle class decline occurred in many industrialized countries over the past three decades. Previous research (Pressman 2007; 2010) claimed that the welfare state prevented middle class decline in terms of post- tax and transfer income distribution, but my analysis shows that middle class size in terms

of the disposable income dimension has also declined substantially. Furthermore, although media coverage and scholarly debates on middle class decline became more common since the 2008 global financial crisis, I have shown that middle class decline is a long-term development that began in the late-1970s rather than an immediate consequence of the recent economic recession. In fact, the effect of the 2008 recession on middle class decline was negligible.

Second, I found that middle class households have become more insecure and increasingly dependent on social transfer incomes to maintain their middle class status. This growing welfare state's contribution to the middle class (or the welfare reliance of the middle class) occurred in most cases over the past two or three decades. In the late-2000s, in 16 out of 22 countries, social transfer income comprised more than 25 percent of middle class household income. The growing importance of social insurance benefits to middle class households was evident in the working age population as well.

Although the welfare state's contribution was much larger among the poor than the middle class, the rate of increase in welfare reliance was higher in the middle class than in the poor. This outcome challenges the widely shared, but outdated, notion that the middle class is independent of the welfare state. The relationship between the welfare state and the middle class has changed fundamentally over the past three decades.

More important than these two trends, I demonstrated significant national and time variation in middle class decline. Some countries experienced greater contractions in the middle class, while others experienced much smaller declines, and even expansion. Within individual countries, there was also significant diachronic change.

This national and time variation in middle class decline is the main puzzle driving this dissertation. The previous literature attributed middle class decline to a common development in

all industrialized countries that skill-biased technological change or global market integration. Alternatively, I have argued that the type of dominant right-wing party in a country explains national and diachronic variation in middle class decline. Christian Democratic governments and secular right governments have shaped wage-setting institutions and social insurance policies in different ways, particularly since the 1980s.

Due to distinctive ideological orientations, cross-class electoral bases, and electoral competition within the political right spectrum, Christian Democratic governments have been much less receptive to neoliberal policy ideas than secular right governments. Christian Democrats have tempered income polarization either by supporting broad bargaining coverage or by maintaining generous income-related unemployment and sickness insurance benefits. As a result, countries where Christian Democratic parties dominate the political right spectrum have experienced relatively smaller declines in middle class size—and in some cases, even middle class growth—whereas countries where secular right parties dominate the political right spectrum have experienced substantially larger declines in the middle class.

Chapter 7 included regression outcomes that support my explanation. I identified four key causal variables that affect middle class size. These include bargaining coverage, unemployment and sickness insurance benefit generosity, elderly population share, and female employment. All of these variables have positive effects on middle class size, except for elderly population share, which has a negative effect. When controlling for these variables, Christian Democratic control in government has a positive effect on middle class size, and secular right party control in government has a negative effect. Furthermore, the contrasting effects of the two rightwing-party governments have intensified in the post-1990 period, as secular right parties,

empowered by a neoliberal policy paradigm and the collapse of communist regimes, furthered their ascendance. The effect of leftist government, however, is statistically insignificant.

Among the four key variables that affect middle class size, Christian Democratic government is positively associated with bargaining coverage and unemployment and sickness insurance benefit generosity, whereas secular right government is negatively associated with these variables. Elderly population share increased independent of government partisanship. As for female employment, secular right government is positively associated, whereas Christian Democratic government has a negative association. However, the partisan difference with respect to female employment is not as large as that regarding bargaining coverage and unemployment (sickness) benefit generosity.

Finally, in Chapter 8, I demonstrated the extent to which these empirical findings explain specific country cases in four pairs of country comparison—the UK and Austria, the Netherlands and Germany, Switzerland and Denmark, and the US and Canada. Each pair of countries once had similarly sized middle classes, but ended up having very different middle class sizes. In the UK and Austria comparison, the divergent outcome was explained by a consistent decline in bargaining coverage and unemployment and sickness benefits under the Conservative Party government in the UK between 1979 and 1996. In contrast, Austria increased its already high bargaining coverage and unemployment and sickness insurance benefits when the Christian-right People's Party (ÖVP) controlled the government.

Whereas bargaining coverage helps to explain the divergent outcomes between the Netherlands and Germany, opposite policies on social insurance benefits explain the difference in the outcomes of Switzerland and Denmark. In addition, the difference in female employment and elderly population share explains the divergent outcomes between the Netherlands and

Germany. Although both countries experienced increases in these two variables, the Netherlands had a higher female employment rate and a much lower elderly population share than Germany. Between the US and Canada, decline in bargaining coverage and absence of paid sick leave in the US also explains its divergent outcome from Canada.

2. Theoretical Contributions

These findings on national and diachronic variation in middle class decline challenge prevailing economic and sociological theories, which attribute middle class decline to factors common across all industrialized countries, such as technological change and global market integration.

Alternatively, I offered a political explanation. Using regression estimation, I demonstrated that neither global market integration, nor the shortage of high-skilled labor has a statistically significant effect on middle class decline or growth. Instead, I was able to identify alternative causal variables related to the labor market and to social policy—bargaining coverage, unemployment (sickness) insurance benefit generosity, elderly population share, female employment, and the type of dominant right-wing party that affects those key factors distinctively.

My alternative explanation is based on a revised version of partisan theory. Like conventional partisan theory, I emphasize the effects of party control in government on policy and distributional outcomes. Yet unlike the previous theories, which examined partisan effects from a dichotomous framework of left and right, I have investigated how the diversity of right-wing parties generates different distributive outcomes. As the left's power has diminished

significantly since the 1980s, it is especially important to investigate diversity within the political right spectrum. In this research, major ideational differences between two types of right-wing party were identified in collective bargaining coverage and unemployment and sickness benefit generosity, and these distinctive partisan effects explained divergent outcomes in middle class size in my cases.

Another difference between my explanation and conventional partisan theory is my focus on non-material partisan effects. Whereas the previous theory focuses on material interests to distinguish the partisan effect of a dichotomous term, business and labor, I paid attention to non-material partisan differences, drawing on recent policy literature, which emphasizes the political role of economic policy ideas (Hall 1993; Blyth 2001; Schmidt 2008). Although both Christian Democratic and secular right parties represent business interests, they have different ideological affinity toward neoliberal policy reform ideas. Whereas monetarism was adopted as a wholesale policy paradigm among secular right parties, undermining existing wage-bargaining settings and social insurance programs, its application was limited within Christian Democratic parties due to their ideological orientations based on the Catholic social doctrine of subsidiarity and solidarity (Van Kersbergen and Manow 2009).

One possible critique of my partisan explanation regards the issue of endogeneity, which is relevant in two circumstances. First, if a country already has a large middle class, regardless of partisanship, all major parties might pursue middle class votes to win elections and devise policies that favor the middle class. Under this condition, an extant large middle class might explain a future large middle class. Second, in a circumstance where the middle class votes for a certain major party exclusively, this party keeps making policies for its middle class constituents. Therefore, a party makes policies for the middle class because it is a middle class party.

There is no empirical support for the former circumstance. As I have shown, middle class sizes were not very different across countries in 1980, but diverged significantly by 2010. The middle class size in Norway was smaller than that of the US in 1980, but grew to be 1.5 times larger than the US middle class by 2005. In the mid-1990s, Austrian middle class size was similar to that of the UK—about 47 percent of the population—but grew to as large as 61 percent, while the UK middle class remained at 47 percent through the mid-2000s.

For the latter circumstance, existing literature agrees that the middle class is constituted by swing voters, who switch their political support depending on certain conditions, rather than loyal voters to a certain party (Iversen and Soskice 2006). In addition, because the middle class has not emerged as a coherent voter group, their votes are distributed across the political spectrum. Although there are parties named “the Center Party” in Europe, these parties represent agricultural and rural interests rather than middle class interests (Luebbert 1987; Heidar 2005).

In terms of theoretical contributions to the existing theories, my findings speak to two prevailing theories from distributional studies in political science—welfare regime theory and median voter theory.

First, my findings challenge welfare regime theory (Esping-Andersen 1990) as much as they are informed by the theory. I found that in most cases the largest middle class countries were what welfare regime theory categorizes as conservative welfare regimes, where Christian Democratic parties were established as dominant right parties. On one hand, as I explained in Chapter 3, my research was informed by the theory in the sense that the theory found that the institutional structure of the welfare state in conservative regimes is designed to preserve the existing social status. This explains why these regimes developed income-related generous social insurance benefits.

Whereas the theory completely neglects the relationship between the institutional design of social insurance programs and middle class size, I demonstrated that the conservative nature of social insurance design helped prevent the middle class from declining. That is, social democratic regimes are still more effective at controlling general income inequality, while conservative regimes are more effective at controlling another type of inequality, namely, income polarization. This is a new finding regarding the distributive effects of conservative welfare regimes, and my contribution to the theory.

On the other hand, my findings challenge welfare regime theory. Because the theory is based on a static institutional explanation, it can explain neither a diachronic change in the institutional design nor the time-variant effects of the institutional structure. I demonstrated that middle class sizes in Continental European countries were not so different from middle class size in Anglo-American or Nordic countries in 1980. However, their middle classes became much larger than those of the Anglo-American countries by 2010. This is because of the time-variant effects of the same institutional structure. As middle class economic security has declined since the 1980s, generous income-related social insurance has become a more critical institution for the middle class.

In addition, institutions are not static, but variable, especially when political parties are equipped with a legitimate idea from which to project an alternative model. For example, Denmark, a typical social-democratic regime, experienced a dramatic decrease in unemployment and sickness benefit generosity when its secular right parties controlled the government after 1980. In contrast to the theory, Switzerland, a typical conservative regime, outpaced Denmark in terms of female employment, and collective bargaining coverage in conservative Austria grew to more than that of social democratic Sweden.

Second, according to the median voter theory, all elected governments should pursue the material interests of the middle class, regardless of which party or parties control the government. This is because both left and right parties compete to accommodate the policy preferences of the median voter, who is at the center of the income distribution and represents much of the middle class. Specifically, whenever the median income becomes significantly lower than the mean income, governments are expected to function as equalizers by enacting more egalitarian redistributive policies—taxes on the rich to benefit the rest. Therefore, middle class decline, which I found, is a problematic case that the median voter theory cannot explain.

My descriptive findings also challenge the core assumption of the median voter theory. The theory presupposes that income distribution follows a normal distribution curve, where middle-income households comprise a plurality of the population, outnumbering, or at least equaling, the number of affluent or poor. However, if the middle class has declined up to a point where its number becomes smaller than the poor or the affluent, it would be rational for parties to move to the position, where the affluent or the poor are clustered in a bipolar income distribution. This can result in political polarization.

3. Policy Implications

Although in most cases countries do not have a choice between a Christian Democratic party and a secular right party, they can still make policy choices to help the middle class grow rather than decline, or to control the trend toward polarization in the income distribution. Discussion of policy effects is important even for countries that have dominant Christian Democratic parties because middle class decline, or growth, is not an intended consequence of

Christian Democratic or secular right government. Rather, it is more likely the unexpected consequence of the different orientations of these two right-wing parties toward a neoliberal policy blueprint.

I found that policies that help the middle class to grow include those that facilitated broader collective bargaining coverage, generous unemployment and sickness insurance benefits, a lower elderly population share, and a higher share of female employment. These policy-related effects on middle class size can be used as a reference when assessing the political parties' proposed policies to help the middle class grow.

One caution against using my policy-related variables as a reference is that my variables explain change in the population share of the middle class, not change in income share of the middle class. That is, policies that increase collective bargaining coverage help promote a larger middle class size (or less income polarization), but may not help increase income share of the middle class, particularly those who have more marketable skills than others. Without broad bargaining coverage, some middle classes can increase their income shares more rapidly, while others may experience decreases in their income shares.

First, bargaining coverage facilitates middle class growth. Recently, research (Rueda 2005; Thelen 2012) points out that labor market dualization is one of the main reasons for the growing income inequality among workers because labor market insiders are overly protected through union organizations and collective bargaining, whereas labor market outsiders are not. However, according to the labor market dualization thesis, collective bargaining coverage itself is not the cause of inequality. Whether collective bargaining induces greater inequality depends on the degree of coverage. If collective bargaining covers a minority of the population and

limited sectors, such as in the US and the UK, it can result in greater inequality. Germany after German re-unification experienced a similar consequence.

One of the notable findings that challenge globalization theory is that the decline in bargaining coverage is not a universal phenomenon across industrialized countries, but a policy outcome driven by secular right party government. Some countries, such as Austria and Switzerland, increased bargaining coverage, while many others maintained their previous levels of bargaining coverage during times of global market integration and technological change. The decline was most dramatic in the UK, the US, Australia, and Germany. Except in Germany, the decline in bargaining coverage was politically driven, a labor market reform policy under secular right governments in the 1980s.

Second, generous social insurance benefits also facilitate middle class growth. Of the three programs I tested, unemployment and sickness benefit generosity have positive effects on middle class size, whereas pension benefit generosity did not have any statistically significant effect. However, social policy reforms under secular right governments during the 1980s to 1990s cut unemployment and sickness benefits substantially, whereas pension benefit generosity remained without substantial cuts.

As middle class income has become increasingly volatile over the past two or three decades, social insurance protection has become more important for middle class households. As I showed in chapter 6, in all 22 OECD countries, except for the East Asian countries, the middle class has become increasingly reliant on social transfer incomes. In 2010, this welfare state contribution to the middle class was substantial and indispensable in most industrialized democracies.

Hacker (2006) points out that the direction of policy reform in the US is toward the privatization and individualization of the burden of social risks. However, in times of greater income polarization in terms of the market income dimension, policies that privatize and individualize the burden of social risks facilitate income polarization in terms of the disposable income dimension. That is, these policies facilitate middle class decline.

Although countries with high bargaining coverage are more likely to have high income-replacement rates of social insurance benefits, the association is not necessary. Germany experienced a steep decline in bargaining coverage, but it maintained high unemployment and sickness benefit levels. Given its high elderly population share and low female employment rate, German middle class size would have declined much more if social insurance benefit levels had been lower than they were. On the contrary, Denmark experienced a decline in unemployment and sickness benefit generosity, while maintaining its comparatively high bargaining coverage.

Third, an increase in female employment results in a less polarized income distribution, and a larger middle class. Though the trend of marriage between high earners might facilitate a polarized income distribution (Blossfeld and Buchholz 2009), the overall effects of female employment on middle class size are positive. This outcome supports the findings of recent cross-national studies (Harkness 2013; Nieuwenhuis et al. 2013). Policies that promote gender equality in employment and pay, and that reconcile the conflicts between work and family can facilitate female employment (Gornick and Meyers 2003). In the Duct case, it was initially the job displacement of male breadwinners during its industrial restructuring that increased female labor force participation in the 1980s. However, the ensuing increase in female employment was facilitated by subsequent reforms (e.g., 1996 legislation on part-time parity) that guaranteed

collective bargaining agreements to part-time jobs where the newly added female labor was largely concentrated (Thelen 2014, 155).

Notably, neither conservative welfare regimes nor Christian Democratic control in government is a necessary condition for becoming a laggard in terms of female employment. After its dramatic increase, Switzerland's female employment level was higher than that of Denmark, a typical social democratic regime.

Fourth, an increase in the share of the elderly population has a negative effect on middle class size. Explaining the aging trend in demography requires a consideration of many complex factors, including increasing life expectancy, working age immigrant population, birth rates in previous decades, and female employment. To specify the main cause of aging populations is a task beyond this study. I can only argue that policies that lower the elderly population share can help the middle class to grow rather than decline.

4. Limits of the Study and Future Research Direction

One of the limits of this study is that it leaves France and Canada unexplained in terms of party government effects. As I showed for the Canadian case, the French case is also explained by change in the key variables with no need to invoke party control in government. Notably, secular right governments in these cases had no consistent effect on change in bargaining coverage or unemployment and sickness benefit generosity. It may be that diversity within the political right spectrum is greater than the two types that I have identified (Christian and secular right party). If the East Asian right-wing parties and European populist parties are included, there would be an even greater need for further specification of the political right spectrum.

Another limit of this study is the limited number of observations (the number of observations is 95 for 17 countries). Although LIS provides hundreds of thousands of observations for each country-year dataset, I was not able to use these household-level data for the analysis. Instead I aggregated household-level variables into country-level variables such as middle class size. This is primarily because I wanted to test the effects of country-level independent variables, including party control in government and global market integration.

Finally, this study did not examine each country case in detail. This is mainly due to my limited knowledge of local contexts and partly due to the original research purpose that focused on cross-national comparison rather than a contextual understanding of individual cases.

Given these limitations, this dissertation research may still inform students in distributional studies with regard to the following future research directions. First, this dissertation informs future research on the effects of income polarization on political outcomes (e.g. political support for redistribution or political polarization). In chapter 5, I showed that middle classes declined much more in terms of market income distribution than in terms of disposable income distribution. In particular, I found a growing number of households that have an affluent-class income before tax and social transfers, but net a middle-class income after tax and social transfers. Their population share was negligible in the 1970s, but grew to a substantial share.

In Germany, affluent households—those having (in market share) more than twice the median income—comprised only 11.8 percent of the population in 1973. However, by 2010, affluent households had increased by more than threefold, comprising 37.8 percent of the population in terms of market income distribution. At the same time, the share of affluent households who are net contributors to the welfare state has increased dramatically. Whereas the

welfare state reduced the affluent population by only two percent in 1973, it diminished more than half the population share of the affluent, from 37.8 to 18.2 percent of the population in 2010. The substantial rise in the share of the affluent population who are net contributors to the welfare state might challenge political support for the existing welfare state—they constituted only two percent of the population in 1973, but almost 20 percent of the population in 2010.

Second, another possible direction of future research is to compare the politics of social policy and labor market reforms between Western and non-Western industrialized democracies. Although I could not include the three East Asian cases (South Korea, Japan, and Taiwan) in my statistical analysis, middle class contraction in these countries can also be tested against my party-based explanation in this dissertation. Unlike secular right parties in Europe and North America, major East Asian right-wing parties are not based on liberalism. However, in East Asia these parties have actively adopted the ideational turn toward neoliberal reforms since the mid-1990s. Labor market reform combined with weak social insurance systems hit middle classes the hardest in the region.

Unlike their Christian Democratic counterparts in Europe, East Asian right-wing parties had no ideological restraints against adopting neoliberal reforms and lacked historical experience with 19th century old liberalism. The position of dominant right-wing parties is critical in this region because leftist political forces are marginalized due to the legacy of the Chinese Revolution and the Korean War.

5. Conclusion

This study described and explained middle class decline in terms of its population share in industrialized democracies between 1980 and 2010. Middle class decline (or income polarization) is a largely understudied phenomenon, although the existing literature points to its critically harmful effects on democracy: such as political instability, political dominance of the moneyed interest, and political polarization, and policy gridlock. This is because existing theories in political science cannot explain the phenomenon by focusing on a dichotomous framework of left and right (classic partisan theory) or by failing to reflect the change in population distribution by income groups (the median voter theory).

Unlike the prevailing economics literature on middle class decline measuring the changes in income share of the middle class, my methodology enabled me to measure change in the population share of the middle class. Using this measure, I analyzed to what extent middle class decline occurred in each country over the past three decades.

I also demonstrated significant national and time variation in middle class decline among industrialized democracies between 1980 and 2010. In terms of cross-national variation, Anglo-American countries experienced greater contractions in their middle class, while Continental European countries experienced a much smaller decline, even in some cases expansion. Nordic countries placed in the middle. This is because general income inequality, measured by the Gini index, is a conceptually and empirically different phenomenon from income polarization (middle class decline). Within individual countries, I also found significant diachronic change.

As an alternative to the prevailing economic and sociological theories that predicted the universal trend of middle class decline, I offered a party-based political explanation arguing that the type of right-wing party government and subsequent policy change generate the divergent outcomes. I highlighted the positive role of status-quo oriented conservatism of Christian

Democratic government and the negative effect of transformative conservatism of neoliberal secular right governments since the 1980s. Christian Democratic governments prevented middle class decline by tempering income polarization and economic insecurity through broad bargaining coverage and generous income-related social insurance programs, respectively.

Given the limits in detailing the historical context of individual cases, this dissertation expects to contribute to facilitating academic debates on the causes of middle class decline, and policy debates regarding how to make income distribution less polarized, with the goal of assisting middle class growth in the era of a globally integrated and technologically advancing market economy.

Datasets

The Luxembourg Income Study (LIS) Database

<http://www.lisdatacenter.org>

The Comparative Welfare State Dataset (CWS)

<http://www.unc.edu/~jdsteph/common/data-common.html>

The Comparative Welfare Entitlements Dataset (CWED)

<http://cwed2.org>

The Organization for Economic Co-operation and Development (OECD) International Migration Dataset in Statistics for Demography and Population <http://stats.oecd.org/#>

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Appendix

Summary Statistics of Dependent and Independent Variables

Variable	Obs.	Mean	Std. Dev.	Min	Max
Middle Class Size (DI) (% of the population)	155	54.81	6.13	39.01	69.02
Christian Democratic Control in Government	964	0.18	0.28	0	1
Secular Right Control in Government	964	0.29	0.38	0	1
Leftist Control in Government (share of the parliament seats)	964	0.35	0.39	0	1
Bargaining Coverage (% of the employees)	414	62.53	25.34	13	99
Bargaining Centralization (Degree of centralization)	969	3.11	1.34	1	5
Unemployment Benefit Generosity (Income replacement rate, %)	693	66.32	14.77	10.10	95.20
Sickness Benefit Generosity (Income replacement rate, %)	696	70.23	26.09	0	101.30
Pension Benefit Generosity (Income replacement rate, %)	653	65.19	14.15	34.00	111.10
Trade Openness (Trade Volume, % of the GDP)	959	69.91	45.48	9.27	319.55
Capital Account Openness (Chinn-Ito Index)	706	1.44	1.25	-1.86	2.46
Immigrant Population Share (% of the population)	407	9.15	8.81	0.34	44.91
High-skilled Labor Share (% of the population)	293	10.19	6.69	0.84	31.95
GDP Growth (%, Growth rates)	940	2.42	2.92	-10.75	13.48
Elderly Population (>65) Share (% of the population)	982	13.38	2.64	7.31	20.98
Female Employment Rate (% of the female population)	913	36.81	9.13	18.13	64.00
EU Membership (Dummy)	988	0.54	0.50	0	1