An Economic Explanation to Welfare State Attitudes:

A Multilevel Analysis of 21 European Countries

Tonje Holtan

Master's thesis

Spring 2021

Department of Comparative Politics

University of Bergen

Abstract

This thesis examines to what extent attitudes towards the welfare state are shaped by economic conditions on both micro and macro level. My argument is that welfare state attitudes are shaped by both micro– and macro-level economy, as well as within the dynamics of these two levels. I argue that more effort should be made to empirical test the effect of personal economic conditions in varying economic contexts. The scholarly literature has to a large extent focused upon the economic self-interest hypothesis in explaining policy preferences on the welfare state. This thesis highlights the importance of self-interest, at the same time as underscoring the relevance of economic context. My argument is that in addition to the micro-explanation of economic self-interest, countries with higher levels of wealth are associated with increased welfare state support. Moreover, the effect of self-interest on welfare state attitudes is expected to vary between economic contexts.

In order to test this argument, multilevel regression modeling with multiple imputation is applied on data from European Social Survey (ESS) covering 21 European countries (*N*=39400). The results align with some of the theoretical expectations. Firstly, a substantial support is given to the economic self-interest hypothesis in shaping policy preferences on welfare issues. Secondly, countries with lower levels of wealth are found to be more associated with higher welfare state support. Lastly, economic context is found to affect the relationship between individuals' income and welfare state attitudes.

Acknowledgements

Denne masteroppgaven markerer slutten av mitt utdanningsløp ved institutt for sammenliknende politikk i Bergen. Først ønsker jeg å takke min veileder, Tor Midtbø, som har stilt opp for meg gjennom hele prosessen. Takk for ditt oppriktige engasjement, og dine uvurderlige råd.

Tusen takk til familie og venner for god støtte hele veien, både gjennom utdanning og ellers.

Tusen takk til mine medstudenter som har gjort studietiden givende og kjekk.

Alt i alt synes jeg masteroppgaven har vært en spennende og lærerik prosess som jeg absolutt ikke ville vært forunt.

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1 Introduction

1.1 Research Question

Research investigating the origins of citizens' policy preferences lies at the heart of political science, and there exists a nearly common conviction that economic variables are of importance in determining political attitudes and behavior. From the time of Adam Smith and now, the historical assumption of economic theory has been that individual economic behavior is governed by the pursuit to maximize self-interest (Hibbs 1993, 11). As Downs (1957, 36) puts it "each citizen casts his vote for the party he believes will provide him with more benefits than any other".

This thesis seeks to examine the relationship between economic circumstances and attitudes towards the welfare state. Previous research on this matter is largely guided by rational choice theory of economic self-interest assuming that an individual's position in the income distribution determines her preferences for redistribution. This classical economic standpoint holds that wealthier people tend to be more opposed to redistribution than poorer people, because the economic burden of redistribution falls on wealthier people (Meltzer and Richard 1981). Due to this, redistribution is aligned with the self-interest of poorer people.

By adopting a multilevel cross-national perspective, this thesis deals with the rational self-interest *a priori* assumption by investigating it both beside and within economic context. I hypothesize that economic self-interest, as well as the macroeconomic context shape welfare state attitudes. I further hypothesize that the effect of economic self-interest is conditioned by economic context. Put differently, the effect of income on welfare state attitudes may vary according to the national economic context.

The research question for this thesis will be the following:

To what extent can economic conditions explain attitudes towards the welfare state?

1.2 Why Study Welfare State Attitudes?

There are several reasons why welfare state attitudes are important to study. Two important reasons are to be recognized.

First, redistribution is an essential task of governments in Western democracies, and citizens' attitudes toward the welfare state should be seen as an important aspect of governance and legitimacy of modern democracies (Jæger 2006, 321; Svallfors 2012, 2). Studying such attitudes provides insight into whether social welfare policies are legitimate, as legitimacy of the welfare state is indicated by the degree of welfare state support (Meuleman et al. 2020). In this way, welfare state policies are highly correlated with welfare state attitudes, due to the fact that policymakers pay close attention to voters' opinions on these policies (Yang et al. 2019, 208). Furthermore, the legitimacy of European welfare states is identified as playing a crucial role in the democratic politics of the welfare state (Meuleman et al. 2020). It is thus compelling to have a broad understanding of welfare state support as it legitimizes government's pursuits on social welfare. Through assessing how micro-macro-level economy affects welfare state attitudes, we increase our understanding of how social policy is shaped (Kluegel 1987, 82). As Toikko and Rantanen (2020, 133) point out, there are various perspectives on the direction and the mechanisms between welfare attitudes and the formation of social policies, but there is not much controversy about the presence of that relationship.

Second, the European welfare states have been substantially challenged in the recent decades, due to major economic, social and political developments, as well as long-term challenges (Taylor-Gooby and Leruth 2018, 1; Meuleman et al. 2020; Svallfors 2012, 1). The global financial and economic crisis of 2008, and the following recession in 2009 and forward, turned out to be a headache for European welfare states in the decade to come. Millions of individuals became unemployed facing economic insecurity and reduced income (Margalit 2013, 80). The aftermath of the financial crisis exacerbated the already present challenges and resulted in comprehensive reform processes throughout European countries. European governments implemented various measures to cope with the rising unemployment levels and the negative consequences from economic recession (Meuleman et al. 2020, 14). On top of this, challenges related to globalization, migration flows into Europe and increased cultural and ethnic diversity have influenced the political landscape. All of these challenges have fueled political debates and policy reforms as well as increased the pressure on the welfare state's capacities (Svallfors

2012, 1; Meuleman et al. 2020, 3). In light of these challenges, studying welfare state attitudes becomes even more crucial.

Furthermore, as welfare policy is an important tool for governments to reduce class conflicts and inequality as well as protecting citizens' social rights (Esping-Andersen 1990; Svallfors 2004), clarifying and bringing new insight to the determinants and mechanisms of welfare state attitudes continues to be an important commitment for both social, political and economy scientists.

1.3 Contribution

The motivation of further investigating the relationship between economic conditions and welfare state attitudes is grounded both theoretically and methodologically. The main contribution of this thesis is twofold. First, from a theoretical perspective, studies examining determinants of attitudes towards the welfare state have in recent years increased partly because of better data availability and multilevel analysis techniques (Wulfgramm and Starke 2017, 1). Moreover, authors have increasingly sought to contextualize their explanations. Despite the relatively large amount of attention to economic conditions in welfare attitudes, a large number of studies previously conducted have not taken into account the economic self-interest *vis-á-vis* national economic considerations – and more importantly, potential economic micro-macro dynamics. According to Wulfgramm and Starke (2017, 4), examining how context mediates individual determinants in welfare state attitudes is still rare, though there are good theoretical reasons why context should matter. Likewise, I argue that studies on welfare state attitudes require a more systematic analysis in which greater effort should be taken to empirically assess the shaping of individual welfare attitudes in light of both the economic micro- and macro-level. I observe an empirical lack of studies examining the effects of national income on welfare state attitudes.

Second, from a methodological perspective, I will contribute to welfare state attitudes research by complementing multilevel analysis with the statistical approach of multiple imputation of missing data. By adopting a multiple imputation method, a nonresponse bias in the personal income variable (as well as other level-1 variables) is avoided as this method replaces missing

data with substituted values. In this way, results are generated more accurate, and in this way sufficiently addresses to what extent economic conditions determine welfare state attitudes.

By quantifying and testing the effect of personal income, as well as economic macro-context, this thesis provides an empirical foundation in explaining variation in public attitudes towards the welfare state. By comparing attitudes in different economic contexts, I hope to shed light on causes behind welfare state attitudinal patterns.

1.4 Central Findings

The analysis finds that personal income is strongly related to welfare state attitudes. Citizens with lower income are more likely to support the welfare state, and the finding is consistent across countries. Economic context taken into account; the negative relationship upholds. This is in line with the rational choice assumption of economic self-interest. Moreover, citizens in richer countries are found to express lower levels of welfare state support compared to citizens in poorer countries. This significant result is not in line with the theoretical expectations, but it does follow into the ranks of previous empirical findings. A negative cross-level interaction effect is found, indicating that economic context interacts with the relationship between welfare attitudes and personal income. This shows that the tendency that poorer individuals living in richer countries have a greater tendency of expressing welfare state support compared to poorer individuals living in poorer countries. Overall, the results from the empirical analysis have proven to be somewhat mixed from the theoretical expectations.

1.5 Structure

The thesis is structured as follows. In chapter 2, theoretical expectations regarding attitudes towards the welfare state is presented, in addition to previous empirical findings, as well as the articulated hypotheses for this specific study. Further, data and measurement are addressed in chapter 3, and chapter 4 outlines the analytic strategy and methods, the main ones being multilevel modeling and multiple imputation of missing data. In chapter 5, I will present the findings and results from the analysis. In chapter 6, I will discuss and conclude upon the

findings with regards to the research question, theoretical expectations and implications for the research.

2 Theory

2.1 Theoretical Framework

This chapter starts off with conceptualizing and operationalizing the welfare state, and attitudes towards it. Further, the theoretical framework is presented and discussed. The aim of this chapter is to show how micro- and macro-level economy, as well as a potential dynamic between these two levels, shape attitudes towards the welfare state. The section also reviews the empirical literature on economic conditions and welfare state attitudes.

2.2 The Welfare State

The welfare state can be defined as "the sum and practices that aim to bring about decommodification of the life prospects of citizens: that is, to assure decent living conditions irrespective of the position of people in the market" (Lewin-Epstein et al. 2003, 2). A comprehensive welfare state has often been characterized as a European invention, and an important benchmark of Europe. The welfare state as a modern social institution serves redistribution and protects citizens and actors from such as unforeseen events, in addition to providing access to care and services (Svallfors 2012, 1). Two fundamental goals of the welfare state are to provide *security* through the provision of a safety net, and *equality* (Roosma et al. 2013).

The welfare state developed as a response to the loss of economic security created by the capitalist economy, and industrialization in the post-1945 period. In a market-led economy, income derives from selling one's labor. This means that under capitalism, citizens' labor power becomes a commodity. Thus, citizens' well-being gets dependent on their ability to sell labor (Esping-Andersen 1990, 35). Under conditions such as unemployment, sickness, invalidity or old age, one is hindered from selling labor in the market. Due to this, the rise of capitalism posed a serious threat for the workers. As the market was unable to provide collective benefits for the deprived, the demand for social and economic provisions from the state increased. In this way, the welfare state is seen as a response to the defects of capitalism. In sum, the welfare

state evolved as an outcome of a struggle between social classes in which each of the classes had its own relative power and authority (van Kersbergen and Manow 2014, 350-352).

The development of welfare states has resulted in different welfare regime types. This is because it reflects different responses and pressures for *de-commodification*. The concept of de-commodification touches upon the main goal of the welfare state, and refers to "the degree to which individuals, or families, can uphold a socially acceptable standard of living independently of market participation" (Esping-Andersen 1990, 37). This decommodification is in the interest of workers, and in many ways the labor movement is viewed as the political driving force behind the welfare state development (Korpi 1983).

Furthermore, besides providing services and income security for its citizens, the welfare state has also been a system of social stratification, and a key institution in structuring social classes and order (Esping-Andersen 1990, 55). According to Svallfors (2004, 119), one of the most important arenas for class politics is the welfare state. The welfare state redistributes economic resources, as well as citizens' risks from being dependent on the market. In this way, welfare policies and its provisions are important in changing the relation between class, resources and risks (Svallfors 2004, 119).

2.2.1 Welfare State Attitudes

This study's phenomenon of interest and dependent variable, *attitudes towards the welfare state*, is a multifaceted concept. Yet, in this thesis such attitudes are focused upon to what extent an individual agrees or not that *the government should reduce differences in income levels*.

It is important to take into account that when citizens evaluate the concept of the welfare state, individuals' perceptions about *what* a welfare state is, and *how* such a state functions will be used as a basis. Further, it is important to note that contemporary welfare states differ in scope, and their purposes are not equal. The welfare state constitutes an economic reality in which individuals are socialized and intertwined. Citizens' perceptions and their attitude formation will be influenced by the context that surrounds them, and their attitude is likely to be ambivalent.

A paradox might be that although people tend to view equality as an important principle, there is weaker consensus about implementing policies, such as redistribution, to reduce inequality (Dawtry et al. 2015, 1389). Likewise, in light of welfare state attitudes, citizens might support the general idea of redistribution and generous state involvement, while not supporting specific policies within their welfare state system (Taylor-Gooby and Leruth 2018, 7).

As the concept of redistribution lies within the purpose of the welfare state, attitudes towards the welfare state and attitudes towards redistribution have been used interchangeably in the literature. Likewise, this thesis will treat the concepts equally.

2.3 Micro Level Economy

2.3.1 The Rational Choice Argument: Self-Interest Hypothesis

The relationship between economic circumstances and political preferences has been much theorized and researched in the political sciences, and it has been commonly assumed that personal economic conditions are an essential determinant of political attitudes and behavior (Lipset 1960, Feldman 1982, 446). Beginning in 1957, with Anthony Downs' *Economic Theory of Democracy*, rational choice theory assumes that humans motivate solely from self-interest. According to Downs (1957, 27), rational behavior is primarily directed towards selfish ends. He underscores that when studying democratic institutions and political ends, the study must include the individuals comprising it. Downs' so-called *rationality axiom* implies that citizens act rationally in politics and that "each citizen casts his vote for the party he believes will provide him with more benefits than any other" (Downs 1957, 36). In calculating such expectations, citizens only need to review their own economic situation. Likewise, Campbell et al. (1960, 205) argue that public opinion often reflects no more than "primitive self-interest". Most broadly defined, almost any action or attitude can be interpreted as being in an individual's self-interest (Feldman 1982, 446; Baslevent and Kirmanoglu 2010, 346).

Rational choice theory has two essential elements (Amadae and de Mesquita 1999, 270). First, political science is based on the same methodological principles as other scientific disciplines, such as the physical sciences or economics. This means that political theory should encompass explanations that describe political outcomes as accurately as possible. Second, rational choice points to collective outcomes as a result of individuals' decision-making deriving from rational

self-interest. This element of self-interest lies within the focus of this thesis. One of the core assumptions of rational choice theory is that individuals' attitudes and their political actions are motivated by maximizing expected payoffs, so-called *utility maximization*. This means that a person maximizes utility by choosing the best option that serves her goals, when presented with a variety of options (Green and Shapiro 1994, 14). As Olson (1965, 65) puts it, a person's action is rational when the goal is "pursued by means that are efficient and effective for achieving these objectives". In sum, individuals are driven exclusively by their self-interest in maximizing their expected payoffs.

The hypothesis of economic self-interest has been viewed as essential in determining individual political preferences and attitudes, and the hypothesis has enjoyed an almost dominant position in political and economic science from the 1970s and onwards (Mansbridge 1990, 137; Rothstein 1998, 123). Much scholarly attention in the comparative welfare attitude literature has been devoted to the self-interest hypothesis as a key determinant of, and a major driving force in shaping individuals' attitudes towards the welfare state and redistribution.

The self-interest hypothesis represents an intrinsically rationalist understanding of welfare attitudes, as being what people can expect to benefit from the welfare state. As stated, individuals are purposive and calculated in their preferences. According to Sears and Funk (1990, 248), the self-interest hypothesis is about psychological assumptions, such as the idea of egotism and individuals' attempts to achieve materialistic hedonism. Moreover, a psychologically aspect is individuals' ability to be rational as they make cost-benefit calculations on the basis of maximizing utility (Sears and Funk 1990, 248; Meulemann and Delespaul 2020, 28). According to Margalit (2013, 81), preferences based on self-interest will vary in accordance with one's material standard of living. When the material standard of living changes this will often result in a significant shift in political preferences, and moreover rule out other explanatory variables such as ideology. Put in other words, when someone's standard of living decreases, this will have a greater influence than ideological principles in shaping her attitude towards welfare. This will be further looked into in the thesis' macro-economy section, 2.4.

2.3.2 The Desire for Equity and Insurance

Rehm (2005) presents two self-interested theoretical perspectives of why individuals would support redistribution. The first is the logic of *desire for equity* which assumes that people are in favor of redistribution for selfish reasons, because they see themselves as disadvantaged. From this perspective, poor people are in favor of redistribution because (a) they hope to gain from it, and (b) because they want to achieve equity. This last point is, according to Rehm (2005, 3), that the best the disadvantaged can achieve within a democracy, is equity. Those supporting the welfare state are thus the disadvantaged citizens who in example find themselves as recipients of transfer incomes, or at risk of becoming financially dependent on the welfare state (Jæger 2006, 322). In this regard, the sick, those with a lower level of income or education, unemployed, or those that are exposed to labor-market risks, especially actual or threatened unemployment, would be more supportive of welfare state policies (Jæger 2006, 323; Meulemann and Delespaul 2020, 28; Naumann 2014, 21). According to Svallfors (1997, 290), resources such as money and qualifications, as well as risks such as unemployment, sickness, and poverty are systematically bound to positions in the labor market. Therefore, citizens having weaker positions in the labor markets would be more reliant on welfare benefits (Svallfors 1997, 290).

In the second perspective, the *desire for insurance*, citizens are believed to support welfare policies because they want to insure themselves through periods of income shocks and to be able to have a minimum income during bad times (Rehm 2005, 3). In other words, citizens want to secure their income throughout their life cycles. In example, people who have done risky investments will demand insurance against a possible future loss of income (Iversen and Soskice 2001). An important note here is that individuals holding a higher income are also exposed to risks and would thus have an interest in insurance (Cusack et al. 2006). In this way, support for redistribution might also include a demand for insurance independent of income, which would affect the relationship between income and political attitudes.

2.3.3 The Meltzer-Richard Model

Further on the rational-choice path, the Meltzer-Richard Model (MR-model) is a classical rational-choice model, and one of the most popular versions of rational-choice approaches. The

self-interest assumption has particularly been formalized by Meltzer and Richard (1981) in their famous model. The MR-model postulates that demand for redistribution will increase when the income of the median citizen falls below that of the mean. This model is essential to many studies of the welfare state, as it assumes that citizens' preferences to redistributive policies is shaped from the economic utility individuals expect to gain from such redistributive policies (Dion and Birchfield 2010, 317). This is an inherently rational understanding of attitudes towards redistribution. Under conditions of lower levels of income, and from self-interest-logic, the public will demand more redistribution. As a proportional amount of taxation finance the governments' spending of welfare goods for all individuals, low-income earners, meaning those below the mean, have more to gain and less to lose from increasing government spending on welfare. Hence, those citizens below the mean will support redistributive policies up to the point where the benefit is outweighed by the cost of taxation (Cusack et al. 2006, 367). The citizens earning above the mean will likewise oppose redistributive policies as the cost of taxation outweigh their expected benefit.

Meltzer and Richard describe the logic of the model as follows:

> "With majority rule the voter with median income among the enfranchised citizens is decisive. Voters with income below the income of the decisive voter choose candidates who favor higher taxes and more redistribution; voters with income above the decisive voter desire lower taxes and less redistribution" (Meltzer and Richard 1981, 924).

According to the MR-model, support for redistributive policies is a function of self-interest. When the median-income citizen receives less than the mean income, she has a self-interest in redistributive policies provided by the state. The median income citizen within the national income distribution, is thus decisive for the number of individuals supporting redistribution. This means that the lower the income of the individual falls below the median income, the more she is expected to gain from redistribution. In the same way, the higher the income of the individual rises above the median income, the more she is expected to finance the welfare state. Thus, self-interest in welfare and redistributive policies diminishes as income increases (Dallinger 2010, 335). This implies that income is negatively correlated to welfare state support.

2.3.4 Empirical Findings

In political economy research, and especially in research explaining individuals' attitudes towards the welfare state, the theoretical propositions originating from material self-interest are dominant. The effect of self-interest has extensively been examined in the literature on welfare state attitudes, and there is a large number of empirical studies that find support for the self-interest argument (Gelissen 2000; Jæger 2006; Margalit 2013; Roosma et al. 2016). Margalit (2013) finds that personal experience of economic hardship, especially when losing a job, has a major effect on increasing support for welfare services. As Margalit (2013, 83) argues, one is expected to observe an inverted U pattern: "following the loss of a job and an increased reliance on welfare services, individual's support for greater welfare assistance would rise. But, as the individual finds new employment and is less dependent on such assistance, that support would drop". Hence, the effect is only short lived.

Using cross-sectional data from a Canadian two-wave longitudinal survey, Jæger (2006) investigates to what extent self-interest determines support for welfare state principles. He finds that individuals with high income holding regular employment are especially negative to redistribution. All of his findings support the argument of the self-interest perspective.

2.3.5 Rational Choice Critique

Originally, rational choice belonged solely to economics. The term *"economics imperialism"* is often referred to when presenting the accomplishments of rational choice theory in political science. Economics imperialism means the expansion of economics to other scientific disciplines, such as political science. It is argued that the self-interest assumption spread from economics and "took over" and "colonized" other disciplines such as political science (Amadae and de Mesquita 1999, 289). Basic simplified economic assumptions were transferred from economics to the society, and many rational-choice theorists were optimistic about this idea because it promised a unification of the social sciences. A unification of the social sciences embodies the idea "that there is something intrinsically virtuous in explaining or accounting for as much as possible with as little as possible" (Kuorikoski and Lehtinen 2010, 351).

The American economist Edward Lazear (2000, 99) argues that economics has an accurate and rigorous language that allows for complicated concepts to be written in simple terms and thus shave away complexity. As he writes, "complexity may add to the richness of description, but it also prevents the analyst from seeing what is essential" (Lazear 2000, 99-100). Lazear describes the power of the economic science over other sciences by pointing at its rigorous and analytical advantage. According to Lazear (2000, 103), other sciences are better in explaining issues while the strength of the economics is "to provide specific, well-reasoned answers".

However, economics imperialism and the adaption of rational choice in political science has been exposed to severe criticism. Kuorikoski and Lehtinen (2010) raise the question whether the economics imperialism possibly have some epistemological implications which can affect the legitimacy of political science when applied to this field. Green and Shapiro (1994, x) claim that very little has been learned about politics within the rational choice tradition, and point at several anomalies in which the rational choice approach seems unable to explain within political science. This includes the so-called "voting paradox" that postulates that when citizens choose to vote in a general election, the probability that their vote might change the election outcome is very small and voters receive in this manner no explicit payoff. Individuals are asked to sacrifice time and transportation costs on behalf of a public good (Green and Shapiro 1994, 47). On such occasions, individuals would thus have no self-interest in casting their vote (Feddersen 2004, 99; Rothstein 1998, 123). As Morris Fiona expresses: the voting paradox "ate rational theory" (Quoted in Rothstein 1998, 123). Put in other words, the voting paradox serves as an explanation to why citizens might have other incentives and motivations than self-interest when voting, and simplified interpretations of voting intentions is simply not enough.

Schmitter (2009, 41) argues that rational choice theories rely on limited assumptions and complete reliance on micro-foundations opting for a "simplification" in explaining political outcomes. Likewise, Fehr and Schmidt (2006, 683) argue that the self-interest hypothesis opts for a simplification, but as they acknowledge, there are situations in which almost all people behave as they were strictly self-interested. Nevertheless, the authors further argue that social life cannot be understood on the primitivity of self-interest, as other explanations are important for understanding the economic incentives.

Opposed to simplification is "complexification" (Schmitter 2009, 41). This refers to accepting far fewer and less restrictive assumptions and beliefs that the world context can not only be based on isolated individuals but include collectivities and their environments (Schmitter 2009,

41). Schmitter (2009, 48) argues "not only that it is literally absurd to compare only at the level of individuals but also that comparativists need to dedicate much more thought to the collectivities". The core of Schmitter's (2009, 45) argument is that if comparative political analyses are to persist productive and innovative in the future, they have to reflect the "real-existing" environment. The importance of the context is also identified by Anderson (2009). Anderson (2009, 591) points out that individuals do not live in vacuum but form their attitudes in environments. These environments vary in terms of formal institutional rules, or differences in economic, social and political conditions. Individuals that are being exposed for such environmental conditions are forced to understand and interpret, and based on this, shape their attitude. As Anderson specifies, these environmental contexts vary from the immediate social environment to macro-level structures, or even beyond country-level. Moreover, these environments have different consequences for different people (Anderson 2009, 592-593). In other words, in the same national context, the environment may affect different people differently.

A similar critique of rational choice models is focused upon its limited capability of explaining cooperation between individuals. In situations where cooperation for collective goods requires cooperation of many self-interested rational individuals, it will always pay for an individual not to collaborate (Rothstein 1998, 125-126). According to Rothstein (1998, 126), rational choice theories are weakened by the claim that cooperative action can be explained by the existence of a context. Moreover, individuals are not heterogeneous, and according to Fehr and Schmidt (2006, 640), if all people were alike, it would be difficult to explain why individuals manage to cooperate even though it is not rational for selfish persons to do so. Rothstein (1998, 126-127) argues that human actions is *strategic*, meaning that how citizens act, depend on how "the others" will act. Rothstein uses the following example: "it may be fully rational to kill your neighbors today if you are convinced that they will otherwise kill you tomorrow, even if it is not in your utility function to kill people" (Rothstein 1998, 127). Citizens might be completely selfish in some strategic settings, while the same citizens might be driven by fairness in other (Fehr and Schmidt 2006, 619).

The conclusion to be drawn from this critique is not to question the relevance of self-interest in determining attitudes towards the welfare state. Rather, it has been indicated that individuals are self-interest-driven in forming their attitude towards the welfare state, *but also* form their attitudes in the surrounding environment. This thesis will further investigate the relevance and

necessity of the macroeconomic context in explaining welfare state attitudes. As Rothstein (1998, 127) points out, explaining attitudes according to self-interest is only possible as long as we have information about the context in which the individual is situated in.

2.4 Macro Level Economy

In this section, I focus exclusively on the economic context. I present the theoretical argument that increased national income is associated with increased public support for the welfare state. I establish this argument based on 1) Modernization Theory, Postmaterialism and Wagner's Law and 2) Sociotropic evaluations.

Before presenting these theories, some notes on social class are regarded fruitful.

2.4.1 Social Class

Knowledge about social classes gives information in a different way than when individuals are treated regardless of class. Due to the fact that social classes might have shared interests, it is fruitful to understand the concept of social class when studying welfare state attitudes.

As noted in the previous sections, distribution of wealth, resources and risks are at the core of the capitalist society. Every society has its privileges unequally distributed, and as a result of this, stratifications into upper and lower layers between the citizens emerge. These layers are characterized by a group of people united through identification and a common interest (Campbell et al. 1964, 184). The phenomenon of a social class is defined in economic terms, and represent an intersection between the social, the economic and the political order. A class is not recognized as a formal organization represented by a leader with, and an official class policy. Rather, social classes consist of individuals' mindsets where individuals feel a sense of belonging to a certain class, which gives them a feeling of "us". Every class will strive for political power, which again have the potential of controlling the economic system. As stratification appears from unequal distribution of resources, it is likely that there will be competition between the classes in order to gain more power and control (Campbell et al. 1964, 184).

Social groups are closely related to social classes. Campbell et al. (1964) underscore the importance of group influence on political behavior, especially on voting. Moreover, social groups constitute reference points in the formation of attitudes and decision making. Members of a group refer to a part of the population that share the same life situation and connects themselves through a set of norms and values. An individual relates to a group through the concept of group identification (Campbell et al. 1960, 171). Political, religious or ethnical affiliations are examples of what might constitute a social group. According to Campbell et al. 1960, 171), successful group influence might potentially cause a large-scale shift in the division of the national vote. Further, smaller groups such as families and friends, are also important in forming attitudes.

Understanding individuals' attitudes in light of social classes and social groups, supports the claim that individuals form their attitudes in environments and context. In this way, it can be argued to provide more information than the rather "simplified" self-interest hypothesis. Individuals both belong to, and are influenced by, social classes and social groups. This is an important aspect in order to understand welfare state attitudes.

2.4.2 Modernization Theory: The Rise of the Middle Class

It is a reputable claim that democracy is expected to increase demands for redistribution. The relationship between democracy and the state of economic development is one of the most extensively discussed relationships within political science. In the early industrial society, Marx (1973, referred in Inglehart and Welzel 2005) advocated a highly influential version of the modernization theory, which was more or less a critique of the exploitation of the working class (Inglehart and Welzel 2005, 16). Marx emphasized the significance of the development of the industrial middle class (bourgeoisie), as the presence of the middle-class majority tended to make political conflict reduced (Inglehart 1990, 46). Moreover, he outlined how economic trends leads to changes in the political and cultural sphere. Building on Marx, Lipset's (1963, 51-54) modernization theory identifies various preconditions of modernization and democratization, including wealth, industrialization, education and urbanization. These preconditions are defined as the major force in obtaining democracy.

Lipset's modernization theory states that socioeconomic development leads to an expansive and more liberal middle class, which paves the way for a democratic culture as well as the sustainment of the democratic system. The middle class is known to express strong support for democratic principles, and the expansion of this class plays an important role in propelling democracy. As Lipset (1963, 49-50) famously put it, "the more well-to-do a nation, the greater the chances that it will sustain democracy". A simplified understanding of the modernization theory as a correlation between national income and democracy is at best imprecise. Lipset (1960, 41) argued relatively broadly that "all the various aspects of economic development – industrialization, urbanization, wealth, and education – are so closely interrelated as to form one major factor which has the political correlate of democracy" (Lipset 1960, 41). Modernization, according to Lipset, largely manifests itself through changing social conditions, which again foster a democratic culture. To Lipset, the correlation between economic development and democratization is inevitable.

The lower classes are characterized by low education, low participation in political and voluntary organizations as well as economic insecurity (Lipset 1963, 109). Furthermore, the lower class is less committed to democratic norms than the middle class, and therefore more open to authoritarian alternatives. A relative lack of material security, and the fear of loss of income, makes poorer individuals create hostility and being more receptive to extremist ideologies. Moreover, the less economic stable an individual is, the more she will adopt a simplistic view of politics, a desire for immediate action, and impatience with talk and discussion (Lipset 1963, 115, 120). The poorer a country and the worse the living standards of the lower classes, the more the upper-class will regard political rights as a privilege for themselves, and sharing power as irrelevant (Lipset 1963, 66). That is one reason to why societies divided between a large mass without political power and influence, and a small elite most often ends up in being dictatorships (Lipset 1963, 50). The less economic resources the masses hold, the less political power they are assigned.

A long-standing argument is that it is only in wealthy societies the masses can have the possibility to participate in politics (Lipset 1959, 75). Modernization through economic development leads to the enlargement of the poors' involvement in the national culture, as they become more exposed to middle-class values and increase their economic security (Lipset 1959, 83). In this way, the poor strengthen and develop more intelligent and complex views of the political landscape. This empowerment in turn affects the political role and size of the middle

class. As Lipset (1959, 83) describes it; with economic growth and modernization, the class structure shifts from being "an elongated pyramid, with a large lower-class base, to a diamond with a growing middle class". A large middle class is essential for alleviating conflict because of its role in supporting democratic principles and dismissing more extremist alternatives (Lipset 1959, 83-84). As the poorer part of the society enjoys greater political power, the tendency is that policies directed at the poor, such as redistribution, will increase (Acemoglu et al. 2015, 1890). As Lipset (1963, 66) points out, it is easier to accept the general idea of redistribution when there is enough wealth in the country not to make too much difference. In sum, modernization increases the receptiveness to democratic values and norms through the strengthening of the middle class. By this, increased wealth affects a nations' receptivity to democratic norms and with this a demand for redistribution. Furthermore, Midtbø (2018) argues that a demand for redistribution is higher in democracies because low-income groups are exposed to elections that actually can make a policy difference in their favor. Again, this refers to the fact the lower-class increasingly participate in politics when their material position is strengthened, which in turn is a result of economic development and increased wealth.

In the same line of reasoning, Moore seeks to explain the developmental transformation from agrarian to modern societies in his famous publication *Social Origins of Dictatorship and Democracy* (1966). Moore argues that the presence of a strong bourgeoise is one of the main elements in developing democracy, as the bourgeoise handles difficulties that previously have hindered democracy to be achieved (Moore 1966, xii). This is because the landowners and bourgeoisie are strong and economically independent enough to limit the political power of the upper-class. As Moore (1966, 418) adequately states: "No bourgeois, no democracy". However, Moore differs from Lipset by stating that democratization is the outcome of fundamental changes in every respective society's class and power relations. With this, Moore argues that modernization not necessarily leads to democracies but might also pave the way for authoritarian versions. On the contrary, Lipset argues that modernization leading to democracy is a universal pattern that every country follows.

In the same direction, Diamond (2008) argues that economic development has a positive impact on democratization, as public values become more open to democracy. As people enjoy higher income and get more knowledgeable through the means of communication, "they become more politically aware and confident, more inclined to participate in politics, to think for themselves, and thus to break free of traditional patron–client ties" (Diamond, 2008, 99). Likewise,

Huntington (1991) studies the impact of modernization on democratization in countries that have experienced rapid economic growth from 1974 to 1990. He argues that economic development and the expansion of the middle class eroded authoritarian regimes. With this, Huntington emphasizes that economic growth brings about democratization. However, he does not view democratization as a result of economic development as inexorable, all though he recognizes that there exists a correlation. He argues: "no level or pattern of economic development is in itself either necessary or sufficient to bring about democratization" (Huntington 1991, 59).

In short, this section has illustrated that economic growth is expected to increase the demands for democracy and redistribution, by expanding the role and the size of the middle class. Citizens of wealthier countries are thus expected to hold higher levels of welfare state support.

Inglehart and Welzel (2005) argue that in the postindustrial phase of modernization, rising self-expression values provide a social force that result in a mass responsive democracy. On this occasion, I will now look further into the postmaterialist theory.

2.4.3 The Theory of Postmaterialism

Inglehart (1977) states that people living in more affluent societies are more characterized by having post-materialist values, rather than materialist. Inglehart builds on the work of Abraham Maslow, who famously suggested that human needs are pursued in a hierarchical order, in which people first will act to ensure basic survival, meaning a minimum of economic and physical security. When these basic needs are met, people can focus on fulfilling more non-material goals (Inglehart 1977, 22). Value orientation emphasizing self-expression and quality of life are found in the upper part of the hierarchy, and appear after economic and physical security. These upper-part privileges are considered to be post-materialist values.

The core of Inglehart's argument is that macro socioeconomic development can shape societies, resulting in a value change of the citizens. In line with the classical sociologists Marx and Lipset, Inglehart (1977) argues that macro phenomenon such as the economy shapes the cultural and political paths of change in societies.

According to Inglehart, the urban middle class is the driver of postmaterialism through the improvement of their living standards. Socioeconomic development is crucial because it has a powerful impact on people's existential conditions and their chances of survival. If survival as being a basic human goal is uncertain or under threat, one's entire life strategy is focused on the struggle to survive. The socioeconomic development diminishes people' material constraints, as they enjoy more material security, intellectual freedom through the possibilities of education, and socially more independent (Inglehart and Welzel 2005, 23).

Inglehart and Welzel (2005, 25) argue that postindustrial modernization will make citizens shift from having a main focus on material living standards, to prioritizing their well-being through life-style changes. Furthermore, a key attribute within a postindustrial society is high levels of optimism. It is also characterized by having a welfare state which provides basic human material needs and health services to almost all its citizens. Because of this, survival is to a large extent taken for granted by most people living in postmodern societies. By securing a minimum standard of living, the citizens may focus on reaching goals beyond survival (Inglehart and Welzel 2005, 28).

Self-expression values endorse human rights, and citizens holding such values concern more towards the discrimination against underprivileged groups. Moreover, self-expression values are related to a higher tolerance of diversity including gender equality, and tolerance of outgroups (Inglehart and Oyserman 2004, 9-10). In this way, welfare state policies are regarded as appreciated.

In sum, economic growth is a precondition for the postmodern society. The increasement of self-expression values in a society increases a pressure for demanding equality between the citizens. As survival is taken for granted in the presence of a welfare state, self-expressive values become more important and more achievable. By this, the demand for redistribution will increase.

2.4.4 Wagner's Law

This section comprises the relationship between increased national wealth on the one hand, and the subsequent increase of public expenditure and demands for redistribution on the other hand.

Economist Adolph Wagner's *Law of the Increasing of Extension of State Activity*, also referred to as *Wagner's Law*, is related to the theory of modernization. In the overall term, Wagner's Law is based on empirical observations and holds that public expenditure rises constantly as national income grows. As the economy grows, and a county becomes more industrialized and modernized, the size of the public sector will expand (Lamartina and Zaghini 2011, 150). Wagner's book of 1863 contains the first formulation of the law:

> "On the whole, the realm of the state's activities has become ever more extensive, as the concept of the state developed, as peoples achieved higher and higher levels of civilization and culture, and the more demands were consequently addressed to the state" (Cited in Chaloupek 2018, 86).

As Bird (1971, referred in Lamartina and Zaghini 2011, 150) argues, the idea of Wagner's Law is that: when economies grow, an expansion of the state happens for three reasons: (1) the administrative functions of the state will replace public for private activity, (2) both need and demand for redistribution will increase, (3) government intervention becomes necessary in order to manage monopolies and to ensure the smoothness of market forces. In this way, as the national income grows the demand for redistribution increases as the public sector expands.

Wagner rejected an individualistic conception of society because he perceived society as a result of collective needs. According to Wagner, the main interest of the state is the well-being of the community as a whole (Nentjes 2018, 109). Wagner refers to the so-called social economy, where the economic society has emerged from individuals and their needs, from below and upwards. These needs are what constitutes the social economy as a whole (Wagner 1907, 83, referred in Nentjes 2018, 109). In the more developed economic societies, the social economy comes more to the foreground. As the state expands, it becomes subject to an increased number of tasks. It is no longer enough that the state ensures law and order, it also has "to support and promote its citizens in the pursuit of their religious, intellectual, economic and material interests." (Wagner 1963, 4, cited in Chaloupek 2018, 86). As the economy grows, so will the demand for state redistribution, which is specified in Wagner's Law.

After the Second World War, a wave of economic growth and industrialization took place at the same time as several European countries expanded their welfare state (Lamartina and Zaghini 2011, 151). Lamartina and Zaghini (2011) investigate the viability of Wagner's Law in 23 industrialized countries from 1970-2006. Figure 1.1 shows the development in the share

of total government expenditure over GDP per capita for the G7 economies[1]. The authors demonstrate a significant increase in the size of government after the 1970s.

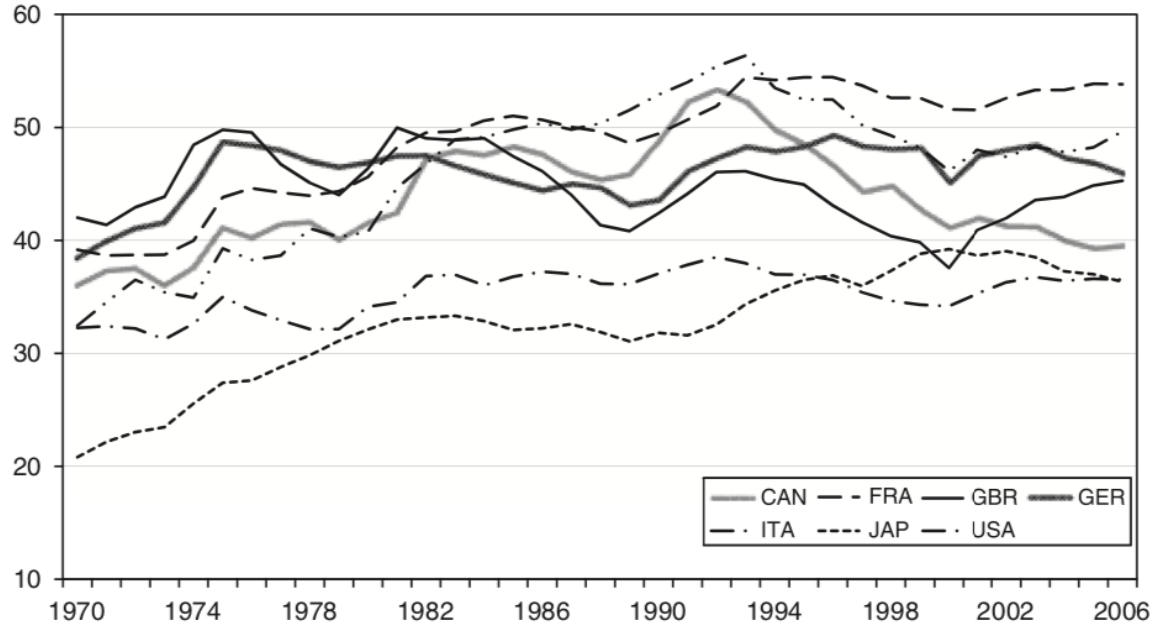

Figure 2.1. Share of total government spending over GDP (Lamartina and Zaghini 2011, 151).

Numerous other empirical studies have found strong support for Wagner's Law, especially in time-series analyses (Thornton 1999; Lamartina and Zaghini 2011). However, the evidence of the Law has also been mixed. In example, when using pooled time-series and cross-sectional data for 53 countries, Abizadeh and Gray (1985) find that the relationship between economic development and the growth of government expenditures holds for developing countries, but not for the poor nor the fully developed countries.

2.4.5 Sociotropic Evaluations

I will now move on to the last part of the theoretical argument. The voting literature presents relevant theoretical explanations for this thesis, namely that of sociotropic evaluations. The sociotropic explanation has had a dominant position in the voting literature, and needs to be

[1] Group of Seven (G7) refers to the seven most affluent democratic industrialized countries in the world: Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.

elaborated in this thesis in order to understand how national economic context might influence individuals' attitudes towards the welfare state. Voting behavior has to a large extent been of scholars' interest in the field of political sciences, and the theoretical views of voting bear the marks of its importance to the wider political system. As Campbell et al. (1964, 4) point out, voting gives information about the psychology and sociology of citizens' behavior, and it is important because of what such decisions lead to. Furthermore, electoral behavior has engaged much attention. This is due to the fact that the collective vote decision is of great importance for the political system as a whole.

In the late 1970s and early 1980s, Kinder and Kiewiet (1979; 1981) put forward the underlying micro-behavior of individual voting, assuming that voting is either *egotropic* or *sociotropic*. Egotropic voting is driven by evaluations deriving from an individual's own pocketbook and material self-interest, while sociotropic voting is driven by evaluations of the economic situation of the country as a whole. The former is based on *individual* economic evaluations (Nannestad and Paldam 1995, 33), while the latter is based on *collective* economic evaluations.

Egotropic voting follows that logic of the rational choice self-interest assumption, in which the thesis has elaborated on in section 2.3. When egocentric voters reach policy preferences, they support parties and candidates that have bolstered their own economic situation, and oppose those parties that appear to threaten it. Pocketbook voters are motivated by the most immediate circumstances of their lives, and the requirement of political knowledge is low (Kinder and Kiewet 1981, 130). In other words, a pure self-interested voting act.

Kinder and Kiewiet (1979) confronted and challenged the self-interest hypothesis using micro survey data on US voting behavior, discovering that personal economic experiences appeared to show much weaker effects than voters' evaluations of the national economy. Kinder and Kiewiet (1979, 495) describe that "judgments of a more general, collective kind" was considered when voting, in example "by judgments regarding recent trends in general business conditions, and, more powerfully, by judgments about the relative competence of the two major parties to manage national economic problems". The authors argue that American elections depend to a large extent of the national economy, and by collectively oriented perceptions. These perceptions evolve around whether in example unemployment rates have increased, whether inflation is worsening, that the incumbent does not seem to handle the economy well, or that the opposition candidate seem to be more capable of solving national economic problems

(Kinder and Kiewiet 1979, 499). These collective judgements of the national economy are what the authors refer to as *sociotropic* evaluations, which illustrate an opposing explanation to the rational self-interest hypothesis.

When citizens take into account the country's economic condition as a basis of voting, they hold a sociotropic motivation. Sociotropic citizens vote according to the country's pocketbook, and not their own (Kinder and Kiewiet 1981, 132). They are directly influenced by the national state of the economy. While pocketbook voting reflects the circumstances of personal economic conditions, sociotropic voting reflects the circumstances of the national economic context. Citizens thus have motivations based on how they assess their context in which they live in, and ask themself "What have you done for the *country* lately", rather than asking "What have you done for *me* lately" (Kinder and Kiewiet 1981, 156).

It might seem unrealistic that citizens are able to evaluate the country's economy, but as Kinder and Kiewiet (1981, 132, 156) underscore, citizens only need to form rough evaluations and first impressions of the economic situation. In example, citizens will assess which national problems seem the most pressing, or whether the incumbent handles the economic issues and problems in a sufficient manner (Kinder and Kiewiet 1981, 156). Moreover, compared to egotropic voters who vote based on their own economic situation, information about national economic conditions appears more abstract as it reaches the citizens through the mass media (Kinder and Kiewiet 1981, 158). As Kinder and Kiewiet (1981, 157) argue, to what extent sociotropic evaluations reflect the economic reality is challenging to evaluate due to three reasons: First, citizens might be confused and therefore do not have a clear understanding of the economic situation, second, the existence of biases from the media, and third, the existence of manipulation by the politicians.

Sociotropic voters support candidates or parties that appear to have furthered the country's economic wellbeing. For this reason, during economic hardship, the incumbent lose support because voters act on their negative assessments. For this reason, the opposition candidates receive greater support. Likewise, in times of economic prosperity, the incumbent party is rewarded as the public have positive assessments of how they handle the national economic situation (Kinder and Kiewiet 1981, 129, 132). During a well performed economy, perceptions that the welfare state delivers good outcomes enhances support for the welfare state. In economies performing less well, negative assessments may cause citizens to distrust

government intervention and its effectiveness, which again wipes out welfare state support (van Oorschot and Meuleman 2012, 29-30).

Similarly, Alt (1979) presents the hypothesis of instrumental voting assuming that economic decline will make the incumbent lose its supporters. By examining economic management and political behavior in Britain between 1964-74, Alt (1979) argues that economic decline appears to make people less generous and more self-interested in their policy preferences. He finds that the support towards the Labour Party in 1966, was highest among those who felt that the years under Labour rule had improved their personal economic situation. Instrumental voting refers to the belief that a particular party is best at dealing with current economic problems seen in the country. If a voter believes that unemployment is the greatest challenge for her country, and the Labour Party will be best at dealing with this challenge, the voter will therefore have an attraction towards the Labour Party (Alt 1979, 237). In a pure "instrumental system", voters will view the political parties as instruments of their own well-being, according to Alt. Alt (1979, 7) acknowledges that citizens might have attitudes based on improving the economic situation of the country rather than for self-interested reasons. However, Alt (1979, 13) points out that economic decline may incline citizens to hold self-interested economic policy positions. *Want-satisfaction* is one determinant of attitude formation, meaning that individuals hold national economic policy positions because it satisfies one's own material position and possible future gratification. Citizens positioned with a more pessimistic view on their economic situation, which includes a larger part of the population during hard economic times, will be more likely to support economic change (Alt 1979, 13). In other words, Alt argues that the underlying motivation of the sociotropic evaluation is (in the end) self-interest. Feldman (1982, 449) also argues that when the macro-economic conditions has a major influence on a voter's wellbeing, the voter will take the macro-economy into consideration when voting.

A significant amount of research has demonstrated a positive relationship between fluctuations in the economies of the Western nations, and support for the incumbent political party (Kramer 1971; Aytaç 2018).

Aytaç (2018) analyses 475 elections in 62 countries over a period of 40 years. He provides evidence on how voters assess the economic performance in a period of government, compared to previous governmental performances. Incumbents who are regarded as delivering better economic outcomes will be rewarded by the public. Likewise, the incumbent is punished if

delivering worse economic outcomes. Furthermore, Aytaç (2018, 16) claims that the incumbent's handling of the economy is indeed a highly debated topic during election campaigns. In example, during the 2012 French presidential election, opposition candidate François Hollande questioned the incumbent president Nicolas Sarkozy, on the standstill of economic growth during his presidency. Sarkozy responded with what he claimed to be positive economic performance, compared to what other European countries had achieved (Aytaç 2018, 16).

Nannestad and Paldam (1995) examine Danish voters' support for the government under both Conservative and Social Democratic rule, and find a clear pattern in people's evaluation of economic events. The authors find that governments are punished when voters feel or expect a decline in their personal economic situation. Again, the underlying mechanism is self-interest. The influence of sociotropic factors was found barely significant, while strong support for the egotropic factors were found.

This section has demonstrated that citizens take into consideration the national economy when forming policy preferences. Hence, the state of the national economy is crucial in shaping attitudes. When the economy is doing well, this results in a positive collective sociotropic judgement. A collective positive perception involves that the welfare state has delivered good outcomes, which again fuel the overall welfare state support.

2.4.5.1 Altruism

The logic underlying sociotropic voting may be motivated by altruism. Altruism is unconditional kindness, and an altruist is willing to sacrifice own resources in order to improve the well-being of other people (Fehr and Schmidt 2006, 617-619). Because some people might be motivated by concerns for the fairness and well-being of others, this needs to be acknowledged in this study. When holding an altruistic view, individuals free themselves from their own economic situation, and focus more on what the government has done, or is going to do for their country. Altruism, like sociotropic considerations, is a motivation for the *collective*, rather than self-interest being a motivation for the *individual*. In this way, altruism challenges the role of self-interest in economic and political behavior.

The widely applied economic hypothesis of self-interest assumes that it exclusively motivates *all* people. However, support for redistribution is widespread and also appears in higher levels of income groups (Rueda 2014, 6). The redistributive preferences of more affluent individuals are less affected by their self-interest as they are not dependent on the services provided by the welfare state. Altruism can thus become relevant in explaining why affluent individuals voluntarily gives a part of their income through the payment of taxes, as they derive utility not only from their own material achievements but also from other people's well-being (Rueda 2014, 4). In other words, they have a motivation in contributing to a better collective society. In example, an altruistic policy choice would be to support reduced unemployment under both better and worse economic times, because reducing unemployment will serve to relieve the suffering of others (Alt 1979, 184).

However, Alt (1979) argues that people tend to be less generous when they experience a decline in their personal economic conditions. As their economic conditions worsen, altruism diminishes because people realize that taxes, in which they pay, are spent to benefit other than themselves. This is the logic of self-interest, and what the MR-model identifies. Alt (1979, 188-189) argues that people will be generous enough to choose altruistic policies when they can afford to do so. The greater the perceived cost, the less likely citizens are to be altruistic. This means that altruism might guide policy choices and attitudes in better economies, but diminish as economic conditions worsen.

In the same line of reasoning, Durr (1993) argues that economic worries cause people to focus more on self-interest and thus give less concern for the disadvantaged people. Durr (1993, 158) argues that shifts in U.S. policy sentiment is understood as responses to changing economic expectations embraced by the public. Durr finds support for this hypothesis by using data on consumer sentiment along with domestic policy sentiment for the period 1968-88. In periods of a strong economy, greater support for liberal domestic policies emerges, whereas economic downturns show the tendency of preferring more conservative policies. As the feeling of economic security increases, in times of economic upturns, the citizens will be more willing to support the pursuit of other goals, as the theory of postmodernism presumes. A country with great collective wealth will value money less and the citizens will be more willing to spend their collective wealth toward the concern for others (Durr 1993, 159). This means that in better economies citizens will support liberal policies which involve a requirement for redistribution of wealth. Likewise, in worse off economies citizens will be less supportive of liberal policies,

and more rewarding to conservative policies meaning less state involvement and redistribution, as citizens become more self-interested and believe in greater individual responsibility.

In sum, altruism might serve as an underlying explanation for sociotropic motivation, as it concerns with the collective rather than the individual interests. However, when economies worsen, it is argued that self-interest overshadow altruistic beliefs.

2.4.6 Empirical Disagreement

Several scholars have investigated how macro-economic conditions influence individuals' welfare state attitudes, and previous research has indicated that the state of the national economy has an important effect (Sihvo and Uusitalo 1995; Blomberg and Kroll 1999). However, there is not full consensus about the direction of the effect. Prior research provides conflicting results.

Several studies show that during better-off economies, the long-term trend is that welfare state support is relatively stable and slightly increased (Goul Andersen et al. 1999; Sihvo and Uusitalo 1995; Jeene et al. 2014). In examining the dynamics of Dutch welfare attitudes from 1975-2006 in changing economic contexts, Jeene et al. (2014) find that when gross domestic product (GDP) grows, the Dutch public is more likely to consider the disabled, the elderly and the social assistance beneficiaries to deserve increased welfare. At the same time, when unemployment rates rise the effect is the same for the unemployed and the social assistance beneficiaries.

Much scholarly attention is given to welfare state attitudes in times of economic recession. Several scholars have found that economic recession results in declining welfare state support (Alt 1979; Durr 1993; Kuivalainen and Erola 2017). In other words, worse-off economies are found to be more related to less welfare state support. This is in line with the arguments presented in the previous sections by Alt (1979) and Durr (1993), as they explain that this decline is due to the fact that citizens become more self-interested. Kuivalainen and Erola (2017) find that economic downturns and high unemployment diminish public support for welfare, by examining attitudes towards welfare policies in Finland from 1995-2010. As the

authors point out, Finland provides an interesting case as the country has experienced two severe economic crises during the last 20 years (Kuivalainen and Erola 2017, 420).

However, some empirical studies of individuals' attitudes in economic downturns have demonstrated the opposite effect. Namely that the public becomes more favorable to the welfare state involvement during economic hardship (Blekesaune and Quadagno 2003; Blekesaune 2007, 2013; Dion and Birchfield 2010; Jæger 2013; Sachweh 2018). These findings are in line with the governmental protection hypothesis, put forward by Blekesaune (2007). This hypothesis states that support for the welfare state is expected to increase during periods of economic hardship, and to decrease during periods of economic prosperity. As economies worsen citizens tend to believe that the governments should have a greater responsibility for economic provision and reducing income inequality. Whereas in a booming economy, people tend to believe that the government should play a limited role as citizens' confidence in individual responsibility rises (Blekesaune 2007, 393). Hence, support for the welfare state is expected to rise during economic hardship and decrease during times of economic growth. Blekesaune (2013) finds that citizens living in countries where a large amount of people report economic difficulties, support redistribution more strongly than individuals living in countries with reports of less economic difficulties. Sachweh (2018) examines the aftermath of the global financial and economic crisis of 2007/2008, and uses cross-sectional survey data from 2010 in 27 European countries. He finds that perceived economic crisis impact is positively correlated with greater support for welfare state responsibility. This effect is further moderated by an individual's class position and national economic conditions.

Dion and Birchfield (2010, 316) argue that a greater effort should be taken to empirically assess the assumption that individuals' attitudes "can be reduced to economic self-interest particularly in countries at different stages of economic development". The authors argue that a nation's level of economic development shape individuals' attitudes, and especially the effect of economic self-interest (Dion and Birchfield 2010, 316). Dion and Birchfield (2010) examine whether the effect of economic self-interest holds in less economically developed societies by analyzing individual-level surveys, combined with country-level indicators for more than 50 countries between 1984 and 2004. They find that individuals' income level does not explain support for redistribution in countries with low levels of economic development. As the authors point out, these findings challenge the universality and the assumption that economic self-interest is so prevalent in the scholarly literature.

2.5 Micro-Macro Level Dynamic

So far, this thesis has focused upon a possible micro- and macroeconomic effect on individuals' attitudes towards the welfare state. The last theoretical argument suggests a possible interaction effect, namely that the effect of self-interest might be affected by the macroeconomic context.

2.5.1 The Frog-Pond Effect and Relative Deprivation Theory

The so-called *frog-pond theory*, as being a contextual theory applied to education studies, relates to how individuals perceive themselves in relation to individuals around them. The theory acknowledges the importance of taking into account the environmental conditions in which individuals are situated in. In education studies, this frog-pond metaphor suggests that in example the effect of intelligence on school career, depends on the average intelligence level at the school. When a pupil is moderately intelligent in a highly intelligent context, the pupil may become demotivated and thus not reach its full potential. The same pupil situated in a less intelligent context may gain confidence and thus reach higher achievements. Hence, the effect of a pupil's intelligence depends on the average intelligence of the other pupils (Hox 1995, 3). The theory also relates to economic conditions. The theory suggests that poorer pupils may face greater competition, and an increased risk of being stigmatized in middle-class schools compared to schools with similar pupils. When poorer pupils go to middle-class schools, this creates disadvantages for the poor pupils and might reduce what poor pupils in fact can achieve (Crosnoe 2009, 709-710).

The frog-pond effect refers to the idea that a specific individual may either be a small frog in a large pond, or a large frog in a small pond (Hox 1995, 3). Specifically, a "large frog in a small pond" is perceived as larger than "a large frog in a large pond", despite the objective similar size of the "large frogs" (Jiang et al. 2014, 388).

Research on the frog-pond theory has predominantly been examined within educational settings. Crusnoe (2009) finds that as the proportion of the students with middle- or high-income parents increased, low-income students progressed less in math and science. Furthermore, he finds that as the middle- or high-income proportion increased, low-income students experienced more psychosocial problems. Hulin (1966) examines the effects of work community on satisfaction with salary, and finds that satisfaction was related to the prosperity

of the community in which the worker lived. Further, he finds that workers living in poorer communities were more satisfied with their salary than those living in wealthy communities.

So, why should the frog-pond effect be applied to this thesis? Although research on the frog-pond effect largely has been examined within educational settings, the use of the frog-pond effect in the economic setting has been somewhat neglected. Little research has explicitly applied a multilevel modelling approach in order to examine the "frog" within the "pond". As this thesis previously has indicated, individuals with their relative personal economies, living in the same economic environment, draw comparisons to each other. The feeling of gratification or deprivation is relative and experienced through the comparison with other citizens. As the capitalist society distributes wealth, resources and risks, citizens with their economic resources are positioned within the stratification system (Lipset 1963, 63), as illustrated in the previous sections. The relative deprivation theory illustrates this further, and the theory is closely related to the frog-pond theory.

In Marx' relative deprivation theory it is suggested that people might feel deprived *relative* to other people. Feelings of deprivation is relative, and not absolute. The relative deprivation theory explains the relationship between objective position and anticipated subjective status[2], meaning that being a better- or worse-off citizen is a subjective feeling, and does not necessarily reflect the reality of stratification (Crosby 1976, 85). Those who are most deprived in an objective sense, are not necessarily the ones most likely to feel deprived. As Marx illustrated it: "A house may be large or small; as long as the surrounding houses are equally small it satisfies all social demands for a dwelling. But if a palace arises beside the little house, the little house shrinks into a hut" (Marx 1933, cited in Lipset 1963, 63).

Citizens' feelings of unjust treatment appear when they compare themselves to a standard of reference. Crosby (1976) theorizes relative deprivation to be a comparison between what an individual possesses, and what her colleagues in the immediate environment possess. He argues that "an individual feels resentment about failure to possess something (X) only when he sees that similar others possess X *(...)*" (Crosby 1976, 85).

[2] "Objective position" means the power position within the economic structure, which is Marx' criterion for class: "persons are located according to their degree of control over the means of production" (Lipset 1968, 150-152). "Subjective status" refers to in which the individual herself perceives the stratification hierarchy. "Status" is a power resource referring to position in the economic system (ibid.).

Based on this, it is likely that poorer individuals that are situated in rich countries ("small frogs in a large pond") will feel more deprived compared to poorer individuals that are situated in poor countries ("small frogs in a small pond"). As earlier pointed out in this thesis, in countries with a great collective wealth, money will be valued less, and the citizens will be more willing to spend the national wealth on welfare (Durr 1993, 159). Poorer individuals living in a rich country will to a larger extent feel injustice, and in this way justify their view that "the others" will be capable of paying for them. This is also in line with the self-interest argument. A poor individual living in a poor country will likewise out of self-interest support redistribution.

In the same line of argumentation, richer individuals living in richer countries ("large frogs in a large pond") will, out of altruism and the concern for others, be more capable of and willing to pay for the more vulnerable and hence support redistribution. However, it might also be that out of pure self-interest, they oppose redistribution. Richer individuals living in poorer countries ("large frogs in a small pond") might notwithstanding their objective position in the stratification system feel deprived in the sense of having to fund a large amount of poor people – and by this, not be supportive of redistribution. However, this thesis does not look into the case of richer individuals living in richer or poorer countries, as it exclusively focus upon the poorer individuals.

The frog-pond theory as well as the theory of relative deprivation propose arguments of why it is important to consider whether a person is better or worse off relative to the persons economic context. In light of this thesis, it is likely to believe that the effect of an individual's economy is affected by the economic context in which the individual is situated in. By this, I expect to find a cross-level interaction.

2.6 Summary of Economic Conditions on Welfare State Attitudes

The above chapters have highlighted the theoretical arguments regarding economic conditions in shaping welfare state attitudes. The theoretical arguments can be formalized into three categories.

First, the impact of individual economy which is based on the rational choice theory of economic self-interest. It is argued that personal income is negatively correlated with welfare state support.

Second, expectations about the effect of national economy are based on modernization theory, postmaterialism, Wagner's Law and the hypothesis on sociotropic evaluations. Economic growth has three important consequences: 1) an expansion of the middle class recognized by showing strong support for democratic values and redistribution, 2) a postmodern value change among citizens including a demand for redistribution, 3) public expenditures grow, and accordingly the public sector which again increase the demand for redistribution.

Last but not least, the sociotropic argument goes as follows: citizens act on their sociotropic judgements of the national economy, meaning that during good economies, the perception that the welfare state has delivered effective and positive outcomes increases. Based on this, the macro-level expectation is that a well-performing economy enhances support for the welfare state. Compared to the micro-level effect, the opposite effect is expected to occur – namely a positive correlation between national economy and welfare state attitude.

Third, the postulation on how micro-macro interaction shape welfare state attitudes derives from frog-pond theory, and relative deprivation theory. The interaction effect proposes that national economy can explain that the relationship between welfare state attitudes and personal income varies between countries.

Based on the theoretical review it is possible to identify a relationship between macro- and micro-level properties, as well as an interaction effect. The theoretical argument is illustrated in figure 2.2.

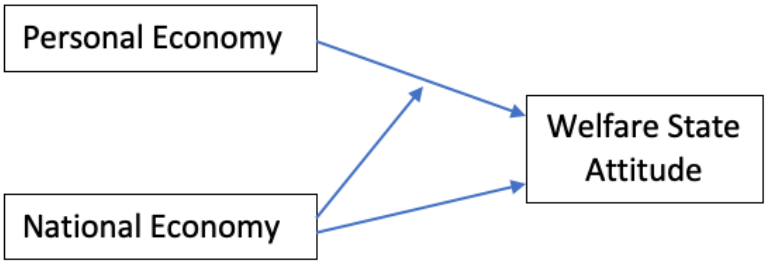

Figure 2.2. The expected relationship between economic conditions and welfare state attitudes.

To sum up the summary section: 1) from the economic self-interest perspective, poorer individuals are more likely to support the welfare state, 2) individuals' attitudes towards the welfare state are expected to be more positive in well-performing economies than in less well-performing economies, 3) the effect of personal economy on welfare state attitudes is affected by the economic context.

2.7 Hypotheses

Based on the theoretical framework, three hypotheses are to be formulated, and presented.

Individual level hypothesis

H1: Income is negatively related to welfare state support.

Macro-level hypothesis

H2: National wealth is positively related to welfare state support.

Cross-level hypothesis

H3: The negative effect of personal income on welfare state support is strengthened if the individual lives in a rich country.

2.8 Alternative Explanatory Variables

In addition to the economic explanation in welfare state attitudes, that this thesis concentrates upon, there is a need to control for some other factors that in previous research have been shown to have an effect on welfare state attitudes. This is important in order to get a more comprehensive understanding of the phenomenon being studied. Public attitudes towards welfare state policies have been studied from various perspectives. The literature suggests a large variety of both structural, sociological and ideological factors that might influence

attitudes towards the welfare state. Some key variables are considered in this study: at the individual level there is ideology, gender, age and education, and at the country level there is welfare regime type, inequality and unemployment.

2.8.1 Ideology

In the large body of literature on welfare state attitudes, the theoretical perception that individuals' values, and deep-rooted ideological views, are well-established and often a competing explanation to that of economic rational choice self-interest. The ideological perspective suggests that individuals' support for the welfare state is determined by their political principles and values that the welfare state institution is built upon. Commitments to principles of egalitarianism and fairness are central. Following this view, individuals who position themselves with the left-wing political parties, are more likely to support the state's responsibility on welfare service (Jæger 2006, 333; Toikko and Rantanen 2020, 145), as left-wing parties are more associated with collectivism over individualism. According to Sears and Lau (1983, 224), politics are usually separated from private life. They argue that political behavior and attitudes are therefore determined by their political values in the public sphere more than their personal needs. The authors illustrate this by using the example of the white Americans opposing racial integration. The opposition was more determined by racial prejudice and conservatism, than by the impact desegregation might have on their private lives (Sears and Lau 1983, 224).

Issues concerning the government's involvement in social welfare lies at the heart of the distinction between liberal and conservative politics. Jakoby (1994) finds that attitudes towards governments' expenditure on social welfare reflects stronger ideological conflict compared to attitudes towards other governmental expenditures.

A large amount of research both recognize and find that political orientation and ideological values matter in shaping welfare state attitudes (Hasenfeld and Rafferty 1989; Gelissen 2000; Lewin-Epstein et al. 2003; Naumann, Buss and Bähr 2016, 82), and the endorsement has been found to be a key determinant. In examining the association between individualistic values and welfare state attitudes, Toikko and Rantanen (2020) find that people leaning towards the political right have higher levels of individualism, and lower degree of interest in the state's welfare responsibility.

2.8.2 Education

The education explanation is not so straight forward. Education is likely to socialize egalitarian values (Pfeifer 2009), and in this way increase support for the welfare state. Education is supposed to enlighten people with a set of values. According to Robinson and Bell (1978, 129), "With enlightenment (...) comes a greater commitment to the idea of equality as a positive value".

On the contrary, higher education might result in the conviction of individual success, and that individual achievement should be rewarded (Andress and Heien 2001, 341). Moreover, seen from the self-interest perspective, educated people have stronger positions in the labor market and lower risk of unemployment (Valdimarsdóttir 2010). Based on this, more well-educated people tend to be less dependent on governmental welfare service, and thus less supportive of such benefits. In this way, higher education might lead to less support for welfare benefits.

Prior research findings indicate both a positive (Gelissen 2002, referred to in Pfeifer 2009) and a negative (Andress and Heien 2001; Pfeifer 2009) relationship between education, and welfare state support.

2.8.3 Age

Previous studies have found that age is a significant factor in welfare state attitudes. On the one hand, younger people are expected to support the welfare state due to the generational change in attitudes. Young cohorts have stronger egalitarian values because they have enjoyed higher levels of material well-being than their parents (Valdimarsdóttir 2010, 195). In line with the postmaterialism hypothesis (Inglehart 1977), younger age cohorts are more characterized by post-materialistic values meaning they favor values such as solidarity and community over material self-interest.

On the other hand, in line with the self-interest argument, young people expect to gain more from the welfare state than the middle-aged people. In the same way, elderly should gain from welfare benefits for pension and sickness (Blekesaune and Quadagno 2003, 416). Based on this, it has been suggested that the relationship between age and welfare state attitudes is curvilinear

(u-shaped), meaning that younger and older people support the welfare state more than middle-aged people (Valdimarsdóttir 2010, 195).

2.8.4 Gender

Women are in general found to be more supportive of the welfare state than men. One explanation poses that women have weaker positions in the labor market, and are more likely to be employed in the public sector (Blekesaune and Quadagno 2003). Women often have a more insecure market position than men, which make them either dependent on a male breadwinner or the state (Svallfors 1997). Moreover, women are socialized as caregivers and seem to emphasize equality while men values merits (Arts and Gelissen 2001).

2.8.5 Welfare Regime

One of the most common explanations to welfare state attitudes in cross-sectional research is the institutional characteristics of welfare policies in each country. Welfare regime and institutionalist theory suggest that democratic states can be divided into certain types based on their institutional characteristics. Korpi (1989) and Esping-Andersen (1990) argue that class coalitions throughout political history have created different types of welfare state regimes. Esping-Andersen (1990) stresses the importance of different welfare policy arrangements in creating cleavage structures and conflict between classes. These socializing forces shape citizens' attitudes, and a crucial aspect of welfare regime theory is that welfare regimes produce its own legitimacy (Jæger 2009, 726). Citizens are nested within the welfare regimes' institutions. In this way, citizens' attitudes towards the legitimacy of redistribution, as well as what is to consider the most desirable welfare regime are being influenced. The debate on welfare state regimes in attitude formation is to a large extent focused on Esping-Andersen's (1990) typology of the contemporary three distinct models of welfare state regimes in capitalist and post-industrial societies:

the liberal, *the conservative*, and the *social democratic* welfare regime[3]. In accordance with these three regime types, variation (due to conflict between classes) is suggested to be highest in the liberal type, and lowest in the social democratic. The reason behind this is that redistribution is high in social democratic regimes, which leads to socioeconomic homogeneity in the population, including attitudes (Jæger 2009, 726). Moreover, the Scandinavian countries that belong to this category are culturally and ethnically homogenous. In liberal regime types the opposite pattern is seen. These countries are generally larger and have a more culturally and ethnically diverse population which yield class cleavages and conflict, and again, a greater variation in attitudes (Jæger 2009, 726). The conservative regime lies in between the other two. Not going into more details, the takeaway from this is that larger class cleavages are by several scholars seen in relation to lower welfare state support in addition to a greater variance in these attitudes. Linos and West (2003) find that the average levels of support for redistribution are highest in Norway (social democratic), lowest in the United States (liberal), and in between Germany (conservative). Moreover, they find that standard deviations are lowest in Norway and highest in the United States. In the almost exact similar vein, Svallfors (1997) finds the same. The social democratic countries overall have significantly stronger support for welfare state intervention, while the liberal countries in general are characterized by low support (Svallfors 1997). Other scholars also assume that patterns of welfare state attitudes are related to regime type (Andress and Heien 2001). However, some scholars only find small or no cross-country differences (Papakadis and Bean 1993; Gelissen 2000).

2.8.6 Inequality

Income inequality has risen in most rich societies over the last three decades (Piketty 2014). Concentration of income and wealth among a small part of the population might threaten the stability of societies, social security and economic productivity (Steele and Breznau 2019, 1).

[3] The liberal welfare state regime is characterized by low state provisions, modest social-insurance and modest transfers. The market, encouraged by the state, is seen to be the primary arena of redistribution by guaranteeing a minimum of protection for the employed. Examples of this model is the United States and Australia. The conservative welfare state regime encompasses corporatism and highlights the preservation of status differentials, in which rights are attached to class and status. Such regimes are typically shaped by the Church, and traditional family values are important. Examples are France and Germany. The social democratic regime-type involves the principles of universalism and de-commodification of social rights to everyone independent of social class. The regime type focus upon the individuals and promote equality as the highest standard. The Scandinavian countries are examples here (Esping-Andersen 1990, 26-28).

On this occasion, the relationship between inequality and welfare state attitudes has been widely investigated and discussed, and the variable is seen to be important.

Gains and losses of redistribution grow with an increasing level of inequality. As inequality rises, more redistribution is needed through increasing the cost (taxes) for high-income earners, and benefits (welfare services) for low-income earners, in order to reach a higher level of equality between the citizens (Wulfgramm and Starke 2017, 5). Meltzer and Richard (1981) argue that when inequality rises, liberalist values among the middle class rise accordingly. According to the MR-model, greater inequality tends to produce greater generosity in welfare benefits among the people earning less than the median income. A higher level of inequality implies a greater distance between the mean and median income voter. This will result in a greater share of the population demanding redistribution, as more citizens fall below the median income. Several scholars find support for this claim; that higher levels of income inequality is positively correlated with welfare state support (Dallinger 2010; Dion and Birchfield 2010; Jæger 2013).

2.8.7 Unemployment

Unemployment is considered an important explanation to welfare state attitudes. It is closely related to the economic situation of the country, and thus important to control for in this study. High unemployment is likely to increase welfare state support for several reasons. As was discussed with regards to the rational choice self-interest argument, welfare state attitudes are likely to be dependent on individuals' own economic circumstances such as employment status. Living in a country with high unemployment increases the risk of being unemployed oneself, as well as the risk of having friends, relatives or socialize with other unemployed people (Blekesaune and Quadagno 2003, 418). Thus, individuals are more likely to be concerned about their economic situation and welfare needs when the unemployment rates are high. Blekesaune and Quadagno (2003) observe that the level of unemployment influences public attitudes. In countries with higher unemployment, public support for welfare policies is higher. Furthermore, if the situation in a country is high unemployment rates, politicians and other elites tend to place unemployment on the political agenda, which again is likely to improve public support for welfare (Blekesaune and Quadagno 2003, 418).

3 Data and Measurement

Before proceeding to the thesis' analysis of the theorized relationships, an understanding of the characteristics and properties of the data and each variable is necessary. This is the purpose of this chapter. I will be using European Social Survey's round 8 multilevel data consisting of 1) individual survey-data (N=39400) covering 21 countries[4] and 2) the country-level variable of national economy (GDP per capita) is gathered from the United Nations (UN) Statistics Division. The country-level control variables are gathered from OECD and Eurostat.

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3.1 Dataset

In order to investigate the research question, data from the European Social Survey's eight (2016) round will be applied. The ESS is an academically driven transnational survey conducted every two years in Europe with the aim of mapping the attitudes, opinions and behaviors of European citizens (ESS, 2016). One of ESS' aims is to monitor and interpret changes in attitudes and social structures in Europe. Moreover, ESS aims to advance methods of cross-national survey measurement. Data is collected by using structured face-to-face interviews with the respondents (ESS, 2016). This helps to prevent unreliability that could more easily occur during data collection carried out using schemes with questionnaires. The surveys also involve strict random probability sampling.

The UN Statistics Division annually collects the official national data reported by the countries in form of the UN National Accounts Questionnaires.

[4] The countries are Austria, Belgium, Switzerland, Czechia, Germany, Estonia, Finland, France, Hungary, Ireland, Iceland, Italy, Lithuania, Netherlands, Norway, Spain, Poland, Portugal, Sweden, Slovenia and United Kingdom. The Russian Federation and Israel have been removed from the sample as the countries are located outside Europe.

3.2 The Dependent Variable

The dependent variable, *welfare state attitude*, is measured using the following question from the European Social Survey dataset:

> «Using this card, please say to what extent you agree or disagree with each of the following statements. The government should take measures to reduce differences in income levels».

The respondent answers using a 5-point Likert scale ranging from strongly disagree to strongly agree. Figure 3.1 shows the distribution of the dependent variable:

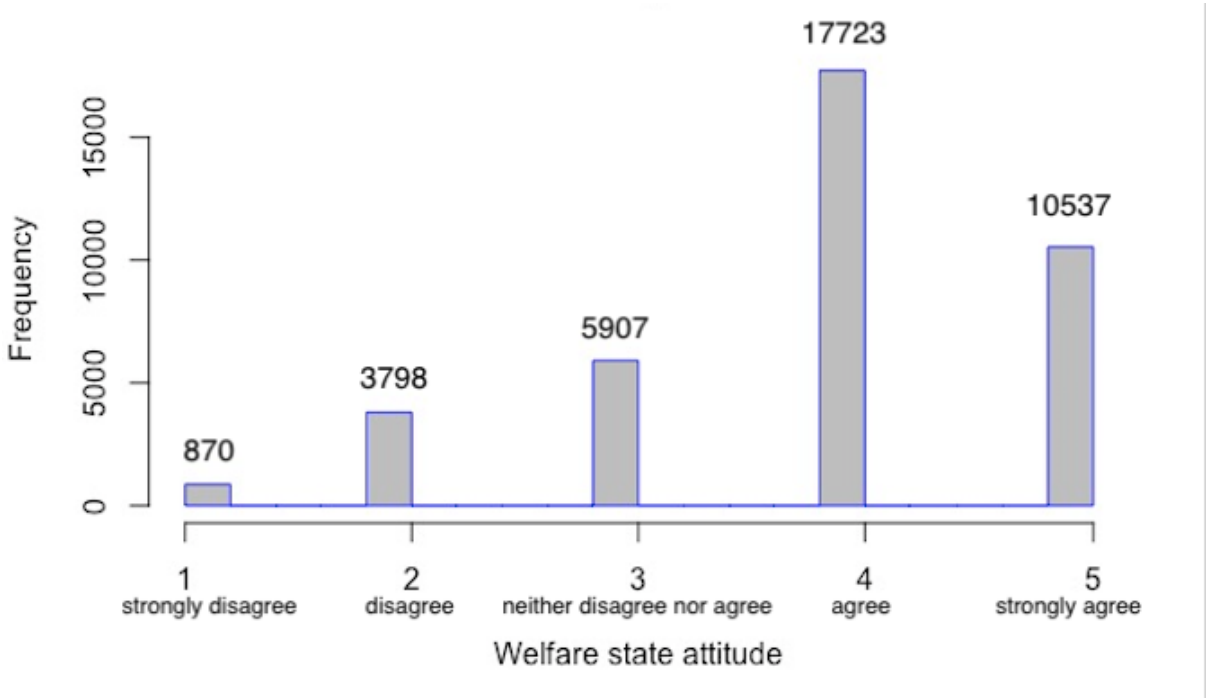

Figure 3.1. Frequency distribution of the dependent variable.

Even though the measurement scale of welfare state attitudes is ordinal, the variable is treated as continuous in the analysis[5].

[5] [5] I have run all models using an ordinal logistic multilevel regression treating the dependent variable as an ordered factor to check whether this yields different results. The results from model 6 (preferred model) can be viewed in appendix C, table C.1. It did yield some different results, but these were minimal. I discuss this more in section 5.8.

Goertz (2006, 95) emphasizes the necessity of paying close attention to details when designing measures in what he calls the "concept-measure consistency". Goertz underscores the importance of to what degree the measure reflects the basic structure of the concept. How attitudes towards the welfare state are conceptualized, must be consistent with the mechanisms presented in the theoretical framework. Concepts may not have clear boundaries, and Goertz (2006, 29) explains this to be a challenge within the social sciences, as the so-called "grey zone" occurs. A concept is more than providing a definition, but rather "deciding what is important about an entity" (Goertz 2006, 27)[6]. Without going into more details of his argument, we can take away that the measurement chosen for a study might have a significant impact on the study's outcome. The chosen measurement of welfare state attitude does not specify what a welfare state entails or how it is defined. Rather, the chosen measurement specifies a fundamental goal of the welfare state as taking measures to reduce inequality. Therefore, I argue that for the purpose of this analysis, the chosen dependent variable is ideal. However, since the survey item is interpretated by each individual respondent, it is not given that all citizens share the same understanding of "taking measures to reduce differences in income levels". In the end, this is a question of definition for everyone. Respondents' different understandings of a survey item is a well-known problem that might occur during data collection which potentially can lead to unreliable answers. According to Grønmo (2016, 198), typical abstract attitude questions could also lead respondents to understand the questions differently, and thus a clear interpretation of the answers afterwards will be difficult.

In this analysis, a unidimensional measure of welfare state attitude is chosen because I focus upon respondents' opinions towards the general ideological principle behind the welfare state as a whole. This opinion is, to what extent the respondents agree that the state should intervene in the market to reduce differences in income levels, understood as social inequality. Most of the previously conducted studies on welfare state attitudes follow this line of reasoning, and use a unidimensional measure (Andress and Heien 2001; Blekesaune and Quadagno 2003; Jæger 2006). However, several scholars (Sihvo and Uusitalo 1995; Roosma et al. 2013) argue that it is important to distinguish analytically between studying peoples' attitudes towards the different aims, means and effects of the welfare state (Jæger 2006). Roosma et al. (2013, 235) argue that individuals might be very positive about the welfare state's goals, while at the same time being critical of its effectiveness and its specific policy outcomes[7]. Their argument is that

[6] This is what Goertz refers to as the "ontological theory" of the concept under consideration (Goertz 2006, 27).
[7] See Roosma et al. (2013) for an overview of their developed 7 dimensions of the welfare state.

attitudes towards a complex phenomenon such as the welfare state, are likely to be contradictory. Nevertheless, merging concepts has the pitfall of creating ambiguities, as several concepts are brought into a single question.

3.3 Explanatory Variables

3.3.1 Personal Income

The individual-level explanatory variable of interest is income. The variable measures *the households'* total net income after tax and compulsory deductions. According to Kellstedt and Whitten (2018, 112), the measure of households' total net income reflects the income distribution in the most realistic sense. This is because asking about *an individual's* total net income would sometimes be an invalid measure as this can potentially put "the nonworking college student of wealthy parents ahead of the [working] student from the less-well-off family" (Kellstedt and Whitten 2018, 112). In this way, the authors argue that asking the question of households' income is the most theoretically useful measure in social and political science.

The variable is a decile-distributed measure where the population is divided into ten equal income groups. According to Franzen and Vogl (2013, 1005), a disadvantage when using income measures is that the respondents tend to underreport their own income. This is a scale that goes from lowest to highest. The variable contains 32647 observed values, and 6753 missing values (17 percent). This is a relatively large amount of missing data. Missing data is common on the income variable as respondents might view this as sensitive information. The problem of missing data, and the methods to handle it, are to be discussed in chapter 4.

3.3.2 National Income

The country-level explanatory variable of interest is income. The variable measures Gross Domestic Product (GDP) in US dollars price-adjusted gross national product per capita in 2016. GDP per capita is GDP per head calculated as the aggregate of production (GDP) divided by the population size. GDP is defined as "the total sum of goods and services produced by labor

and property in a given time period" (Kellstedt and Whitten 2018, 107). Since this thesis uses cross-sectional data, adjustment of GDP for purchasing power parity is not necessary.

3.4 Control Variables

3.4.1 Ideology

Ideological affiliation is measured on a right-left position of the respondents in a 10-point scale where 0 is the far left and 10 is the far right.

3.4.2 Education

The education variable is measured in the number of completed years of education. The scale ranges from 0 to 54 years, and the average is 13 years.

3.4.3 Age

Age is measured from 15 to 100 years. The average is 49 years.

3.4.4 Gender

The variable gender is a dummy variable where woman is 0 and man is 1.

3.4.5 Welfare Regime

In order to control for welfare regime, I measure the total size of the welfare state using the variable of the total public social expenditure as a percentage of GDP. The data has been compiled from the OECD Social Expenditure Database (SOCX), and is integrated in the ESS multilevel dataset round 8. In accordance with Esping-Andersen typology of the three welfare regimes (social democratic, liberal and conservative), one can argue that a higher public social expenditure percentage of GDP points in direction of a social democratic welfare regime. Likewise, in liberal regimes state provision is minimal, and this again is associated with lower levels of public social expenditure percentage of GDP. Conservative regime types are located in between. Another way of controlling for welfare regime type could have been to create a variable based on Esping-Andersen's typology. The reason why I do not conduct this is because

of the impossibility of categorizing the post-communist countries of Central- and Eastern Europe (CEE), which constitute 6 of the 21 countries in the sample.

Furthermore, I create a dummy for the social democratic welfare state (1) and the others (0). The social democratic welfare regime constitutes Norway, Finland, Sweden and Iceland. Using the Scandinavian countries as a reference category, check whether this type of welfare regime creates a special pattern in shaping welfare state attitudes, compared to other welfare regimes.

3.4.6 Inequality

Inequality is measured with the Gini coefficient which is based on equivalized household disposable income, after and before taxes and transfers. The Gini coefficient is defined as the area between the Lorentz curve (triangle shaped) and the 45° line, taken as a ratio of the whole triangle (ESS, 2016). The values of the Gini coefficient range from 0 (perfect equality) to 1 (perfect inequality). The variable is gathered from Eurostat, and is integrated in ESS multilevel data round 8.

3.4.7 Unemployment

Unemployment is measured by all ages in percent in 2016. The variable is gathered from Eurostat, and is integrated in ESS multilevel data round 8.

3.5 Descriptive Statistics

	Mean	Standard deviation	Min	Max
Dependent variable				
Welfare state attitude	3.86	0.99	1	5
Explanatory variables				
Personal income (decile)	5.26	2.73	1	10
National income (gdp in $)	37606	18543.5	12349	79767
Control Variables				
Ideology	5.11	2.19	1	10
Education	13.01	3.91	0	54
Age	49.43	18.57	15	100
Gender	1.52	0.49	0	1
Welfare Regime (tot.exp. % of gdp)	22.81	5.15	15.48	31.98
Social Democratic Welfare Regime	0.15	-	0	1
Unemployment (in %)	7.57	3.58	3	19.6
Inequality (gini)	29.06	3.45	24.1	37

Table 3.1. Descriptive statistics. Missing values are not imputed in the level-1 variables.

4 Analytic Strategy and Methods

In this chapter I outline how the data is analyzed in order to test the hypothesis presented in chapter 2. I adopt multilevel modeling (MLM) which account for a hierarchical data structure, as individual- and country-level factors are analyzed simultaneously. The missing data is handled with the method of multiple imputation. Table 4.1 summarizes the research question, the theoretically developed hypothesis and the corresponding variables from the dataset.

RQ: *To what extent can economic conditions explain welfare state attitudes in Europe?*

	Hypothesis	**Variables**
Individual level	H1 *Income is negatively related to welfare state support.*	Households' income (decile distributed)
Country level	H2 *National wealth is positively related to welfare state support.*	GDP (in US dollars price-adjusted gross national product per capita)
Cross level	H3 *The negative effect of personal income on welfare state support is strengthened if the individual lives in a rich country.*	Households' income and GDP

Table 4.1. Hypotheses table.

4.1 Some Remarks on Causation

Political and social science is fundamentally about establishing whether there are *causal* relationships between important concepts. Building a causal relationship is not straightforward, and some general words about causality are therefore in order. Understanding relationships between concepts is usually based on predicting the future, based on observations from the past.

First, an important remark is that the findings from this study do not claim causality regardless of how strong the correlations are. Kellstedt and Whitten (2018) identify four minimum requirements for building a causal relationship between a dependent variable *Y*, and an explanatory variable *X*. First, there must be a credible causal mechanism that connects X to Y.

Second, the possibility that Y causes X must be eliminated. Third, there must be co-variation between X and Y, and forth, alternative and confounding explanations must be ruled out (so that the correlation between X and Y is not spurious).

In light of this study, the first requirement represents an effort to explain *how* and *why* questions, meaning that the claim between economic conditions and welfare state attitudes must be trustworthy. This is grounded in theory, and touches upon the core of the research question. The second requirement can create some difficulties as many variables potentially may create a reverse causality. What way does causality actually runs? Whether economic conditions cause welfare state attitudes, or welfare state attitudes causes economic conditions can be difficult to conclude with. The causal direction is thus not guaranteed. Hypothetically, it could be that more welfare supportive individuals choose to take higher education, which again raises their income. In this way, it may be that the causal direction runs through education. The best way to unwrap the difficulty of causality direction would be to study welfare state attitudes over time.

The third requirement is easier to fulfill. This requires that there must be co-variation between economic conditions, and welfare state attitudes. The fourth requirement is perhaps the hardest one. As social reality is multivariate rather than bivariate, the problem of unknown alternative factors will always be present. It is impossible to be completely sure that one controls for all possible alternative factors of why economic conditions and welfare state attitudes correlate. The omission of unknown factors can lead the analysis into wrong conclusions, and a claim of causality is thus impossible to make. In sum, this thesis concentrates upon fulfilling the first, the third and partly the fourth requirement.

4.2 Theoretical and Statistical Reasons for Multilevel Analysis

The general idea within social science research, which this thesis has also highlighted, is that individuals interact and get influenced by the contexts to which they belong (Hox 2010, 1; Luke 2020, 2). A large amount of research focus upon understanding the relationship between individuals and context. This leads scholars into investigating the relationship between variables characterizing individuals, and variables characterizing a higher unit. This research is generally referred to as *multilevel research*. The research question for this thesis is to what extent economic conditions shape attitudes towards the welfare state. Both the research

question, theory and data of this study all imply the use of a cross-sectional analysis with a multilevel design. The theoretical motivation for using multilevel analysis is that the theoretical assumptions presented in chapter 2 assume that welfare state attitudes are a multilevel phenomenon: it can be explained both by micro-level economy as well as macro-level economy. In this way, a multilevel analysis disentangles the effect of individual economy from the economic contextual effect, and enables us to discover just that. Moreover, a deeper understanding of how the economic variables at both levels work is possible. In this way, there are strong theoretical motivations for using a multilevel method.

Statistically, one of the main strengths of multilevel models is its handling of a hierarchical data structure (Finch et al. 2014, 23-24). The method applies to data clustering at different analytical levels, meaning that variation in a lower level is explained by a higher level by the fact that the lower level is nested within a higher level. A common example is studies on students' performance. Explanations limited to the student herself is not enough as students are nested within classes, which again are nested within schools. A part of a student's performance can thus be explained by both her class, and school (Finch et al. 2014, 23-24).

An important assumption within regular regression is that observations are independent from one another (Gerring 2012, 213; Hox 2010, 4-5). If the respondents in a cross-country dataset answer similar to each other (for example that almost everyone within a country has a positive attitude towards the welfare state), this indicates that their answers are correlated within countries. Thus, if one continues with regular regression and violates this assumption, this creates a problem in which standard errors will be too small. This underestimation of the standard errors will cause an overestimation of the test statistic, and the results might be a higher significance for the parameters than specified (Steenbergen and Jones 2002, 219-220; Finch et al 2014, 28). The consequence is thus an incorrect model for understanding the outcome of the dependent variable. Therefore, one has to measure the degree to which observations are independent from one another (correlated within groups), or not. The most common way of testing the homogeneity of the level-1 units is by measuring the Intra-Class Correlation (ICC)[8]. The ICC tests to what extent individuals are nested within a higher-level unit such as countries,

[8] The formula for ICC is: ICC $=V_{00}/ (V_{00}+ V_e)$, where:
V_{00} is the between-group variance (between level-2 units) divided by the total variance of the level-1 unit V_e and the level-2 unit V_{00} . The variance of the dependent variable is the sum of the total variance (Christophersen 2018, 111).

and measures the proportion of variation in the dependent variable within the level-2 variables (Finch et al. 2014, 24). In this way, the ICC tells us whether welfare state attitudes are similar within countries or not. Higher similarity within countries indicates that it might have something to do with country characteristics. This again indicates more variation between countries. In multilevel modeling such between-county difference is assumed to exist, and the ICC coefficient tells us whether such differences are present in the data. The coefficient varies between 0 (no variance) and 1 (complete variance) (Finch et al. 2014, 24). If the coefficient is 1 this would mean that welfare state attitudes have nothing to do with individual differences, and depend completely on country differences. Some scholars (Theall et al. 2011, 689; Christophersen 2018, 111-112) argue that the ICC coefficient should be over a certain level (typically 0.002 or 0.05) in order to justify the use of multilevel regression, while some scholars (Nezlek 2011, 53-54) argue that a multilevel approach is necessary and justified if the data structure and theory indicate so (regardless of ICC). This is because the effects of individual level variables can vary between groups even if ICC is equal to zero, and ignoring the interdependence of a data set can provide inaccurate parameter estimates (Nezlek 2011, 53-54). As I will come back to in chapter 5, the ICC for my dependent variable in this analysis is .069 (in the empty model). This indicates that the statistical motivation for multilevel regression is supported.

In social sciences, it is common to aggregate the data of individuals in order to gain insight to the context of which the individuals belong. Researchers who rely upon such techniques may perform what is referred to as the ecological fallacy (Hox 2010, 3; Nezlek 2011, 7; Luke 2020, 3). Ecological fallacy occurs when researchers conclude about relationships on the within-group level, based on relationships on the between-group level. For example, it could be observed that on the country level there is a correlation between the number of wealthy people, and how positive the public opinion mean on the welfare state is. However, this is not equivalent to the fact that wealthy people are on average more positive to the welfare state than poorer people. Suggesting this would be to make an ecological fallacy.

In multilevel models such fallacies are ruled out because the relationships between variables at the different levels are mathematically independent from one another (Nezlek 2011, 7). Moreover, disaggregation of group-level information to the individual level means that contextual information ends up pooled into the single individual error term of the model (Luke 2020, 5-6). Individuals belonging to the same context will presumably have correlated errors,

and hence, this violates one of the key assumptions of multiple regression; namely no autocorrelation of residuals (Luke 2020, 6). This is often called *clustering*.

In a multilevel analysis, aggregation or disaggregation is not necessary, and problems such as ecological fallacy and clustering will be avoided. This strengthens the internal validity of multilevel models.

4.3 Linear Multilevel Regression

As argued, there is a strong motivation for using multilevel regression models in this thesis. Some basics about the method should therefore be remarked upon.

Statistical models in general provide powerful tools to researchers in a wide array of disciplines. Such models allow for examination of relationships among multiple variables (Finch et al. 2014, 1). The most popular type of regression models is the general linear model (GLM). GLM links a dependent variable to one or more independent variables. The regression coefficient of a variable tells us the effect of one single variable (in a model), holding the other variables constant. The effective ability of GLM serves as the foundation of many other models including multilevel models.

Whether multilevel or other regression models are applied, the first step is to decide the type of distribution the dependent variable represents. Since the dependent variable (welfare state attitude) is treated as a continuous variable, *basic linear multilevel regression* will be used for all models in this analysis.

A linear multilevel regression model measures mean-changes in continuous relationships, and gives the predicted mean value of a dependent variable at a particular value of an independent variable (Sommet and Morselli 2017, 204). The predicted value, the so-called residual, of the dependent variable can take any value within the range of the dependent variable, and is assumed to follow a normal distribution[9]. The residual represents the distance between the

[9] A normal distribution has two characteristics. First, it follows a "bell curve", and is symmetrical about its mean. Second, the normal distribution has a predictable area under the curve within specified distances of the mean (Kellstedt and Whitten 2018, 149).

predicted and observed value. The predicted value is not bounded (Sommet and Morselli 2017, 204, 206).

4.3.1 Specification of Multilevel Models

Linear multilevel regression estimates the effects of X on Y for a respondent *i,* in country *j*. A multilevel model can be formalized through a set of regression equations on both level-1 and level-2. A level-1 linear multilevel model with one explanatory variable can be written as (Enders and Tofighi 2007, 122-123):

$$y_{ij} = \beta_{0j} + \beta_{1j}(x_{ij}) + r_{ij}.$$

Here y_{ij} is the dependent variable *y* for the level-1 unit *i* (individuals) nested in the level 2-unit *j* (countries). The *j* subscripts tell us that a level-1 model is being estimated for each of the *j* level-2 units. x_{ij} is the independent variable. β_{0j} is the intercept, meaning the point to which the line of equation crosses the *y* axis at x=0. β_{1j} is the slope, and expresses the relationship between *y* and *x* (Enders and Tofighi 2007, 122-123; Finch et al. 2014, 2). A positive slope value indicates that larger values of x are associated with correspondingly larger values of y, while negative slopes mean that larger x values are associated with smaller y values. Larger values of β_{1j} (positive or negative), when holding everything else constant, indicates a stronger linear relationship between x and y (Finch et al. 2014, 2, 29). Lastly, r_{ij} represents the level-1 residual. Moreover, the level-2 models for the intercept and slope are as follows:

$$\beta_{0j} = \gamma_{00} + u_{0j}.$$

$$\beta_{1j} = \gamma_{10} + u_{1j}.$$

Here, both the country's *j* intercept, and the slope are expressed as a function of the mean of the intercept and slope (γ_{00} and γ_{10}) of the dependent variable, added to residual terms describing the country's deviation from these means (u_{0j} for the intercept and u_{1j} for the slope)

(Enders and Tofighi 2007, 122-123). This shows that each country has its own slope and intercept. By combining these equations, a complete multilevel model can be written as follows:

$$\gamma_{ij} = \gamma_{00} + \gamma_{10}(X_{ij}) + u_{0j} + u_{1j}(X_{ij}) + r_{ij}.$$

4.3.1.1 Random Intercept Model

Based on this specification, the multilevel models to be estimated in the forthcoming analysis can be specified. Three different multilevel models are to be estimated. The first one is a so-called random intercept model (fixed effect). The intercept is expected to vary between countries, but the model assumes that all slopes are fixed (the same across different contexts). This model will be used for examining H1 (the correlation between personal income and welfare state attitudes) and H2 (the correlation between national income and welfare state attitudes). It is written as follows:

$$\gamma_{ij} = \gamma_{00} + \gamma_{10}(X_{ij}) + u_{0j} + r_{ij}.$$

4.3.1.2 Random Slope Model

The second model is the *random slope model*. This thesis explores how the effect of income varies between countries. Multilevel modelling has the strengths of specifying random slopes that allows the explanatory variables to have a different effect for each level-2 unit (countries), a so-called random slope model. It is the random slope terms that specify these varying effects. In a random slope model, not only the intercept is allowed to vary between countries, but also the slope (read: the effect of welfare state attitude). In the following analysis, the personal income variable is given a random slope term, and thus measures country-specific effects of personal income. Put differently, is the effect of personal income similar or unsimilar in the different countries? Specifying a random slope term can for example give us information on whether poorer people in Norway are more supportive of the welfare state compared to poorer people in the United Kingdom (UK). Furthermore, an ANOVA (analysis of variance) test can

specify whether a model of random slope term is significant, and if so, the effect of personal income varies between countries. Changes in AIC can tell whether specifying random slopes improves the explanatory power of the model, which is important to assess. This model is specified as follows:

$$\gamma_{ij} = \gamma_{00} + \gamma_{10}(X_{ij}) + u_{0j} + u_{1j}(X_{ij}) + r_{ij}.$$

4.3.1.3 Interaction Model

The third model is the interaction terms. While the random slope model gives information about whether the effect of personal income varies between countries, an interaction model further investigates to what extent GDP can explain these differences. Hypothesis 3 indicates an interaction effect between personal income, and national wealth on welfare state attitudes. An interaction effect occurs when X affects Y in a different way dependent on the values of Z (Midtbø 2016, 136). This means that an effect of an independent variable (X) (personal income), on the effect on the dependent variable (Y), (welfare state attitude), is a product of the function of a second variable (Z) (national wealth), and the first independent variable (X) (personal income). The model can be specified as follows (the interaction effect is specified by γ_{11}):

$$\gamma_{ij} = \gamma_{00} + \gamma_{10}(X_{ij}) + \gamma_{11}(X_{ij})(X_j) + u_{0j} + u_{1j}(X_{ij}) + r_{ij}.$$

4.4 Assumptions

When performing regression analysis in any form it is important to be conscious about some key assumptions to best secure the analysis to be reliable.

First, as I have discussed, one important assumption that does not apply to multilevel regression is the independence of observations. Due to the fact that this is a multilevel analysis, and observations are clustered within different groups, this means that respondents nested in the same cluster are more likely to function in the same way compared to respondents nested in

different clusters. Thus, observations are interdependent rather than independent (Sommet and Morselli 2017, 206). Multilevel models account for dependencies in the data.
Second, an assumption that must hold true is that the relationships between the independent variables and the dependent variable are linear. If this is not the case, the model is misspecified (Finch et al. 2014, 4).

Third, since linear multilevel models predict residuals, the assumptions of homoscedasticity and normally distributed residuals in a population are important to uphold. Homoscedasticity implies that the variance in the residuals is constant regardless of the value of the independent variables (Finch et al. 2014, 4). This means that the variance for every case in the population is assumed to be the same. Homoscedasticity means "uniform error variance", and if this assumption is not followed, the situation of heteroscedasticity occurs (Kellstedt and Whitten 2018, 208-209).

Forth, an important assumption is that independent variables are not correlated with each other, meaning the absence of *multicollinearity*. This occurs when one independent variable is in a strong linear relationship with one or more of the other independent variables. Multicollinearity will generate poor standard errors and poor inferences (Finch et al. 2014, 9). The variance inflation factors (VIF) estimate the presence of multicollinearity for the independent variables. Finch et al. (2014) consider multicollinearity a problem if VIF scores > 5 or 10. VIF scores for the variables used in the preferred regression model (model 6) can be viewed in appendix B, table B.1. None of the variables indicate a problem of multicollinearity, meaning that this assumption is not violated.

Fifth and finally, whether there should be a threshold of level-2 units in multilevel modelling in order to yield accurate estimates is debated among scholars. In multilevel analyses, this is a challenge that is encountered particularly often because there are often natural limits to how many level-2 units there are in the sample universe (for example, countries in Europe). Christophersen (2018, 109) argues that the reward of multilevel analysis is greatest with many level-2 units. Both Hox (2012, 235) and Christophersen (2018, 109) argue that researchers should strive for at least 30 groups with at least 30 individuals per group for fixed parameters, while in cross-level interactions, the number of groups should reach 50. On the contrary, Gelman and Hill (2007, 275) argue that such advice is unreasonable because multilevel regression performs better than an alternative that would possibly ignore the multilevel data

structure. Nevertheless, the authors acknowledge that when the number of groups are small (<5), it is difficult to estimate the between-group variation and the output of performing a multilevel analysis will be small (Gelman and Hill 2007, 247, 275). In the same line of reasoning, Strabac (2007, 176) argues that a multilevel analysis is advisable if there exists between 10 and 100 level-2 units. However, he argues that it is justifiable to only include one explanatory variable per tenth level-2 unit (Strabac 2007, 186). This has to do with a limited number of degrees of freedom (df). If too many level-2 variables are included in the analysis, the independent observations will no longer have the freedom to vary without breaking any constraints. In my sample there are 21 level-2 units (countries), and a violation of the assumption regarding the number of level-2 units is not considered present. However, 3 control variables at level-2 are present and thus might disturb the assumption that there should be enough degrees of freedom.

4.5 Explained Variation

The evaluation of multilevel regression models is not limited to the interpretations of the separate residuals, but also to the model as a whole. A comparison of the different models' fit enables us to assess whether one model is preferred over another. There is no consensus on how to measure explained variation in multilevel regression models. I will use two common indicators, Akaike's Information Criterion (AIC), and the Schwarz' Bayesian Information Criterion (BIC), respectively.

AIC is a general fit index that is calculated from the deviance *d*, added by the number of variables *q* times 2 (Hox 2010, 50):

$$\text{AIC} = d + 2q.$$

Smaller AIC values are preferred as it reflects a better model fit. The purpose of multilevel modelling is to explain more variation of a model compared to another. Lower levels of AIC express more explained variation of a model A compared to a model B, while higher levels of AIC express less explained variation between the models. AIC is an index that focus upon poor explanatory power, and the higher the AIC value, the worse (Midtbø 2016, 103). This means that AIC penalizes to some extent complex models with low explanatory power, in example

models with many explanatory variables or many level-1 units (Midtbø 2016, 103; Christophersen 2018, 112). Smaller models are also characterized by a lower AIC value, simply because smaller models are preferred over complex models. As more explanatory variables are added to the model, AIC tend to increase (because *2q* is added). However, since AIC measures how well a model fits the data, AIC reward models with greater explanatory power that explain the data better (Hox, Moerbeek and van de Schoot 2018, 38-39). So, when deviance decreases, AIC will also decrease despite a more complex model. This means that AIC does a trade-off between the model's complexity, and validity. When increasing the number of explanatory variables, AIC prevents us from overfitting the model. In sum, if AIC decreases as more explanatory variables are added, this illustrates a good fit.

According to Treiman (2009, referred in Midtbø 2016, 103-104), a rule of thumb is that a reduction of AIC between 0 and 2 gives "weak" support for model A compared to model B, while a difference between 2 and 6 gives "positive" support for a model. A difference between 6 and 10 gives "strong" support for a model, and finally, a reduction of AIC >10 gives "very strong" support. Based on this, I will regard a reduction in AIC between 2 and 10 as a model supported compared to another model, and >10 to be strongly supported.

The Schwarz' Bayesian Information Criterion (BIC) is a similar model fit index, and strongly related to AIC[10]. While AIC penalizes models only on the basis of the number of variables, BIC also includes sample size (Christophersen 2018, 112). In this way, BIC penalizes harder than AIC, and tends to prefer smaller models. Furthermore, Hox (2010, 50) explains that the equation of BIC is more ambiguous, because it is not clear whether (*N)* (the number of observations) refers to the first or second level sample. Based on this, AIC will be given the most weight in the assessment of the models in this analysis. BIC will also be assessed, but more as a complementary fit index of explained variation.

Lastly, it should be mentioned that multilevel models easily become complex. This thesis is in line with the principle of preferring simple models over complex ones. The models used in this analysis only include one dependent variable, two explanatory variables and five control variables. In this way, these simple models avoid the fact that confusing models might overshadow basic aspects of multilevel regression.

[10] The general equation: BIC = $d + q \ln(N)$, where d is deviance, q is the number of variables, and (N) is the number of observations (Hox 2010, 50).

4.6 Multiple Imputation Method

This section discusses why the missing data are treated with multiple imputations in this analysis. Before this can proceed in a best possible way, I first have to understand and diagnose the missing data process underlying the missing data in my dataset. Like any statistical method, key assumptions need to be considered and followed.

Missing data are a widespread problem in social sciences. It is nearly inevitable that some respondents for different reasons refuse to answer certain questions (van Buuren 2012, 6). If this refusal has a systematic pattern, this creates problems for the validity of the analysis such as a biased result. The most common method of handling missing data is listwise deletion, which simply focus upon omitting entire records containing missing values, and restricts the analysis to containing completely observed cases. This causes the dataset (and the representativeness of a chosen sample) to be shrunken, and most likely biased. A greater number of missing data entails more biased data. Moreover, such an approach is likely to suffer from low explanatory power and inaccurate standard errors (Hox 2010, 107; Grund et al. 2016, 3; Newman 2014, 372). This can be quite harmful for any statistical analysis, especially if the pattern of missing data is systematic (relationships between observed and missing data) (Newman 2014, 372). As representativeness of a chosen sample is a fundamental goal in statistical analyses for drawing causal inferences, being aware of the problem of missing data is crucial.

The method of multiple imputation (MI) has gained popularity among researchers as a method of overcoming problemes related to missing data, and as being a superior method to the traditional listwise deletion (Grund et al. 2016, 3; Lall 2016, 414). MI is a simulation-based procedure that replaces each missing value based on estimations from the observed data. As the missing data is built on realistic distributions, the problems occurring under listwise deletion is eliminated (Grund et al. 2016, 3; Lall 2016, 414). In this way, when using MI, we are kept with a complete nonbiased dataset in the analysis.

One important question to address is whether the pattern of missing data is random or not. In the 70s, the statistician Rubin (1976, referred in van Buuren 2012), proposed the multiple imputation method, and classified missing data problems in three categories. These three categories represent different mechanisms of the probabilities that missing data might occur in a dataset. These are (1) missing completely at random (MCAR), (2) missing at random (MAR)

and (3) missing not at random (MNAR). In MCAR, the probability that a value is missing is the same for all cases. Some data will miss simply because of bad luck. There are no structural reasons behind the missing values, and they are not in any way related to the observed data (van Buuren 2012, 7; Lall 2016, 416). On the other hand, MAR depends on the observed data *only* and might in this way be correlated with other variables. Modern missing data methods generally start from the MAR assumption, as it is more general and more realistic than MCAR (van Buuren 2012, 7). A typical MAR situation occurs in the income variable. Respondents might be reluctant to answer questions regarding income because they can view it as sensitive information. Respondents in the higher or lower ends of the distribution might feel this especially. Moreover, income is often structurally related to observed data on other variables, such as education.

If the missing data is neither MCAR nor MAR, we might deal with MNAR. MNAR is more complex and occurs when the probability of the missingness varies due to unknown reasons. An example is when those people with weaker opinions respond less often to survey questions, we are dealing with MNAR in public opinion research (van Buuren 2012, 7).

Listwise deletion is unbiased only when the MCAR assumption holds, because of the random missingness. Unlike listwise deletion, multiple imputation is unbiased when data is MAR and MCAR (Lall 2016, 418). This means that in situations of MAR and MNAR, where missing data is related to the observed data, multiple imputation is preferred over listwise deletion. However, Lall (2016, 418) points out that under MNAR, multiple imputation cannot avoid bias because missingness depends (to a certain degree) on missing values. In this way, multiple imputation is most advisable under MAR-conditions.

Lall (2016, 415) argues that in the subfield of comparative and international political economy (CIPE), listwise deletion tends to produce biased inferences because the pattern of missing values is not completely random. Poorer and less democratic countries tend to have more missing data, causing listwise deletion to give rise to a selection problem. Lall further notes that previously CIPE studies indicate that 90 percent deploy listwise deletion, while only 5 percent use MI (Lall 2016, 415). In this way, MI is especially advisable when studying cross-national data on economic circumstances, as economic variables tend to contain a high proportion of missing values.

On the basis of this discussion, multiple imputation is argued to strengthen this analysis, and it seems reasonable to assume that the missing data are strongly related to the observed data, meaning the missingness is random (MAR). In my dataset, the highest amount of missing data is found within the income variable (NA = 6753), where 17.14 percent of the datapoints is missing. Going through with a listwise deletion in this analysis would mean to remove all observations with missing values, which constitute a total of 5.03 percent of all the level-1 observations (including control variables). See figure 4.1 for an overview of the missing data in each variable. Newman (2014, 373), in addition to several other scholars, suggests a rule-of-thumb of using MI when the data confronts a missing-rate of 10 percent or higher. This is indeed the case for both the income, and the ideology variables.

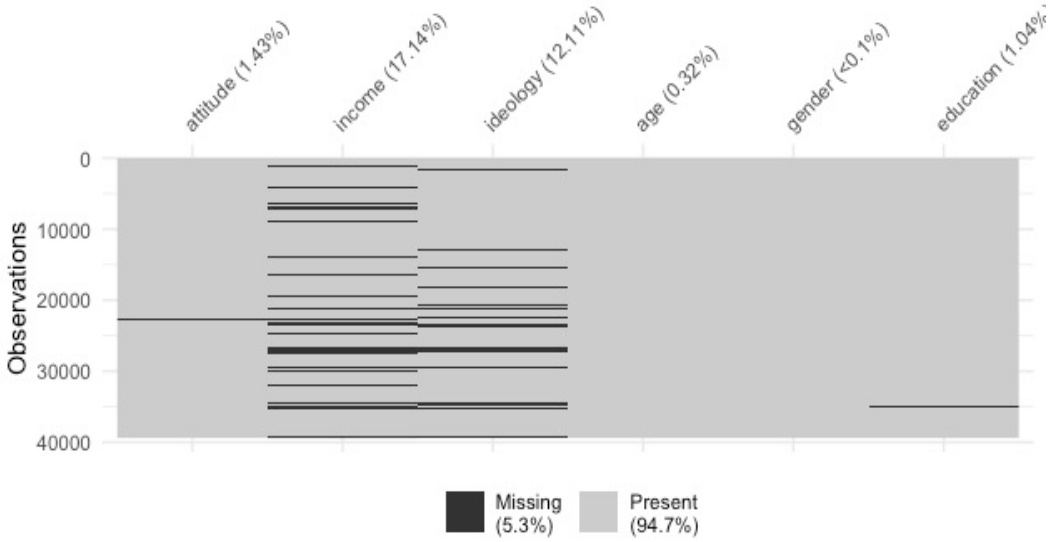

Figure 4.1. Summary of missing data in sample.

4.7 MICE

A variety of approaches is used when dealing with missing data. The approach used in this analysis is *multiple imputations by chained equations*, shortly called MICE. The MICE procedure involves three key stages. First, it estimates $M < 1$ simulated versions, and by incorporating a random component for each missing cell it enables to reflect the uncertainty of the missing data (Wulff and Jeppesen 2017, 42). The imputed values are drawn from a prior

distribution based on the observed data (Lall 2016, 418)[11]. Second, the multiple imputed complete datasets *M* are analyzed separately using standard statistical techniques, and finally, the results from the multiple analyses are combined using Rubin's rules (Sullivan et al. 2015, 528; Lall 2016, 418). As every single imputation model is imprecise, the power of MI lies in its reproduction of *M*'s. The combination of many *M*'s (Rubin's rules) takes the uncertainty of each *M* into consideration (Wulff and Jeppesen 2017, 42). Rubin's rules pool the datasets, and appropriately account for the uncertainty by combining both within and between dataset variance (Sullivan et al. 2015, 528; Lall 2016, 418). An illustration of the whole MICE process is shown in figure 4.2.

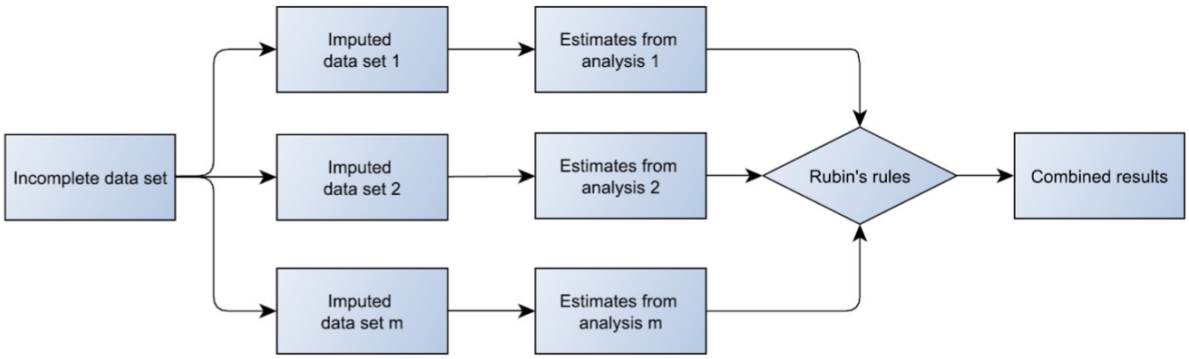

Figure 4.2. The MICE-process (Wulff and Jeppesen 2017, 42).

A rule of thumb is that the number of imputation models should be at least equal to the percentage of missing observations (Wulff and Jeppesen 2017, 49. Theoretically, it is always better to use a higher number of *m,* but according to van Buuren (2012, 50), using *m*=5-20 will be enough under moderate missingness. Based on this, m=25 is chosen for this analysis. Furthermore, predictive mean matching (PMM) will be applied as the estimation procedure for all variables. PMM calculates the predicted value based on comparing a set of complete cases ("donors") that have predicted values closest to the predicted value for the missing case. One donor randomly draws a replacement value, and the assumption is that the distribution of the

[11] *Prior* is a term that refers to the Bayesian approach. Bayesian statistical modelling involves the use of prior distributional information to estimate a posterior distribution (Finch et al. 2014, 167).

missing case is the same as the observed data of the candidate donors (van Buuren 2012, 68-69).

Figure 4.3 illustrates the multiple imputation procedure in each variable used in this analysis. The figure shows the density of the imputed data for each imputed dataset (m=25). Plotting the discrepancy between the imputed and observed data is a fruitful tool to assess the plausibility of the imputations. Again, under my previous assumptions I expect the distributions to be similar, and the figure shows that the distributions match up well. Moreover, two robustness checks will be applied: a convergence diagnosis and a comparison to listwise deletion of handling missing data. This is discussed more in the following chapters.

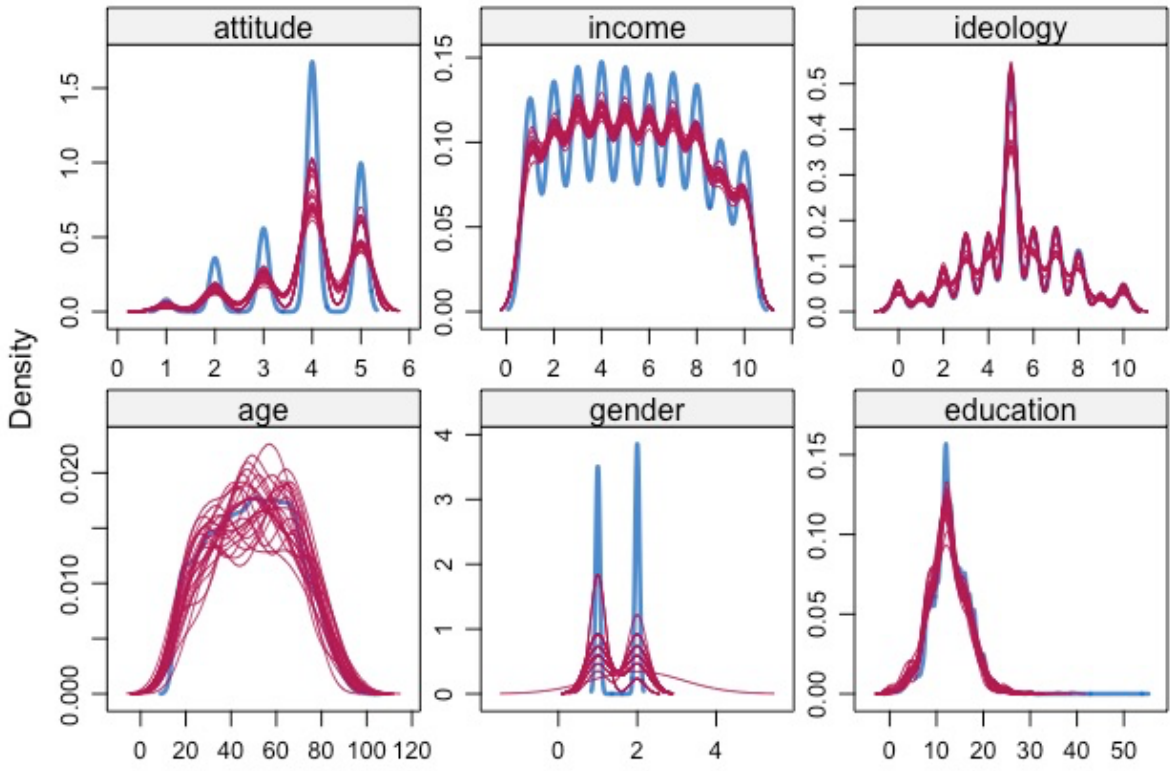

Figure 4.3. A density plot of the imputed datasets (m=25) shown in thin red lines. The observed data is shown in blue.

4.8 Outline of the Analysis

The analysis will proceed in five main steps. First, a presentation of the bivariate relations between the main explanatory variables and the dependent variable are presented in order to get an overview of how they are related. Second, the empty model is specified, and the ICC expresses how much variation in welfare state attitudes there is both between and within countries. Third, the effects of the variables of interest are estimated through multilevel linear regression. Forth, the interaction between personal income and national income is tested to assess H3, namely whether the negative effect of personal income on welfare state attitude is strengthened if the individual lives in a rich country. Lastly, the robustness checks will be addressed.

5 Results

5.1 Economic Conditions and Welfare State Attitudes

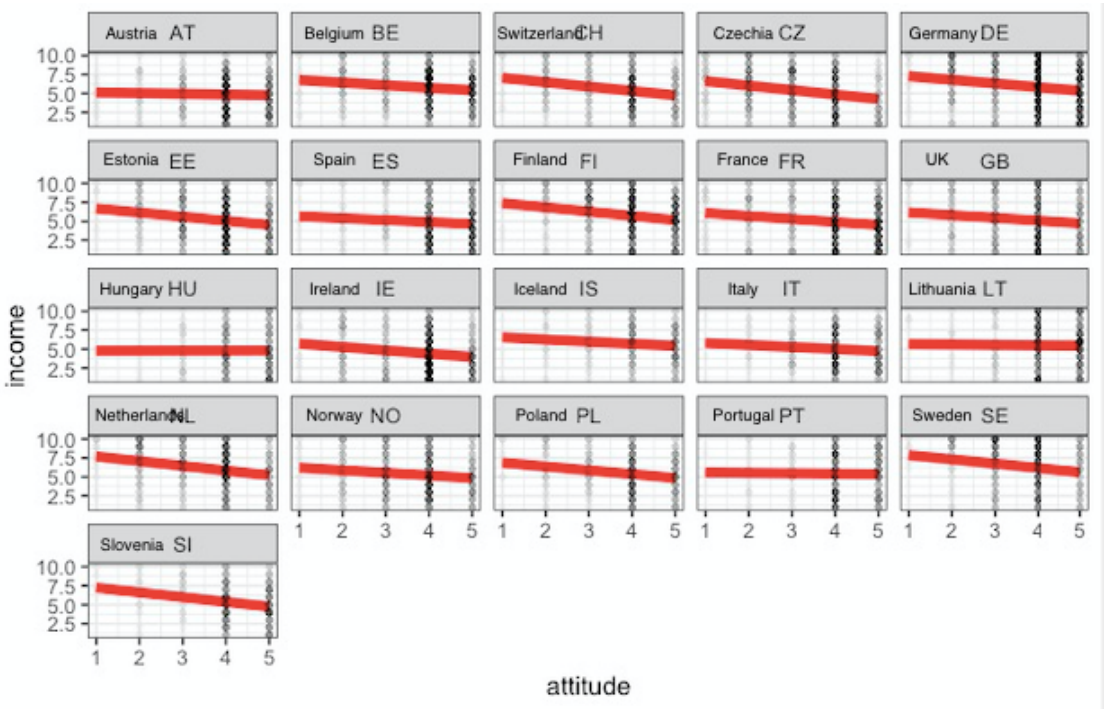

Figure 5.1. Trellis plot of the effect of personal income on welfare state attitudes in every country.

To make a first impression of the effect of personal income, I have plotted the negative effect of personal income on welfare state attitude (results from model 6) in every country, as shown in figure 5.1. The effect is as expected. If my theoretical arguments are true, the rational choice self-interest is an important factor in shaping welfare state attitudes. However, the countries of Hungary, Lithuania and Portugal seem to show neither a positive nor a negative effect.

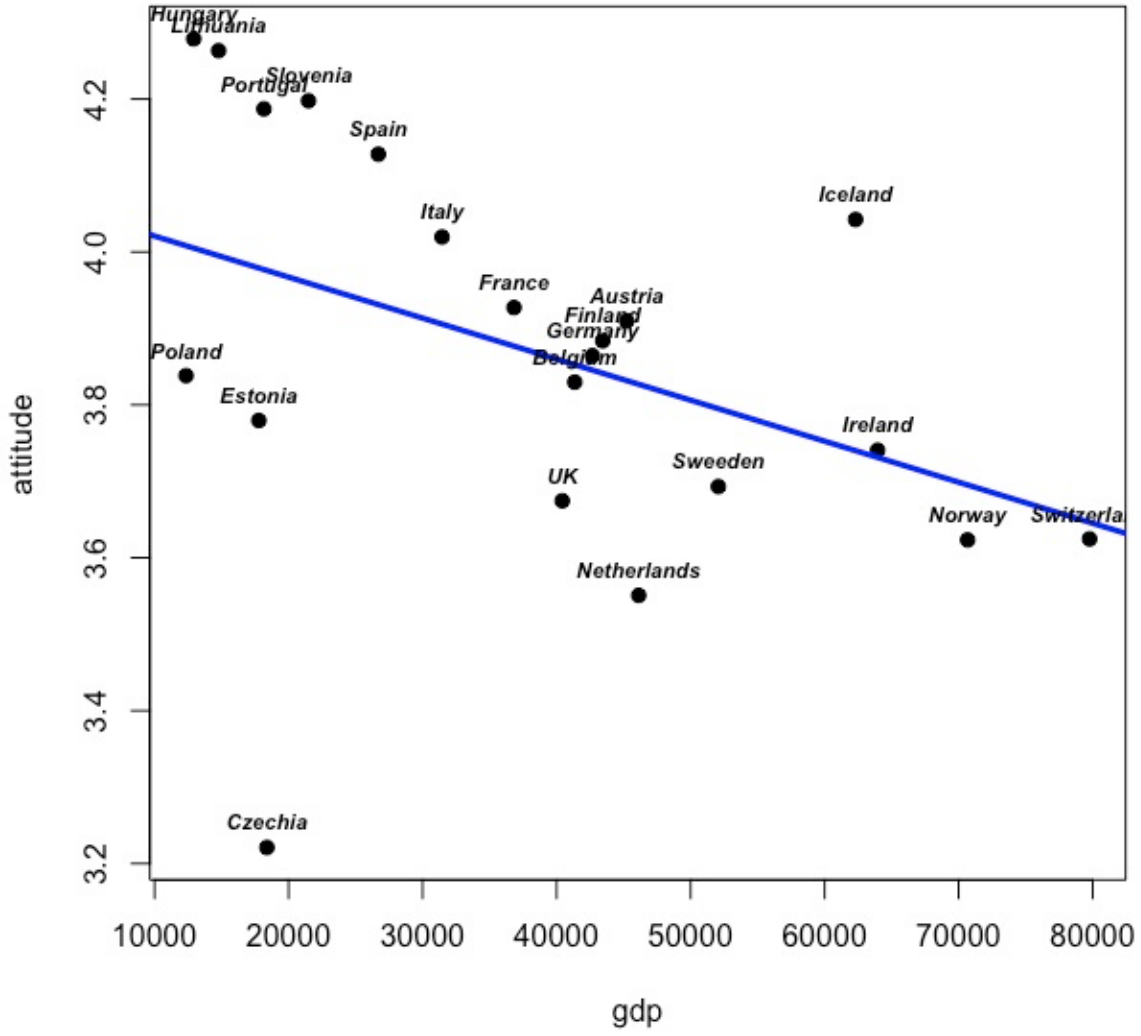

Figure 5.2. Scatterplot of GDP per capita over welfare state attitudes.

In figure 5.2, we can observe the bivariate relationship between country wealth measured by GDP per capita and welfare state attitudes. The plot tells an unexpected story: in countries with lower levels of GDP per capita, individuals are more supportive of the welfare state. This is illustrated by the fact that a large number of countries are located in the upper right corner. The overall trend is negative, and not in line with theoretical expectations.

An important note is that a relatively few numbers of respondents have actually chosen value 1 or 2 (strongly disagree and disagree) on the Likert scale used for measuring welfare state attitudes. The distribution on the dependent variable is actually a bit skewed, which makes the analysis slightly more challenging to interpret. What is seen as low welfare state support in

figure 5.2, is not actually as low as it might seem. As illustrated in figure 5.2, in countries with higher GDP per capita (Sweden, Ireland, Iceland, Norway and Switzerland), welfare state support is actually *not that low*, just *lower* compared to other European countries. Countries with a high GDP per capita range between 3.6 and 4.1 on the Likert scale which indicate support for the welfare state or the value of *neither disagree nor agree*. In this way, one could argue that the theoretical expectation for the national economy is not rejected completely. The results indicate that inhabitants in richer countries have high support for the welfare state, but lower support compared to poorer countries. Moreover, as the above figure illustrates, none of the countries are located below 3.2 on the Likert scale meaning that the support for the welfare state is indeed quite high in European countries. It might also indicate that the differences in welfare state attitudes do not vary much between countries.

Iceland is presumably the only country where a high GDP per capita and relatively high welfare state support is observed. However, as shown in figure 5.1, the individual-level effect of personal income is negative also in Iceland. This indicates that there is a difference in the individual-level effect compared to the country-level effect in the case of Iceland. Moreover, Czechia seems to show the opposite trend having a low GDP per capita in addition to low support for the welfare state. I ran a test to check whether removing Czechia from the analysis would change any results, but it did not. However, leaving Czechia out of the analysis would contradict theoretical expectations, and was not on any occasion an option.

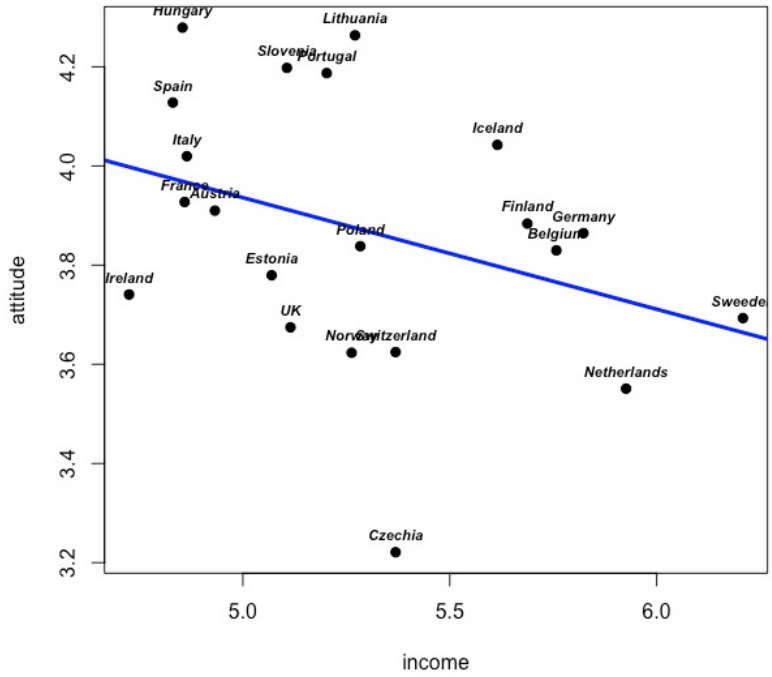

Figure 5.3. Scatterplot of aggregated mean income on welfare state attitude represented by country.

In addition, I aggregated the income variable to test whether this yielded similar results as the GDP per capita. The income variable is thus used as another country-level variable for the national income level, however just for testing intentions. Figure 5.3 shows the bivariate relationship between mean income on welfare state attitude in every country. The result is plotted in figure 5.3. The trend is similar; countries with higher levels of mean income are negatively correlated with higher levels of welfare state support.

5.2 Empty Model

The multilevel regression analysis starts by running the first model, the empty model, containing no independent variables. The empty model is shown in table 5.1. The interesting score to assess is the ICC, which for this analysis is .069. The ICC score reports how the dependent variable is distributed across the level-2 units. In this case, 6.9 percent of the variation in welfare state attitudes is between countries, while 93.1 percent is within countries. 6.9 percent is a slightly low score which might have to do with the relative similarity between welfare state attitudes in European countries. However, the ICC score is not by any means insignificant, and indicates that country-level factors are important in analyzing attitudes

towards the welfare state. For this analysis, the task will be to explain these between-county-differences by pointing at the national state of the economy.

Model 0: Empty Model		
	Coefficient	Standard error (SE)
Constant	3.870***	.576
ICC	.069	
AIC	109053	
BIC	109079	
N (respondents)	39400	
N (countries)	21	

*** = p < 0.001; ** = p < 0.01; * = p < 0.05

Table 5.1. Empty model.

5.3 Presentation of Results in Model 1-6

	Model 1		Model 2	
Individual level variables	Coefficient	SE	Estimate	SE
Constant	4.147***	.057	4.546***	.061
Income	–5.248***	.001	–3.971***	.002
Ideology			–8.114***	.002
Age			2.074***	.000
Gender			–7.032***	.009
Education			–9.217***	.001
Model Stats				
ICC	.067		.067	
AIC	108206		106760	
BIC	108240		106829	
N (respondents)	39400		39400	
N (countries)	21		21	

*** = p < 0.001; ** = p < 0.01; * = p < 0.05

Table 5.2. Models 1-2.

	Model 3		Model 4 (random slope)	
Individual level variables	Coefficient	SE	Coefficient	SE
Constant	4.733***	1.174	5.062***	5.329
Income	–3.971***	2.105	–3.855***	5.402
Ideology	–8.114***	2.291	–8.076***	2.293
Age	2.075***	2.703	2.098***	2.716
Gender	–7.026***	9.656	–7.178***	9.638
Education	–9.190***	1.416	–9.791***	1.426
Country level variables				
GDP per capita	–4.946’	2.678	–2.493	2.244
Regime type			–3.685	9.164
Unemployment			1.591	1.512
Inequality			–1.562	1.522
Model Stats				
ICC	.060		.071	
AIC	106783		106685	
BIC	106860		106805	
N (respondents)	39400		39400	
N (countries)	21		21	

*** = p < 0.001; ** = p < 0.01; * = p < 0.05; ‘= p < 0.10

Table 5.3. Models 3-4 (random slope).

	Model 5		Model 6 (interaction)	
Individual level variables	Coefficient	SE	Coefficient	SE
Constant	4.157***	.565	5.103***	5.333
Income	–3.971***	2.105	–2.360 *	1.142
Ideology	–8.114***	2.291	–8.076***	2.293
Age	2.074***	2.703	2.106***	2.717
Gender	–7.027***	9.656	–7.186***	9.638
Education	–9.188***	1.416	–9.799***	1.426
Country level variables				
GDP per capita	–4.886	3.135	–3.320 **	2.308
Regime type	-	-	–3.830	9.158
Soc.dem. regime	1.865	1.618	-	-
Unemployment	1.483	1.733	1.580	1.511
Inequality	1.471	1.953	–1.582	1.521
Income*GDP per capita			–3.945	2.673
Model Stats				
ICC	.059		.069	
AIC	106800		106713	
BIC	106903		106842	
N (respondents)	39400		39400	
N (countries)	21		21	

*** = p < 0.001; ** = p < 0.01; * = p < 0.05

Table 5.4. Models 5-6 (interaction, random slope).

5.4 Model Fit

Before assessing the models, some remarks about model fit are seen necessary. A best model fit is a trade-off between the greatest complexity (more variables added) at the same time as explaining variance. In other words, AIC, BIC gives the information needed to compare models and decide upon the best fit. The following regression models are organized gradually in order to separate the effects of specific variables when complexity is added. The best fit is shared between model 4 (random slope) and model 6. Lowest AIC and BIC scores are found in model 4. However, the highest ICC score is also found in model 4 (.071). On the one hand, this means that the variation in welfare state attitudes between the countries are greater than in any other model. On the other hand, lower ICC scores are preferable since this indicates greater explanatory power across the level-2 units. ICC favors model 5 (.059) but this model has not the most preferable AIC and BIC scores. Based on this, I argue that model 6 (interaction) is the most preferable model because it has a more favorable ICC score than model 4, and the

increasement of AIC and BIC scores are minimal compared to model 4[12]. That said, as AIC and BIC are used to compare models, these values are given weight in the choosing of the best model fit (and not ICC).

5.5 Individual Level Results

First, I will assess the results for individual economy, in addition to the control variables of ideology, education, age and gender. Model 1 and 2 in table 5.2 show the individual level variables. Model 6 in table 5.4 shows the individual level variables controlled for all country-level variables. The overall impression is that the individual level results are robust.

5.5.1 Personal Income

In line with the theoretical expectations the effect of personal income on welfare state attitude is negative and significant in all models. The effect is also consistent when controlling for other individual level variables as well as when country level variables are added in model 6 (shown in table 5.4). The predicted effect of income is illustrated below in figure 5.4. In line with theoretical expectations, the results tell us that the lower a respondent's income, the more likely she is to support the welfare state. More specifically, when all else is held constant a unit (decile) decrease in personal income results in a unit increase in the welfare state attitude measurement scale. Since respondents tend to underreport their income, the interpretation of the results might take this into account. In this regard, the effect might be slightly weakened due to this.

To figure out whether the effect of income vary between countries a random slopes term is added in model 4. By specifying that the effect of income shall vary between countries results in a significantly ($p < 0.001$) better fit of the data compared to fixed terms. A random slope term thus increases the explanatory power of the model, and the effect of income is still significant. Running model 4 with random slopes terms (compared to running the same model by fixed terms), leads to a substantial reduction in AIC (decrease of 122). This indicates that

[12] This argument is also based on the fact that ICC, AIC and BIC scores are based on means across all the 25 imputed datasets. By investigating these scores individually reveals that there is very little separating model 4 and model 6 across the 25 imputed datasets.

the effect of individuals' income on the likelihood of supporting the welfare state vary between countries. Moreover, from model 3 to model 4, ICC increases by .011 meaning that model 4 displays more between-country differences. This is important information as this thesis also seeks to explain whether the effect of income varies in countries due to differences in GDP per capita (H3, interaction effect). The random slope term is thus kept for the full (interaction) model (model 6). Moreover, AIC and BIC reduce substantially from the empty model to model 1 and further to model 2. This means that when complexity is added (the control variables), this increases the explanatory power of the model.

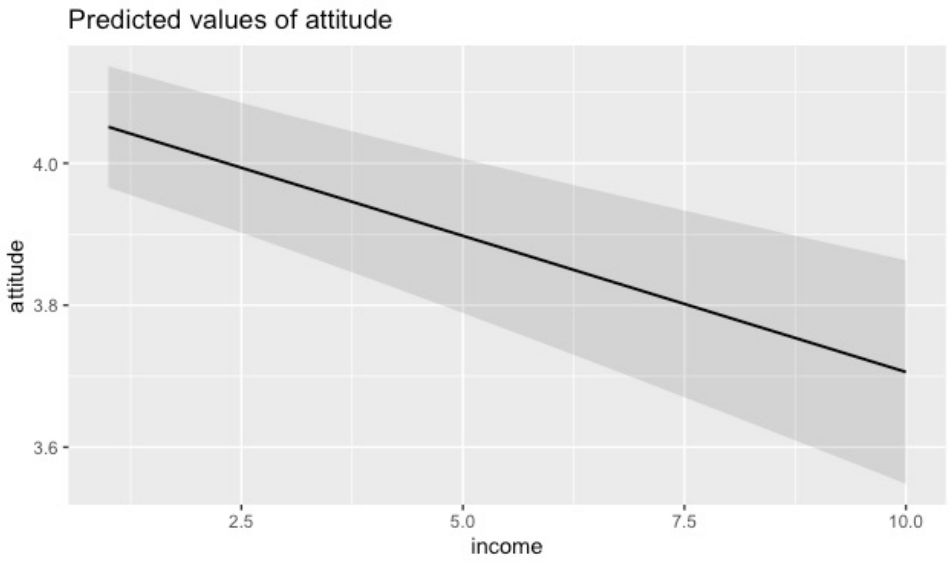

Figure 5.4. Predicted effect of personal income on welfare state attitudes (model 6).

5.5.2 Control Variables

With regards to the control variables, all of them (partly age and education) are in line with the theoretical arguments and statistically significant throughout all models. As expected, the effect of ideology is negative indicating that respondents who position themselves more to the left on the political spectrum are more likely to support the state's responsibility on providing welfare.

Age results in a positive effect in all models indicating that the older a respondent, the more likely the respondent is to support the welfare state. This analysis does not reveal whether this effect is curvilinear or not. The theoretical expectations lead more to the effect being negative as younger cohorts are more associated with post-materialistic values (Inglehart 1977), and that

they expect to gain more from the welfare state (out of self-interest). However, the self-interested argument also points in the direction of older cohorts due to sickness and pensions, and the theoretical expectations can thus be supported.

Gender results in a negative effect in all models implying that women are in general more supportive of the welfare state, as expected.

Lastly, education turns out to have a negative effect, meaning that less education is more associated with welfare state support. This is partly as expected. On the one hand, higher levels of education are argued to enhance egalitarian values and thus the embracement of equality (Pfeifer 2009; Robinson and Bell 1978). On the other hand, from a self-interest perspective, more well-educated people are less dependent on welfare benefits and thus less supportive of it.

One interesting takeaway from the control variable effects is that the self-interest argument holds in the variables of age, gender and education. This might support the overall impression that self-interest is an important theoretical explanation in shaping welfare state attitudes. Moreover, when the control variables are added in model 2, AIC and BIC levels drop quite much meaning that the added variables explain more of the variation in welfare state attitudes. Also, the effects of the control variables are consistent throughout the models when the level-2 variables are added.

5.6 Country Level Results

5.6.1 National Economy

The level-2 explanatory variable of interest, the state of the national economy (GDP per capita), has throughout all models a negative effect in this current data. The effect of GDP per capita is significant in model 6 ($p = .015$). In model 3, GDP per capita is significant at a 10 percent level ($p = .064$), which is recognized as a “loose” significance level in the norms of political science (Kellstedt and Whitten 2018, 165), and thus a significance in doubt.

As demonstrated in section 5.1, the result of GDP per capita on welfare state attitudes is theoretically unexpected. As previously discussed, the trend is not necessarily that countries with higher GDP per capita such as Sweden, Norway and Switzerland, report "low" welfare state support, just lower than other European countries. However, the analysis still contradicts the theoretical expectations of this thesis; increasing country affluence is argued to expand the middle class (modernization theory), increase postmaterialist values, increase the size of the public sector (Wagner's Law) and increase citizens' positive evaluations of the economy (sociotropic evaluations), and accordingly, the publics' support of the welfare state increases.

When adding the GDP per capita variable in model 3, the ICC score drops .007 to .060 meaning that GDP per capita explains a substantially amount of the differences in welfare state attitudes between countries. However, AIC and BIC scores increase meaning that the model 3 adds complexity without explaining more compared to model 2. In model 4, the opposite happens; the ICC score increases to .071, but AIC and BIC scores decrease. This indicates that when adding the control variables more between-countries differences are not necessarily explained, but model 4 has the best fit when considering the effect of GDP per capita. The predicted effect of GDP per capita on welfare state attitudes are shown in figure 5.5.

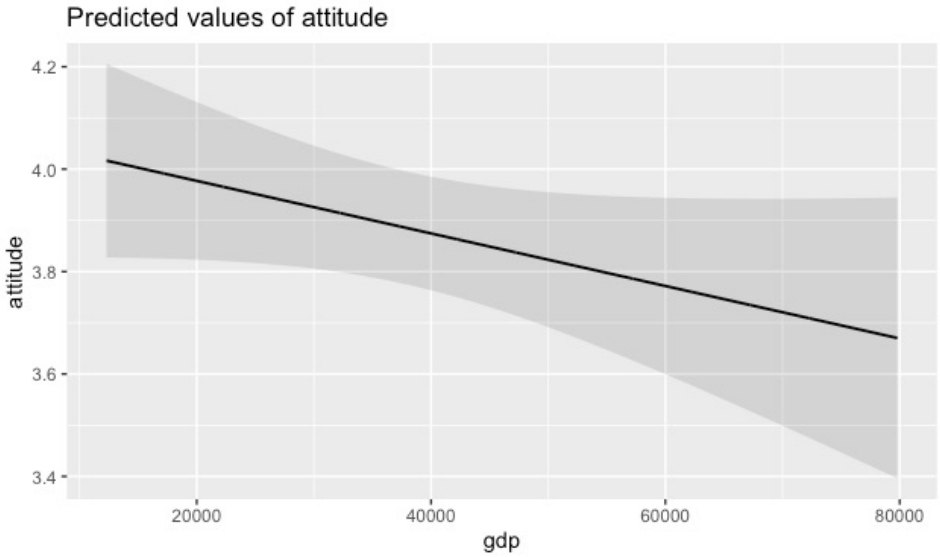

Figure 5.5. The significant effect of GDP per capita on welfare state attitudes (model 6 results).

5.6.2 Control Variables

When considering the level-2 control variables, none of them turned out to be statistically significant[13]. Some of the effects are in agreement with theoretical expectations. First, regime type is negatively correlated with welfare state attitudes, not as expected. The negative effect means that the smaller the size of the welfare state the more citizens will support the welfare state. Smaller welfare states are liberal ones (and to a certain degree conservative ones). However, using the Scandinavian countries as a reference category (model 5) yields other results. Model 5 is run to control for the social democratic welfare state compared to other welfare states. The effect is positive meaning that a social democratic welfare state increases the possibility of generating welfare state support among its citizens. Measuring the size of the welfare state is a more diffuse way of testing regime type, as the liberal and conservative is not so easily separated by size. By radically separating the social democratic welfare state from the rest, I test whether attitudes towards the welfare state might turn out in a different pattern, which it did. However, AIC and BIC scores are considerably higher in model 5, meaning that the models including the regime-variable (by size) have higher explanatory power.

Second, higher levels of unemployment have a positive impact on the likelihood that respondents support the welfare state. Theoretically, this is argued based on rational choice self-interest, and the finding is as expected. Lastly, inequality yields results which are not in accordance with the theoretical propositions (except model 5). Inequality is negatively correlated with welfare state attitudes suggesting that higher levels of inequality decrease the probability that citizens will support the welfare state. However, in model 5 the effect is positive.

5.7 Interaction Term

One central discussion in previous chapters has been whether the economic context in which the individual live influences the effect of individuals' income on welfare state attitudes. The GDP per capita variable is thus tested to check this third theoretical argument of this thesis, namely the micro-macro economy interaction effect. This expectation is put forward based on

[13] I have tried to control for one variable at the time because of the limited degrees of freedom, but this did not result in significance in either of the variables.

the frog-pond theory and relative deprivation and is formulated in H3. In order to allow such a possibility in the analysis an interaction of income and GDP per capita is specified in model 6. As the model with a random slope term turned out to be significantly better than the random intercept term (fixed effect), illustrates that the effect of individuals' income on the probability of supporting the welfare state vary between countries.

The direct effects of income and GDP per capita which constitute the interaction are included in the interaction model in line with advisable methodological procedures (Hox 2010, 63)[14]. In an interaction model the direct effects should not be interpreted as the effects when everything else is kept constant but when the other variable is equal to zero (Hox 2010, 63)[15].

The results of the analytical model are as expected; negative, indicating that the negative effect of personal income is strengthened if the individual lives in a rich country. Put differently, an individual with lower income is more inclined to support the welfare state if the individual lives in a rich country. If the theoretical propositions are correct, this has to do with the feeling of being relative deprived and being "a small frog in a large pond". However, the interaction effect is not within acceptable significance levels ($p = 0.14$). AIC and BIC scores increase in the interaction model (model 6), meaning that complexity is added without explaining more of the variation in the dependent variable. However, the ICC-score drops with .002 indicating that more between-country differences are explained with the presence of interaction. The slopes shown in figure 5.6 illustrate that a small interaction between income and GDP per capita is present. No interaction is recognized by parallel slopes which this is clearly not any case of.

[14] This is grounded in the methodological principle that the direct effects in an interaction model must be interpreted together as a system (Hox 2010, 63).
[15] Since the value "zero" does not exist in the GDP-variable, this is taken care of by centering both explanatory variables on their grand mean before running the interaction model.

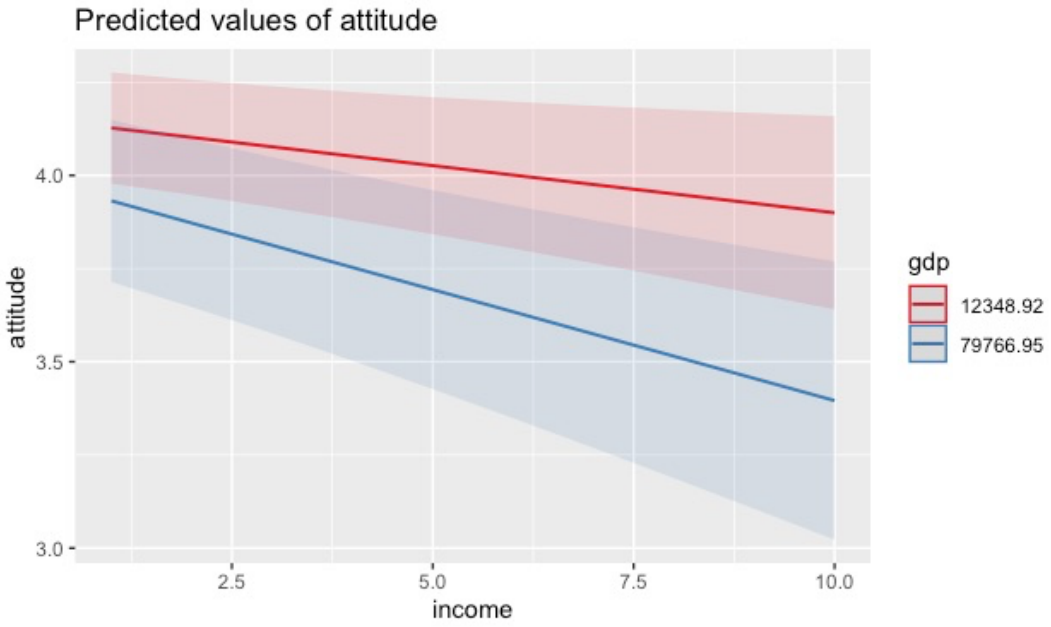

Figure 5.6. Interaction plot of income and GDP per capita over attitude. The GDP per capita values to the right represent the lowest GDP per capita value in red and the highest GDP per capita value in blue.

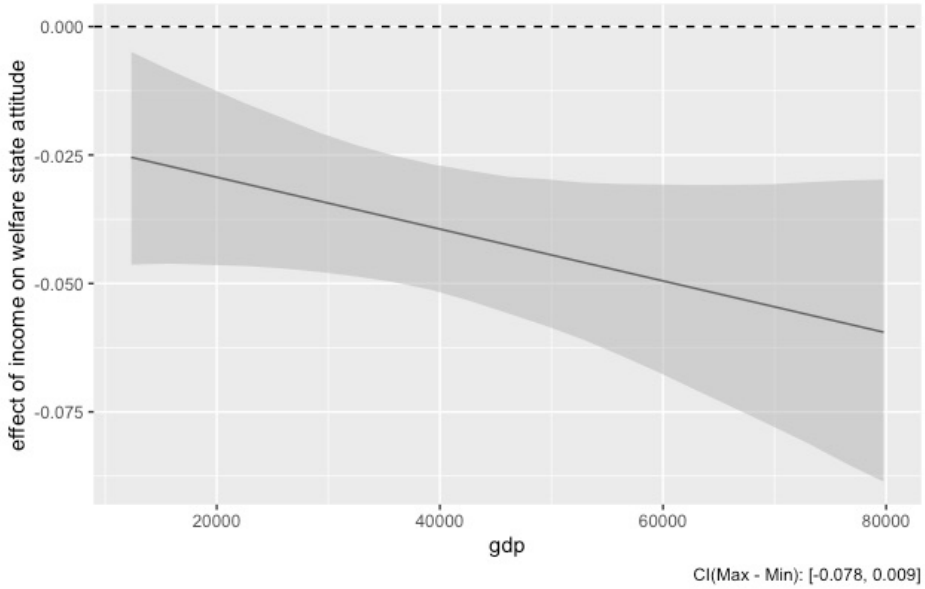

Figure 5.7. Plot of the interaction effect of income*GDP per capita on welfare state attitudes.

5.8 Summary

To summarize the results, linear correlations of economic conditions and welfare state attitudes were found in all of the analytical models. First and foremost, the effect of personal income is shown to have the most reliable correlation. Second, the economic context measured by GDP

per capita suggested the opposite theoretical expectation being significant in model 6. Third, the cross-level interaction effect is correlated with the dependent variable, but not significant. In sum, these results give substantial support for the rational choice assumption that economic self-interest is an important determinant in shaping individuals' attitudes towards the welfare state. However, the theoretical and analytical implications of the results are discussed more thoroughly in chapter 6. First, robustness checks of the results are presented.

5.9 Robustness Checks

Three diagnosis procedures were run to check the robustness of the results. First, the analysis was run with an ordinal treatment of the dependent variable in a logistic regression, compared to the continuous treatment used in this analysis. A comparison of the results shows very close similarities[16]. Second, a model based on listwise deletion of missing data was applied. The listwise deletion model is very similar in terms of effects and significance. But the effect of GDP per capita is not significant in the listwise deletion model 6 meaning that ignoring the use of multiple imputation in this case could by best means result in a type-II error. Overall, the multiple imputations method does to some extent improve the robustness of the results, but not much. Third, a convergence diagnosis of the multiple imputation procedure did not show any problems with convergence as there are little signs of trends and the streams intermingles well with one another[17]. All of the robustness checks are displayed in the appendix. The results from the ordinal logistic regression model 6, and the multilevel regression model 6 using listwise deletion is found in appendix C, table C.1. A plot of the convergence diagnosis is shown in appendix A, figure A.1.

Moreover, the robustness of the individual level results including control variables are stronger than the level-2 results. They are significant throughout all models. However, the positive and significant GDP per capita correlation on welfare state attitudes in model 6 are an important takeaway from the results. The negative interaction effect between income and GDP per capita

[16] The differences are mainly concentrated on the effects of some variables, such as age turns out positive but not significant in any of the models in the log.reg. Moreover, in model 6, welfare regime, inequality and the interaction effect turn out positive as compared to the main analytical model. ICC, AIC and BIC scores follow the same pattern in both procedures.

[17] In addition, the Rhat values are very close to 1 in every variable. See appendix A, table A.1 for an overview of the Rhat values.

are not found significant making inferences based on these results less stable. In sum, the rational choice self-interest explanation demonstrates the most robust results.

6 Discussion and Conclusion

To what extent can economic conditions explain attitudes towards the welfare state? The purpose of this study has been to discover and uncover exactly that question. The last chapter of this thesis focus upon a) reviewing and discussing the theoretical expectations and the related results from the empirical analysis, and b) bring to the fore the theoretical and analytical implications of this study, and c) with this, answer the research question.

6.1 To What Extent Can Economic Conditions Shape Welfare State Attitudes?

Chapter 2 presented the theoretical arguments of how and why economic conditions might determine individuals' welfare state attitudes. First, the rational choice self-interest argument goes as follows: individuals maximize expected payoffs. When the expected benefits from the welfare state outweigh the expected costs, an individual is more likely to support welfare state policies. Low-income earners have greater expected benefits from welfare, and likewise, high-income earners have their expected welfare benefits outweighed by the expected cost of maintaining the welfare state. To follow the logic from the MR-model; when the individual's income is expected to receive less than the median income, she will have a self-interest in benefitting from redistributive policies. Second, the economic context argument goes as follows: as a society becomes wealthier this a) leads to an expansion of a more liberal middle class recognized by showing strong support for democratic principles and redistributive policies, b) results in a postmaterialist value change and the postmodern society, including a desire for sustaining the welfare state, c) increases public expenditures and expand the state functions as the demand for social and economic provision rises (Wagner's Law), and d) affects the publics' sociotropic judgements of the national economy in a positive direction, resulting in a collective perception that the welfare state has delivered good outcomes, which again fuels the overall welfare state support.

Lastly, the cross-level theoretical argument goes as follows: citizens are influenced by the economic context in which they live and compare themselves to a standard of reference. Thus, it is important to consider whether an individual is better or worse off relative to her fellow citizens. In richer countries, the general population are better off possibly resulting in the fact that poorer individuals feel more deprived. This is argued through the relative deprivation

theory. The “smaller” (in terms of economic resources) an individual feels, the stronger the negative effect of income on her welfare state attitude.

The results from the empirical analysis have proven to be somewhat mixed from the theoretical expectations. I will discuss the expectations and their related findings one by one.

6.1.1 Individual Level Economy

Beginning with the economic conditions on the individual level, citizens with lower income are seen to express more support for the welfare state across European countries. The relationship has indisputably been proved to be the most convincing evidence in the analysis, and through all robustness checks and analytical models the relationship is still significantly and negatively correlated. In addition, economic context taken into account, the negative relationship upholds.

Furthermore, the negative and significant effect of the closely related indicator, namely education, adds to the overall support of the self-interest hypothesis. Likewise, the negative and significant effect of gender, indicating that women, out of self-interest are more in the need of welfare state benefits. However, the negative and significant control variable of ideological affiliation might indicate that there are other forces at play than economic self-interest; a greater affiliation with left-oriented politics increases the probability of supporting the welfare state, which either can be indirectly or not related to income at all. Indirectly meaning that poorer people in general are more affiliated with left-oriented politics, or non-economically that left-oriented citizens are more driven by non-economic forces such as altruism.

This thesis does not disregard the fact that richer individuals also support the welfare state. Reasons might be such as altruistic motivations, grounded in ideological affiliations or desires for insurance over life cycles risks. However, this is not the pattern found in the empirical analysis.

In brief, this study gives substantial support to the rational choice literature that a conclusive determinant in shaping welfare state attitudes is economic self-interest. This finding is indeed in accordance with a large body of studies on welfare state attitudes.

6.1.2 Country Level Economy

With regards to economic conditions on the country level, the tendency goes in the opposite direction than expected. The correlation between national wealth and welfare state attitudes are found to be negative and significant in two analytical models. As pointed out in chapter 5, Iceland is the only country with high levels of welfare state support and high GDP per capita. The overall result is somewhat ambiguous because the effects of GDP per capita is not as significant in the robustness checks compared to the main analysis. Czechia is the only country where lower-income earners are more associated with lower welfare state support. It is not easy to speculate in this thesis why the countries of Iceland and Czechia end up like this, but it is not to exclude that this may be affected by country characteristics.

This thesis has argued that attitudes towards the welfare state are expected to increase as the countries reach higher levels of economic wealth. However, this is not necessarily expected as a result from wealth in its limited sense, but because of wealth's consequences on modernization and the expansion of the middle class, a postmaterialist-value change, the increasement of public expenditures and a collective sociotropic positive evaluation of the welfare state effectiveness – which leads to a collective desire and demand for a welfare state. If these consequences are not present, economic growth cannot be argued to increase welfare state support. On this occasion, it is important to note that most of the richer countries in the sample have enjoyed high GDP per capita rates over a long period of time. Hence, the countries are argued to be quite modernized and postmodern. However, the interesting part was to compare them to the poorer countries of Europe, to see if there exists a positive effect of economic wealth. In this regard, this study cannot be argued to support the arguments presented by the modernization theory, postmodernism, Wagner's Law, or the sociotropic explanation. The possibility of a positive but diminishing effect of national wealth on welfare state attitudes might be considered relevant, but has not been discussed nor investigated under the scope of this thesis. Perhaps in the early phase of high national income one could witness more broad welfare state support, but over time it might change in the other direction. Several mechanisms might be at play in this regard. Examining a glimpse of a single year, as in this case, might not be enough to capture a possible positive effect of national wealth in determining welfare state attitudes. In the end, attitudes are not static but dynamic.

Based on the above discussion, one last-standing argument still theoretically stands strong, but is not supported by the empirical results; the sociotropic collective judgement which during a well-performed economy reward policies that seem to have furthered the economic conditions of the country, hereunder that the welfare state has delivered good outcomes. Hence, welfare state support increases. The sociotropic argument is presented as a contradiction to the argument of self-interest. In the end, the study support self-interest over sociotropic evaluations in shaping welfare state attitudes.

After all, the results indicate that increased economic wealth decreases welfare state support. Indeed, this is in line with what several other scholars' find (as discussed in 2.4.6.); in worse-off economies, and during economic crises, people tend to be more favorable towards the welfare state (Blekesaune and Quadagno 2003; Jæger 2013). According to the governmental protection hypothesis, citizens believe that the state should have greater responsibility for social and economic provision as well as reducing income inequality when the country faces harder economic times (Blekesaune 2007). In the opposite direction, both Alt (1979) and Durr (1993) argue that during worse economic times, people tend to be less generous and altruistic in their policy choices when their personal income become worse. Thus, they become more self-interested. It could be argued then, that the country level economy-results of this analysis point in the opposite direction than self-interest. Put differently, under worse economic conditions, people express higher levels of welfare state support, indication a concern for others. However, it could also be argued that during worse economic conditions a larger number of people are in the need of welfare provision, which again supports the self-interest argument. It would not be far-out to presume that the finding from this analysis points more in the direction of the last assumption.

6.1.3 Cross Level Economy

The results from the micro-macro-level interaction are the greatest weakness of this study, while at the same time the most interesting. In this thesis it has been argued that studies focusing on micro-macro-economic dynamics in welfare state attitudes has somewhat been limited. Moreover, as research explicitly applied to multilevel approaches investigating the "frog" within the "pond" in the economic case has been somewhat neglected, the opportunity was not to be missed in this study. On this occasion, this thesis has tried to fill a gap. The results show

that the negative effect of income on welfare state attitude is slightly strengthened when individuals live in richer countries. This is an interesting finding. Put differently, this illustrates that lower income individuals living in richer countries show a higher tendency of supporting the welfare state. One could argue that self-interest is present also here, but the underlying driving force might be relative deprivation and the feeling of being a "small frog in a large pond". Although the results are as expected they are unsatisfactory with regards to significance. However, this does not mean that a possibly negative effect is present.

Overall, an explanation to why poorer individuals in richer countries have a greater probability of supporting the welfare state than richer individuals, might be due to a stronger feeling of being deprived in richer economic contexts. Poorer individuals living in richer countries will to a larger extent justify that "the others" will be capable of paying for them, and will simply out of self-interest in welfare provision support the welfare state. This finding underscores the importance of taking into account the environmental conditions that individuals are nested within. However, there are some unanswered questions related to the attitudes of richer individuals living in poorer countries, compared to richer individuals living in richer countries. The scope of this study has focused upon the negative effect of individual income and investigates whether this effect intensify in richer economic contexts.

6.2 Implications for Hypotheses

Based on the empirical analysis and the internal results discussed in the above section, the implications for the hypothesis are shown in table 6.1. Overall, one hypothesis is supported, and two rejected.

	Hypothesis	**Assessment**
Individual level	H1 *Income is negatively related to welfare state support.*	Supported
Country level	H2 *National wealth is positively related to welfare state support.*	Not supported
Cross level	H3 *The negative effect of personal income on welfare state attitude is strengthened if the individual lives in a rich country.*	Not supported

Table 6.1. Internal analytical assessments of the hypothesis.

6.3 Research Implications

This study has been somewhat in agreement with theoretical expectations. As welfare state support legitimizes government responsibility for social welfare it is crucial to understand what causes this support. Investigating the *a priori* assumption of economic self-interest both isolated and in relation to national economic considerations has provided interesting results. The study follows into the ranks of confirming the classical rational choice theory of self-interest, while at the same time underscoring the importance of economic context. As demonstrated, there are theoretical and empirical reasons to believe that attitudes towards the welfare state are influenced by economic conditions including the dynamics of micro-macro level economy. The thesis has not focused upon all possible economic explanations, but has indeed captured some important ones.

With relevance to both external and internal validity, a drawback that has to considered is the relatively low number of countries in the analysis. Likewise, the somewhat similarity in welfare state attitudes across countries makes the reliability of the results slightly weakened.

The use of multiple imputation in handling missing data, especially on the high missing data rate on the income-variable, has made it possible to generate more accurate non-biased results. As the use of listwise deletion in handling missing data is widespread, I underscore that awareness of the potential problems related to such an approach is crucial. With this, I encourage the method of multiple imputation. The field of social sciences can greatly benefit from statistical methods such as multiple imputation that enable more precise predictions.

6.4 Suggestions for Further Research

The results and shortcomings of this thesis imply some interesting directions for future studies. As European welfare state attitudes are shown to be similar, studies should focus upon bringing out the differences. Further, to increase the external validity, including a larger number and a wider spectrum of different countries outside Europe would be preferable in future studies. Including a larger country-level sample would facilitate a better understanding of macro-level explanations as well as cross-country effects in shaping attitudes towards redistribution and the welfare state. It would also increase the possibility of to a greater extent investigate the effects of richer individuals in richer contexts compared to richer individuals in poorer contexts.

Moreover, the specific results of this thesis rely entirely on quantitative methods, as a large amount of research on welfare state attitudes indeed does. In order to explore causal mechanisms better in the relationship between economic conditions and welfare state attitudes, qualitative methods should be more approached.

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Appendix

Appendix A: Convergence Diagnosis

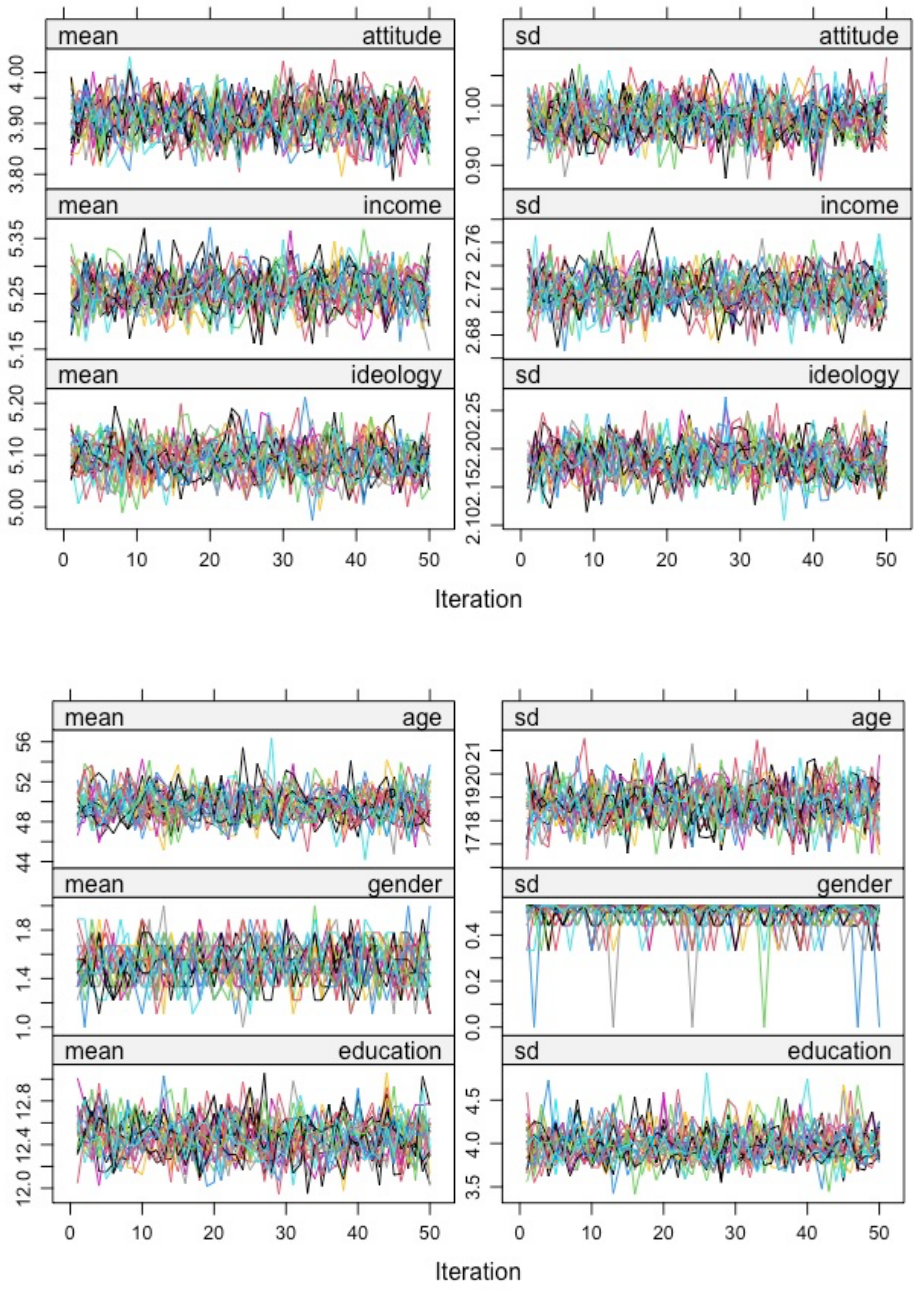

Figure A.1. Mean and standard deviation of the synthetic values plotted against iteration number for the imputed data.

Variable	Rhat values
Welfare state attitude	1.004
Income	1.000
Ideology	1.004
Age	1.005
Gender	0.997
Education	1.002

Table A.1. Rhat values of the imputation procedure.

Appendix B: Multicollinearity Check (VIF-scores)

Variable	VIF Scores Model 6
Income	4.89
Ideology	1.00
Age	1.04
Gender	1.00
Education	1.06
GDP	1.28
Welfare regime	1.39
Unemployment	1.88
Inequality	1.86
Income*GDP per capita	4.92
Mean VIF	2.03

Table B.1. VIF scores in model 6.

Appendix C: Robustness checks

	Model 6: Listwise Deletion		**Model 6: Ordinal Log.Reg.**	
Individual level variables	Coefficient	SE	Odds Ratio	SE
Attitude	5.015***	5.693	5.814**	1.802
Income	–1.902***	1.383	0.903***	.016
Ideology	–8.546***	2.573	0.790***	.009
Age	2.613***	3.233	0.998	.002
Gender	–9.045***	1.106	0.683***	.083
Education	–9.217***	1.601	0.961***	.011
Country level variables				
GDP per capita	–2.392	2.399	0.846	.189
Regime type	–3.173	9.754	1.006	.188
Soc.dem. regime	-	-	-	-
Unemployment	1.927	1.616	1.025	.209
Inequality	–1.607	1.624	1.034	.061
Income*GDP per capita			1.007	.015
Model Stats				
ICC	.075		.124	
AIC	79358		5654.13	
BIC	79482		5753.52	
N (respondents)	29216		29216	
N (countries)	21		21	

*** = p < 0.001; ** = p < 0.01; * = p < 0.05

Table C.1. Results from diagnosing procedures. The results from the best fitted model (model 6) are plotted. Note that the regression coefficients in log.reg. are converted to odds ratio (except attitude).