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Abstract

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The Impact of Capital Mobility on Political Representation:

An analysis of changing welfare policies

"The Impact of Capital Mobility on Political Representation: An analysis of welfare policies"

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Executive Summary

The existing literature has consistently shown that policy outcomes in representative democracies tend to disproportionately reflect the interests of the affluent, creating a significant inequality in political influence. Potential explanations to account for the observed disparities have been explored but fall short of fully explaining the persistent bias in favor of the rich. This study aims to address the underdeveloped research on structural economic conditions as potential drivers of differential policy responsiveness. Specifically, it investigates the influence of capital mobility on the relationship between income groups' preferences and subsequent changes in welfare policies. By focusing on changes in welfare generosity rather than mere spending, this study captures the actual changes in welfare policies.

Contrary to expectations, the findings show that capital mobility does not increase the influence of the rich in shaping welfare policies. Instead, as capital mobility rises, the preferences of the least affluent have a greater affect in determining welfare generosity. However, even when there is large consensus among the least affluent for higher welfare expenditure, it does not result in welfare expansion when capital is highly mobile. Instead, the extent to which the least affluent demand welfare only limits the effect that capital mobility has on welfare retrenchment. Although the welfare changes only depend on the preferences of the least affluent under high capital mobility, the resulting welfare outcomes do not better represent their interests.These findings highlight the systematic influence of structural economic conditions on the relative influence of different income groups. Moreover, they emphasize the need to examine how the preferences of income groups interact with the effects of capital mobility on fiscal policy outcomes. While existing literature has examined the impact of capital mobility on fiscal policy changes, there has been insufficient focus on understanding how income group preferences modify these effects.

Introduction

Much of the literature that assessed to what extend policy outcomes correspond to the interest of different income groups finds that the rich seem to enjoy a highly disproportional influence in determining political outcomes (Gilens, 2005; Bartels, 2015; Elsässar et al., 2020; Schakel et al., 2022). Gauging the preferences of different income groups towards proposed policy changes, Gilens (2005) found that whenever the preferences of different income groups diverge, policy outcomes strongly reflect the preferences of the rich whereas they hardly ever reflect the preferences of the poor or middle-income US citizens. Gilens (2005) argued that such extreme form of political inequality is likely to be driven by the role of money in US politics. Given the severity of these findings, a new branch of research has recently evolved and investigated to what extend unequal responsiveness exists outside the US. Academics observed remarkably similar results of differential responsiveness in favor of the rich in various European countries (Lupu & Warner, 2022; Schakel et al., 2020; Peters & Ensink, 2015). Based on the similarity of unequal responsiveness, scholars have heavily questioned institutional differences such as private campaign finance and the direct influence of private money in politics as the main causal mechanism to explain why policy outcomes heavily reflect the interest of the rich (Elsässer et al., 2020).

In search for alternative explanations, scholars discovered several factors that contribute to differential policy responsiveness; yet, these factors remain unable to account for the strong similarity of affluent bias in political outcomes. Investigating the impact of partisanship on representational income bias, academics found that partisanship heavily mediates the representational gap between the preferences of the rich vis-à-vis the poor (Mathisen et al., 2021; Lax et al., 2019). Although partisanship diminishes the representational bias in favour of the wealthy, it continues to exist even under left-leaning parties. Peters und Ensink (2015) explored the effect of electoral participation on unequal policy responsiveness and found that lower levels of turnout can to some extent explain the degree to which policy responsiveness is biased. However, given that European nations have less income inequality, stronger labor unions, higher turnout rates, and depend less on private campaign finance, the question, why researchers observe such a similar degree of affluent bias in Germany and Denmark compared to the United States, remains unsolved (Elkjaer & Klitgaard, 2021).

Although the literature has extensively investigated institutional as well as political characteristics to explain unequal policy responsiveness, only one paper has assessed to what extend structural economic conditions translate into the frequently observed pro-rich bias. Elsässar and Haffert (2022) discovered that when the interest burden rises, the influence of the rich diminishes as governments appear to be equally unresponsive to all income groups. Whilst interest burden is not able to explain unequal policy responsiveness, the study has shown how the influence of different income classes can be dependent on structural economic conditions. Specifically, policymakers appear to be unable to respond to the interest of citizens under certain types of economic conditions.

Prominent academics argue that capital mobility has also infringed a governments’ ability to act in the interest of its citizens (Piketty, 2014). Instead of responding to citizens demands, governments also choose their economic policy to attract capital and investment, when capital mobility is high. Based on the structural dependence of policymakers on capital, higher capital mobility influences policymaker to implement policies that are more aligned to the interest of capital (Gill, 1988). Accordingly, this paper hypothesis that capital mobility can explain why political outcomes heavily reflect the interest of the rich.

To assess this, this paper investigates the degree to which the preferences of the rich median and less affluent citizens are related to subsequent changes in welfare policies for various levels of capital mobility. Instead of examining changes in welfare spending that are heavily shaped by economic conditions, this paper assesses the changes in welfare generosity which better capture the actual changes in welfare policies. To focus on the impact of each income group at different levels of capital mobility, the research implements three random intercept models to control for potentially confounding country-specific characteristics.

Contrary to the expectation, this paper shows that capital mobility does not increase the influence of the rich in determining welfare policies. Instead, the models show that when capital mobility rises, the comparative influence of the least affluent in affecting welfare generosity increases. When capital mobility is low, the preferences of the poor have practically no influence on the changes in welfare generosity. As capital mobility rises, changes in welfare are largely conditional on the preferences of the poor. However, with rising financial flows, the extent to which the least affluent demand more welfare expenditure, never results in welfare expansion, but instead, only limits the extent to which welfare is reduced. The interest of the least affluent appear to be essential in limiting the effect that capital mobility has on welfare retrenchment. Whilst the influence in affecting welfare policy grows, the least affluent are better ‘coincidentally’ represented when capital mobility low.

The models' findings provide some valuable insights for the research on unequal responsiveness and capital mobility. Assessing changes in welfare legislation, we find that capital mobility does not result in unequal policy responsiveness in favor of the rich. However, the paper shows how the influence of different income groups in a policy domain can vary depending on structural economic conditions. The models also show that the effect that capital mobility has on welfare retrenchment, is largely dependent on the extent to which the least affluent demand welfare compensation. While a lot of literature has examined how capital mobility affects fiscal policy, social spending, and the size of the government (Liberati, 2007; Mosley, 2005; Clift, 2004; Rodrik, 1998), there appears to be a gap in the literature that assess how preferences of different citizen groups might interact with the impact that capital mobility has on fiscal policy outcomes. The findings suggest that the interaction of structural economic factors and citizen interests may provide important new insights into how political outcomes are formed in capitalist democracies.

The rest of the paper is structured as followed: First, the paper provides a comprehensive review of the causal mechanisms that have been examined to explain the observed disparities in policy responsiveness. The paper highlights the underdevelopment of the existing literature concerning structural economic conditions, and subsequently investigates the extent to which capital mobility influences policymakers in implementing policies that are more aligned to the preferences of the affluent. In the methodological section, the current study examines how capital mobility is operationalized before discussing the data and models used to investigate the research question. Subsequently, this paper interprets the findings of the models in light of the existing literature and concludes by identifying and discussing the limitations of the study.

Literature Review

Policy Responsiveness

In recent years, academics have investigated to what extent policy outcomes reflect the preferences of different income groups to draw conclusions about political inequalities stemming from the influence of money on political power. Martin Gilens (2005) was the first to gauge the preferences of different income groups towards proposed policy changes based on large amounts of survey data. He found that whenever the preferences of different income groups diverge, policy outcomes strongly reflect the preferences of the rich whereas they hardly ever reflect the preferences of the poor or middle-income US citizens. The authors elaborates that the structural dependence of political parties to finance political campaigns as well as the lobbying by corporations and corporate interests to be the potential mechanism that explain why policy outcomes disproportionately reflect the interest of the rich (Gilens & Page, 2014).

Given the severity of these findings a new branch of research has recently evolved led by political scientist who applied different variations of Gilen’s methodological approach, correlating the preferences of various social classes towards political outcomes (Elkj & Iversen, 2020.; Elsässer et al., 2020; Lax et al., 2019; Lupu & Warner, 2022; Schakel et al., 2020). The new wave of research has put forward further evidence of unequal policy responsiveness enriching the literature in terms of breadth and scope. Several studies have contributed to the breadth of the existing literature by analyzing whether unequal policy responsiveness exists in various countries outside the U.S. (Lupu & Castro, 2022; Lupu & Warner, 2022; Peters & Ensink, 2015; Schakel et al., 2020, Elsässer et al., 2020; Schakel, 2021) whereas other studies broadened the scope of the unequal policy responsiveness literature by focusing on educational and occupational inequalities (Elsässer et al., 2020; Schakel & Van Der Pas, 2021).

Examining the impact of the preferences of different social classes, Elsässar et al. (2020) find a strikingly similar pattern that show how policy outcomes correspond to the preferences of the richest ten and one percent of the income distribution, whereas the preferences of the median and the poor do not seem to be statistically significant in deciding whether a policy is implemented or not. The authors conclude that institutional differences such as private campaign finance and the direct influence of private money in politics cannot solely explain why policy outcomes disproportionately reflect the preferences of the rich, since political campaigns are largely publicly funded in Germany. Therefore, the representational bias must go way beyond large private donations, as previously has been continually argued for the U.S. (Elsässar et al., 2020). Studies in other European countries including in Spain (Lupu & Castro, 2022) and in the Netherlands (Schakel, 2021) have found similar evidence that underlines the fact that representational bias is not a U.S. specific phenomenon and questions private campaign finance as the main causal driver behind unequal policy responsiveness. Given that all countries operate in political systems with heterogenetic institutional characteristics, the similarity of representational bias in favour of the rich is somewhat puzzling.

Other factors that could potentially explain what has been driving such bias have been explored by several authors. Peters und Ensink (2015) explored the effect of electoral participation on unequal policy responsiveness, testing whether higher participation in elections promotes more equal policy responsiveness. The idea behind this is that citizens that do vote are better represented than those who don’t, consequently policy outcomes are more likely to correspond to the preferences of voters. When investigating political participation, researchers have consistently identified income as a significant factor that influences voter turnout (Marien et al., 2010). It follows logically that such structural inequalities in participation may also contribute to disparities in policy outcomes. Accordingly, Peters und Ensink (2015) tested whether higher levels of turnout is associated with more equal responsiveness using a time series dataset with 25 European countries. The authors finds that the overall level of turnout can indeed partly explain the degree to which policy responsiveness is biased, although the systemic difference of the overrepresentation of high-income citizens does not disappear (Peters & Ensink, 2015).

Based on the similarity of unequal responsiveness that has been observed in countries with heterogenous institutional settings, scholars have brought forward strong evidence that questions the overall interpretation behind the strong correlation between the preferences of the rich and policy outcomes. These authors argue that the reason why policy outcomes heavily reflect the preferences of the rich is not due to any kind of instrumental or structural power that wealthier citizens enjoy to impact political decision making, but instead, that the wealthier peoples’ preferences tend to be based on more accurate information about political and economic conditions and therefore appear to more aligned to the overall political situation of the state (Elkjær & Iversen, 2020).

Elkjaer and Iversen (2020) illustrate, through simulations, that if political knowledge differs among groups, one might receive biased findings when investigating preferences for change and policy changes. Even though the middle class is politically significant and determines the long-run level of a policy, statistical models can yield the outcome that only the affluent's choices matter, if the rich are more informed than the lower and middle classes. To eliminate bias, they advise investigating long-run policy levels rather than short-term adjustments. Elkjaer and Iversen (2020) use data from 21 advanced democracies to test their claim on redistribution and social expenditure preferences. The findings are coherent, indicating that while short-term variations in spending appear to have been driven by the choices of the wealthy, long-run levels appear to have been determined by the preferences of the middle class.  
  
In attempt to understand the underlying mechanism that drives policy responsiveness, Elkjær (2020) investigates to what extend economic elites are dominating the democratic decision making in Denmark and found a puzzling similarity to previous studies in the United States and Europe that shows how political representation increases monotonically with income. The Danish political system bears the most favourable condition for political equality based on some of the highest levels of redistribution and economic equality, a high turnout rate in elections averaging around 86% as well as state funded political parties; therefore, the author rules out such causal mechanism that were previously assumed to be driving unequal responsiveness, but instead, argues that unequal responsiveness may only reflect asymmetries in information (Elkjær, 2020). The author elaborates that the affluent are more involved in political decision and face a higher incentive to be well informed on political and economic issues. Specifically, Elkjaer (2020) finds that the affluent are much more likely to engage in political discussions in comparison to the poor, even after controlling for the overall level of education. Proponents of the informational asymmetries consequently argue that when government adopt optimal fiscal policies, the affluent will update their preferences more in line to such policies, leading to coincidental representation of the rich, instead of, as many scholars claim, a causal mechanism through which higher income of citizens results in more political power. Concluding, the authors state that information conditions preferences, and as long as information is rising with higher income, informational asymmetries will ultimately translate into unequal policy responsiveness.

Whilst there is reason to believe that political information does rise with income, the results of studies that have investigated the impact of partisanship, heavily question whether differences in information can solely explain why policy outcomes heavily reflect the interest of the rich (Mathisen et al., 2021; Schakel & Burgoon, 2022). Given unequal policy responsiveness is investigated within representative democracies, in which elected officials ultimately decide political outcomes, the political orientation of the elected would intuitively seem a deciding factor that conditions which specific policies are being implemented. Arguably, one might assume that left leaning parties that are generally associated with a higher preference for redistribution might be more aligned to the preferences of the lower income population. Assessing the impact of partisanship on representational income bias, Lax et al. (2019) challenge the common perception of exaggerated wealthy influence. Their findings indicate that partisan alignment holds more weight than financial status when it comes to shaping policy outcomes. As a result, the authors conclude that partisanship generates, modifies, and constrains rich influence (Lax et al., 2019).   
  
Investigating the effect of government partisanship in Germany Sweden Norway and the Netherlands, Mathisen et al. (2021) find that the representational gap between the preferences of the richest 10 percent and the poorest 10 percent is heavily mediated by the number of cabinet seats that left-wing parties hold. Specifically, the authors observe that when Left parties hold all cabinet seats, there seems to still be a slight bias in favour of the wealthier citizens, however, when Left parties hold no cabinet seats, the bias in favour of the affluent grows substantially (Mathisen et al. 2021). The authors additionally question whether the 1990s reorientation of Social Democratic parties resulted in a decline in policy responsiveness to the desires of low- and middle-income individuals under Left government involvement. The reorientation of social democratic parties in the 1990s, often referred to as the 'Third Way', was characterised by a move away from traditional left-wing ideologies towards a more liberal, market-friendly approach, associated with greater reliance on market mechanisms to promote economic efficiency, limit public deficits, reduce redistributive policies, and make the labour market more flexible (Green-Pedersen et al., 2001). Interestingly, Mathisen et al. (2021) found that before the reorientation of social democratic parties (between 1960 and 1998), left-wing governments were equally responsive to the preferences of low and middle income citizens on economic and welfare issues, but after the 1998 period, the effect of partisan conditioning on policy responsiveness disappears with regards to economic and welfare issues.   
  
The evidence brought forward brings in to question to what extend unequal policy responsiveness is merely driven by asymmetries in information. As the authors argue, why should the wealthy be less informed to elite discourses under Left-leaning governments, and particularly, if it would be information that drives policy responsiveness, why would low- and median-income citizens be better informed about economic and welfare issues before the 1990s (Mathisen et al. 2021).

In sum, partisanship and political orientation does seem to play an important role in conditioning the effect that income has on political outcomes. However, whilst the representational bias in favour of the affluent seems to be mediated by partisanship, it continues to exist even under left-leaning parties.

In a meta-study of 25 studies with over 1163 estimates of responsiveness, Elkjaer and Klitgaard (2021) find that the collective research generally suggests that policy outcomes are more in line with the preferences of the rich, but that the results of the estimates vary quite significantly. The divergence can partly be explained by partisanship, but more crucially by model specification: differences in responsiveness are far more pronounced when analysed in a statistical model that combines the preferences of various income groups, rather than using separate models for each income group. Specifically, when the preferences of high- and low-income groups are incorporated in the same statistical model, the most severe types of differential responsiveness, where the coefficient of the affluent is positive (and significant) and that of the lower-income group is negative, are twice as likely to be detected, suggesting that the multivariate model is inadequate for accurately representing degrees of differential responsiveness when preferences are highly correlated (Elkjaer and Klitgaard, 2021).

So far, there has been very little evidence that unequal responsiveness in favor of the affluent varies across political economic contexts (Bartels, 2017). Indeed, the similarity of findings across the United States and other countries is still puzzling most researchers up to date (Elkjær & Klitgaard, 2021; Elsässer et al., 2020.; Mathisen et al., 2021). Elsässar et al. (2020) argue that the fact that we observe unequal responsiveness in countries such as Germany and Sweden, heavily questions the relevance of campaign finance as the primary source of unequal representation globally; one would expect less unequal responsiveness in countries where elections campaigns are financed by public subsidies. Other scholars argue that the same argumentation holds for electoral participation as a causal mechanism that drives unequal responsiveness, as Sweden, Germany, Denmark and the Netherlands have higher participation in elections, however policy responsiveness does not appear to differ significantly (Mathisen et al., 2021).   
  
Investigating the literature of unequal responsiveness, Elkjr and Klitgaard (2021) agree that it remains perplexing to see such similar degree of affluent bias in Germany and Denmark compared to the United States, given that the European countries have less income inequality, stronger labor unions, higher turnout rates, and rely less on private campaign finance. The authors argue that although partisanship seems to be a crucial factor that can explain some of the extend of affluent bias, the observed differences in income biases across Democrats and Republicans are much smaller than theories of democracies would predict. Finally, whilst much literature has found substantial evidence to show the extent of which policy outcomes reflect the preferences of different income groups, the remains a significant gap in the literature which elaborates the causal mechanism that can explain why policy outcomes correspond so strongly to preferences of the affluent.

To answer why policy outcomes seemingly reflect the interest of the rich, the literature has primarily focused on institutional (e.g. reliance on private campaign finance) and political differences (e.g. partisanship & voter turnout) between and within countries. However, so far there remains a gap in assessing the role of structural economic conditions that underly capitalist democracies. Assessing the role of fiscal constraints on policy responsiveness in Germany, Elsässar and Haffert (2022) have found that fiscal pressure heavily reduces policy responsiveness for all income groups. The authors assumed that fiscal pressure reduces the governments' ability to respond to the preferences of the poor more than affluent preferences, given their greater reliance on public social protection and social spending. However, the authors find that fiscal pressure diminishes the influence of all social groups, whereas when fiscal pressure declines, policy outcomes are more aligned to higher status social. Therefore, the authors conclude that inequality of responsiveness is not a result of fiscal pressure, but instead, the bias is more pronounced whenever states have more capacity to respond to the preferences of specific interest groups. Nevertheless, structural economic conditions seem to tell an important story about how responsive policymakers are to citizens demands.  
  
To limit fiscal pressure, governments, theoretically, could reduce the dependence on debt by raising taxes. However, some scholars argue that the increased mobility of capital has restricted governments capacity to tax (Genschel & Schwarz, 2013). Schwank (2015) argues that increases in capital mobility force governments, regardless of their political ideology, to lower levels of taxation for mobile capital which results in a shift of the tax burden to labor and consumption. Therefore, the increase in capital mobility that came along in the process of financial globalization has shifted the power balance in favor of capital holders (Clift et al., 2004). By undermining the states' capacity to tax and redistribute, capital mobility has compromised governments' ability to respond to citizens demands (Piketty, 2014). Even though all capitalist democracies are embedded in global financial market, no research has so far questioned to what extend differences in capital mobility affect policy responsiveness. Particularly, given that the shift in the tax burden favours capital owners, one might assume that structural power of capital resulting from capital mobility leads to policy outcomes that are more in line with the preferences of the affluent. This paper attempts to answer whether capital mobility does in fact influence unequal responsiveness by looking at the changes in welfare policies. To that end, this paper will investigate past literature on mechanisms that show how capital mobility could potentially influence policy responsiveness and specifically, lead to policy outcomes that are more aligned to the preferences of the wealthy.

## Capital Mobility

“We must recognise that the UK is situated in the middle of an active global market

for capital—a market which is less subject to regulation today than for decades.

An expansionary fiscal or monetary policy that is at odds with other economies

in Europe will not be sustainable for very long. To that extent the room for

manoeuvre of any government in Britain is already heavily circumscribed.”

(Blair, 1995: Mais Lecture)

Tony Blair, former prime minister of the Labor Party, refers to the constrains on the state’s ability to decide on its fiscal and monetary policy independently. As the United Kingdom is embedded in a market in which capital can move freely, governments choose their economic policy by not only responding to the publics preference, but also to appeal to the interest of capital. This is what scholars often refer to as ‘policy convergence’ (aka ‘efficiency hypothesis’), a state in which the international mobility of capital can ‘exit’ any economy which therefore subjects’ government policy to international competition (Mosley, 2000). Since governments are dependent on the access to capital and investment, they need to sell their economic policies to investors and act at least partially in the interest of capital. The structural power of capital therefore has the potential to influence elected officials to implement policies that are less in line with the preferences of voters, but instead, serve to attract capital and investment (Gill, 1988). Following this line of argumentation, when capital is less mobile, its structural power is reduced since the potential threat of leaving diminishes. This results in less competition between nations' economic policies to attract capital, and therefore creates more space for policymakers to be responsive to their citizens.

To answer whether capital mobility can explain the similarity of unequal responsiveness observed in many capitalist democracies, it is vital to understand whether the political outcomes that result from more capital mobility correlate stronger to the preferences of the rich than to the preferences of the poor. As Blair points out, the active global market in which the UK is situated circumscribes the room to for manoeuvre. Since governments are structurally dependent on access to capital, they are required to maintain stable rates of inflation and low budget deficits to preserve credibility on financial markets and to secure cheap access to capital (Gelleny & Mccoy, 2001; Mosley, 2000). Whenever capital is more mobile, the actual or apparent threat of capital flight that policymakers perceive is likely to increase. Subsequently, some scholars argue that governments are inclined to prioritize stable rates of inflation and fiscal discipline over low levels of unemployment (Clift et al., 2004). Indeed Scholars expect the fiscal stance of governments to become more conservative, as governments liberalize their capital regimes (Heller, 1997). A few researchers claim that capital mobility eventually results in a wide range of convergence of policy outcomes towards smaller governments, lower levels of labour rights and a decline in the welfare state such as reduced social security (Mosley, 2000).

As Elsässar and Haffert (2022) elaborate, the poor are more reliant on welfare spending as well as an overall strong fiscal state, and as a result, they frequently reject measures that reduce fiscal spending or welfare retrenchment. Overall, the less affluent are said to have a higher preference for redistribution and state intervention in comparison to the wealthier citizens (Beramendi et al., 2015). Whenever governments enact contractionary policies to reduce inflationary pressure or to maintain financial market credibility, we would expect this to go against the preferences of the less affluent and therefore likely to increase unequal responsiveness. The same holds whenever governments prioritize fiscal discipline over low levels unemployment, considering that the working class place a higher emphasis in fighting low levels of unemployment rather than maintaining stable rates of inflation (Jayadev, 2008).

In contrast to the policy divergence hypothesis that predicts less government intervention and a decline in social welfare, Rodrik (1998) has found significant evidence that countries economic openness is positively related to countries social welfare state. With regards to capital mobility, this is the second hypothesis this paper explores in this paper known as ‘policy divergence’ or also referred to as compensation hypothesis. The hypothesis states that a highly open country in economic terms, increases the competition and exposes domestic workers to higher risk (Sen & Barry, 2020). As the workforce is exposed to the competition to the world market, citizens will demand higher levels of government intervention and social protection (Rodrik, 1998). Indeed, scholars argue that the growing economic insecurity among a broad base of the population will increase the citizens demand for domestic compensation (Sen & Barry, 2020).

Proponents of the compensation hypothesis argue that governments are likely to redistributive wealth and social risk, to counterbalance the effect of risk and competition of an open economy, ultimately increasing the political influence of citizens that belong to the lower part of the income distribution and thereby lowering unequal responsiveness inf favour of the rich. According to Rodrik (1998), countries with more open economies tend to have higher rates of industrial concentration that promotes higher unionization and an increased scope of collective bargaining resulting in government transfer via social protection, unemployment benefits and job training. Haupt (2010) found evidence in favor of the compensation hypothesis, as increasing levels of capital mobility and imports were correlated to a leftward shift in parties’ ideology, independent of left or right-wing parties, showing that parties shift their economic policy in response to economic integration. Contrary, Ezrow (2014) found that party representatives of countries that are highly integrated in the world economy tend to be less responsive to citizens preferences. The author underlines those international aspects used to be subordinated to domestic actors and conditions, however now global economic are now the major driving force for policy outcomes. The author finds evidence that that governments only respond to the changes in the left-right shifts in the mean voter position when the national economy is necessarily isolated from the world economy.   
  
Investigating the effect that capital mobility has on economic policy outcomes, there seems to be more literature that implies that policy outcomes will convergence to the interest of capital. Even though the compensation hypothesis predicts that governments would compensate financially weaker households in response to the effects of economic globalisation, the compensation theory put out by Rodrik (1998) and is highly contested and appears to lack widespread validity (Liberati, 2007; van Orrdt, 2019). Instead, a great deal of the literature agrees, that capital mobility has increased capitals bargaining strength vis-a-vis labor and ultimately shifted the power balance in favour of capital (Jayadev, 2007). Correspondingly, political outcomes in the economic domain, driven by fiscal conservatism as well as the inability to tax and transfer, seem to have converged to the interest of capital and consequently are more aligned to the preferences of the wealthy. Drawing from the literature on unequal policy responsiveness, we know that governments were equally reponsive to the preferences of the low- and middle income citizens in economic and welfare issues before the reorientation of the Social Democratic parties (Mathisen et al., 2021). According to Blair (1995), it seems the ‘Third Way’ has at least partially been developed as a reaction to the forces of globalisation. In the Mais Lecutre Blair (1995) specifically refers to the global market for capital as the binding constrain that limits the room for manoeuvre for any government in the United Kingdom. The question then arises, to what extend the reorientation of the Labour Party in the United Kingdom can be ascribed to the unleashed global market for capital. If increasing capital mobility has at least partially been the reason why social democratic parties have shifted their economic policies towards market liberalisms, it will also explain why responsiveness has shifted in favour of the wealthy even under left-leaning parties. In sum, this paper hypothesizes that increasing capital mobility has led to economic outcomes that are more in line with the preferences of the rich, and consequently worsened the unequal responsiveness.

Methodology  
  
Measuring Capital Mobility

To measure capital mobility the literature differentiates between actual (de facto) or potential (de jury) capital mobility. Whereas de facto capital mobility measures the actual capital flows that are entering and leaving a country, potential capital mobility refers to the possibility of capitals leaving and entering a country with respect to the emplaced capital controls (Kose et al., 2009). Most countries have abolished almost all capital controls by the end of the 20th century (Quinn, 2011). Whereas average de jure capital mobility hardly changed, de facto capital flows rose significantly over the last three decades (Kose et al., 2009). Therefore, to exploit significant variation in capital mobility, scholars suggest it is better to use measures of actual capital flows (Kose et al., 2009; Liberati, 2007). To capture the threat of capital flight, which is a large sum of what may influences policymaker to be less responsive citizens’ demands, some scholars differentiate between more speculative short-term flows (Portfolio Investments) in comparison to more permanent long-term flows (Foreign Direct Investment) (Singh, 2003). However, Claessens et al. (1995) have argued that the differentiation between FDI and PI has become weaker in terms of their potential threat of capital flight, since FDIs can now swiftly be transformed via derivatives and funds into liquid assets. Additionally, Kant (1996) demonstrated how Foreign Direct Investment from abroad significantly influences capital flight. In line with Kose et al. (2009) and Liberati (2007) this paper will use the sum of gross stocks of foreign assets and liabilities as a share of GDP. This measure is commonly referred to as the Lane and Milesi-Ferreti’s (2006, 2007) index and includes all capital flows including Portfolio Investment , Foreign Direct Investment, debt and financial derivates. The data is retrieved from the External Wealth of Nations Database (Lane & Milesi-Ferreti’s, 2022).

A picture containing text, line, screenshot, diagram

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In Figure 1 one can observe how drastically capital flows have risen between 1985-2008 for the countries under observation. Despite the widespread liberalization of capital accounts in these countries by the end of the century, the level of de facto capital mobility varies significantly over time. While all countries have experienced a notable increase in capital mobility, the magnitude of cross-border capital appears diverge for countries. To allow for meaningful comparisons, the y-axis of the graph is scaled up to 1000, representing capital inflows and outflows as a percentage of GDP. One can observe that Ireland has already surpassed the de facto mobility of 1000% after 1996. Whereas investigating the reasons for more mobile capital is beyond the scope of this paper, it is interesting to observe that many that smaller countries often witnessed some of the largest streams of capital (Netherlands, Ireland, Switzerland). Amirkhalkhali and Dar (1993) have argued that inter-country differences in the degree of capital mobility appear to be caused by a variety of institutional and structural variables, however the authors struggle to identify a single trait that may account for the observed disparities. The structural makeup of a particular economy appears to be one component that can help explain such discrepancies, as nations with significant financial sectors have seen some of the highest capital inflows and outflows (e.g. Switzerland and Great Britain).

As previously mentioned, de facto capital mobility incorporates components that are significantly correlated to the risk of capital flight (Kant, 1996). However, one important limitation of this paper is that de facto capital mobility does not fully capture the threat of capital flight. Whereas it is possible to measure capital flight by looking at the direct outflows, this paper argues that it is not necessarily the actual capital flight that influences policymakers to implement policies that correspond to the preferences of the wealthy. Examining the ‘Third-Way’, it appears that many social democratic parties changed their economic policies not as a response to unprecedented capital flight, but rather, as a result of significantly higher net capital inflows and outflows. Namely, capitals potential to exit any given country. Therefore, this paper assumes that capital mobility and thereby its potential to exit, has increased the perceived threat of capital flight. The subsequent perceived threat appears to be sufficient to infringe the policymakers’ ability to be responsive towards its citizens.

Arguably, one might assume that the assets held by residents abroad, are less likely to influence policymaker in comparison to the domestic assets held by non-residents. Capital held by foreigners might be more prone to capital flight as a response to domestic changes in macroeconomic developments. Following this logic, one might argue that one should only focus on the total liabilities of a country to non-residents to capture how fast capital can exit a country. However, Kant (1996) has shown how residents also move their capital abroad to hedge against short- or long-term risks at home. Therefore, besides the assets held by foreigners domestically, the assets held by citizens abroad also serve as an important indication on capitals potential to exit. Nevertheless, one might argue that policymakers place a higher weight on conforming to the interest of capital in countries in which capital mobility is largely driven by the liabilities to non-residents in comparison to countries in which capital mobility is mainly driven by the assets that citizens hold abroad. To account for such differences, this paper will also control for the net international investment position of a country (NIIP). A country's NIIP is calculated as the difference between its total external assets and its external liabilities divided by its GDP. A country has a positive NIIP if the value of its foreign assets exceeds the value of its external liabilities, showing that it is a net creditor to the rest of the world. In contrast, if external liabilities are more than external assets, the NIIP is negative, indicating that the entity is a net debtor. Like capital mobility, this paper retrieves the data for the NIIP from the External Wealth of Nations Database (Lane & Milesi-Ferreti’s, 2022).

## Data

To assess whether capital mobility has led to unequal responsiveness, this paper investigates to what extend the preferences of different income groups correlate to subsequent changes in welfare at various levels of capital mobility. To that end, this paper utilizes the dataset created by Schakel et al. (2020), who investigated to what extend the preferences of different income groups lead to subsequent changes in welfare the state. As previously mentioned, changes in welfare state spending per capita do not always correspond with regulatory changes in social policies, but instead can occur due to economic shocks. To overcome this, Schakel et al. (2020) matched the preferences of citizens towards welfare state expenditure with the actual changes in welfare state generosity. Welfare state generosity better captures the actual entitlement to social programs for each citizen. In comparison to changes in welfare state spending per capita, changes in welfare state generosity are therefore a better reflection of regulatory changes that are implemented as a response to citizens demands.

Schakel et al. (2020) utilize two primary data sources to measure the extent to which changes in welfare state generosity reflect the interest of different income groups. Firstly, the International Social Science Program (ISSP) is employed to quantify citizen attitudes towards specific social policy reforms in various countries. The dataset of the authors includes four waves *(1985, 1990, 1996, and 2006)* of the repeated ‘Role of Government’ modules by the ISSP. In the Modules respondents are asked whether they would want to see more or less spending on unemployment, pension and health care. Given the substantial amount of time and the wide spectrum of democratic nations in which the survey has been conducted in, the authors are able to exploit significant cross-country and time variation in welfare state developments.   
  
Secondly, the Comparative Welfare Entitlements Database (Scruggs et al. 2017) is utilized to measure changes in the generosity of social policies, allowing for a more precise assessment of the actual trends in welfare generosity over time. Each unit of observation of the database records the aggregated preferences of different income groups within a country at a given year towards the specific welfare policy as well as the changes in the welfare generosity in the specific sectors (unemployment, pension, and health care)[[1]](#footnote-1). Additionally, the database contains several economic variables that potentially confound with the change in welfare generosity in a particular sector including logged GDP, GDP growth, unemployment and the overall level of generosity in the specific welfare policy sector[[2]](#endnote-1). Instead of assessing how capital mobility reduces the influence of different income groups within specific welfare policy sectors, this paper will focus on the overall impact of capital mobility on the influence of different income groups on welfare, regardless of the specific sector for which welfare state changes have been measured. For the analysis, this paper combines the dataset created by Schakel et al. (2020) with the de facto capital mobility as well as the net international investment position for each county within a given year. The combined data contains 130 observations on the changes in welfare state generosity, preferences towards welfare state changes per income group as well as other economic control variables among 21 countries between the years 1985 to 2008.

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Figure 2 shows the distribution of capital mobility for all 130 country-year observations. It is striking to see how unevenly the variable is distributed. The solid line at 220 percent represents the median of the variable distribution. Between 1985 and 2008, around half of the countries have experienced total capital in- and outflows that were just above twice their GDP In comparison, Ireland witnessed capital streams that were more than 25 times greater than its GDP in 2006. To measure the impact of capital mobility on unequal responsiveness, it is reasonable to assume that the absolute value of capital mobility plays less of a role in comparison to the relative increase in capital streams. This means that an absolute increase of 100 percent in capital mobility will have the highest effect for countries with the lowest exposure to capital streams. As countries exposure to capital streams rises, the effect that an additional 100 percent capital mobility (of GDP) has on unequal responsiveness diminishes. To focus on the relative instead of absolute increases, the variable is log-transformed for the linear regression. Prior to logging, the variable is transformed to a factor in which 100 percent of capital mobility relative to GDP is equal to capital mobility of 1[[3]](#footnote-2).

| Table 1: Summary Statistics | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **N** | **Mean** | **Std. Dev.** | **Min** | **Pctl. 25** | **Pctl. 75** | **Max** |
| Preferences of the bottom 5% | 131 | 39 | 21 | -16 | 29 | 52 | 81 |
| Preferences of the Median | 131 | 31 | 25 | -37 | 16 | 51 | 87 |
| Preferences of the top 5% | 131 | 19 | 26 | -53 | 2.6 | 41 | 71 |
| Averange Change in Welfare Generosity | 131 | 0.75 | 3.1 | -7.4 | -0.96 | 1.9 | 13 |
| Total Welfare Generosity | 131 | 9.9 | 3.5 | 0 | 7.8 | 12 | 17 |
| Captial Mobility Logged | 131 | 0.84 | 0.88 | -0.51 | 0.14 | 1.4 | 3.2 |
| Net international investment Position | 131 | -0.68 | 0.44 | -0.92 | -0.16 | 0.4 | 1.3 |
| Logged GDP | 129 | 11 | 0.33 | 9.9 | 10 | 11 | 11 |
| GDP growth (%) | 129 | 2.4 | 1.3 | -1.1 | 1.6 | 3.1 | 7 |
| Unemployment (%) | 129 | 7.2 | 3.5 | 3.3 | 4.4 | 8.8 | 22 |

Table 1 displays the summary statistics for the continuous variables operationalized in the statistical analysis. The preferences of the different income groups range from -100 to 100 to represent the average share of the income groups preferences towards welfare reduction or welfare spending. The average change in welfare generosity is measured as the average change in welfare between the subsequent first and the fourth year after the survey has been. In line with Elsasser and Haffert (2022) one can observe that on average the bottom 5 percent of the income distribution are more in favor of welfare spending (39%) in comparison to the top 5 percent (19%). As previously mentioned, mobile capital might result in a decline welfare state spending. Capital mobility may put downward pressure on tax revenues, which in turn may result in a decrease in welfare spending. The convergence hypothesis predicts that governments may collect fewer taxes and can scarcely run budget deficits in response to a rise of capital openness (Liberati, 2007). Free capital may easily disapprove of disagreeable tax laws or loose budget measures by transferring abroad. If rising mobility has indeed led to a decrease in welfare state generosity, it is likely that capital mobility has led to welfare state outcomes that are relatively more aligned to the interest of the affluent.

Many academics argue that wealthy people generally have more similar preferences for policy outcomes in comparison to the less affluent (Elkjr and Klitgaard, 2021; Elkjaer and Iversen, 2020). The scholars claim that the smaller standard deviations resulting from more homogenous preferences may be able to explain why the coefficient of wealthy people's preferences is almost always more statistically significant than the coefficient of the less wealthy. Contrary to what some scholars believed, the data shows that the standard deviation is larger for the preferences of the top 5 percent of the income distribution (26%) in comparison to the preferences of the bottom 5 percent (21%). If the divergence in the standard deviation is large enough to be relevant, it would mean that it would generally lead to an overestimation of the influence of the less affluent in the statistical analysis.

## Model:

Schakel et al. (2020) deployed a random intercept model to assess to what extend the preferences of different income groups result in changes in welfare state generosity. The authors found that citizen preferences often result in subsequent changes in welfare state policies. However, the authors also show the richest citizens have a statistically significant influence on later policy changes, but the poorest citizens do not. To determine if capital may have contributed to the wealthy's disproportionate influence, this paper partially replicates the random intercept model. Specifically, the paper interacts interacts the preferences of each income with logged capital mobility to understand whether the influence of a certain income groups changes when capital mobility rises.

The extent to which changes in welfare generosity are driven by the preferences of different income groups is dependent on various fixed effects as well as random effects that represent the differences in the political landscapes of countries. Fixed effects are the independent variables that the model controls for which, regardless of the country, might influence the variation in the average change in welfare. Besides the preferences of different income groups, these include GDP, GDP growth, unemployment, and the overall level of generosity. Additionally, the model controls for the wave in which the survey was taken (i.e. for the year) as well as the type of welfare policy assessed (unemployment, health care, pension). However, country specific institutional variables like the level of direct democracy or variations in liberal or social democratic welfare systems may also influence the extent to which the preferences of citizens translate to subsequent changes in welfare. To capture the variability and dependencies within countries, the intercept of the predicted variable ‘average changes in welfare’ is allowed to vary across countries. Therefore, the model allows for assessing the impact of fixed effects while accounting for the country-level variation in the intercepts.

An important assumption of linear regression is that the size of the error terms around the regression line is constant across all values of the independent variables. A violation of such assumption (heteroscedasticity) might lead to a bias in the standard errors. Running a replication of the model constructed by Schakel et al. (2020), this study finds that the likelihood of non-constant error variance (heteroscedasticity) is 99.9%. Since the dataset contains multiple observations for each country, the size of the error terms for the predicted average change in welfare varies depending on the specific countries. In line with Schakel, this paper adopts cluster robust standard errors to account for multiple observations per country.

## Results

Table 2 displays the random intercept models that regress the average change in welfare

on the preferences of the three income groups interacted with capital mobility. Due to

the interaction effect between capital mobility logged and the preferences of citizens,

the preferences coefficients can be interpreted as the change in average welfare when

one additional percent of an income group favors more welfare spending, whilst logged

capital mobility is held constant at zero. Conveniently, the logged capital mobility of

zero equates to capital mobility with a factor of one (100% of GDP), in which the sum

of capital in- and outflows is exactly as large as a countries GDP. As depicted in figure

2, countries with capital flows the size of their GDP are well below the median of

capital flows (220%), and therefore can still be considered as relatively sheltered from

large capital streams. Within such economies, this paper finds that only the preferences

of the rich and the median are significant in deciding to what extend welfare generosity

changes. The models show when an additional one percent of the rich favor more

welfare spending this translates into a subsequent 0.04 increase in welfare generosity. In comparison when an additional one percent of citizens with median income favors more welfare spending, this translates into an increase of 0.037 average change in generosity. The difference between the influence of the middle class in deciding welfare outcomes in comparison to the rich does not appear to be as pronounced when economies are not exposed to large streams of capital. However, the preferences of the median are only moderately significant at a significance level of 90%, whereas the preferences of the rich are also statistically significant at a significance level of 95%.

Table2: Random Intercept Models of Changes in Welfare State Generosity   
 (Average Change from T + 1 to T + 4 relative to T).

|  | Preferences (P95) | Preferences (P05) | Preferences (P50) |
| --- | --- | --- | --- |
| Preferences of the richest 5% (P95) | 0.040\* |  |  |
|  | | (0.018) |  |  |
| Preferences of the poorest 5% (P05) |  | 0.012 |  |
|  |  | (0.025) |  |
| Preferences of the median (P50) |  |  | 0.037+ |
|  |  |  | (0.020) |
| Capital Mobility Logged (t) | -0.857 | -1.656 | -0.961 |
|  | (0.775) | (1.006) | (0.856) |
| Net International Investment Position | 0.856 | 1.383+ | 1.038 |
|  | (0.713) | (0.716) | (0.732) |
| Preferences P95 x Capital Mobility Logged | 0.008 |  |  |
|  | (0.009) |  |  |
| Preferences P50 x Capital Mobility Logged |  |  | 0.008 |
|  |  |  | (0.008) |
| Preferences P05 x Capital Mobility Logged |  | 0.021\* |  |
|  |  | (0.010) |  |
| Total Welfare Generosity (t) | -0.116 | -0.109 | -0.118 |
|  | (0.076) | (0.073) | (0.074) |
| Logged GDP (t) | -1.617 | -2.455 | -2.058 |
|  | (1.387) | (1.600) | (1.476) |
| Growth (t) | 0.171 | 0.162 | 0.161 |
|  | (0.132) | (0.147) | (0.134) |
| Unemployment (t) | 0.001 | -0.001 | -0.007 |
|  | (0.117) | (0.129) | (0.127) |
| Pension Policy (Reference = Health) | 1.218+ | 0.712 | 1.135 |
|  | (0.670) | (0.606) | (0.706) |
| Unemployment Policy (Reference = Health) | 3.523\*\* | 2.225+ | 3.252\*\* |
|  | (1.105) | (1.138) | (1.164) |
| Wave 2 (Reference = Wave1) | 1.581\*\* | 1.959\*\* | 1.750\*\* |
|  | (0.525) | (0.698) | (0.629) |
| Wave 3 (Reference = Wave1) | 1.046 | 1.292 | 1.109 |
|  | (1.309) | (1.349) | (1.342) |
| Wave 4 (Reference = Wave1) | 1.903 | 2.490+ | 2.015 |
|  | (1.410) | (1.500) | (1.479) |
| Intercept | 15.682 | 25.203\* | 20.122 |
|  | (14.840) | (14.184) | (15.702) |
| Num.Obs. | 129 | 129 | 129 |
| R2 Marg. | 0.192 | 0.179 | 0.189 |
| R2 Cond. | 0.231 | 0.263 | 0.248 |
| + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001 | | | |

To assess whether rising capital mobility has increased the influence of the rich in comparison to the poor and the median, one must assess the interaction terms in table 2. If capital mobility has led to unequal policy responsiveness with respect to welfare state changes, one would expect that the interaction between capital mobility and the preferences of the rich would be positive, whereas the interaction with the preferences of the poor (and the median) would be negative. Contrary to what this paper hypothesis, the models show that the coefficient of the preferences of the affluent does not increase whenever capital mobility increases. The interaction term between the preferences of the richest 5 percent and capital mobility is insignificant. Therefore, the political influence of the rich in determining welfare generosity in the assessed sectors of unemployment, health care or pensions does not increase whenever capital mobility increases. The same holds for the political influence of the median, as the interaction term of the preferences of the median and capital mobility is also insignificant. Besides the difference in significance levels, this paper finds limited evidence for a substantial difference in the influence of the rich relatively to the median in deciding welfare policies at various levels of capital mobility.   
  
Unlike anticipated, the influence of the poor in deciding welfare reform actually grows when capital mobility increases. While the coefficient of the poorest five percent does not show any statistical significance, the interaction of the preferences and capital mobility is statistically significant at a 95% confidence level. The model shows that the effect of capital mobility on the influence of different income groups to decide welfare state outcomes is only relevant for the least affluent citizens. Specifically, for every unit change in logged capital mobility, the coefficient of the poor (0.012) grows by an additional (0.021). Contrary to expectations, as capital mobility rises, the proportional impact of the poor in altering welfare generosity rises relative to that of the affluent and the median.

Additionally, the models depicted in table 2 show several essential aspects to consider. The Net International Investment Position is only significant for the model that assesses the influence on the poorest citizens (p =0.056). When the NIIP grows from 0 to 1 (0 to 100% of its GDP), the average change in welfare grows by 1.383. An NIIP of 1 means that residents possess as much wealth abroad as their nation's whole GDP. However, the NIIP seems moderately influential (only at 90% sign.) in determining the level of welfare generosity when the change in generosity is predicted by the poorest citizens. This effect vanishes when changes in welfare generosity is predicted by the preferences of the median or the rich. In theory, to properly understand the effect of the NIIP on the relationship between the preferences of income groups and welfare outcomes, one would have to interact the preferences with the NIIP. Whilst this is beyond the scope of this paper, the fact that the NIIP is only relevant in the model that evaluates the opinions of the least wealthy may suggest that a positive NIIP is more important for the underprivileged than the wealthy.

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To have a better understanding of the extent to which capital mobility impacts the influence of different income groups on welfare generosity, figure 3 plots the marginal slopes of the preferences coefficients for various levels of capital mobility. In the plot, all other variables of the models are held constant at their mean (or mode). The shaded area resembles the clustered 95% confidence intervals. At logged capital mobility of zero, the coefficients shown in figure 3 are equivalent to the non-interacted coefficients of the preferences provided in the model output. At such level of capital mobility, one can observe how only the preferences of the richest five percent are statistically significant at the 95 percent significance level. As the confidence interval of the medians' preferences barely exceeds the 0.00 cutoff, the non-interacted coefficient is only significant at the 90% level. Based on the confidence intervals, one can also observe how preferences of the poor only turn significant once logged capital

mobility exceeds 1.4 (corresponding to financial flows that are four times the size of a

nations’ GDP). Whereas we know that the effect of capital mobility on the size of coefficients are not significant for the median and the rich, capital mobility significantly affects the influence of the poor in determining the average change in welfare generosity. Specifically, as logged capital mobility increases from 0 to 1, the change in welfare generosity that results from an additional 1% of the poor favoring more welfare expenditure increases from 0.012 to 0.031. For countries in which capital streams are nearly twenty times are large as its GDP (corresponding to logged capital mobility of 3), the average increase in welfare generosity resulting from a unit change in preferences rises to 0.075. In nations with the highest financial flows, the influence of the least affluent is almost two times greater than that of their peers.

The reported R-squared marginal in table 2 represents the proportion of variance of the

average change in welfare generosity explained by the fixed predictors alone. On the other hand, R-squared conditional takes into account both the fixed and random effects, providing measure of the total variance explained by all predictors. In comparison to the other models, the model that regresses the preferences of the poorest 5 percent has the lowest R2 marginal which suggests that their interest explain the variance in the change in welfare generosity relatively less well in comparison to the median or the rich. However, the higher R-squared conditional indicates that when combined with the country specific characteristics, including the preferences of the poorest 5 percent explains the largest proportion of the total variance. The difference between R-squared marginal and R-squared conditional is the largest for the model that focuses on the preferences of the poor. Accordingly, the effect that country differences have in predicting welfare changes is most pronounced when it is based on the interests of the least affluent. As country differences are only captured by the varying intercepts, the effect of the preferences of different income groups will be equal

amongst all countries. Future research might investigate whether country differences also influence the effect that preferences have on welfare outcomes.

Contrary to what this paper hypothesis, the models show how increasing levels of capital mobility rises the influence of the least affluent in deciding welfare state changes, whereas it does not affect the influence of the rich or median income groups. Given that the literature of the effect that capital mobility has on a state’ capacity to finance welfare expenditure predicts retrenchment in welfare, how does one make sense of such result? The data shows how the least affluent are on average more in support for welfare state expansion. Wouldn’t capital mobility lead to political outcomes that are less in line with the preferences of the poor and therefore correlate less when capital

mobility rises? To answer this, figure 4 plots out how the preferences of the different income groups predict the average welfare change in welfare generosity.

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For each graph the figure shows to what extend the preferences of each income group result in average changes in welfare generosity for countries with the lowest and the highest capital mobility. Besides the predicted average change in welfare generosity, the data points reflect the observed data for different ranges of capital mobility. One can observe that on average the change in welfare generosity is higher when economies financial flows are low. This is in line with what the literature on capital mobility predicts. Contrary to the expectation, the model also predicts welfare outcomes that are less in line with the preferences of the rich (and the median).

When an average of 40 percent of the affluent advocate for increased welfare spending on pensions, healthcare, and unemployment benefits, the level of welfare generosity remains largely unchanged in the absence of capital mobility. When capital is highly mobile, generosity is predicted to decline more than two points even when the rich demand more welfare compensation. Whilst it is important to understand that capital mobility does actually not lead to better outcomes for rich, the models show that the effect of capital mobility does not appear to be relevant for the rich (or the median). Therefore, this paper focuses on the effect that capital mobility has for the underprivileged.

When there is a low frequency of financial transfers that are moving in and out of an economy, the preferences of the poorest 5 percent have virtually no effect on the average change in generosity. In contrast, in the most financially globalized economies, the changes in welfare policies are remarkably dependent on the preferences of the poor. However, capital mobility does not lead to welfare outcomes that are more aligned to the preferences of the poor. Instead, the preferences of the poor seem to only be a deciding factor in limiting the effect that capital mobility has on welfare retrenchment. Whereas the influence of the impoverished grows when capital mobility rises, this influences only determines to what extend welfare generosity declines. Figure 4 shows that when 25 percent of the least affluent prefer an expansion in the specific welfare sector, welfare generosity is reduced by -1 in economies with the lowest financial flows, whereas generosity it is reduced by a staggering -5 for economies with the highest financial flows. Hence, capital mobility does lead to worse welfare outcomes that are in less aligned to the preferences of the poor. However, in comparison to economies that have little cross border transactions, changes in welfare are much more dependent on the preferences of the poor. In theory, the model predicts, that when all of the poorest 5 percent would demand more welfare expenditure, generosity will increase. However, there is no country-year-topic observation in which all of bottom 5 percent of the income distribution agree on more welfare spending. The largest on average agreement recorded (81%) is barely sufficient to prevent a decline welfare generosity when capital is highly mobile. Therefore, even though the influence in shaping welfare policies grows under high capital mobility, the poor are better ‘coincidentally’ represented when capital mobility is limited.

# Discussion

Contrary to the hypothesis, capital mobility is unable to explain why so much of the literature has found that policy outcomes disproportionately reflect the interest of the rich. Assessing changes in welfare policies, this paper does not find any evidence that supports that capital mobility increases the political influence of the rich in comparison to the poor or the median. Instead, this paper finds that capital mobility increases the relative influence of the poor in determining changes in welfare policies. Specifically, when capital is highly mobile, the average changes in welfare generosity seem to be quite dependent on the preferences of the least affluent. However, the models show that the interest of the poor never translate to welfare expansion, but instead only influence the extent to which welfare is reduced when financial flows are increasing. Even though changes in welfare generosity correlate strongly to the preferences of the least affluent under high capital mobility, mobile capital does not result into welfare state changes that are more in line with the preferences of the poor. The gained influence of the poor is consequently only limiting the effect that capital mobility has on welfare retrenchment.   
  
The result of the models tells an important story. Whereas structural conditions might increase the correlation between a specific outcome and the preferences of any income group, this does not necessarily mean that the outcomes under such conditions are more aligned to the interest of any group. Whereas the preferences of the least affluent are practically irrelevant when capital mobility is low, the average changes in welfare are still more aligned to their preferences as much of the poor are in favor of welfare expansion. When capital mobility is high, a large share of the poor demanding welfare compensation only limits how much welfare is reduced, instead of receiving the demanded welfare.

This research modifies the model of Schakel et al. (2020) in significant ways. As previously mentioned, Elkjaer and Klitgaard (2021) analysed over 25 studies that

investigated policy responsiveness and found that the most severe types of differential

responsiveness are twice as likely to be detected when the preferences of high- and low

income groups are included in the same statistical model. The authors caution to use

multivariate models when preferences between income groups are highly correlated. As

shown in the appendix, the preferences between the rich and the poor are extremely correlated (r = 0.91). Therefore, this paper questions the validity of the degree of unequal policy responsiveness that Schakel et al. (2020) finds when including the preferences of the wealthy and the poor in the same model. To accurately represent degrees of differential responsiveness, this paper runs several regressions and assess the influence of each income group on welfare state changes independently. Whereas Schakel et al. (2020) find that an additional unit of the richest 5 percent that favors welfare expenditure translates into change in welfare generosity of 0.078, this paper finds that the coefficient of the rich seems to mainly range from 0.04 to 0.06 depending on the level of capital mobility. Even in economies with extreme financial flows larger than 25 times of its GDP, the resulting average change in welfare is always predicted to be well below 0.07 when the influence of the rich is assessed independently.   
  
Additionally, examining the diagnostics of the model run by Schakel et al.

(2020), one can observe how the authors includes a substantial outlier that exerts

disproportionate influence on the results and therefore is likely to bias the estimates. The appendix of this paper incorporates an outlier analysis that demonstrates the magnitude of the outlier. Additionally, this paper includes one version of the regression models that includes the outlier in the appendix. The results show that including the outlier results in an overestimation of the impact of the NIIP, the-non interacted capital mobility coefficient as well as the interaction of capital mobility with the preference for each income group. In all models the size of the coefficient as well as the significance level increases for capital mobility as well as all for all interactions of capital mobility and preferences. The same holds for the NIIP. In contrast, the non-interacted preferences of the rich and the median seem to only be significant at the 90 percent significance level when the outlier is included. Assessing the R2 marginal, one can observe that including the outlier substantially reduces the variation that can be explained by the fixed effects. Even though the influence of capital mobility and the NIIP is larger when including the outlier, the model that excludes the outlier appears to be better suited to draw robust conclusions about the influence of capital mobility as well as the influence of different income groups in deciding welfare state change.   
  
The results of the models yield some interesting findings for the literature on unequal responsiveness as well as the literature on capital mobility. With respect to the respect to the convergence (aka efficiency) hypothesis, this paper does not find evidence that explains how capital mobility itself has led to large reduction in the welfare state (when outlier is excluded). Instead, the effect that capital mobility has on welfare retrenchment seems to be dependent on how uniformly the least affluent are demanding higher compensation. Whereas much literature has assessed the effect of capital mobility on fiscal policy, social expenditure or the size of the government (Jayadev, 2018; Liberati, 2007; Mosley, 2005; Clift, 2004; Rodrik, 1998; Heller, 1997), no literature to best of my knowledge has investigated to what extend the actual preferences of citizen groups might limit (or enhance) the influence that capital mobility has on fiscal policy outcomes. The results show that interacting structural economic conditions with the the interest of citziens, might yield valuable insights into the dynamics that underly capitalist democracies.

Assessing the compensation hypothesis, this paper also does not find that risk-exposed lower income citziens receive a higher compensation as capital mobility rises. However this paper finds that capital mobility increases the politicial influence of the low income earners in comparison to the rich or to wealthy. Proponents of the compensation argument claim that citizens will demand higher compensation for the exposed risks that comes along with globalization. As capital mobility essentially represents the degree of financial globalization, proponents may argue that preferences of citizens towards welfare state changes are highly endogenous to the levels of capital mobility. If capital mobility would influence the peoples’ preference, this would introduce bias in the models and seriously threaten the statistical inference of the analysis. Regressing the level of capital mobility on the preferences, we do not find evidence that preferences of any income group do indeed vary for different levels of capital mobility[[4]](#footnote-3).  
  
Linking the results back to the literature on policy responsiveness, this paper does not find that capital mobility results in policy bias in favor of the rich. Instead, this paper finds that as capital mobility rises, the relative influence of the poor in determining welfare policies seems to grow. However, the extent to which the poor demand more expenditure in the welfare state, never results in any expansion in welfare generosity, but only limits to what extend capital mobility leads to welfare retrenchment. Altogether, this paper adds substantial insights for the literature, as it shows how structural economic conditions, such as capital mobility, can alter the influence of different income groups with respect to specific policy domains.   
Assessing unequal responsiveness, this paper finds a modest bias of the rich in comparison to the median, as the preferences of the rich seem to be more significant in explaining changes in welfare policy in comparison to the median class. However, the bias in favor of the rich is still deeply puzzling when one considers that governing coalitions are structurally dependent on majorities that are ultimately decided by the median. As the ‘median voter theorem’ predicts, one would expect that the preferences of the median would be pivotal to decide policy output (Peters & Ensink, 2015).   
The correlation table shows that the preferences of the rich are highly equal to the preferences of the median (r = 0.96). Given such strong correlation, the fact that the preferences of the wealthy are significant at the 95% level, whereas those of the median are not, suggests that the observed ‘moderate’ bias in favor of the wealthy may partially be a result of the preferences of the median being so closely aligned with those of the wealthy.

Conclusion

A vast body of literature has found that policy outcomes disproportionately reflect the interests of the affluent (Gilens, 2005; Elsässar et al., 2020; Schakel et al., 2022). Surprisingly, when comparing unequal responsiveness in the US to European countries, these patterns remain exceptionally consistent across diverse political landscapes (Peters & Ensink, 2015; Schakel et al., 2020). Scholars have thus questioned the role of private money in politics and institutional differences such as policymakers’ dependence on private campaign finance as the dominant mechanism to explain differential responsiveness (Elsässar et al., 2020). Alternative explanations, including partisanship and electoral participation, have been explored but fail to fully account for the persistent bias in favor of the rich (Mathisen et al., 2021; Lax et al., 2019; Peters & Ensink, 2015; Elkjaer & Klitgaard, 2021).   
  
In the search for answers, the literature on structural economic conditions that might systematically affect the relative influence of income groups has remained largely underdeveloped. Elsässar and Haffert (2022) show how fiscal pressure decreases unequal policy responsiveness in Germany, as policymakers seem unresponsive towards all income groups when the interest burden rises. The study shows how economic factors can infringe policymakers’ capacity to be responsive to citizens’ demands.  
In similar vein, scholars argue that capital mobility has hindered governments' ability to act in the interest of their citizens (Piketty, 2014; Gill, 1988). Accordingly, this paper hypothesizes that capital mobility can explain why the assessed policy outcomes strongly correspond to the preferences of the rich.

To test this hypothesis, the study focuses on changes in welfare policies and their relation to the preferences of different income groups under varying levels of capital mobility. Rather than focusing solely on changes in welfare spending, which are largely influenced by economic conditions, this study adopts a comprehensive approach by assessing changes in welfare generosity to better capture the actual changes in welfare policies. Contrary to expectations, the analysis demonstrates that capital mobility does not alter the influence of the rich in shaping welfare policies. Instead, it reveals that as capital mobility rises, changes in welfare policies are largely dependent on the preferences of the least affluent. However, even under wide consensus among the least affluent in favor of higher welfare expenditure, this does not translate in the expansion of welfare. Instead, the demands of the least affluent merely restrict the extent to which capital mobility leads to welfare retrenchment. Whereas the poorest do affect changes in welfare when capital mobility is high, the welfare state outcomes that result from higher financial flows, therefore, do not lead to a better representation of the interests of the underprivileged.

The implications of the results show structural economic conditions systematically shape the relative influence of specific income groups. Additionally, whereas much literature has assessed to what extend capital mobility leads to changes in fiscal policy, insufficient emphasis has been placed on understanding how the preferences of different income groups modifies the effect that capital mobility has on fiscal policy (Jayadev, 2018; Liberati, 2007; Mosley, 2005; Clift, 2004; Rodrik, 1998; Heller, 1997). The results show that interacting structural economic conditions with the preferences of citizens’ might yield interesting insights into how political outcomes are determined in capitalist democracies.   
  
I argue that the results of models carry substantial meaning to infer about how capital mobility shapes the influence of different income groups in welfare state changes. Although the random intercept model is not explicitly designed for causal inference, it effectively addresses potential confounders related to specific countries and time periods. By incorporating unit and time effects, the model accounts for factors that could confound the relationship between the preferences and changes in welfare generosity for various levels of capital mobility. As mentioned by Schakel et al. (2020), controlling for the total level of generosity and measuring changes in subsequent years also limits potential reverse causation.

However, there are important limitations to address. Whereas much of the investigated

literature on capital mobility addresses how capital mobility might lead to a decline in

welfare states, this paper does not elaborate in which ways capital mobility

effects the influence of any income group. Specifically, as capital mobility increases, the mechanism that causes the influence of the poorest to rise remains completely unknown. Moreover, given that the preferences of the rich and the median are extremely correlated, this paper cannot draw any robust the conclusions about the differences in the relative influence between those two income groups. To draw valid conclusions about the size of the influence at various levels of capital mobility, this paper assesses the preferences of each income group in separate models. The models show that only when the preferences of the least affluent determine welfare changes, capital mobility leads to welfare retrenchment. Whilst considering the large multicollinearity between preferences, future research may find innovative approaches to incorporate the preferences of multiple income groups to better understand to what extend capital mobility leads to welfare retrenchment. Lastly, the random intercept model assumes that the effect that capital mobility has on shaping the influence of different income groups is equal across countries, however, there is reason to believe that country-specific characteristics would mediate the influence of different income groups at various levels of capital mobility. welfare doubt that the slopes of the coefficients would not be dependent on. When assessing how structural economic conditions interact with the influence of different income groups, deploying random slope models might bring interesting findings into the influences of different income groups vary across countries.

1. For more information on the dataset, please visit the online supplementary material of Schakel et al. (2020) retrieved from: <https://journals.sagepub.com/doi/full/10.1177/0032329219897984#supplementary-materials>

   [↑](#footnote-ref-1)
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   # Appendix

   | Correlation between the preferences of different income groups | | | |
   | --- | --- | --- | --- |
   |  | **p95** | **p05** | **p50** |
   | p95 | 1 | . | . |
   | p05 | .92 | 1 | . |
   | p50 | .96 | .94 | 1 |
   | Table 3 (P95 = Preferences of the richest 5 percent | ) |  |  |

   | Table4: Exogenous Preferences | | | |
   | --- | --- | --- | --- |
   |  | **P95** | **P05** | **P50** |
   | Capital Mobility Logged | 2.216 | -0.502 | 2.932 |
   |  | (2.629) | (0.310) | (2.504) |
   | Intercept | 16.769\*\*\* | 1.172\*\* | 28.267\*\*\* |
   |  | (3.193) | (0.376) | (3.041) |
   | Num.Obs. | 131 | 131 | 131 |
   | R2 | 0.005 | 0.020 | 0.011 |
   | R2 Adj. | -0.002 | 0.012 | 0.003 |
   | + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001 | | | |

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   ## Outlier Analysis

   The diagnostics of the paper show the severity of the outlier that has been included in Schakel et al. (2020) model.

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   Description automatically generatedFigure 7

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   Figure 8

   Table5: Random Intercept Models of Changes in Welfare State Generosity   
    ( Outlier Included)

   |  | Preferences (P95) | Preferences (P05) | Preferences (P50) |
   | --- | --- | --- | --- |
   | Preferences of the richest 5% (P95) | 0.036+ |  |  |
   |  | | (0.018) |  |  |
   | Preferences of the poorest 5% (P05) |  | 0.011 |  |
   |  |  | (0.025) |  |
   | Preferences of the median (P50) |  |  | 0.035+ |
   |  |  |  | (0.020) |
   | Capital Mobility Logged (t) | -0.963 | -2.128\* | -1.133 |
   |  | (0.775) | (1.006) | (0.856) |
   | Net International Investment Position | 1.579\* | 2.084\*\* | 1.724\* |
   |  | (0.713) | (0.716) | (0.732) |
   | Preferences P95 x Capital Mobility Logged | 0.016+ |  |  |
   |  | (0.009) |  |  |
   | Preferences P50 x Capital Mobility Logged |  |  | 0.015+ |
   |  |  |  | (0.008) |
   | Preferences P05 x Capital Mobility Logged |  | 0.032\*\* |  |
   |  |  | (0.010) |  |
   | Total Welfare Generosity (t) | -0.111 | -0.092 | -0.106 |
   |  | (0.076) | (0.073) | (0.074) |
   | Logged GDP (t) | -3.003\* | -3.723\* | -3.469\* |
   |  | (1.387) | (1.600) | (1.476) |
   | Growth (t) | -0.066 | -0.071 | -0.074 |
   |  | (0.132) | (0.147) | (0.134) |
   | Unemployment (t) | -0.043 | -0.051 | -0.055 |
   |  | (0.117) | (0.129) | (0.127) |
   | Pension Policy (Reference = Health) | 1.258+ | 0.748 | 1.172+ |
   |  | (0.670) | (0.606) | (0.706) |
   | Unemployment Policy (Reference = Health) | 3.147\*\* | 2.041+ | 2.922\* |
   |  | (1.105) | (1.138) | (1.164) |
   | Wave 2 (Reference = Wave1) | 1.519\*\* | 1.867\*\* | 1.680\*\* |
   |  | (0.525) | (0.698) | (0.629) |
   | Wave 3 (Reference = Wave1) | 1.343 | 1.644 | 1.431 |
   |  | (1.309) | (1.349) | (1.342) |
   | Wave 4 (Reference = Wave1) | 1.708 | 2.401 | 1.851 |
   |  | (1.410) | (1.500) | (1.479) |
   | Intercept | 31.220\* | 39.267\* | 35.812\* |
   |  | (14.840) | (16.455) | (15.702) |
   | Num.Obs. | 130 | 130 | 130 |
   | R2 Marg. | 0.161 | 0.164 | 0.159 |
   | R2 Cond. | 0.256 | 0.294 | 0.277 |
   | + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001 | | | |

   **Model Diagnostics**

   **Model 1 (P95)A picture containing screenshot, line, diagram

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   **Model 2 (P05)**

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   **Model 3 (P50)**

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   **R Code:**  
   library(haven)

   library(tidyverse)

   library(readxl)

   library(nlme)

   library(lme4)

   library(marginaleffects)

   library(sjPlot)

   library(sjlabelled)

   library(stargazer)

   library(texreg)

   library(ggplot2)

   library(robustlmm)

   library(sandwich)

   library(clubSandwich)

   library(lmtest)

   library(parameters)

   library(performance)

   library(merDeriv)

   library(modelsummary)

   library(jtools)

   library(vtable)

   library(kableExtra)

   library(flextable)

   library(labelled)

   setwd('/Users/finnkruger/Documents/Hertie/Masterarbeit/Respog/other')

   ### levels

   # Financial Openness

   my\_data <- read\_excel("EWN-dataset\_12-2022.xlsx",

   sheet = "Dataset")

   # Select What is needed & Rename Coloumns to Match

   financial\_openness <- my\_data%>%

   select(Country,Year,`Financial Openness`, Foreign\_share, IIP\_GDP)%>%

   filter(`Financial Openness` != 'na')%>%

   filter(IIP\_GDP != 'na')%>%

   rename(country2 = Country,

   Financial\_Open = `Financial Openness`,

   year = Year)

   countries <- financial\_openness%>%

   filter(country2 %in% data\_master1$country2)

   #Rename Entries to Match

   financial\_openness$country2 <- financial\_openness$country2%>%

   case\_match("United Kingdom" ~ "Great Britain","Korea" ~ "South Korea", .default = financial\_openness$country2)

   #### join the data

   data2 <- read\_dta('SBH\_P&S\_Data.dta')

   data\_Schakel <- read\_dta('issp.dta')

   colnames(data\_Schakel)

   table(data\_master$wave)

   by <- join\_by(year, country2)

   data\_master <- left\_join(data2, financial\_openness, by, multiple = "all")

   #### Group per Country and per Year

   checking <-data\_master%>%

   select(country2, year, Financial\_Open, dgentav14)%>%

   print()

   checking1 <-data\_master%>%

   select(country2, year, Financial\_Open)%>%

   group\_by(country2)%>%

   summarise(Financial\_O = mean(Financial\_Open))%>%

   arrange(desc(Financial\_O))%>%

   print()

   checking2 <-data\_master1%>%

   select(country2, year, Financial\_Open)%>%

   group\_by(year)%>%

   summarise(Financial\_O = mean(Financial\_Open))%>%

   arrange(desc(Financial\_O))%>%

   print()

   ## for foreign Share

   checking\_IIP\_GDP <-data\_master%>%

   select(country2, year, IIP\_GDP)%>%

   print()

   checking1\_foreign <-data\_master%>%

   select(country2, year, Foreign\_share)%>%

   group\_by(country2)%>%

   summarise(Financial\_O = mean(Foreign\_share))%>%

   arrange(desc(Financial\_O))%>%

   print()

   checking2\_foreign <-data\_master%>%

   select(country2, year, Foreign\_share)%>%

   group\_by(year)%>%

   summarise(Financial\_O = mean(Foreign\_share))%>%

   arrange(desc(Financial\_O))%>%

   print()

   ### logging financial data

   data\_master$Financial\_Open <- data\_master$Financial\_Open\*100

   data\_master$Financial\_Open\_Logged <- log(data\_master$Financial\_Open)

   data\_master$Foreign\_share\_logged <- log(data\_master$Foreign\_share)

   data\_master1 <- data\_master%>%

   filter(!is.na(dgentav14))

   ##### GRAPHS

   ### Histogram on capital mobility

   ## create theme for graphs

   My\_Theme = theme(

   plot.title = element\_text(size=26),

   axis.title.x = element\_text(size = 18),

   axis.text.x = element\_text(size = 14),

   axis.text.y = element\_text(size = 14),

   axis.title.y = element\_text(size = 18),

   plot.caption = element\_text(size= 14),

   legend.text = element\_text(size= 16),

   legend.title = element\_text(size= 16))

   ### Create histogram for Capital mobility in percentage

   data\_master$Financial\_Open <- data\_master$Financial\_Open\*100

   ggplot(data\_master, aes(Financial\_Open)) +

   geom\_histogram(color = "#000000", fill = "#0099F8", breaks = c(0,100,200,300,400,500,600,700,800,900,1000,1100,1200,1300,1400,1500,1600,1700,1800,1900,2000,2100,2200,2300,2400,2500,2600)) +

   geom\_vline(aes(xintercept = median(Financial\_Open)), color = "#000000", size = 0.75) +

   scale\_x\_continuous(breaks=c(0,100,200,300,400,500,1000,2000, 2600)) +

   labs(title = 'Distribution of Capital Mobility between 1985 and 2008'

   ,caption = "Figure 2: Distribution of Capital Mobility (Source: External Wealth of Nation Database)")+

   xlab('Capital Mobility (as a share of GDP)')+

   My\_Theme

   data\_master$Financial\_Open <- data\_master$Financial\_Open/100

   ### summary statistics

   summary\_stats <- data\_master1%>%

   select(p05,p50,p95,dgentav14,gent,Financial\_Open\_Logged,IIP\_GDP,loggdpt,growtht,unempt)

   var.labs <- data.frame(var = c('p05','p50',

   'p95','dgentav14','gent',

   'Financial\_Open\_Logged','IIP\_GDP','loggdpt','growtht','unempt'),

   labels = c('Preferences of the bottom 5%',

   'Preferences of the Median',

   'Preferences of the top 5%',

   'Averange Change in Welfare Generosity',

   'Total Welfare Generosity',

   'Captial Mobility Logged',

   'Net international investment Position (%GDP)',

   'Logged GDP',

   'GDP growth (%)',

   'Unemployment (%)'

   ))

   summary\_statistics <- st(summary\_stats, labels = var.labs, title = 'Table 1: Summary Statistics', out = 'kable', col.width=c(24,rep(10.5,15)))

   summary\_statistics%>%

   kable\_styling()%>%

   save\_kable(file = 'summary\_stats1.html')

   ### correlation between preferences

   correlation <- summary\_stats%>%

   select(p95,p05,p50)

   datasummary\_correlation(correlation, title = 'Correlation of the Preferences between different income groups', notes = 'P95 = Preferences of the richest 5 percent')

   ### Taking care of Outlier

   data\_master1 <- data\_master%>%

   filter(!is.na(dgentav14))%>%

   filter(dgentav14 >= -20)

   which(data\_master1$dgentav14 <= -20)

   ggplot(data\_master, aes(dgentav14)) +

   geom\_histogram(color = "#000000", fill = "#0099F8")

   geom\_vline(aes(xintercept = median(Financial\_Open)), color = "#000000", size = 0.75) +

   scale\_x\_continuous(breaks=c(0,100,200,300,400,500,1000,2000, 2600)) +

   labs(title = 'Figure 2: Distribution of Capital Mobility',

   caption = "Figure 2: Distribution of Capital Mobility (Source: External Wealth of Nation Database)")+

   xlab('Capital Mobility (as a share of GDP)')

   ### Replicate Real but unequal responsiveness

   original\_model <- lmer(dgentav14 ~ p05 + p95+ gent + loggdpt + growtht + unempt + factor(topic) + factor(wave) + (1 | country), data = data\_master, REML = FALSE)

   original\_model1 <- lmer(dgentav14 ~ p95+ gent + loggdpt + growtht + unempt + factor(topic) + factor(wave) + (1 | country), data = data\_master1, REML = FALSE)

   original\_model2 <- lmer(dgentav14 ~ p50 + gent + loggdpt + growtht + unempt + factor(topic) + factor(wave) + (1 | country), data = data\_master1, REML = FALSE)

   original\_model3 <- lmer(dgentav14 ~ p05 + gent + loggdpt + growtht + unempt + factor(topic) + factor(wave) + (1 | country), data = data\_master1, REML = FALSE)

   ### Robust standard errors

   check\_heteroskedasticity(original\_model)

   cstypes <- paste0("CR", c("0", "1", "1p", "1S", "2", "3"))

   rob\_se\_fun <- function(type) sqrt(diag(vcovCR(original\_model, type = type)))

   rob\_se <- sapply(cstypes, rob\_se\_fun)

   std\_se <- sqrt(diag(vcov(original\_model)))

   cbind(std = std\_se, rob\_se\_fun,

   merDeriv = sqrt(diag(sand)[1:2]))

   coef\_test(original\_model, vcov = "CR1", p\_values = TRUE, test = "naive-t")

   ### interacting with financial openness

   model <- lmer(dgentav14 ~ p95\*Financial\_Open\_Logged + IIP\_GDP + gent + loggdpt + growtht + unempt + factor(topic) + factor(wave) + (1 | country), data = data\_master1, REML = FALSE)

   model\_within <- lm(dgentav14 ~ p95\*Financial\_Open\_Logged + IIP\_GDP + gent + loggdpt + growtht + unempt + factor(topic) + factor(wave) + as.factor(country), data = data\_master1)

   model2 <- lmer(dgentav14 ~ p05\*Financial\_Open\_Logged + IIP\_GDP + gent + loggdpt + growtht + unempt + factor(topic) + factor(wave) + (1 | country), data = data\_master1, REML = FALSE)

   model3 <- lmer(dgentav14 ~ p50\*Financial\_Open\_Logged + IIP\_GDP + gent + loggdpt + growtht + unempt + factor(topic) + factor(wave) + (1 | country), data = data\_master1, REML = FALSE)

   #### Summary of models

   ## Robust Standard Erorrs

   RSE\_Model <- vcovCR(model, type = "CR1")

   RSE\_Model2 <- vcovCR(model2, type = "CR1")

   RSE\_Model3 <- vcovCR(model3, type = "CR1")

   ### Checking models

   model\_parameters(model, vcov = RSE\_Model)

   model\_parameters(model2, vcov = RSE\_Model2)

   model\_parameters(model5, vcov = RSE\_Model5)

   vcov = list(RSE\_Model, RSE\_Model2, RSE\_Model3)

   models1 = list(model, model2, model3)

   #### Creating Output table

   cm <- c('p95' = 'Preferences of the richest 5% (P95)',

   'p05' = 'Preferences of the poorest 5% (P05)',

   'p50' = 'Preferences of the median (P50)',

   'Financial\_Open\_Logged' = 'Capital Mobility Logged',

   'IIP\_GDP' = 'Net International Investment Position',

   'p95:Financial\_Open\_Logged' = 'Preferences P95 x Capital Mobility Logged',

   'p50:Financial\_Open\_Logged' = 'Preferences P50 x Capital Mobility Logged',

   'p05:Financial\_Open\_Logged' = 'Preferences P05 x Capital Mobility Logged',

   'gent' = 'Total Welfare Generosity (t)',

   'loggdpt' = 'Logged GDP (t)',

   'growtht' = 'Growth (t)',

   'unempt' = 'Unemployment (t)',

   'factor(topic)2' = 'Pension Policy (Reference = Health)',

   'factor(topic)3' = 'Unemployment Policy (Reference = Health)',

   'factor(wave)2' = 'Wave 2 (Reference = Wave1)',

   'factor(wave)3' = 'Wave 3 (Reference = Wave1)',

   'factor(wave)4' = 'Wave 4 (Reference = Wave1)',

   '(Intercept)' = 'Intercept')

   full\_model\_html <- modelsummary(models1, vcov = vcov, stars = TRUE, coef\_map = cm, notes = NULL,

   title = 'Random Intercept Models of Changes in Welfare State Generosity

   (Average Change from T + 1 to T + 4 relative to T).',

   output = 'flextable') %>%

   save\_as\_docx(path = "mytable2.docx")

   modelsummary(models1, vcov = vcov, stars = TRUE, coef\_map = cm, notes = NULL,

   title = 'Random Intercept Models of Changes in Welfare State Generosity

   (Average Change from T + 1 to T + 4 relative to T).')

   ## visualise the log transform for interpretability

   data\_master1 %>%

   ggplot(aes(x=Financial\_Open, y=Financial\_Open\_Logged)) +

   geom\_line() +

   scale\_y\_continuous(name = "Capital Mobility Logged") +

   scale\_x\_continuous(name = 'Capital Mobility (Factor to GDP)') +

   labs(title = 'Log transform of Capital Mobility (Factor to GDP)',

   caption = 'Figure 6') +

   My\_Theme

   #Plot the model

   predicted\_p95 <- plot\_model(model, type = "int", terms = c("p95", "Financial\_Open\_Logged"), show.data = TRUE, vcov.fun = RSE\_Model, legend.title="Capital Mobility Logged", title = '') +

   geom\_point(data = data\_master1, aes(x = p95, y = dgentav14, colour = Financial\_Open\_Logged), inherit.aes = FALSE) +

   scale\_color\_continuous() + My\_Theme

   predicted\_p05 <- plot\_model(model2, type = "int", terms = c("p05", "Financial\_Open\_Logged"), show.data = TRUE, vcov.fun = RSE\_Model2, legend.title="Capital Mobility Logged", title = '') +

   geom\_point(data = data\_master1, aes(x = p05, y = dgentav14, colour = Financial\_Open\_Logged), inherit.aes = FALSE) +

   scale\_color\_continuous() + My\_Theme

   predicted\_p50 <- plot\_model(model3, type = "int", terms = c("p50", "Financial\_Open\_Logged"), show.data = TRUE, vcov.fun = RSE\_Model3, legend.title="Capital Mobility Logged", title = '') +

   geom\_point(data = data\_master1, aes(x = p50, y = dgentav14, colour = Financial\_Open\_Logged), inherit.aes = FALSE) +

   scale\_color\_continuous() + My\_Theme

   predictions <- ggarrange(predicted\_p95, predicted\_p05, predicted\_p50, ncol = 3, common.legend = TRUE, legend="bottom")

   annotate\_figure(predictions,

   top = text\_grob('Predicted Values of Average Change in Generosity (t+1-t+4)', size = 20),

   bottom = text\_grob('Figure 4: Predicted Values of Change in Generosity (data points represent the actual data) | Source: authors elaboration', hjust = 1.1))

   ### checking for endogenetiy

   endogeneity\_model <- lm(p95 ~ Financial\_Open\_Logged, data = data\_master1)

   endogeneity\_model2 <- lm(p05 ~ Financial\_Open\_Logged, data = data\_master1)

   endogeneity\_model3 <- lm(p50 ~ Financial\_Open\_Logged, data = data\_master1)

   endogeneity\_models = list(endogeneity\_model, endogeneity\_model2, endogeneity\_model3)

   summary(endogeneity\_model)

   summary(endogeneity\_model2)

   summary(endogeneity\_model3)

   modelsummary(endogeneity\_models, stars = TRUE, coef\_map = cm, notes = NULL,

   title = 'Table4: Exogenous Preferences',

   output = 'flextable')

   ## PLOTTING SLOPES AND COMPARISONS MARGINAL EFFECTS

   My\_Theme\_slopes = theme(

   plot.title = element\_text(size=14),

   axis.title.x = element\_text(size = 16),

   axis.text.x = element\_text(size = 14),

   axis.text.y = element\_text(size = 14),

   axis.title.y = element\_text(size = 16),

   plot.caption = element\_text(size= 12),)

   slopes\_p95 <- plot\_slopes(model, variables = "p95", vcov = RSE\_Model, condition = c("Financial\_Open\_Logged")) +

   scale\_y\_continuous(name = "Coefficient Size",

   breaks=c(0.00,0.02,0.04,0.06,0.08,0.1),

   limits=c(-0.05,0.135)) +

   scale\_x\_continuous(name = 'Logged Capital Mobility') +

   labs(title = "Preferences of the richest 5 %") +

   My\_Theme\_slopes

   slopes\_p05 <- plot\_slopes(model2, variables = "p05", vcov = RSE\_Model2, condition = c("Financial\_Open\_Logged"))+

   scale\_y\_continuous(name = "Coefficient Size",

   breaks=c(0.00,0.02,0.04,0.06,0.08,0.1),

   limits=c(-0.055,0.135)) +

   scale\_x\_continuous(name = 'Logged Capital Mobility') +

   labs(title = "Preferences of the poorest 5 %") +

   My\_Theme\_slopes

   slopes\_p50 <- plot\_slopes(model3, variables = "p50", vcov = RSE\_Model3, condition = c("Financial\_Open\_Logged"))+

   scale\_y\_continuous(name = "Coefficient Size",

   breaks=c(0.00,0.02,0.04,0.06,0.08,0.1),

   limits=c(-0.05,0.135)) +

   scale\_x\_continuous(name = 'Logged Capital Mobility') +

   labs(title = 'Preferences of the Median') +

   My\_Theme\_slopes

   slopes <- grid.arrange(slopes\_p95, slopes\_p05, slopes\_p50, nrow = 1,

   top = textGrob("Marginal Slopes of the Preferences dependent on level of Capital Mobility", gp=gpar(fontsize=25,font=8)),

   bottom = textGrob('Figure3: How capital mobility affects the influence of different income groups in determining changes in welfare genersoity | Source: authors elaboration',hjust=0.85)) +

   My\_Theme\_slopes

   ### checking for diagnosis of original model.

   plot\_model(original\_model, type = "diag", sort.est = '(Intercept)')

   ### checking for diagnosis of adjusted model

   plot\_model(model, type = "diag", sort.est = '(Intercept)')

   plot\_model(model2, type = "diag", sort.est = '(Intercept)')

   plot\_model(model3, type = "diag", sort.est = '(Intercept)')

   plot\_model(model, type = "resid")

   #############Recreate the Regression including the outlier

   outlier\_model <- lmer(dgentav14 ~ p95\*Financial\_Open\_Logged + IIP\_GDP + gent + loggdpt + growtht + unempt + factor(topic) + factor(wave) + (1 | country), data = data\_master, REML = FALSE)

   outlier\_model2 <- lmer(dgentav14 ~ p05\*Financial\_Open\_Logged + IIP\_GDP + gent + loggdpt + growtht + unempt + factor(topic) + factor(wave) + (1 | country), data = data\_master, REML = FALSE)

   outlier\_model3 <- lmer(dgentav14 ~ p50\*Financial\_Open\_Logged + IIP\_GDP + gent + loggdpt + growtht + unempt + factor(topic) + factor(wave) + (1 | country), data = data\_master, REML = FALSE)

   #### Summary of models

   ## Robust Standard Erorrs

   RSE\_Model\_outlier <- vcovCR(outlier\_model, type = "CR1")

   RSE\_Model\_outlier2 <- vcovCR(outlier\_model2, type = "CR1")

   RSE\_Model\_outlier3 <- vcovCR(outlier\_model3, type = "CR1")

   ### Checking models

   model\_parameters(outlier\_model, vcov = RSE\_Model\_outlier)

   model\_parameters(outlier\_model2, vcov = RSE\_Model\_outlier2)

   model\_parameters(outlier\_model3, vcov = RSE\_Model\_outlier3)

   vcov\_outlier = list(RSE\_Model, RSE\_Model2, RSE\_Model3)

   models1\_outlier = list(outlier\_model, outlier\_model2, outlier\_model3)

   #### Creating Output table

   cm <- c('p95' = 'Preferences of the richest 5% (P95)',

   'p05' = 'Preferences of the poorest 5% (P05)',

   'p50' = 'Preferences of the median (P50)',

   'Financial\_Open\_Logged' = 'Capital Mobility Logged',

   'IIP\_GDP' = 'Net International Investment Position',

   'p95:Financial\_Open\_Logged' = 'Preferences P95 x Capital Mobility Logged',

   'p50:Financial\_Open\_Logged' = 'Preferences P50 x Capital Mobility Logged',

   'p05:Financial\_Open\_Logged' = 'Preferences P05 x Capital Mobility Logged',

   'gent' = 'Total Welfare Generosity (t)',

   'loggdpt' = 'Logged GDP (t)',

   'growtht' = 'Growth (t)',

   'unempt' = 'Unemployment (t)',

   'factor(topic)2' = 'Pension Policy (Reference = Health)',

   'factor(topic)3' = 'Unemployment Policy (Reference = Health)',

   'factor(wave)2' = 'Wave 2 (Reference = Wave1)',

   'factor(wave)3' = 'Wave 3 (Reference = Wave1)',

   'factor(wave)4' = 'Wave 4 (Reference = Wave1)',

   '(Intercept)' = 'Intercept')

   modelsummary(models1\_outlier, vcov = vcov\_outlier, stars = TRUE, coef\_map = cm, notes = NULL,

   title = 'Random Intercept Models of Changes in Welfare State Generosity when Outlier included

   (Average Change from T + 1 to T + 4 relative to T).',

   output = 'flextable') %>%

   save\_as\_docx(path = "Random\_Intercept\_Outlier.docx") [↑](#endnote-ref-1)
3. See Appendix for full transformation [↑](#footnote-ref-2)
4. See Apendix Table 4 [↑](#footnote-ref-3)