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A Certain Recipe for Political Trust?

A Quantitative and Comparative Analysis into the Macro-Level
Determinants of Political Trust in 26 European Democracies

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Abstract

Political trust can be understood as an unavoidable precondition for the functioning of representative democracy that entails several beneficial side effects. Therefore, questions regarding its origins and determinants are of central importance and relevance for researchers as well as society. However, although it is quite well researched and known what determines political trust at the individual level, research still faces many blind spots when it comes to the determinants of political trust at the macro-level. Thus, the aim of this thesis is to advance our understanding of the macro-level determinants of trust. Starting from previous research, several hypotheses, including already tested and newly introduced, never tested macro-level predictors of trust, are developed and then tested on their own and simultaneously with the help of multi-level models. For this purpose, the analysis mainly relies on data from the ninth round of the European Social Survey and several other data sources. Hence, 26 different European democracies are chosen as cases. The results of the empirical analysis then indicate that the level of corruption and the electoral system design of a country mainly determine the level of political trust in a country. More specifically, just corruption can explain about 73% of the unexplained variance at the macro-level that is left after including individual level predictors. At the same time, results show that the newly introduced predictors substantive representation, descriptive representation and the social protection expenditure share have a significant effect only in specific situations, e.g., if they are tested on their own.

Keywords: political trust, trust in parliament, Europe, multi-level models, corruption, electoral system

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1 Introduction

Political trust often is at the heart of the debate when citizens argue over politics, evaluate their satisfaction with politicians' as well as institutions' performance or when politicians analyse the sources of people's voting choices. While some people argue that politicians generally have lost sense of what their constituents really want and thus squandered their trust, politicians start campaign-like actions in order to re-gain trust. Beyond that, decades of researchers have been concerned with and focused on political trust and consequently produced a remarkable number of research outputs.

However, this important status of political trust in society as well as in research is not surprising given the central importance of trust. On the one hand, political trust can be understood as an unavoidable precondition for the functioning of representative democracy. It allows for the actual transformation of the decision-making power from citizens to representatives, it gives representatives more leeway to govern effectively (Hetherington, 1998) and citizens are more willing to accept decisions even when they go against their own interests if they trust their representatives (van der Meer & Zmerli, 2017). Because of that, in total, representatives as well as institutions have a stronger fundament on which they can act (Hetherington, 1998). Besides these legitimising and constituting effects of political trust, on the other hand, it also entails positive effects on other parts and aspects of society. More specifically, political trust has the ability to facilitate the development of social trust and cooperation while evoking more trustworthy behaviour among the citizenry (Levi & Stoker, 2000). Therefore, political trust can be considered as "the glue that keeps the system together and as the oil that lubricates the policy machine" (van der Meer & Zmerli, 2017, p. 1).

Given the central importance and relevance of political trust, questions regarding its origins, its determinants and the ways in which it can be developed as well as maintained gain a significant meaning. First, politicians and public officials might be interested in answers to these questions in order to know how to have more leeway to govern effectively without being permanently forced to justify every decision and how to create a strong fundament for political institutions as well as democracy in general. Therefore, knowing where to start and what to change is a remarkable advantage. Second, citizens might be interested to know what to demand from politicians in order to achieve trust and they might have an interest in understanding their and others' political trust, distrust or even mistrust. Similarly, third, researchers might have an interest in advancing our understanding of the origins of such a crucial aspect of our society as

well as democracy and in explaining cross-country differences in trust. Because when looking at the different levels of political trust in Europe, in fact, one can observe clear, noticeable differences between countries (see Table 3) that consequently raise questions about the origins of such differences and the ways in which some countries can achieve remarkably higher or lower levels than others. Nonetheless, in general, everyone should be interested in achieving a strong, vital and steady democracy which is only possible when knowing and understanding the origins of one crucial ingredient, that is, political trust.

Therefore, it is not surprising that the origin of political trust is a topic that has been intensively researched during the last decades (e.g., Miller & Listhaug, 1999; Mishler & Rose, 2001; Magalhães, 2006; van der Meer, 2010; Torcal, 2014; van der Meer & Hakhverdian, 2017; Noordzij, de Koster & van der Waal, 2021). Looking at the existing literature, determinants of political trust can be widely grouped into two distinct categories. These are individual level determinants such as age, gender, level of education and the level of political interest on the one hand and macro-level, also called country-level, determinants of political trust such as the electoral system design or the level of corruption on the other hand. While the different individual level determinants are studied and known quite well as they can be easily obtained with the help of mass surveys that include questions on political trust as well as on individual characteristics, attitudes and behaviours (e.g., Gatterberg & Moreno, 2005; Torcal, 2014), our understanding of macro-level determinants of political trust is, despite many advancements in recent decades, far from being perfect as we still have to face many blind spots. However, this is a problem to be solved as macro-level determinants of political trust play a remarkable role. First, they determine a significant part of the total variation in and the level of political trust in a country of around 14% depending on the study (Table 4; e.g., van der Meer, 2010). Second, they are the drivers of cross-country differences and variation in political trust and thus help us understanding these differences. Third, they are the ones that can be tackled pretty well if politicians or public officials want to improve or maintain the level of political trust in their country. As these persons have frequent contact with and influence on political institutions that impact macro-level characteristics, this is often considered a quite straightforward way to improve trust.

Therefore, the aim of this thesis is to contribute to a richer and more accurate picture of the origins of political trust by further investigating the influence of macro-level determinants on trust. These macro-level determinants will be, in line with previous research, separated into input factors concerned with rules and structures of the political system and output factors

concerned with outcomes of the system (e.g., van der Meer, 2017). This has the advantage that one can estimate every predictor's effect on its own, but also the effect of rules and structures on the one side and outcomes on the other side. Thus, associated with the aim of this thesis is the willingness to advance research and our understanding of political trust. Because of that, the analysis here will extend the range of macro-level predictors commonly tested in previous research on the origins of political trust. More specifically, predictors capturing the quality of representation in a country, that is, regarding macro-level substantive and descriptive representation, as well as predictors capturing macro-economic performance that go beyond standardly used predictors, for example, the social protection expenditure share of a country's GDP, will be used for seemingly the first time to test their influence on the level of political trust. Additionally, those newly introduced predictors will be tested alongside other predictors that have been tested frequently in order to take into account composition effects and test the validity of previously estimated effects. Therefore, the grand research question of this thesis is:

Research Question: *What are the macro-level determinants of political trust?*

Additionally, this grand research question can be further differentiated into two research sub-questions that similarly guide the analysis in this thesis:

Research Sub-Question 1: *Which macro-level factor determines political trust the most?*

Research Sub-Question 2: *Do input or output factors, in total, matter more as determinants of political trust?*

In order to answer these questions, the analysis in this thesis will rely on a series of multi-level models with Maximum Likelihood estimation that will be employed using different sets of macro-level predictors. As one of the main data sources is the ninth round of the European Social Survey (ESS, 2018), 26 different European countries are chosen as cases.

Finally, the thesis is structured as follows: First, in the following chapter, the theoretical framework is laid out and the concept of political trust as well as its societal and academic relevance are introduced. After that, previous research results on the origins of political trust are presented, discussed as well as interpreted and hypotheses intended to answer the above research questions are developed. The following chapter is dedicated to the data and methods of the analysis. At first, the data sources and the cases are introduced. Then, the different variables that are part of the analysis are operationalised and their descriptive statistics are presented. In what follows, the methodology and research design are explained before heading on to the model diagnostics that are used to prevent biased or distorted results.

In the fourth chapter of this thesis, the results of the empirical analysis are presented as well as discussed. This includes testing the hypotheses developed in the theoretical framework and analysing whether they can be supported or not. Finally, a conclusion including a brief summary of the results, limitations and implications of the research at hand and recommendations for future research finalise the thesis.

2 Theoretical Framework

2.1 Political Trust and its Relevance

Trust can generally be defined as “a rational or affective belief in the benevolent motivation and performance capacity of another party” (Norris, 2017, p. 19). It is thus an individual and subjective evaluation of someone else’s capabilities and goodwill in the light of one’s own wishes and desires. If this individual evaluation happens within or regarding the political context, one usually refers to political trust. Political trust extends the general definition of trust by adding the expectation that the other party is specifically able to act in one’s own interest without overseeing or monitoring (Warren, 2017). The other party in this process can either be a single person like a politician, a group of persons like a fraction in parliament or also an entire institution like a nation’s parliament or government. In addition, interests can concern specific desired policies, one’s own personal economic situation as well as the political system as a whole, for example, by preserving basic democratic principles. Hence, political trust is always relational as it involves someone who trusts and someone or something that is trusted (van der Meer & Zmerli, 2017). In addition, trust is also situational in the sense that trust is usually granted to or withheld from actors in a specific situation for a limited amount of time. This can be, for example, the national government for one tenure until the next election.

Furthermore, when people trust politically, they transfer parts of their self-determination to others as they expect the trusted to be acting in line with their own interests (Warren, 2017). By doing so, they are able to dramatically increase their collective capabilities as trust allows for cooperative divisions of labour as the need for everyone to directly take part in the decision-making process decreases (Warren, 2017). Political trust therefore can be understood as an unavoidable precondition for the functioning of representative democracy. It legitimises the political actions of elected political actors as well as the political system as a whole and allows for the actual transformation of people’s decision-making power to a representative, which is the major idea behind political representation. With trust, representatives have more leeway to govern effectively, and institutions have a stronger fundament as well as a stronger acceptance among the citizenry as trust entails more positive feelings for both (Hetherington, 1998). In addition, trusting citizens are more willing to accept policies even when they tend to disagree with them (van der Meer & Zmerli, 2017).

As trust can also be withheld by the citizenry in case they evaluate specific actors or parts of the system to be continuously acting in a way that does not benefit their interests, political trust also functions as a middle-range indicator of political support (Zmerli, Newton & Montero,

2007). Although political support may survive minor fluctuations in performance (Easton, 1975), it might not outlast major crises or longer periods of disapproval. This furthermore highlights the importance of political trust as “a democratic system cannot survive for long without the support of a majority of its citizens” (Miller, 1974, p. 951).

Besides the relevance of trust in constituting and legitimising the political system, its actors and institutions, political trust also has positive effects on other related and desirable aspects of democracy and society. Research has shown, for example, that a government that receives trust from its citizenry can evoke trustworthy behaviour and compliance among them and can even facilitate the development of social trust and cooperation (Levi & Stoker, 2000). Thus, political trust has the ability to translate to other areas of society and positively influence them, for instance, by creating stronger social cohesion.

Nevertheless, despite the necessity and benefits of political trust, the opposite of trust, distrust, also has its function and relevance within a democracy. Although it is beneficial for public officials to be able to govern more freely and effectively and for institutions to hold a general storage of trust and support, a sceptical distrust serves as a form of democratic monitoring (Warren, 2017). It ensures that the people use their powers to monitor and oversee those who hold power (Warren, 2017) and prevents political actors from acting in an arbitrary or even despotic way that could harm both the rights and interests of the people as well as the overarching principles of representative democracy. However, distrust should only exist to a degree that is healthy and beneficial for a democracy and its citizens. If distrust gets generalised, people stop basing their trust on evaluations of the actions and behaviours of political actors and institutions and generally distrust everything. As a result, “citizens can withdraw into cynicism or alienated passivity, and the mechanisms of [...] distrust that motivate responsiveness from political elites can fall into [defective] disuse” (Warren, 2017, p. 35). Beyond that, eroding trust can result in a rise of political extremism and populism (Algan et al., 2017), phenomena that are known to be able to threaten the functioning and state of political representation and consequently democracy (e.g., Urbinati, 2019).

All in all, one can conclude that, although a sceptical distrust is essential to a democracy as it ensures that people use their powers to monitor and oversee those who hold power and, in some instances, demand better performances from them, political trust forms an essential, constituting and legitimising part of representative democracy. Thereby, trust ideally remains as long as political actors and institutions perform in line with citizens’ interests.

Consequently, political trust “functions as the glue that keeps the system together and as the oil that lubricates the policy machine” (van der Meer & Zmerli, 2017, p. 1).

2.2 The Origins of Political Trust

2.2.1 The Importance of the Origins of Political Trust

Given the relevance and necessity of political trust for representative democracy and the overarching beneficial effects of trust for public officials, institutions and society as described above, it is only reasonable to expect that politicians as well as citizens have an interest in high levels of political trust. Because of that, declining or even low levels of trust are often reasons for explicit concern. Scholars have thus often dealt with decreasing levels of political trust in their research (e.g., Crozier, Huntington & Watanuki, 1975; Torcal, 2014), while citizens criticised politicians for putting their trust into them at risk and political leaders started campaign-like actions in order to re-gain trust. Consequently, questions on how trust develops, how it can be increased and how it can be maintained are of central importance for political actors and citizens as well as of special interest for many scientists dealing with the field of political trust. Therefore, it is not surprising that scientific contributions have been made by numerous researchers during the last decades that specifically deal with the origins of political trust (e.g., Miller & Listhaug, 1999; Mishler & Rose, 2001; Magalhães, 2006; van der Meer, 2010; Torcal, 2014; van der Meer & Hakhverdian, 2017; Noordzij, de Koster & van der Waal, 2021). Based on this literature, one can distinguish between two main groups of explanations for political trust, that is, cultural and institutional theories. Furthermore, within the group of institutional explanations, that will form the main part of this analysis, one can further distinguish between input factors such as the quality of representation, the electoral system as well as the age of a democracy and output factors such as corruption and macro-economic performance. These explanations are discussed in detail in the following sections.

2.2.2 Cultural and Institutional Theories

Looking at the existing research dealing with the origins of political trust, one can identify two major theoretical strands, one focusing on cultural, the other focusing on institutional explanations (Mishler & Rose, 2001). Cultural theories treat trust as something exogenous, as an extension of interpersonal trust that is learned early in life and later projected onto the political context. Contrastingly, institutional theories conceptualise political trust as something endogenous that exists as a consequence of satisfactory institutional performance (Mishler & Rose, 2001). While some scholars argue in favour of cultural theories, stressing the relevance

of socialisation processes in one's early childhood (e.g., Almond & Verba, 1963; Eckstein, 1966; Eckstein, Fleron, Hoffman & Reisinger, 1998), the vast majority of research highlights the importance of institutional theories and proves them to be a valid explanation of the origins of political trust (e.g., Aarts & Thomassen, 2008¹; van der Meer, 2010; Hakhverdian & Mayne, 2012; Torcal, 2014; Dunn, 2015; Dahlberg & Holmberg, 2014¹). In addition, in their influential study, Mishler and Rose (2001) compared and tested both theoretical strands simultaneously to evaluate which of them matter more as an explanation of the origins of political trust. Their study strongly supports institutional explanations while widely rejecting cultural theories.² Consequently, one can conclude that political trust mainly originates in institutional performance.

This conclusion has further important consequences for the study of political trust. In contrast to cultural theories, where changes in attitudes might take several decades or even generations to happen as a matter of socialisation processes, institutional theories allow trust to be built (and lost) far more quickly (Mishler & Rose, 2001). As citizens base their political trust on the evaluation of institutional performance, institutions might be able to increase citizens' trust into them and thus also political trust in general if they perform in a way that benefits the citizenry and therefore generates more satisfaction among them. Hence, political leaders and elites who are interested in higher levels of trust might have chances to reach those if they bring the institutions' performance closer in line with citizens' wishes and ideas. In fact, these considerations are also supported by Offe (2006) who states that institutional trust could change quickly in reaction to changes in institutional performance.

2.2.3 Input and Output Factors

However, institutional performance is still a broad concept that involves many different areas and that is evaluated based on specific underlying factors that all together contribute to trust or distrust in institutions. These different factors can be summarised into two distinct categories, that is, input factors on the one hand and output factors on the other hand. Input factors reflect

¹ Although this thesis aims at researching the origins of political trust, some studies dealing with satisfaction with democracy are discussed here. More specifically, the studies by Aarts & Thomassen (2008), Dahlberg & Holmberg (2014) and Mayne & Hakhverdian (2017) are discussed a couple of times while the studies by Anderson & Guillory (1997) and Cusack (1999) are mentioned as examples only a few times. The reason for that is that the arguments made and the conclusions drawn in that studies are pertinent also to research on trust and therefore need to be included here.

² Of course, this result must be treated as a generalised statement depicting the situation generally. Perhaps, different groups of people are more sensitive to institutional performance than others. Thus, it might also play a larger role in their evaluation of political trust than for others. The role of such macro-micro interactions is discussed shortly at the end of the theoretical framework.

the procedural arrangements of a democratic system. These include the rules and structures how the system is built, the way how actors and institutions interact and interrelate with each other as well as the influence of citizens on who governs and makes decisions. When evaluating the input performance of a democratic system as a whole, one can ask oneself “Is the system fair and do I have a say within the system?”. Besides that, output factors concern the actual outcomes of the system, for example, the policy outputs that arise out of the decision-making process and the overall macro-economic performance that is related to them. Similarly, if one would evaluate the output performance, here one could ask oneself “Do I get what I want and what I deem to be important?”.

Nevertheless, whether *actual* procedures or *actual* outcomes as a whole matter more as an explanation of the origins of trust, which underlying factors within these two distinct categories should be considered and which of those explain the development of trust best is subject to a debate among researchers (e.g., van der Meer, 2017). While some researchers highlight the importance of input factors (e.g., Aarts & Thomassen, 2008; Dunn, 2015; Torcal, 2014; van der Meer & Hakhverdian, 2017), others stress the necessity of output factors (e.g., Miller & Listhaug, 1999; Taylor, 2000; Anderson, 2009). At the same time, one can also find contradicting predictions and results concerning one specific factor, for example, concerning the effects of *actual* macroeconomic performance (e.g., Miller & Listhaug, 1999; van der Meer, 2010). Therefore, the following sections will be dedicated to the presentation and discussion of previous findings alongside suggestions for improvement.

2.2.4 Input Factors: Quality of Representation, Electoral System Design and Age of Democracy

In this analysis, the following variables are considered as input factors: the quality of representation, the electoral system design as well as the age of a democracy.

To start with, one input variable that is included in many studies researching the origin of trust is the quality of representation (e.g., Aarts & Thomassen, 2008; Dahlberg & Holmberg, 2014; Dunn, 2015; Torcal, 2014; Mayne & Hakhverdian, 2017). As representation is one of the main fundamentals of today’s representative democracies, one can reasonably expect that it influences people’s trust in institutions. The reasoning behind this mechanism is that the better the quality of representation, the higher political trust. However, there is not just one form of representation that would determine the general quality of it. In general, one can differentiate between two forms of representation that are important to mention here, that is, substantive representation and descriptive representation. While substantive representation covers the extent to which

representatives' actions are related to the citizens' preferences, descriptive representation focuses on the extent to which representatives' characteristics resemble the demographic characteristics in society (Soroka & Wlezien, 2010). In addition, the third form of representation, electoral representation, which stresses the accurate allocation of seats based on the actual vote share of parties and its representatives (Soroka & Wlezien, 2010), is a direct feature of the electoral system design of a country and is thus discussed later.

Until today, all studies that have included the quality of representation in their analysis have almost exclusively focused on substantive representation (e.g., Aarts & Thomassen, 2008; Dahlberg & Holmberg, 2014; Dunn, 2015; Torcal, 2014; Mayne & Hakhverdian, 2017). Thereby, substantive representation has either been conceptualised and measured in terms of responsiveness (e.g., Torcal, 2014) or in terms of ideological congruence (e.g., Golder & Stramski, 2010; Dahlberg & Holmberg, 2014). While responsiveness is mainly based on the idea that there is ideally a constant interaction between representatives and those represented to ensure that preferences are adequately picked up in the policy-making process (Soroka & Wlezien, 2010), ideological congruence grounds in the broader assumption that the general ideological position of those who represent must be similar to those being represented (Golder & Stramski, 2010). However, no matter which conceptualisation is chosen, substantive representation has been proven to be a strong predictor of the levels of political trust in several studies.

In his study, Mariano Torcal (2014) analyses the reasons behind declining trust in Spain and Portugal and mainly focused on political responsiveness and economic performance. He found out that individual *perceptions* of political responsiveness, together with *perceptions* of corruption, serve as the main explanation of increasing citizen distrust in institutions, even outperforming individual *perceptions* of economic performance. These results are especially noteworthy as they depict the situation in two countries, Spain and Portugal, that have been harmed by a severe economic crisis during that time. Despite this crisis, citizens seemingly still deem it more necessary to be represented adequately than being satisfied with the economy in their evaluation of political trust. Similarly, Dahlberg and Holmberg (2014) argue that ideological congruence is a strong predictor of people's satisfaction with democracy that is only being outperformed by government effectiveness in their analysis. Furthermore, Dunn (2015) concludes that individuals will trust parliament more when their elected representative acts as an advocate of their political preferences.

At first, these results should not be surprising if we take into account that substantive representation reflects, inter alia, the representation of one's own preferences which is closely in line with the definition of political trust, that has been proposed here earlier, according to which acting in one's interests plays a significant role. However, what almost all studies researching the effects of substantive representation on political trust or satisfaction with democracy respectively, including those named above, have in common is that they focus their analysis purely at the individual level, although this is not always clearly stated. While some of these studies, such as the one by Torcal (2014), focus on individual *perceptions* of political responsiveness, which is an individual, subjective evaluation of the institutions' performance, other studies like the ones by Dahlberg and Holmberg (2014) or Dunn (2015) take into account *actual, objective* levels of congruence, but also at the individual level. In fact, the two latter studies do this by evaluating ideological congruence as the difference between citizens' ideological self-placement and the ideological position of the party they have voted for.

In contrast to that, the study by Mayne and Hakhverdian (2017) differentiates between ideological congruence at the individual level and the macro-level. For that, they use the terms egocentric and socio-tropic congruence respectively. Their findings support, on the one hand, previous conclusions by other researchers that *actual* ideological congruence at the individual level influences the level of political trust in a country. However, on the other hand, they also indicate that ideological congruence at the macro-level, that takes into account whether the representatives in parliament or government as a whole match the distribution of ideological positions in society as a whole, has no significant effect on satisfaction with democracy. Although the different effects of ideological congruence at the individual and at the macro-level might seem surprising or even contradicting at first, they also make sense if one takes into account that ideological congruence generally is not frequently discussed in public, nor is it easily observable for citizens at the macro-level (Mayne & Hakhverdian, 2017). In fact, it demands citizens to evaluate the distribution of ideological positions of the entire citizenry as well as of the parliament as a whole which makes it a cognitively challenging concept. Contrastingly and compared to that, evaluating one's own ideological position and the one of the representative or party one has voted for is a significantly easier thing to do. Beyond that, citizens might care more about their individual congruence with the representative they have chosen rather than ideological congruence of the entire citizenry and the entire parliament which would further explain these two different results.

Therefore, given the results of the studies named above, it is also reasonable to expect that the same holds true for political trust. More specifically, the expectation is that *actual*, macro-level ideological congruence and thus substantive representation measured at the macro-level has no significant effect on the level of political trust in a country. Hence, the contribution of this thesis to the study of the origins of political trust is the inclusion of a measurement of *actual* substantive representation at the macro-level for seemingly the first time. While *actual* substantive representation at the individual level, often conceptualised as egocentric congruence, has been part of many studies as its measurement is quite straightforward with the help of mass surveys such as the European Social Survey (ESS) or especially the Comparative Study of Electoral Systems (CSES), capturing *actual* substantive representation at the macro-level is more demanding as one cannot fully rely on data of one of these surveys. This could also be a reason why its effect on political trust has been not tested until today.

Besides that, given the large amount of research dealing with the effects of substantive representation on political trust in one way or the other, it is surprising that studies have mainly focused on one part determining the quality of representation. So far, there has been seemingly no analysis of the origins of trust that included descriptive representation alongside substantive representation. However, several authors pointed at the importance of representatives resembling one's own characteristics for representation (e.g., Mansbridge, 1999; Banducci, Donovan & Karp, 2004; Arnesen & Peters, 2018). According to Mansbridge (1999), descriptive representation is especially important in times of mistrust because it leads to adequate communication. As the quality of mutual communication between representatives and those being represented varies from group to group and era to era, those who share a set of common experiences can often read another person's signals more easily and therefore better engage in accurate forms of communication. Consequently, one can expect descriptively fitting representatives to represent their constituents more accurately, at least in times of mistrust, which could accordingly lead to higher levels of political trust. Furthermore, research shows that descriptive representation leads to more positive evaluations of responsiveness, which complements Mansbridge's (1999) thoughts, and increases political participation (Banducci, Donovan & Karp, 2004).

In addition, citizens generally prefer a more descriptively representative decision-making body to a non-descriptively one (Arnesen & Peters, 2018), which further nourishes the expectation that democratic systems which can be considered descriptively representative, are likely to strengthen political trust among its citizenries. Lastly, research indicates that also the

willingness to accept public decisions, especially if those decisions go against one's own standpoint, increases with higher levels of descriptive representation (Arnesen & Peters, 2018). Thereby, the willingness to accept decisions that sometimes do not match one's own preferences is a cornerstone for the functioning and stability of democracy. If citizens nevertheless accept these decisions, they can also be expected to trust their representatives to overall act according to their preferences and desires. Beyond that, the evaluation of descriptive representation can be expected to be, compared to the evaluation of substantive representation, much simpler for citizens. The reasons for that are more frequent debates about the share of women in parliament or other institutions as well as an easier observation of the actual quality of descriptive representation.

Thus, this thesis provides a new approach to the evaluation of the origins of political trust as it incorporates descriptive representation, alongside substantive representation, for seemingly the first time as a determinant of trust in the analysis. Together, these two factors are expected to measure the quality of representation and its effects on the levels of political trust more accurately and comprehensively than other studies have done before. In addition, the expectation is that a better representation substantially has no significant effect on the level of political trust, while a better representation descriptively is expected to lead to higher levels of political trust.

***Hypothesis 1:** The level of substantive representation in one country has no significant effect on the level of political trust in that country.*

***Hypothesis 2:** The higher the level of descriptive representation within the country, the higher the level of political trust in that country.*

Besides the quality of representation, another input factor that can be included in the analysis of the origins of political trust is the electoral system design of a democracy. Usually, electoral systems within Europe are categorised into proportional, majoritarian and mixed systems. While more proportional electoral systems tend to lead to multi-party systems as they translate votes to parliamentary seats as closely as possible (Norris, 1999; Magalhães, 2006), more majoritarian systems tend to lead to two-party systems as they translate votes into seats with a bias towards bigger parties (Aarts & Thomassen, 2008). Consequently, proportional systems are argued to be more responsive to citizen's preferences and majoritarian systems are thought to strengthen mechanisms of accountability (van der Meer, 2017).

The extent to which the electoral system matters as such as well as which of these two mechanisms and thus which of these two types of electoral systems matter more as determinants of political trust has been subject to a debate with mixed results. Some studies indicate that political trust is higher in countries with more proportional systems (e.g., Anderson & Guillory, 1997; Magalhães, 2006; van der Meer, 2010). Contrastingly, other studies conclude that proportionality decreases political trust (e.g., Norris, 1999). At the same time, there are also studies that find no significant effect of the electoral system on political trust at all (e.g., Oskarsson, 2010; Dahlberg & Holmberg, 2014; van der Meer & Hakhverdian, 2017). Moreover, Marien's (2011) study reveals results different to all of those mentioned above. She states that trust is highest in those countries in which there is either an extreme majoritarian or proportional system. Consequently, according to her study, political trust has a curvilinear effect that profits from both extremes.

Nevertheless, the interpretation of the studies' findings mentioned above must be treated with some caution as most of them, except of the study by Dahlberg and Holmberg (2014), focus on European countries and thus only include two countries with purely disproportional outcomes, namely France and the United Kingdom. Contrastingly, Dahlberg and Holmberg (2014), who do not identify a significant effect of the electoral system as such, include a larger number of countries with majoritarian or mixed systems, so that different electoral system designs are more equally represented in their analysis. Beyond that, also studies that only include European countries and focus explicitly on political trust identify no significant effect of the electoral system (e.g., Oskarsson, 2010; van der Meer & Hakhverdian, 2017). As a consequence, in this thesis, the expectation will be the same. Thus, the electoral system design of a country is expected to have no significant effect on the level of political trust in that country.

***Hypothesis 3:** The electoral system design of a country has no significant effect on the level of political trust in that country.*

The last input factor that is discussed in this thesis regarding its effect on political trust is the age of democracy, that is, the period of time since a country can be evaluated as a democracy. European countries, that are evaluated in this analysis, provide an interesting site of comparison as the countries democratised at different time points as well as almost together within groups since the end of World War II within Europe (van der Meer, 2017). While countries like (Western) Germany, France or Italy could already be counted as democracies in the late 1940s, other countries experienced a transition from authoritarian to democratic regimes in the 1970s. The latter includes countries such as Spain, Portugal, Greece and Cyprus. Beyond that,

formerly Communist countries in Central and Eastern Europe experienced a transition to democracies in the late 1980s and early 1990s, marking the last and third group within Europe (van der Meer, 2017). These countries include, inter alia, Croatia, Slovakia, Slovenia as well as Bosnia and Herzegovina.

According to research, familiarity with democratic traditions increases trust in the political system. Thereby, the frequency of free, competitive, national elections seems to be a predictor of trust (McAllister, 1999). Thus, countries that held democratic elections more often because they have a longer history of being a democracy can be expected to show higher levels of political trust. However, this should of course not be misunderstood as frequent elections based on short and rather instable governments probably cannot be expected to have a positive influence on trust. Nevertheless, the former mechanism is in line with research by Rose (1994) who states that even after countries' transitions to democracy, political trust takes some time to develop. Further empirical research has thus shown that political trust is higher in countries with a longer, uninterrupted democratic history (e.g., Aarts & Thomassen, 2008; Anderson & Singer, 2008; van der Meer, 2010; Marien, 2011).

Consequently, the expectation is the same in this thesis. The length of the time period a country can be evaluated as a democracy is expected to have an influence on the level of political trust within that country. More precisely, countries that can provide a longer history of uninterrupted democratic rule are more likely to show higher levels of political trust.

***Hypothesis 4:** Democracies that experienced a longer period of uninterrupted democratic rule are more likely to have higher levels of political trust than younger democracies.*

2.2.5 Output Factors: Corruption and Macro-Economic Performance

Now turning to the output side of the political system, focusing on *actual* outcomes, the two variables that are discussed here are corruption and macro-economic performance.

To begin with, the focus first lies on corruption. Corruption can generally be defined as the “misuse of public office for private gain” (Sandholtz & Koetzle, 2000). It is thus a two-sided concept as it involves procedures as well as outcomes. On the one hand, those who are entrusted with power manipulate the procedure in order to gain advantages for themselves or partisans. On the other hand, this results in a different, more unequal distribution of resources as well as in policies and services that are somehow distinct from public interests (Hakhverdian & Mayne,

2012). Consequently, corruption as such could be conceptualised as either an input, an output factor or even as both. The difficulty of clearly conceptualising corruption has previously been highlighted by other researchers (e.g., Anderson & Tverdova, 2003). In this analysis, corruption is categorised as an output factor, stressing its negative effects on the distribution of resources and implementation of policies and services. However, as this is just a matter of conceptualisation, it will not affect the results of the analysis.

In general, corruption fundamentally undermines democratic principles of accountability, equality and openness (Dahl, 1971). It implies an absence of moral scruples as corrupt political actors display an inherent lack of care and responsibility for citizens, who they are entrusted to represent (van der Meer & Hakhverdian, 2017). It can therefore be regarded as the prime antithesis to any trust relationship (Rothstein & Teorell, 2008). Beyond that, corruption also has an influence on the outcomes of the political system. It entails uncertainty and unreliability as citizens do not know which policy outcomes to expect (van der Meer, 2010) as well as inequality as the distribution of outcomes is distorted by corrupt practices. Thus, it is not surprising that corruption has proven to have a negative influence on political trust in several studies (e.g., Anderson & Tverdova, 2003; Oskarsson, 2010; van der Meer, 2010; Hakhverdian & Mayne, 2012; van der Meer & Hakhverdian, 2017). Moreover, van der Meer (2017) even identifies corruption as one of the central factors determining the existence or absence of political trust.

Because of that, the expectation is that corruption has a substantial and significant influence on the levels of political trust within different countries. In addition, the effect of corruption is expected to be negative and stronger in countries that face higher levels of corruption.

***Hypothesis 5:** The higher the level of corruption in a country, the lower the level of political trust in that country.*

The last dimension that will be discussed in this thesis as a determinant of political trust is, broadly defined, macro-economic performance. Since several decades, this specific factor has been investigated in many different studies. Almost 50 years ago, Easton (1975, p. 449) already argued that “[the] evaluation of outputs and performance may help to generate, and probably at all times will help to sustain, confidence in authorities”. In addition, around 25 years later, Miller and Listhaug (1999) concluded that economic performance is critical to citizens’ support of and trust in political actors. From a normative viewpoint, these conclusions at first make sense as indicators of macro-economic performance such as the GDP, the inflation rate or the unemployment rate are omnipresent in our daily lives. They are presented in the news when the

economic situation of countries is evaluated, economists employ them to make predictions of a country's future, politicians use them to explain or justify their behaviour and decisions and they affect citizens directly through rising prices or unemployment. Therefore, a general understanding of and feeling for them can be expected to exist in almost every individual, at least after someone else has interpreted them for the citizenry. Consequently, a general sense of how a country's economy is performing is thus probably way more tangible as well as better observable than many other possible determinants of political trust, including the quality of representation and the electoral system.

In general, and in line with that, many studies show that individuals' positive evaluation of a country's economic performance, that is, their *perception*, has a positive influence on their political trust (e.g., Citrin & Green, 1986; Lawrence, 1997; Chanley, Rudolph & Rahn, 2000; van der Meer & Dekker, 2011; Elinas & Lambrianou, 2014). Beyond that, even authors who otherwise stress the importance of input factors and identify them as main determinants of political trust, admit that *perceptions* of economic performance substantially and significantly influence citizens' trust (e.g., Torcal, 2014).

However, these consistent results are not found when one looks at previous studies analysing the effects of the *actual, objective* economic performance of a country. Thereby, the *objective* macro-economic performance indicators that are used most frequently include the GDP per capita, economic growth, unemployment and inflation rates (e.g., Miller & Listhaug, 1999; van der Meer & Hakhverdian, 2017). While some studies find significant effects of these indicators (e.g., Lipset & Schneider, 1983; Cusack, 1999; Miller & Listhaug, 1999; Anderson & Singer, 2008; Marien, 2011; Kalbhenn & Stracca, 2015), others find generally no or only minor significant effects (e.g., Rahn & Rudolph, 2005; Oskarsson, 2010; van der Meer, 2010; Hakhverdian & Mayne, 2012; van der Meer & Hakhverdian, 2017).

One reason for the absence of significant effects when evaluating *actual* performance indicators could be the inclusion of corruption. Van der Meer and Hakhverdian (2016) conclude in their study that all macro-economic performance indicators turn non-significant once corruption is part of the analysis. Therefore, corruption might serve as the major variable determining the effects of output factors on political trust. However, studies also show that there is a high correlation between corruption and macro-economic performance indicators, especially with the GDP per capita (e.g., Goubin & Hooghe, 2020). They might thus measure the same effect, which would explain the non-significant effects of typical macro-economic performance indicators once corruption is included.

Second, and more substantially, these indicators that are usually used to measure *actual* macro-economic performance could also be a misleading choice in another sense. Citizens might have a general sense of how the economy is performing, they might be able to take into account the situation as a whole, which would also explain the positive effects of *perceptions* on trust, however, they might not have a deep understanding of those specific indicators and therefore might not use them as a starting point for their individual evaluation. Furthermore, one can also question the importance of these indicators when looking at the actual values of them. Especially in comparison to the rest of the world, European countries almost entirely display high levels of GDP and GDP per capita as well as similar inflation rates due to the shared European market, just to name two of them. Consequently, there might be other indicators to which citizens' everyday contact is even stronger, which are thus even more tangible and which can actually portray larger differences in performance and might therefore provide stronger, significant effects on political trust.

More specifically, areas of which one might think of here could be the quality of the health system, the extent and generosity of social protection benefits or the equal distribution of wages and assets. These are areas to which individuals usually have frequent contact in their everyday lives and which, on the other hand, also have a direct impact. Hence, one might also expect that the impact on political trust is more important. Unfortunately, we are missing *objective*, comparative data sets on the quality of the health system, the status of social insurances etc. However, one might be able to measure those indirectly by using a country's social protection expenditure, measured as a share of the country's GDP. The assumed mechanism would then be that a higher social protection expenditure would also lead to more generous social protection benefits and a better health system among other things. In fact, research shows that health inequalities are lower in countries where social expenditure is higher (Álvarez-Gálvez & Jaime-Castillo, 2018). In addition, studies indicate that economic inequalities have a negative effect on the levels of political trust (e.g., Zmerli & Castillo, 2015; Hutchinson & Xu, 2017; Goubin & Hooghe, 2020). Fortunately, and in contrast to other factors, there are indicators that can be used to measure these effects, for example, the Gini coefficient that assesses the unequal or equal distribution of incomes across Europe and beyond or income percentiles that indicate the share of a country's total assets and incomes a specific percentage of the population is having or earning.

In sum, the contribution of this thesis regarding the measurement of *objective* macro-economic performance on political trust is the inclusion of *objective* indicators, that are often not used in

the analysis, such as the social protection expenditure share or the Gini coefficient. The inclusion of those factors might lead to a fuller, more comprehensive evaluation of macro-economic performance effects on trust and might thus provide a starting point for a path away from previously inconsistent effects of former indicators. The expectation is that the higher the share of social protection expenditure in a country, the higher the level of political trust. Similarly, the more equally distributed the incomes within a country, the higher the level of political trust.

***Hypothesis 6:** The higher the share of social protection expenditure of a country's GDP, the higher the level of political trust in that country.*

***Hypothesis 7:** The more equally distributed the incomes within a country, the higher the level of political trust in that country.*

2.2.6 Micro-Level Predictors and Macro-Micro Interactions

In this thesis, the focus lies on macro-level predictors of political trust such as, for example, the quality of representation, the electoral system and macro-economic performance as extensively discussed above. Nevertheless, there are also micro-level predictors as well as macro-micro interactions that have an influence on the level of political trust in a country. However, as macro-micro interactions are not explicitly included in the analysis and as micro-level predictors are only used as control variables, the following section is dedicated to a short discussion of those.

To start with micro-level predictors, or individual level predictors respectively, numerous studies indicate that they have an influence on the level of political trust (e.g., Bäck & Kestilä, 2008; van der Meer, 2010; Marien, 2011; Torcal, 2014). These micro-level predictors include, on the one hand, variables dealing with an individual's social background and socio-economic position such as gender, age, education, income or being part of a minority, but also, on the other hand, variables dealing with individual attitudes, behaviours or evaluations such as political interest, political winner or loser status after elections or perceived economic performance. More specifically, studies conclude, for example, that higher levels of education have a positive influence on political trust (e.g., Anderson & Tverdova, 2003; van der Meer, 2010; Marien, 2011), that higher levels of political interest are associated with higher levels of political trust (e.g., Anderson & Tverdova, 2003; van der Meer, 2010; Torcal, 2014) and that

positive, individual evaluations of the economic situation can increase political trust (e.g., Bäck & Kestilä, 2008; Torcal, 2014).

In addition, especially recent studies on the origins of political trust included macro-micro interactions in their analysis (e.g., Marien, 2011; Hakhverdian & Mayne, 2012; Noordzij, de Koster & van der Waal, 2021). The main idea behind these interactions is that the same predictors at the macro-level might have a different effect on the level of political trust for different individuals. As political trust is an individual, subjective evaluation of institutional performance, different individuals might thus evaluate performances differently. Hence, the effect of a macro-level predictor, such as the level of corruption in a country, might be moderated or conditioned by micro-level variables, that is, individual characteristics, attitudes, behaviours or evaluations. In fact, research shows that this is often the case. For example, studies indicate that the negative effect of corruption on political trust increases as education improves (Hakhverdian & Mayne, 2012). Thus, in the evaluation of institutional performance, the same level of corruption has a more negative effect on political trust for more educated citizens than for their lesser educated counterparts.

2.3 Summary

In sum, political trust is an essential, constituting and legitimising part of every representative democracy. Its presence therefore is not only a necessity, but also desired and valued by politicians, public officials as well as citizens. Regarding its origins, researchers widely agree that political trust mainly originates in institutional performance. However, which specific factors influence evaluations of institutional performance and thus political trust and which of them matter the most as determinants of political trust remains debated. At the macro-, respectively the country-level, possible determinants of political trust can be sorted into two distinct categories, namely input factors on the one side and output factors on the other side. On the input side, factors that are discussed here include the quality of representation, the electoral system design as well as the age of democracy. Contrastingly, on the output side, these factors are corruption and macro-economic performance. After having interpreted and discussed previous research results in the theoretical reflection above, the expectation is that, on the input side, the level of substantive representation as well as the electoral system design of a country have no significant effect on the level of political trust in a country. However, in addition, the level of descriptive representation and the period of time a country can be evaluated as a democracy are expected to have an influence. More precisely, higher levels of

descriptive representation as well as a longer period of uninterrupted democratic rule are expected to influence political trust in that country positively. Besides, on the output side of the system, higher levels of corruption are expected to be a determinant of lower levels of political trust. Lastly, focusing on macro-economic performance, a higher share of social protection expenditure of a country's GDP as well as more equally distributed incomes within a country are predicted to increase the level of political trust in that specific country. Whether these expectations and hypotheses are valid for European democracies is discussed after the empirical analysis in the results chapter of this thesis. To start with, an overview of all hypotheses developed here is presented in the following section. After that, the case selection, relevant data, operationalisation of the variables and methodology are explained before moving on to the actual analysis and discussion of the results.

2.4 Overview of the Hypotheses

Table 1: Overview of the hypotheses

Hypothesis
Hypothesis 1: The level of substantive representation in one country has no significant effect on the level of political trust in that country.
Hypothesis 2: The higher the level of descriptive representation within the country, the higher the level of political trust in that country.
Hypothesis 3: The electoral system design of a country has no significant effect on the level of political trust in that country.
Hypothesis 4: Democracies that experienced a longer period of uninterrupted democratic rule are more likely to have higher levels of political trust than younger democracies.
Hypothesis 5: The higher the level of corruption in a country, the lower the level of political trust in that country.
Hypothesis 6: The higher the share of social protection expenditure of a country's GDP, the higher the level of political trust in that country.
Hypothesis 7: The more equally distributed the incomes within a country, the higher the level of political trust in that country.

3 Data and Methods

After having laid the theoretical fundament of this thesis in the previous chapter by discussing and interpreting previous research results and developing hypotheses on the origins of political trust, the following sections are dedicated to the data, methodology and research design that is used in the following analysis. Therefore, first, the relevant data, cases and key variables are explained. After that, the methods and the research design are introduced.

3.1 Data Sources and Case Selection

The European Social Survey (ESS) provides a starting point for the analysis here and is used as a data source for the dependent variable and individual-level control variables as well as for the case selection. It is an academically-driven, high-quality survey that is used in many other studies researching the origins of political trust (e.g., Oskarsson, 2010; van der Meer, 2010; Marien, 2011). For the purpose of this analysis, the most recent, ninth round of the ESS (2018) is chosen. The ninth round covers data from 49,519 individuals in 29 European countries that was mainly collected between 2018 and 2019 among representative samples of the population of the 29 countries in face-to-face interviews, and includes survey responses on topics such as trust, political interest, human values and demographics among others (ESS, 2021). Hence, this dataset is well suited for the comparative analysis here as it provides relevant and reliable information on trust in institutions as well as on individuals' demographics and attitudes in many European countries while ensuring comparability among different cases (Marien, 2011).

However, not all 29 countries that were part of the ninth round of the ESS are chosen as cases for the analysis here. As this thesis focuses solely on liberal democracies in Europe, those countries that do not fulfil this criterion have to be removed. Additionally, the removal of such countries is necessary because they would conflict with variables that are part of the analysis, such as the age of democracy or the electoral system design. Therefore, drawing on data from V-Dem's Liberal Democracy Index (LDI) of 2018, which captures the quality of electoral aspects, freedom of expression, freedom of the media, civil society, rule of law and strength of checks on the executive (V-Dem Institute, 2019), Hungary, Montenegro and Serbia are not included in the analysis. Consequently, the remaining 26 European countries, most of them member of the European Union, namely Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Iceland, Ireland, Italy, Latvia, Lithuania, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom, are treated as cases for the analysis.

Furthermore, data collection for the ninth round of the ESS (2018) took place in twenty countries that are part of the analysis in the last third of 2018 and the first half of 2019 and in the six other countries almost one year later ³. Therefore, to measure the different variables' effects on political trust suitably and to bring them into accordance with the data provided by the ESS (2018), data for the first group of countries is taken from the year 2018 while data for the latter group of six countries is taken from the year 2019. Thus, data for Croatia, Iceland, Lithuania, Portugal, Slovakia and Spain is taken from the year 2019 while data for the remaining cases is taken from 2018. Consequently, the expectation is that individuals base their evaluation of a country's institutional performance either on the same year if they took part in the ESS in the last months of a year or on the previous year if they took part in the very beginning of the year.

Moving on, in the following sections, the dependent and independent variables as well as the control variables are introduced and operationalised.

3.2 Dependent Variable

The ESS (2018) includes three national political institutions, organisations and actors that are key in representative democracy and that therefore can be used to assess the current level of political trust. These three institutions are the country's parliament on the one hand and political parties as well as politicians on the other hand. To evaluate trust in these institutions, organisations and actors, the following questions were asked: "please tell me on a score of 0 – 10 how much you personally trust each of the institutions I read out. 0 means you do not trust an institution at all, and 10 means you have complete trust" (ESS, 2018). Beyond that, respondents were allowed to refuse to answer or to state that they do not know. However, answers relating to one of the two latter options are excluded from the analysis here.

For the purpose of this analysis, and in line with other studies researching the origins of political trust (e.g., Magalhães, 2006; van der Meer, 2010), trust in the country's parliament is chosen as the dependent variable. The reason for that is that the national parliament can be seen as one of the main political actors and institutions within a country that somehow also includes political parties as well as politicians as they are mostly part of it. Beyond that, all three items,

³ Field work and thus data collection for the ninth round of the ESS (2018) took place in most countries that are included as cases here between 28.08.2018 and 26.05.2019. However, in many countries, data collection already finished earlier in 2019. The exemptions are Croatia, Iceland, Lithuania and Spain where data collection happened around one year later between 20.09.2019 and 31.01.2020 as well as Portugal and Slovakia where data collection started at 26.11.2018 respectively 14.06.2019 and ended in December 2019.

that is, trust in the country's parliament, trust in political parties and trust in politicians, strongly correlate together. Similarly, previous research indicates that trust in political institutions is a one-dimensional concept (Zmerli, Newton & Montero, 2007; Hooghe, 2011) which further confirms the choice of the dependent variable. At the same time, this also means that trust in the country's government is not included here. The reason for that mainly is that two independent variables, the quality of substantive and descriptive representation, are measured in the country's parliament. Therefore, the inclusion of trust in government would not be suitable.

Lastly, as indicated above, the dependent variable, trust in the country's parliament, is measured on a scale from 0 to 10 while 0 indicates no trust at all and 10 complete trust.

3.3 Independent Variables

After having explained the operationalisation and measurement of the dependent variable, trust in the country's parliament, the following sections are dedicated to the operationalisation and measurement of the independent variables that are part of the analysis.

3.3.1 Input Factors: Quality of Representation, Electoral System Design and Age of Democracy

To start with, as already explained in the theoretical reflection, substantive representation is mostly operationalised in terms of responsiveness or ideological congruence. While it is easier to use individual *perceptions* of responsiveness as individuals just have to evaluate general responsiveness as a subjective feeling, using *actual, objective* responsiveness is rather difficult. The reason for that is that responsiveness is a dynamic and ongoing process between representatives and those represented. In order to function properly, responsiveness requires that changing preferences of the constituency result, accordingly, in changing and adapting preferences, behaviours and policy outputs by the representatives (Beyer & Hänni, 2018). Thus, one would have to compare all policy preferences of the citizenry with the policies produced by the representatives in the decision-making process. At the same time, one would have to analyse whether representatives are actually responsive to the citizens' preferences and desires, that is, whether they adapt their own behaviour in a sufficient and fitting manner. However, this would pose an obstacle for the analysis here.

Because of that, and in line with previous research (e.g., Dahlberg & Holmberg, 2014), ideological congruence is chosen as an operationalisation of the quality of substantive

representation. In contrast to the concept of responsiveness, ideological congruence focuses on the overlap of ideologies, policy positions or issue priorities between citizens and their representatives. Ultimately, and because of that, assessing ideological congruence brings one closer to the answer whether the majority actually gets what it wants (Beyer & Hänni, 2018). It is thus a more static concept than responsiveness that allows for comparing citizens' positions to those of their representatives at one single time point.

In this thesis, ideological congruence is operationalised, in line with Golder and Stramski (2010), as a many-to-many relationship between citizens and their representatives in the national parliament. Thus, it is measured as the extent to which the distribution of citizens' ideological positions matches the distribution of the representatives' ideological positions on a left-right scale. The advantage of this approach is that one can actually assess the representation of different individuals' and (sub-)groups' positions in parliament. Data regarding the distribution of citizens' ideological positions is retrieved from the ESS (2018), using individuals' self-assessments of their ideological position. In addition, data regarding the representatives' ideological positions is taken from the Chapel Hill expert survey (Jolly et al., 2022) which codes different parties' ideological positions on a similar left-right scale based on evaluations of 421 political scientists specialised in political parties and European integration. Therefore, the assumption here is, in line with Golder and Stramski's (2010) research, that all legislative representatives from the same party share the same ideological position of their party. The parties' positions themselves are evaluated for the year 2019 but they are assumed to be overall valid for 2018 as well. It is thus a suitable and reliable dataset for the analysis here that includes data for almost all of the relevant cases that are part of the analysis.

After that, the distribution of such positions is determined based on each national parliament's (the lower house's) seat distribution after the last election prior to either 2018 or 2019, depending on the specific country as indicated earlier. If there has been an election in some country in 2018 or 2019 respectively, the seat distribution after this election is taken as the data from the ESS (2018) has also been collected in the last period of 2018 and the first months of 2019 or in the last period of 2019 and the following year. However, there is one exemption. Although data for Portugal is generally taken from the year 2019 as indicated earlier, the seat distribution is not taken from the period after the election in 2019, but from the election prior to that, as data collection already finished in December 2019 and the election was held only a few weeks prior to that. Additionally, in some countries, seats from smaller parties need be removed from the analysis as the Chapel Hill expert survey (Jolly et al., 2022) does not provide

data and thus the exact ideological position for every party in every country's parliament. However, as this is only the case in some countries and for parties that only have a small number of seats⁴, this does not influence the results substantially. In those countries in which small parties are taken out of the analysis, the distribution of seats is calculated based on the regular, total number of seats minus the seats of those parties that are not part of the analysis. Besides, as Iceland, Norway and Switzerland are not included in the Chapel Hill expert survey (Jolly et al., 2022), they cannot be evaluated in terms of their ideological congruence and thus have to be excluded from the analysis when it comes to this specific variable.

Furthermore, for the purpose of this analysis, parties' positions are then changed into whole numbers as the ESS (2018) also only allows citizens to position themselves with the help of whole numbers. For example, if a party receives a score of 4,5 based on its ideological position and this party owns 20% of seats in parliament, this party contributes to a distribution of seats of 10% for 4 and 10% for 5 on the scale from 0 to 10. The same logic applies to the other parties until 100% of the relevant seats in parliament are sorted on this scale from 0 to 10 with whole numbers.

Lastly, congruence is evaluated, similar to Golder and Stramski's (2010) approach, as the difference between the cumulative distribution function of the citizenry and that of the parliament. This is done with the help of the following measure: $\sum_x |F_1(x) - F_2(x)| =$ ideological congruence with $F_1(x)$ and $F_2(x)$ as the cumulative distribution functions for the citizenry and the parliament. The closer these distributions are together, the smaller the area between the two cumulative distribution functions, the lower the result of the above equation and the higher ideological congruence. In the end, the different countries' scores are coded inversely to make the results more intuitive to interpret. As a result, countries are evaluated on a scale from 0 to 10 where 0 represents no ideological congruence at all, hence, the lowest level of substantive representation possible, and 10 represents the best ideological congruence, the highest overlap possible.

After that, to measure the quality of descriptive representation, this thesis focuses on the (un)equal representation of gender in parliament. More specifically, descriptive representation is operationalised as the degree to which men and women are equally represented in a country's

⁴ In 13 countries that are part of the analysis, one or a few parties and/or parliamentarians and thus seats had to be removed from their national parliament. In most cases, these were independent or minority parliamentarians who could not be evaluated based on their overall ideological position. However, in most of these cases, the total number of parliamentarians that had to be removed only had a marginal share of the total seats in parliament (below 5%). The only exemptions are Estonia (7.92% of seats), France (8.31% of seats) and Ireland (12.66% of seats) where the percentage was slightly higher.

national parliament. Surely, this operationalisation does not cover all facets of descriptive representation as other aspects play a role as well, for example, the representation of citizens with and without a migration background. However, we are missing comparative datasets on such other aspects and the equal representation of gender in parliament is not only frequently debated in society, but also an important and major part of descriptive representation. As data from the World Bank (2022) shows that, on average, the population of European countries is composed by approximately 50% women and 50% men, the highest level of descriptive representation could be reached if a country's national parliament consists of 50% women and 50% men. Consequently, the more the distribution of seats between male and female representatives deviates from this ideal distribution, the lower the quality of descriptive representation in that country. To capture the actual quality of descriptive representation in a country, a measurement on a scale from 0 (absolute gender inequality) to 10 (absolute gender equality) is created. The different country's score on that scale is evaluated based on data from the World Bank (2022) regarding the proportion of seats held by women in national parliaments. In this process, the women's share in a country's parliament in percentage is divided by ten and multiplied by two. The result is that countries with 0% women in parliament would score zero on the scale, while those with 25% women in parliament would score five and those with 50% women in parliament, thus the ideal distribution for gender equality, would score ten. This construction is possible as there are no European democracies in which there are more women than men in parliament, which would again have to result in a lower score on the scale here. Similar to the measurement of substantive representation above, women's seat share in parliament is either taken from 2018 for the first group of countries or from 2019 for the latter group.

Beyond that, in order to measure the effect of the electoral system design on political trust, the different European democracies that are part of the analysis are classified into three categories. These categories are proportional and majoritarian electoral system designs on the one hand and mixed systems on the other hand. Majoritarian systems are coded as 0, mixed systems are coded as 1 and proportional systems are coded as 2. Thus, the more proportional an electoral system of a country, the higher the country's score. In fact, this trichotomous operationalisation is used in many other studies (e.g., Aarts & Thomassen, 2008; Dahlberg & Holmberg, 2014; van der Meer & Hakhverdian, 2017) and is expected to measure the effect of the electoral system design sufficiently. Furthermore, the classification of the different electoral systems is taken from Bormann and Golder (2013) which is an update to Golder's (2005)

Democratic Electoral Systems (DES) dataset. The year in which the different countries were classified is 2016.

Additionally, to measure the age of democracy, that is, the period of time a country can provide an uninterrupted democratic rule, a similar measurement is constructed. As one can observe three major groups of countries to democratise within Europe since the end of World War II, as described in the theoretical framework, a trichotomy is used to capture that development. Hence, countries that developed into democracies shortly after the end of World War II or that already could be counted as democracies back then, such as France, Italy or (Western) Germany⁵, are coded as 2. These countries can thus provide the longest period of an uninterrupted democratic rule in the analysis. Furthermore, countries that transitioned to democracies in the 1970s, such as Spain or Portugal, here identified as the second group of countries to democratise after World War II, are coded as 1. Lastly, countries that became democracies in the late 1980s and 1990s, the post-Communist states, here identified as the third group of countries to democratise after World War II, are coded as 0. Thus, the longer the period of being a democracy, the higher a country's score. This distinction and scale is possible because countries transitioned to democracies almost together as a group within a short time frame and the period of time between those groups is almost similar, closely related to the time span of one generation.

3.3.2 Output Factors: Corruption and Macro-Economic Performance

In addition, in order to take into account cross-country differences in levels of corruption, the well-known *Corruption Perceptions Index (CPI)* by Transparency International (2019, 2020) is used. The index relies on thirteen expert surveys evaluating the levels of public sector corruption and scores on a scale of zero (highly corrupt) to 100 (very clean). For the purpose of this analysis, the country's scores are divided by 10 and the results are coded inversely to make the results more intuitive to interpret. Thus, the new measure ranges from 0 (very clean) to 10 (highly corrupt). Hence, countries that have a higher level of corruption, also score higher on

⁵ In this thesis, similar to the ESS (2018), Germany is treated as one single country throughout the entire analysis. Thus, most variables are measured based on the entire territory of Germany after the official reunification in 1990. At the same time, when it comes to the age of democracy, Germany receives a score of 2 as Western Germany can be counted as a democracy since 1949. Although Eastern Germany only became a democracy several years later in 1990 when it officially reunified with Western Germany, this classification is believed to be suitable for the analysis as Western Germany is and has been far more populated and bigger with, inter alia, more economic power.

this scale. Moreover, either 2018 or 2019 is chosen as the reference year, as discussed earlier, to harmonise it with the values of the other variables.

Lastly, the operationalisation of the variables used to capture macro-economic performance are presented. As stated in the theoretical framework, the first variable of interest here is the social protection expenditure share of a country's GDP. Included in the different countries' social protection expenditure are old age pensions, sickness and disability benefits, spendings on family and children, unemployment, housing, R&D social protection as well as other general spendings to counteract social exclusion and protection (OECD, 2019). To measure this, data is taken from Eurostat's (2022) annual government finance statistics for all countries except the United Kingdom and from the OECD (2019) for the United Kingdom. The reason for the use of these two data sources is that Eurostat (2022) does not provide data for the United Kingdom regarding this specific variable while the OECD (2019) does not include all countries that are treated as cases in this analysis. Therefore, in order to use data for all countries that are part of the analysis, one has to rely on multiple data sources here. Similar to other variables, the reference year here is 2018 for most countries and 2019 for the six exceptions Croatia, Iceland, Lithuania, Portugal, Slovakia and Spain. In addition, data for the United Kingdom is taken from 2017 as the OECD (2019) provides no data for 2018. However, the expectation is that data from this year for the United Kingdom is nevertheless suitable for the analysis as one cannot observe major changes in the social protection expenditure share of a country's GDP for most other countries from 2017 to 2018 or 2019 (Eurostat, 2022). In addition, countries can score on a scale from 0 to 100, similar to their social protection expenditure share of their GDP in percent, while a score of 0 means no social protection expenditure at all and a score of 100 indicates that a country is spending all its GDP only on social protection. Consequently, the higher a country's score, the higher its social protection expenditure as a share of its GDP.

Furthermore, the Gini index is used to measure the equal distribution of incomes within a country. In fact, "the Gini index measures the extent to which the distribution of income [...] among individuals or households within an economy deviates from a perfectly equal distribution" (ILO, 2002, p. 704). Moreover, the Gini index ranges from 0 to 100 while an index of 0 represents an absolute equal distribution of incomes and an index of 100 indicates absolute inequality. For the purpose of this analysis, the different countries' scores are divided by ten and coded inversely. Hence, the new index ranges from 0 to 10 with 0 representing absolute inequality of incomes and 10 representing absolute equality of incomes. Consequently, the higher a country's score, the more equally distributed are the incomes within that country.

The data to capture each country's Gini coefficient is taken from the World Bank (2022). Furthermore, Croatia, Iceland, Lithuania, Portugal, Slovakia and Spain are measured in 2019 while the other cases are measured in 2018 as indicated earlier.

3.4 Control Variables

In addition to the independent variables at the macro-level mentioned above, three macro-level control variables as well as a number of individual-level control variables are included in the analysis. First, two macro-level indicators that are frequently used in other studies researching the origins of trust (e.g., Miller & Listhaug, 1999; van der Meer & Hakhverdian, 2017) are included to complement the two dependent variables associated with macro-economic performance. These two indicators are the unemployment rate and the inflation rate (GDP deflator) of a country. The specific values depict the situation in 2018 or 2019, depending on the country as specified earlier, and are taken from the World Bank (2022). Beyond that, the GDP of a country is not included in the analysis as it highly correlates with one of the dependent variables specified earlier, that is, corruption, to the point that multicollinearity would be a problem.

Second, individual-level control variables are included as well. As until now only macro-variables have been included, the inclusion of individual-level variables is necessary to be able to assess composition effects. More specifically, these control variables are age (in years from 15 to 90), gender (0 = male, 1 = female), highest level of education (0 = other, 1 = less than lower secondary, 2 = lower secondary, 3 = lower tier upper secondary, 4 = higher tier upper secondary, 5 = advanced vocational, 6 = BA level or 7 = MA level and higher), level of political interest (not at all interested = 0, hardly interested = 1, quite interested = 2, very interested = 3) and satisfaction with life as a whole (on a scale from 0 = extremely dissatisfied to 10 = extremely satisfied). All of the individual-level control variables are taken from the ninth round of the ESS (2018).

3.5 Descriptive Statistics of the Variables

Before moving on to the methodology and research design of this thesis, the following section is dedicated to the presentation of the descriptives of the different variables specified above. Specific values for different countries and variables as well as the entire dataset are available upon request.

Table 2: Descriptive statistics of the variables

Variable (Possible Values)	N	Mean	SD	Min	Max
<i>Dependent variable</i>					
Trust in country's parliament (0-10)	43,620	4.56	2.63	0	10
<i>Independent variables</i>					
Substantive representation (0-10)	23	9.01	0.36	8.18	9.55
Descriptive representation (0-10)	26	6.34	1.57	3.57	9.23
Electoral system (0-2)	26	1.77	0.63	0	2
Age of democracy (0-2)	26	1.19	0.93	0	2
Corruption (0-10)	26	3.13	1.33	1.2	5.8
Social protection expenditure (0-100)	26	16.20	4.15	8.9	24.3
Gini index (0-10)	26	6.93	0.41	5.87	7.68
<i>Macro-level control variables</i>					
Inflation rate (0-100)	26	2.17	1.31	0.7	6.7
Unemployment rate (0-100)	26	5.94	2.57	2.2	14.1
<i>Individual level control variables</i>					
Age (15-90)	44,397	51.02	18.70	15	90
Gender (0-1)	44,615	0.54	0.50	0	1
Highest level of education (0-7)	44,519	4.02	1.85	0	7
Political interest (0-3)	44,535	1.38	0.92	0	3
Satisfaction with life as a whole (0-10)	44,398	7.20	2.13	0	10

Notes: N = number of observations, SD = standard deviation, min = minimum value, max = maximum value

Sources: Bormann & Golder, 2013; ESS, 2018; OECD, 2019; Transparency International, 2019; Transparency International, 2020; Eurostat, 2022; Jolly et al., 2022; World Bank, 2022 and own calculations

3.6 Methods

After having introduced the data and cases as well as operationalised the variables that are part of the analysis, the following section is dedicated to the methodology and the research design.

The aim of this thesis is to research the origins of political trust using *actual*, macro-level predictors. At the same time, multiple European countries are included in the analysis and data is taken from one single time point in accordance with the ninth round of the ESS (2018). Thus, it is a comparative, cross-national analysis, rather than a longitudinal study, evaluating the effects of different country's performances on political trust. Consequently, the data that is used in this study has a multi-level character as there are different individuals nested in different countries. Hence, there is variation at the individual (or micro-)level as well as at the country (or macro-)level and thus between-group (country) and within-group (individual) difference. Therefore, in order to test the hypotheses of interest and thereby evaluating the origins of political trust, one has to rely on multi-level models. More specifically, the random intercept model with Maximum Likelihood estimation is chosen here. The reason for that is that the focus and interest of this thesis and analysis lies on cross-national variation. Hence, between-country effects are of central importance and interest while within-country effects are not (because we have data for only one time-point). Therefore, the use of a random effects model is necessary as the other model available, the fixed effects model, removes the between-country variation one is looking at here.

In order to analyse possible determinants of political trust and test the hypotheses developed in chapter two, the multi-level model is built up in different steps. First of all, an empty model with just the dependent variable, trust in the country's parliament, is performed to estimate the variance components and thus the variance at the individual as well as at the macro-level. After that, an empty model with the individual level control variables is estimated to see how much macro-level variation is left to explain once one adds these individual level variables. Then, there are seven models where only a single independent variable will be added to the individual level control variables to be able to estimate each independent variable's effect on trust on its own. These models are followed by two models that include all input factors and all output factors respectively alongside the individual level control variables and a full model without macro-level control variables and finally a full model that includes all independent and individual as well as macro-level control variables. By doing so, the models are built up one by one and one is able to take into account the different variables' effects on their own and possible

composition effects. Finally, one further model with individual level as well as macro-level variables that excludes the quality of substantive representation and thus includes a larger number of cases is part of the analysis to be able to analyse the robustness of the other variables' effects. Further robustness checks are specified, if needed, in the following section and when discussing the results in the following chapter. Beyond that, all missing values such as refusals to answer or "I don't know" are excluded from the analysis in order to not bias the results.

3.7 Model Diagnostics

Lastly, before moving on to the actual analysis and the presentation as well as discussion and interpretation of the results, it makes sense to first look at the model diagnostics in order to prevent that the results of the analysis are biased or distorted in a way that could have been avoided. In this thesis, this includes checking for multicollinearity in the data and for extreme values. A third standard check, namely checking for normality, is not applied here as violations of the normality assumption usually do not impact results noticeably if the sample size and thus the number of observations per variable is as large as in this analysis (> 10) (Schmidt & Finan, 2018). Furthermore, the empirical analysis in this thesis cannot provide the degrees of freedom that are usually or conventionally needed (3 cases per variable) to test the different macro-level variables' effect in the three full models displayed in table 6 below. Therefore, a robustness check that only includes the variables that prove to be significant if they are tested alongside other macro-level variables in models 11 and 12, where the degrees of freedom are sufficient, has been performed as well. The result was overall the same as in the full models and thus leads to the conclusion that the missing degrees of freedom do not substantially affect the results found in the full models.

The results of the robustness check above and the checks regarding multicollinearity and extreme values can be found in appendices A, B, C and D.

Multicollinearity

To start with, multicollinearity refers to a linear relationship between two or more variables that might exist in a multiple linear regression model (Alin, 2010). If these relationships are not detected and solved in the model, they can cause a serious threat to the proper estimation of the different explanatory variables' effect on the dependent variable (Farrar & Glauber, 1967). More specifically, multicollinearity can lead to overinflating standard errors and thus statistically insignificant effects when they should be significant (Daoud, 2017). However, there is a way to test for multicollinearity, that is, to estimate the variance inflation factor (VIF).

When doing so, values below ten are usually regarded as unproblematic (e.g., Alin, 2010; James et al., 2013). When estimating the VIF for all the independent macro-level variables that are part of the analysis, most of them receive a score that is below five, more than half of them even receive a score that is below three. Only descriptive representation receives a score that is a bit higher than five, however, it still can be treated as unproblematic. Furthermore, when adding the macro-level and individual level control variables, the VIF scores of almost all variables increase slightly, but they are overall still on a level that is acceptable and suitable for the analysis (Table 9). Consequently, one can expect that multicollinearity is not a serious problem in the models run here⁶.

Extreme Values

Second, one can check for extreme values and thus outliers in the data. This can be done by plotting the different countries' values regarding the independent, macro-level variables versus the dependent variable, that is, trust in the country's parliament. Although an outlier does not have to be influential on the actual results of the analysis (e.g., Chatterjee & Hadi, 1986), it is worth looking at them in order to prevent exactly that. When plotting the different independent variables versus trust in parliament, one can see that there are generally only a few outliers at best. More specifically, the countries that have the highest and lowest levels of political trust on average are also the countries that can be regarded as outliers when it comes to a few variables. These are in specific Bulgaria, Croatia, Norway and Switzerland. Additionally, Austria is a noticeable outlier when it comes to substantive representation. Therefore, in order to test the robustness of the results and to check the influence of these outliers, the relevant models displayed in tables 4 to 6 have been ran again twice. At first, Bulgaria, Croatia, Norway and Switzerland have been entirely removed as cases from the analysis. However, this overall did not change the conclusions. At second, Austria has been entirely excluded from the analysis for all models displayed in tables 4 to 6 that controlled for substantive representation. Although the results stayed overall the same as well, the exclusion of Austria made some change to model 3 that only includes individual level control variables alongside substantive representation. Therefore, model 4 shown in table 4 displays the effect of substantive representation once Austria is excluded and only individual level control variables are included. However, this was the only noteworthy difference in all the models performed once Austria is excluded.

⁶ VIF scores can normally not be calculated for categorical variables, that is, age of democracy and the electoral system design. Here, however, VIF scores are calculated for all independent variables including those mentioned above and, additionally, the association between the two categorical variables is estimated with the help of Cramér's V. For the two categorical variables, Cramér's V equals 0.20, they are thus only slightly associated.

4 Results and Discussion

In this chapter, the results of the empirical analysis are presented as well as discussed. At the same time, the different hypotheses developed earlier are evaluated in light of these results.

Hence, the first part of this chapter deals with the different levels of political trust, more specifically trust in parliament, across Europe, with consequences that can be derived from these levels and with the variances on the individual as well as country-level that are estimated with the help of the first model without predictors. After that, the second part of this chapter is dedicated to the further models that include predictors on one and both levels and thus the different effects these predictors have on the levels of political trust across the different European countries in the sample. By doing so, one is also able to test the different hypotheses at hand.

4.1 Variance Analyses

To start with, table 3 below displays the different levels of trust in parliament in the different European countries that are part of the analysis and thus provides an overview to what extent the levels differ across countries. In general, one can identify large differences between the countries as well as certain patterns within Europe. Trust in parliament is highest in the Scandinavian countries, in Switzerland as well as in the Netherlands. More specifically, Norway and Switzerland are the countries with the highest levels of trust, followed by Denmark, Sweden, the Netherlands and Finland. In contrast, trust in parliament is lowest in the former Communist countries and, even though it is on average a bit higher there, in the Southern European countries. More accurately, Croatia and Bulgaria display by far the lowest levels of trust, followed by Lithuania, Latvia, Slovenia, Slovakia, Cyprus and Poland. Furthermore, there are only nine out of 26 countries in which trust in parliament is higher than 5, consequently, in which there is on average more trust than distrust in parliament. These countries are all situated in Scandinavia and Western Europe, while the other parts of Europe overall only display levels below 5 on average.

Table 3: Political trust across Europe

Country	Trust in country's parliament (Mean)	N	SD
Norway	6.76	1,400	2.15
Switzerland	6.40	1,453	1.94
Denmark	6.17	1,560	2.22
Sweden	6.17	1,526	2.34
Netherlands	5.93	1,637	1.87
Finland	5.91	1,743	2.18
Austria	5.42	2,448	2.28
Iceland	5.17	851	2.17
Germany	5.10	2,327	2.48
Estonia	4.86	1,890	2.45
Belgium	4.79	1,751	2.20
Ireland	4.62	2,127	2.49
Italy	4.25	2,656	2.53
United Kingdom	4.21	2,182	2.51
Czech Republic	4.18	2,326	2.42
Portugal	4.15	1,017	2.65
France	4.14	1,950	2.41
Spain	4.08	1,583	2.53
Poland	3.83	1,456	2.50
Cyprus	3.71	769	2.31
Slovakia	3.71	1,072	2.83
Slovenia	3.58	1,284	2.40
Latvia	3.36	887	2.52
Lithuania	3.30	1,809	2.40
Bulgaria	2.49	2,122	2.27
Croatia	2.25	1,794	2.30
Overall	4.56	43,620	2.63

Notes: N = number of observations, SD = standard deviation

Source: ESS, 2018

However, by only looking at the country-level values of the specific countries shown in table 3, one ignores that there is also variation within the countries at the individual level. In order to estimate how much of the total variance in trust in parliament is situated at the individual and the macro-level, one can run a multi-level model without predictors, that is, an empty model. When running the empty model, the variance at the individual level equals 5.61 while the variance at the country-level equals 1.35. That means that 80.61% of the variance in trust in parliament is situated at the individual level and 19.39% of the variance is situated at the macro-level. Hence, most of the difference in trust is located at the individual level and, consequently, differences between citizens matter more than differences between countries. However, more than 19 percent of all variance is due to variation between countries, which is a notable amount given the fact that mass opinion surveys like the European Social Survey include thousands of individual respondents, but only a few countries in which they are situated. Therefore, already five percent of between-country variance is considered to be substantial (Rahn & Rudolph, 2005). The large share of cross-national variance therefore makes multilevel research into cross-national effects worthwhile (van der Meer, 2010) as otherwise a substantial part of the variation in trust in parliament would be ignored. Thus, this also supports the chosen methodology.

4.2 Determinants of Political Trust

Before looking at the possible macro-level determinants of political trust and testing the hypotheses developed earlier, one has to take into account individual level predictors as well. Although they are not the focus of this analysis, they are important in order to take composition effects into account. Therefore, the second model presented in table 4 only includes individual level predictors. Looking at the different individual level variables, all predictors that are included here, with the exception of gender, are highly significant at the $p < 0.001$ level. Furthermore, the level of political interest as well as the satisfaction with life as a whole have the highest influence on the level of trust in parliament among all individual level predictors. More specifically, the more satisfied a person with his or her life in general and the more politically interested that person, the higher his or her trust. Beyond that, the higher educated a person, the higher this persons' trust. In addition, although the age of a person has a highly significant effect, the negative effect of older ages on trust is rather small, especially compared to the effects of satisfaction with life as a whole and political interest and even when one considers the much larger scale age varies on. Lastly, the gender of a person has no significant effect on the level of trust one person is holding.

Additionally, looking at the variances in model 2 when including individual level control variables to the empty model, one can see that the unexplained macro-level variance declines a bit. This makes sense as the model corrects for composition effects due to these individual level predictors. However, 14.07% of the total variance in trust in parliament still lies at the macro-level which nonetheless makes research into macro-level effects worthwhile and necessary.

4.2.1 Input Factors: Quality of Representation, Electoral System Design and Age of Democracy

After having looked at the second model and the individual level predictors of trust in parliament, the focus now lies on the macro-level determinants of trust that are the primary interest of this thesis.

To start with, the focus first lies on the input factors specified in the theoretical framework. Starting with the first variable of interest, the level of substantive representation, the expectation was that it does not have a significant effect on political trust. Although many studies have proven that it has an effect when it comes to individual, subjective perceptions and individual level congruence, there is seemingly no study in which macro-level congruence's effect on trust is actually captured. However, there is one study by Mayne and Hakhverdian (2017) that tests the effect of macro-level congruence on satisfaction with democracy and concludes that there is no significant effect. Looking at the results of the analysis, one can see that substantive representation, conceptualised as macro-level congruence, respectively socio-tropic congruence according to Mayne and Hakhverdian (2017), at first has no significant effect on trust if it is tested on its own alongside individual level control variables as shown in model 3 in table 4 below. Nevertheless, as previously mentioned in chapter 3.7 on model diagnostics, Austria can be identified as a noteworthy outlier when plotting the relation between substantive representation and trust in parliament. Therefore, a further model, namely model 4 displayed in table 4, that excludes Austria as a case has been ran in order to test the effect of substantive representation on trust without notable outliers. By doing so, one can see that it indeed has a positive, significant effect on its own. Although the significance level is below other variables' significance of $p < 0.01$ or even $p < 0.001$, namely $p < 0.05$, it still is a result worth considering.

However, as soon as other macro-level predictors are added to the model alongside substantive representation, such as in model 11 that tests the effects of input factors or in models 13 and 14 that can be regarded as full models, all of them displayed in table 6 below, the significant effect of substantive representation disappears. These results stay overall the same whether Austria is included or excluded as a case, so even controlling for outliers cannot remarkably change the

non-significant effect of substantive representation on trust once other macro-level predictors are included in the models. Consequently, the degree to which the distribution of citizens' ideological positions and thus preferences and the distribution of ideological positions of representatives in parliament overlap does not seem to matter for the level of political trust in one country. In other words, in citizens' evaluation of institutional performance and thus political trust, the degree to which the entire citizenry is represented by the parliament as a whole does not play a significant role once one controls for other macro-level predictors. Therefore, hypothesis 1 can be supported despite the fact that substantive representation has a significant effect on its own if one excludes outliers. Beyond that, it might be the case that, as other studies indicated previously (e.g., Torcal, 2014; Dahlberg & Holmberg, 2014), substantive representation has a significant effect when it is conceptualised as individual level congruence, egocentric congruence respectively or subjective perceptions of responsiveness, however, at the macro-level it has shown to only have an effect when it is tested on its own and when excluding outliers.

Moving on to the second variable of interest, descriptive representation, the hypothesis was that higher levels of descriptive representation increase the level of political trust in one country. This expectation was theoretically especially grounded in research by Mansbridge (1999), Banducci, Donovan and Karp (2004) as well as Arnesen and Peters (2018) that states that people generally prefer a descriptively representative body over others and that people's willingness to accept decisions increases when descriptive representation increases among other things. Looking at model 5 presented in table 4 below, one can see that higher levels of descriptive representation on their own, if one does not take into account other macro-level predictors, have a highly significant and positive effect ($p < 0.001$) on the level of political trust in one country. Similarly, countries with higher levels of descriptive representation usually also have higher levels of trust. Furthermore, if one adds other input factors, as done in model 11 shown in table 6, to test the effects of all input factors at the same time, the significance level decreases to the $p < 0.1$ level. However, and in contrast to substantive representation, descriptive representation still has a significant effect on trust once all input factors are included.

Nevertheless, the positive effect of higher levels of descriptive representation on trust turns non-significant, similar to the effect of substantive representation, once output factors are added to the model as well and one is thus taking into account the situation as a whole. This can be seen in models 13 to 15 displayed in table 6 below. At the same time, there are moderate correlations between descriptive representation and two other variables, namely age of

democracy and corruption. While descriptive representation has a correlation of -0.57 with corruption on the one side, it has a slightly higher correlation of 0.67 with age of democracy on the other side. This might partly explain why descriptive representation's effect on trust decreases in significance once age of democracy is included in model 11 and turns non-significant once age of democracy and corruption are included alongside in models 13 to 15. Thus, descriptive representation has no significant effect on trust once all other macro-level predictors are taken into account, however, it has a significant effect on its own if it is only tested alongside individual level control variables. This leads to the conclusion that, despite descriptive representation's significant effects in models 5 and 11, hypothesis 2 must be rejected. That being said, citizens might prefer a decision-making body that better resembles their socio-demographic characteristics and they might be more willing to accept decisions made by such, however, this does not influence their trust significantly once one takes into account all macro-level predictors and all composition effects.

The next input factor that is discussed here is the electoral system design of a country. As mentioned in the theoretical framework, results are mixed when it comes to the effect of the electoral system on political trust in one country. However, as many other studies researching the electoral system design's effect on trust as well as Dahlberg and Holmberg (2014), who include much more majoritarian systems and thus a more diverse set of countries regarding their electoral system in their analysis, find no significant effect of the electoral system design, the expectation here was the same. Looking at the results of the empirical analysis, however, one can conclude that this is not always the case here. When testing the effect of the electoral system on its own alongside individual level control variables as done in model 6 shown in table 5, one can see that the electoral system design has no significant effect on trust at all. Moreover, looking at the unexplained variance at the macro-level in model 6, the electoral system design of country is also unable to explain a noteworthy part of the variance at the macro-level.

However, in models including others predictors, the electoral system design has a significant effect on trust in parliament, as it can be seen in models 11 and 13 to 15 presented in table 6. However, this is only the case for the group of countries with proportional systems and if other predictors, especially output factors, are added to the models. More specifically, the effect of proportional electoral systems on trust turns out to be highly significant at the $p < 0.01$ and $p < 0.001$ level respectively if corruption is included as in models 13 to 15. However, most corrupt countries in the dataset also have a proportional electoral system while those countries

having a majoritarian or mixed system overall do not have the highest levels of corruption. This could explain why a proportional electoral system has a highly significant effect on trust once corruption is included and why this is not the case for mixed electoral systems and if corruption is not included in the model. Similarly, with the exception of Lithuania, the countries with the shortest period of uninterrupted democratic rule all have a proportional electoral system. This could additionally explain why proportional electoral systems have a significant effect on trust at the $p < 0.1$ level in model 11. Nevertheless, as the electoral system design of a country has a significant effect in models 11 and 13 to 15 that take into account other macro-level predictors as well, hypothesis 3 must be refuted. Thus, the electoral system design of a country, taking into account other macro-level predictors, has a significant effect on the level of political trust in that country.

However, regarding this variable, one also has to keep in mind that this analysis faces the same limitation as many other studies researching the electoral system design's effect on trust or satisfaction with democracy respectively. That is, although 26 countries are included as cases in the analysis, only two of them have a truly majoritarian electoral system and only two further electoral systems can be categorised as mixed. The rest of them, 22 countries, are classified as having proportional electoral systems. As studies like the one by Dahlberg and Holmberg (2014) still find the same result, it might indeed be the case that it has no significant effect on trust, however, further research is needed to definitely prove that. For now, the result still stands, namely that the electoral system design has a significant effect on trust.

Moving on to the last input factor that is part of this thesis, the focus is on the age of democracy, that is, the period of time one country has an uninterrupted democratic rule. As formulated in the theoretical framework, the expectation was that countries that experienced a longer period of uninterrupted democratic rule are more likely to show higher levels of political trust than other countries. This expectation was supported by previous research done by McAllister (1999), van der Meer (2010), Marien (2011) and others. Looking at the results of the empirical research here as displayed in tables 5 and 6, one can observe a clear pattern. While the age of democracy of the second group of countries that transitioned to a democracy in the 1970s such as Spain, Portugal and Cyprus, has no significant effect on trust in all the models ran here, the third group, namely the ones with the longest period of an uninterrupted democratic rule, have a highly significant, positive effect on trust in models 7 and 11. In these two models, the age of democracy is either tested on its own alongside individual level control variables or together with other input factors. In fact, theoretically, one could think

about at least one reason for this dichotomous effect of the age of democracy. It could be the case that it takes some time to entirely or almost entirely socialise citizens into a democracy and thus to be able to measure a positive and significant effect of an uninterrupted democratic rule after a democratic transition. Therefore, the period of time since the countries in the second group, such as Spain, Portugal and Cyprus, can be evaluated as a democracy might be too short to find the same positive and significant effect of older democracies. Similarly, although there might be many people living in the countries of the second group that have been raised in a democracy and never experienced another, undemocratic regime, there still is a noteworthy part of citizens that was born into an undemocratic regime. At the same time, the share of people that were born in times of an undemocratic regime is much lower or completely diminishes if one is looking at the third group of countries. This might further explain the effects found here.

Additionally, looking at models 13 and 15 displayed in table 6, the age of democracy turns out being non-significant while it is significant at the $p < 0.05$ level in model 14 due to the inclusion of the unemployment rate and the inflation rate. In these models, firstly output factors and secondly macro-level control variables are added to the analysis. That being said, the age of democracy proves to be highly correlated with one variable that is part of the analysis. In fact, there is a high, negative correlation between the age of democracy and corruption (- 0.72). More specifically, the level of corruption in one country seems to be associated with the age of democracy in the same country. Thus, countries that have a longer period of an uninterrupted democratic rule on average also display lower levels of corruption. This could explain the different effects of age of democracy on trust in parliament as soon as output variables are added to the models. Consequently, the effect of the level of corruption in one country seems to override the effect of the age of democracy. As the latter effect turns non-significant once the first effect is included and as the latter effect is not significant in all of the full models, one can say that hypothesis 4 cannot be supported.

In order to check the robustness of these findings and to strengthen the validity of the results mentioned above, the operationalisation of age of democracy also has been changed and all models presented in tables 4 to 6 have been ran again. More specifically, instead of summarising the 26 countries into three distinct groups according to the time point they transitioned into a democracy, the specific, exact age of each country's democracy has been determined and included in the analysis. Data for this comes from Boix, Miller and Rosato (2013). However, although the correlation between age of democracy and corruption was slightly higher, the effects overall stayed the same. Also in this case, the age of democracy only had

a significant effect on trust once it is the only predictor alongside individual level control variables or only tested together with input factors and individual level control variables. The results of this robustness check can be found in appendix E.

Having checked the effects and the hypotheses regarding the four input factors' impact on the level of political trust in one country, one can conclude that only of them has a consistent significant effect on trust once one includes other macro-level predictors alongside them, that is, the proportional electoral system. In addition, the electoral system design of a country has no significant effect on its own, that is, without including any other macro-level predictors, while substantive representation, if one excludes the outlier Austria, descriptive representation as well as the age of democracy have one without other predictors. Because of that, hypothesis 1 can be supported while hypotheses 2 to 4 can be rejected. Furthermore, when adding all input factors to the model as done in model 11 displayed in table 6, all input factors together leave a variance of 0.21 at the macro-level unexplained. That means that all input factors together explain 75.29 % of the variance at the macro-level that still existed after adding individual level control variables to the model as done in model 2 displayed in table 4.

Table 4: Determinants of trust in parliament (random intercept model with Maximum Likelihood)

Variables	Model 1	Model 2	Model 3	Model 4 ^o	Model 5
	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)
<i>Input factors</i>					
Substantive representation			0.70 (0.49)	1.37* (0.53)	
Descriptive representation					0.35*** (0.09)
Electoral system (majoritarian)					
- Mixed					
- Proportional					
Age of democracy (youngest)					
- Middle					
- Oldest					
<i>Output factors</i>					
Corruption					
Social protection expenditure					
Income equality (Gini index)					
<i>Macro-level control variables</i>					
Unemployment rate					
Inflation rate					
<i>Individual level control variables</i>					
Age		-0.004*** (0.00)	-0.004*** (0.00)	-0.004*** (0.00)	-0.004*** (0.00)
Gender		-0.02 (0.02)	-0.03 (0.02)	-0.03 (0.02)	-0.02 (0.02)
Highest level of education		0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)
Political interest		0.42*** (0.01)	0.44*** (0.14)	0.44*** (0.01)	0.42*** (0.01)
Satisfaction with life		0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)
Constant	4.56***	2.35***	-4.10	-10.21	0.11
Variance individual level	5.61	5.19	5.30	5.33	5.19
Variance macro-level	1.35	0.85	0.62	0.51	0.52
Number of individuals	43,620	43,105	39,459	37,027	43,105
Number of countries	26	26	23	22	26

Notes: b = coefficient, SE = standard error, ⁺p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001, ^oModel 4 without outlier Austria

Sources: ESS, 2018; Jolly et al., 2022; World Bank, 2022 and own calculations

Table 5: Determinants of trust in parliament (random intercept model with Maximum Likelihood)

Variables	Model 6	Model 7	Model 8	Model 9	Model 10
	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)
<i>Input factors</i>					
Substantive representation					
Descriptive representation					
Electoral system (majoritarian)					
- Mixed	-0.01 (0.91)				
- Proportional	0.40 (0.68)				
Age of democracy (youngest)					
- Middle		0.39 (0.43)			
- Oldest		1.42*** (0.27)			
<i>Output factors</i>					
Corruption			-0.60*** (0.07)		
Social protection expenditure				0.09* (0.04)	
Income equality (Gini index)					0.68 (0.43)
<i>Macro-level control variables</i>					
Unemployment rate					
Inflation rate					
<i>Individual level control variables</i>					
Age	-0.005*** (0.00)	-0.005*** (0.00)	-0.005*** (0.00)	-0.005*** (0.00)	-0.005*** (0.00)
Gender	-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)
Highest level of education	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)
Political interest	0.42*** (0.01)	0.42*** (0.01)	0.42*** (0.14)	0.42*** (0.01)	0.42*** (0.01)
Satisfaction with life	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)
Constant	2.01	1.54***	4.24***	0.85	-2.38
Variance individual level	5.19	5.19	5.19	5.19	5.19
Variance macro-level	0.83	0.41	0.23	0.71	0.78
Number of individuals	43,105	43,105	43,105	43,105	43,105
Number of countries	26	26	26	26	26

Notes: b = coefficient, SE = standard error, *p < 0.1, **p < 0.05, ***p < 0.01, ****p < 0.001

Sources: Bormann & Golder, 2013; ESS, 2018; OECD, 2019; Transparency International, 2019; Transparency International, 2020; Eurostat, 2022 and World Bank, 2022

Table 6: Determinants of trust in parliament (random intercept model with Maximum Likelihood)

Variables	Model 11	Model 12	Model 13	Model 14	Model 15
	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)
<i>Input factors</i>					
Substantive representation	0.34 (0.32)		0.13 (0.23)	0.10 (0.22)	
Descriptive representation	0.15 ⁺ (0.08)		0.03 (0.09)	-0.004 (0.10)	-0.07 (0.10)
Electoral system (majoritarian)					
- Mixed	0.68 (0.50)		0.49 (0.35)	0.44 (0.33)	0.45 (0.37)
- Proportional	0.79 ⁺ (0.40)		0.86** (0.30)	0.82** (0.28)	1.10*** (0.29)
Age of democracy (youngest)					
- Middle	0.13 (0.35)		0.09 (0.25)	0.49 (0.34)	0.28 (0.32)
- Oldest	1.01** (0.29)		0.32 (0.26)	0.63* (0.32)	0.43 (0.28)
<i>Output factors</i>					
Corruption		-0.56*** (0.08)	-0.43*** (0.10)	-0.37** (0.11)	-0.52*** (0.11)
Social protection expenditure		0.02 (0.02)	0.02 (0.03)	0.03 (0.03)	0.05 ⁺ (0.03)
Income equality (Gini index)		0.16 (0.24)	0.06 (0.24)	0.19 (0.25)	-0.14 (0.22)
<i>Macro-level control variables</i>					
Unemployment rate				-0.02 (0.04)	-0.01 (0.05)
Inflation rate				0.17 (0.11)	0.11 (0.07)
<i>Individual level control variables</i>					
Age	-0.004*** (0.00)	-0.005*** (0.00)	-0.004*** (0.00)	-0.004*** (0.00)	-0.005*** (0.00)
Gender	-0.03 (0.02)	-0.02 (0.02)	-0.03 (0.02)	-0.03 (0.02)	-0.02 (0.02)
Highest level of education	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)
Political interest	0.44*** (0.01)	0.42*** (0.01)	0.44*** (0.14)	0.44*** (0.01)	0.42*** (0.01)
Satisfaction with life	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)
Constant	-3.10	2.66	0.51	-0.68	3.17 ⁺
Variance individual level	5.29	5.19	5.29	5.29	5.19
Variance macro-level	0.21	0.22	0.10	0.09	0.12
Number of individuals	39,459	43,105	39,459	39,459	43,105
Number of countries	23	26	23	23	26

Notes: b = coefficient, SE = standard error, ⁺p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001

Sources: Bormann & Golder, 2013; ESS, 2018; OECD, 2019; Transparency International, 2019; Transparency International, 2020; Eurostat, 2022; Jolly et al., 2022; World Bank, 2022 and own calculations

4.2.2 Output Factors: Corruption and Macro-Economic Performance

After having presented and discussed the results regarding the four input factors, the following section deals with the three remaining output factors that are part of the analysis, namely corruption, the social protection expenditure share and the equal distribution of incomes within a country.

First, corruption has proven to have a highly significant effect ($p < 0.001$ in models 8, 12, 13, 15 and $p < 0.01$ in model 14) on the level of political trust within a country in all of the models where it is included displayed in tables 5 and 6. No matter which variables are included besides corruption, its effect always remains highly significant. In fact, it is the only variable for which that is the case. In addition, the effect of corruption always is considerably high, especially when comparing it to the other significant variables in the models and taking into account their measurement scales. Besides, when running a model only with corruption as an explanatory macro-level variable of trust as shown in model 8 in table 5, its effect on trust is not only highly significant and considerably high, but just corruption also explains 72.94% of the total variance in trust at the macro-level that was left after including individual level control variables (Table 5). Hence, corruption alone can explain a substantial, large part of the differences between countries regarding their level of trust in parliament. This is a remarkable and noteworthy result as it indicates that a single predictor accounts for most of the variance at the country-level on the one side, and that this single predictor alone also largely determines the level of political trust within a country. In total, this clearly leads to the validation of hypothesis 5 which is based on the expectation that higher levels of corruption lead to lower levels of political trust in that country.

Second, the next output factor that was expected to have an influence on political trust is the social protection expenditure share of a country's GDP. This variable was chosen to indirectly measure the quality of the health system, social welfare system among others in one country as the assumption was that those might matter more for citizens than rather abstract and less tangible factors such as the GDP per capita, the unemployment or the inflation rate. More specifically, the expectation was the higher the social protection expenditure share of a country's GDP, the higher the level of political trust in that country. Now turning to the results of the empirical analysis as shown in tables 5 to 6, one can see at first that the social protection expenditure share has a positive and significant effect on trust in parliament at the $p < 0.05$ level in model 9 that only includes this variable alongside individual level control variables. However, it does not reach similar significance levels of other variables, that were previously

tested on their own alongside individual level control variables such as descriptive representation or corruption, that reach significance levels at the $p < 0.001$ level. Besides, when one is adding further macro-level predictors to the model as done in models 12 to 14 displayed in table 6, the effect of the social protection expenditure share of a country's GDP turns out being non-significant. Only in model 15 where one does not control for substantive representation to increase the number of countries from 23 to 26, the effect again reaches significance at the $p < 0.1$ level. However, contrastingly to corruption, it does only have a significant effect in these two cases where the significance levels are, beyond that, not remarkably high. Therefore, hypothesis 6 must be refuted. Higher shares of social protection expenditure seem to have a significant and positive effect on the level of political trust in that country in some cases, however, this is not always the case. Especially when one is adding further macro-level predictors to the model, the positive, significant effect measured in model 8 turns non-significant.

One reason to explain this result contrary to expectations might be that the social protection expenditure share of a country's GDP actually is not entirely suited to capture the effects it aimed at. Hence, it might not be able to adequately measure and represent the quality of a country's health system, pension system among others. However, due to limitations in comparative, quantitative datasets on such areas, one further has to rely on such indirect measurements. Additionally, it might also be the case, similar to the results discussed regarding substantive representation, that citizens do not significantly ground their evaluation of institutional performance and thus trust on objective, macro-level qualities of their country's social welfare and health system. It might be the case that subjective *perceptions* differ from those objective measurements or that citizens focus more on the quality they experience as an individual. However, testing these assumptions will be up to further research.

Lastly, the equal distribution of incomes within a country was expected as well to have an influence on political trust within a country. A more equal distribution of incomes was thereby assumed to lead to higher levels of trust. Similar to the choice of the social protection expenditure share, the aim here was to test the effect of a variable different from those standard measurements of macro-economic performance, namely the GDP, the unemployment and inflation rate. Nevertheless, the distribution of incomes within a country, measured with the Gini index, has proven to have no significant effect on the level of political trust within a country. In fact, it does not make a difference whether one only tests the effect of the Gini index on trust on its own alongside individual level control variables or in combination with other

macro-level variables. The Gini index never reaches significance levels below 10% ($p < 0.1$). Therefore, hypothesis 7 has to be refuted. Consequently, the Gini index and thus the equal distribution of incomes within a country has no significant effect on the level of political trust in that country. Similar to the interpretation of the results regarding the social protection expenditure share, it might be the case that citizens are more egocentric when it comes to the distribution of incomes. Therefore, they might take into account their own income and might even compare it to the incomes of others, however, the societal distribution of incomes might not play a large role when evaluating political trust.

Having tested the effects of the three output factors on political trust and the associated hypotheses 5 to 7 accordingly, one can conclude that there is one variable that proves to have a significant as well as large and noteworthy effect on trust. This variable is the level of corruption within a country. As the analysis here shows, corruption alone can explain more than 70% of the total variance at the macro-level in trust and thus serves as the main predictor of between-country differences in and national levels of political trust. At the same time, the equal distribution of incomes within a country, measured with the Gini index, has no significant effect on the level of political trust in a country. Beyond that, while the social protection expenditure share of a country's GDP has a significant effect on its own, it largely does not have one alongside other macro-level predictors. Consequently, hypothesis 4 can be validated and hypotheses 5 and 6 must be refuted. Furthermore, when adding all output variables to the model as done in model 12 displayed in table 6, all output factors together leave a variance of 0.22 at the macro-level unexplained. This is pretty similar to the variance left unexplained when only testing models with input factors and means that all output factors together explain 74.11% of the variance at the macro-level that still existed after adding individual level control variables to the model as done in model 2 displayed in table 4.

4.3 Summary of the Hypotheses

At the end of this thesis, after having performed the analysis, presented and interpreted the results as well as tested the hypotheses developed in the theoretical framework, it is worth once again to come back to the overview of hypotheses. The empirical analysis indicates that two of the hypotheses at hand can be validated and that four of them need to be refuted. While substantive representation and corruption have effects according to the expectations, descriptive representation, the age of democracy and the social protection expenditure share have a significant effect if they are tested on their own, however, their effect turns non-significant in the full models. Contrastingly, the electoral system has a significant effect in the full model, but not on its own, while the equal distribution of incomes never has a significant effect on trust.

Table 7: Summary of the hypotheses

Hypothesis	Support
Hypothesis 1: The level of substantive representation in one country has no significant effect on the level of political trust in that country.	Yes
Hypothesis 2: The higher the level of descriptive representation within the country, the higher the level of political trust in that country.	No
Hypothesis 3: The electoral system design of a country has no significant effect on the level of political trust in that country.	No
Hypothesis 4: Democracies that experienced a longer period of uninterrupted democratic rule are more likely to have higher levels of political trust than younger democracies.	No
Hypothesis 5: The higher the level of corruption in a country, the lower the level of political trust in that country.	Yes
Hypothesis 6: The higher the share of social protection expenditure of a country's GDP, the higher the level of political trust in that country.	No
Hypothesis 7: The more equally distributed the incomes within a country, the higher the level of political trust in that country.	No

5 Conclusion

In the following, last chapter of this thesis, the results of the empirical analysis above are briefly summarised and an answer to the research question is provided. Beyond that, implications and limitations of the research done here are discussed alongside suggestions for future research.

To start with, the aim of this thesis was to contribute to a better, fuller and more accurate understanding of the origins of trust by further investigating macro-level determinants of trust and to thus advance research in this specific area. The grand research question that this thesis aimed to answer therefore was: *What are the macro-level determinants of political trust?* This grand question was further differentiated into two sub-questions, namely *Which macro-level factor determines political trust the most?* and *Do input or output factors, in total, matter more as determinants of political trust?*

In conclusion, the results of the empirical analysis show, at first, that macro-level determinants account for about 14% of the total variance in political trust, operationalised as trust in the country's parliament (Table 4). That being said, macro-level factors have a substantial impact on the level of political trust in a country that makes investigating the specific, single determinants necessary and worthwhile. Furthermore, as previous research has shown that mainly evaluations of institutional performance determine political trust at the macro-level (e.g., Mishler & Rose, 2001; van der Meer, 2010; Hakhverdian & Mayne, 2012; Torcal, 2014; Dunn, 2015), four input and three output factors have been chosen and tested specifically in order to estimate their effect on political trust. These input factors are substantive representation, descriptive representation, the electoral system design and the age of democracy while the output factors include the level of corruption, the social expenditure share of a country's GDP and the equal distribution of incomes within a country. Additionally, three of them have seemingly never been estimated as determinants of political trust, namely macro-level substantive representation, descriptive representation and the social protection expenditure share, while the compositions of all factors included in the full models consequently also have never been tested before.

Empirical results then show that the two newly introduced macro-level variables capturing the quality of representation in a country, namely substantive and descriptive representation, have a positive and significant effect on the level of political trust once they are tested on their own and alongside individual level control variables. Although this is only the case for substantive representation if one excludes outliers, this is always the case for descriptive representation.

However, if one adds further variables to the models, these significant effects disappear, especially when looking at the full models. This means that they do not determine political trust if one takes into account other macro-level predictors as well. Regarding both factors, this result is a valuable contribution to the research on the origins of political trust as it seemingly has never been tested before and as such it enhances our understanding of what determines the level as well as the development of political trust.

Furthermore, the results indicate that the electoral system design of a country has a positive, significant effect on the level of political trust in a country if one takes into account other macro-level predictors. However, this is only the case for proportional systems. Furthermore, as the electoral system design on its own does not have a significant effect, this significant effect in the full models must be treated with some caution as it might be the case that it is due to the fact that highly corrupt countries also have proportional systems. Additionally, the age of democracy only has a positive, significant effect for the countries with the longest period of uninterrupted democratic rule and only if one does not add output variables, specifically corruption, to the model. This shows, similar to the other input variables, that it does not significantly influence the level of political trust in a country once one is looking at all macro-level predictors and thus the full models. However, the age of democracy positively affects the level of political trust in older democracies if it is the only macro-level predictor.

Moving on to the output factors, one can say that the equal distribution of incomes within a country does not affect the level of political trust in a country. Beyond that, the social protection expenditure share of a country's GDP, that was chosen to indirectly measure the quality of the health system, pension system among other things, has a positive, although less significant effect on trust. Nevertheless, similar to most input factors, it loses its significant effect once it is not considered on its own anymore. In fact, this is a valuable contribution to the research on the origins of political trust as well as it also has never been tested before.

Finally, moving on to the last macro-level predictor discussed in this thesis, the focus is on corruption. Unlike all other macro-level predictors that were part of the empirical analysis, the level of corruption in a country is the only predictor that stays significant throughout the entire analysis and in all models ran here. Thus, it proves to always influence the level of political trust in a country, no matter which other predictors are added to the model. Thereby, higher levels of corruption have proven to lead to lower levels of trust in the same country. Besides, if corruption is the only macro-level predictor alongside individual level control variables, it has the ability to explain around 73% of the total variance at the

macro-level that was left unexplained after including individual level control variables (Tables 4 and 5).

This is a remarkable result that makes corruption the main macro-level determinant of political trust. At the same time, the electoral system design can be regarded as a macro-level determinant as well, although this needs to be treated with caution, while the equal distribution of incomes cannot be regarded as a macro-level determinant of trust. Furthermore, substantive and descriptive representation as well as the age of democracy and the social expenditure share of a country's GDP can be seen as determinants of trust in specific situations alone, e.g., when they are the only macro-level predictors of trust. Additionally, given the above results and the fact that input factors as well as output factors on their own, alongside individual level control variables, both have the ability to explain an almost equal share of the previously unexplained variance at the macro-level, both input and output factors can be, in total, regarded as similarly important determinants of political trust.

In sum, this answers the grand research question and sub-questions relating to the macro-level determinants of political trust and advances our understanding of the origins of political trust as it takes into account the effects of predictors that seemingly have never been tested before and composition effects between these newly introduced and already tested predictors that consequently also could not have been part of any empirical analysis researching the origins of political trust before.

Therefore, politicians or public officials who are interested in higher levels of trust in their country, who wish to increase or stabilise the level of political trust in their country, can mainly focus their attention on the level of corruption in their country with good conscience. Facing and lowering the level of corruption thus can be regarded the main objective in order to increase levels of political trust in a country and decrease between-country differences.

However, despite this thesis' advancements, it also faces some limitations. First, one has to take into account that the above explained results display the situation on average, namely looking at the country as a whole. It might be the case that some of the variables do not affect political trust for all individuals in the same way. For example, it might be the case that one of the predictors analysed above has a stronger effect for one specific group, for example, for women or men. Similarly, it might be that one, on average significant, predictor has no significant effect at all for one part of society or that an, on average, insignificant predictor influences the political trust of another group. In fact, previous research has shown that this is the case for many predictors of political trust (e.g., Hakhverdian & Mayne, 2012; Noordzij, de Koster &

van der Waal, 2021). Therefore, analysing the above stated effects more in-depth with the help of cross-level interactions can be a further valuable contribution to the research on the origins of political trust and can thus be treated as a suggestion for future research. Second, it might be the case that the above stated results are not valid for all countries in the world. As this empirical analysis only focuses on one part of the world, namely Europe, future research could extend the scope of cases to validate the above results for other parts of the world. Similarly, this might also help adding more majoritarian and mixed electoral system to the analysis and maybe uncovering different effects of the electoral system as Europe does not provide us with much variety in this regard. Third, it might be the case that predictors directly measuring the effect of one specific aspect of society or measuring the effect of such aspect on a different level, namely the individual level, indicate different results. For example, future research could furthermore focus on replacing the indirect measurement of the social expenditure share by direct measurements of the quality of the health system as soon as such comparative datasets are available. Similarly, instead of testing these effects at the macro-level, one could also focus on testing these effects at the individual level as there might be a different effect.

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Appendices

Appendix A: Robustness Check regarding the Degrees of Freedom

Table 8: Determinants of trust in parliament (random intercept model with Maximum Likelihood)

Variables	Model 16
	b (SE)
<i>Input factors</i>	
Substantive representation	
Descriptive representation	0.06 (0.07)
Electoral system (majoritarian)	
- Mixed	0.57 (0.39)
- Proportional	1.01*** (0.29)
Age of democracy (youngest)	
- Middle	0.01 (0.28)
- Oldest	0.33 (0.28)
<i>Output factors</i>	
Corruption	-0.49*** (0.10)
Social protection expenditure	
Income equality (Gini index)	
<i>Macro-level control variables</i>	
Unemployment rate	
Inflation rate	
<i>Individual level control variables</i>	
Age	-0.005*** (0.00)
Gender	-0.02 (0.02)
Highest level of education	0.08*** (0.01)
Political interest	0.42*** (0.01)
Satisfaction with life	0.21*** (0.01)
Constant	2.45***
Variance individual level	5.19
Variance macro-level	0.14
Number of individuals	43,105
Number of countries	26

Notes: b = coefficient, SE = standard error, *p < 0,1, **p < 0.05, ***p < 0.01, ****p < 0.001

Sources: Bormann & Golder, 2013; ESS, 2018; Transparency International, 2019; Transparency International, 2020 and World Bank, 2022

Appendix B: VIF scores

Table 9: VIF scores

Variables	VIF	VIF	VIF
<i>Input factors</i>			
Substantive representation	1.34	1.35	1.39
Descriptive representation	6.52	6.51	8.11
Electoral system (majoritarian)			
- Mixed	2.25	2.26	2.30
- Proportional	2.72	2.74	2.81
Age of democracy (youngest)			
- Middle	1.66	1.69	3.16
- Oldest	3.46	3.51	6.70
<i>Output factors</i>			
Corruption	4.10	4.21	5.61
Social protection expenditure	4.75	4.75	4.96
Income equality (Gini index)	2.34	2.36	2.99
<i>Macro-level control variables</i>			
Unemployment rate			3.01
Inflation rate			3.26
<i>Individual level control variables</i>			
Age		1.08	1.08
Gender		1.03	1.03
Highest level of education		1.16	1.16
Political interest		1.25	1.25
Satisfaction with life		1.15	1.15
Mean	3.24	2.50	3.12

Notes: VIF = variance inflation factor

Sources: Bormann & Golder, 2013; ESS, 2018; OECD, 2019; Transparency International, 2019; Transparency International, 2020; Eurostat, 2022; Jolly et al., 2022; World Bank, 2022 and own calculations

Appendix C: Robustness Checks excluding Bulgaria, Croatia, Norway and Switzerland

Table 10: Determinants of trust in parliament (random intercept model with Maximum Likelihood), excluding Bulgaria, Croatia, Norway and Switzerland as cases

Variables	Model 11	Model 12	Model 13	Model 14	Model 15
	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)
<i>Input factors</i>					
Substantive representation	0.13 (0.26)		0.03 (0.19)	0.01 (0.18)	
Descriptive representation	0.11 ⁺ (0.06)		0.01 (0.07)	-0.03 (0.08)	-0.07 (0.08)
Electoral system (majoritarian)					
- Mixed	0.60 (0.40)		0.48 (0.28)	0.40 (0.26)	0.38 (0.26)
- Proportional	0.92** (0.32)		0.90*** (0.25)	0.92*** (0.23)	0.98*** (0.22)
Age of democracy (youngest)					
- Middle	-0.10 (0.28)		0.02 (0.22)	0.36 (0.27)	0.21 (0.26)
- Oldest	0.87*** (0.24)		0.37 ⁺ (0.21)	0.66** (0.25)	0.46* (0.22)
<i>Output factors</i>					
Corruption		-0.40*** (0.07)	-0.35*** (0.09)	-0.29** (0.09)	-0.34*** (0.09)
Social protection expenditure		0.04 ⁺ (0.02)	0.03 (0.03)	0.05 ⁺ (0.03)	0.06* (0.03)
Income equality (Gini index)		0.39 ⁺ (0.22)	0.13 (0.25)	0.10 (0.24)	-0.06 (0.22)
<i>Macro-level control variables</i>					
Unemployment rate				-0.02 (0.03)	-0.02 (0.03)
Inflation rate				0.17 ⁺ (0.09)	0.10 (0.09)
<i>Individual level control variables</i>					
Age	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)
Gender	-0.03 (0.02)	-0.02 (0.02)	-0.03 (0.02)	-0.03 (0.03)	-0.02 (0.02)
Highest level of education	0.09*** (0.01)	0.09*** (0.01)	0.09*** (0.01)	0.09*** (0.01)	0.09*** (0.01)
Political interest	0.46*** (0.01)	0.45*** (0.01)	0.46*** (0.02)	0.46*** (0.02)	0.45*** (0.01)
Satisfaction with life	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)
Constant	-0.82	0.23	0.72	0.43	1.88
Variance individual level	5.34	5.31	5.34	5.34	5.31
Variance macro-level	0.13	0.23	0.06	0.05	0.06
Number of individuals	35,619	36,466	35,619	35,619	36,466
Number of countries	21	22	21	21	22

Notes: b = coefficient, SE = standard error, ⁺p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001

Sources: Bormann & Golder, 2013; ESS, 2018; OECD, 2019; Transparency International, 2019; Transparency International, 2020; Eurostat, 2022; Jolly et al., 2022; World Bank, 2022 and own calculations

Appendix D: Robustness Checks excluding Austria

Table 11: Determinants of trust in parliament (random intercept model with Maximum Likelihood), excluding Austria as a case

Variables	Model 4	Model 11	Model 13	Model 14
	b (SE)	b (SE)	b (SE)	b (SE)
<i>Input factors</i>				
Substantive representation	1.37* (0.53)	0.80 ⁺ (0.45)	0.37 (0.34)	0.23 (0.34)
Descriptive representation		0.17* (0.08)	0.05 (0.09)	0.01 (0.10)
Electoral system (majoritarian)				
- Mixed		0.45 (0.52)	0.40 (0.36)	0.39 (0.35)
- Proportional		0.44 (0.46)	0.65 ⁺ (0.37)	0.71* (0.36)
Age of democracy (youngest)				
- Middle		0.17 (0.34)	0.13 (0.25)	0.46 (0.35)
- Oldest		0.83** (0.31)	0.28 (0.26)	0.58 ⁺ (0.25)
<i>Output factors</i>				
Corruption			-0.39*** (0.11)	-0.36** (0.12)
Social protection expenditure			0.02 (0.03)	0.03 (0.03)
Income equality (Gini index)			0.13 (0.25)	0.21 (0.26)
<i>Macro-level control variables</i>				
Unemployment rate				-0.01 (0.04)
Inflation rate				0.15 (0.12)
<i>Individual level control variables</i>				
Age	-0.004*** (0.00)	-0.004*** (0.00)	-0.004*** (0.00)	-0.004*** (0.00)
Gender	-0.03 (0.02)	-0.03 (0.02)	-0.03 (0.02)	-0.03 (0.03)
Highest level of education	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)
Political interest	0.44*** (0.01)	0.44*** (0.01)	0.44*** (0.02)	0.44*** (0.02)
Satisfaction with life	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)
Constant	-10.21	-6.93 ⁺	-2.16	-2.00
Variance individual level	5.33	5.33	5.33	5.33
Variance macro-level	0.51	0.21	0.10	0.09
Number of individuals	37,027	37,027	37,027	37,027
Number of countries	22	22	22	22

Notes: b = coefficient, SE = standard error, ⁺p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001

Sources: Bormann & Golder, 2013; ESS, 2018; OECD, 2019; Transparency International, 2019; Transparency International, 2020; Eurostat, 2022; Jolly et al., 2022; World Bank, 2022 and own calculations

Appendix E: Robustness Checks with exact Age of Democracy

Table 12: Determinants of trust in parliament (random intercept model with Maximum Likelihood), exact age of democracy instead of three categories

Variables	Model 7	Model 11	Model 13	Model 14	Model 15
	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)
<i>Input factors</i>					
Substantive representation		0.24 (0.33)	0.13 (0.24)	0.11 (0.24)	
Descriptive representation		0.17* (0.07)	0.01 (0.09)	0.01 (0.10)	-0.06 (0.09)
Electoral system (majoritarian)					
- Mixed		0.93+ (0.53)	0.47 (0.38)	0.46 (0.38)	0.59 (0.37)
- Proportional		0.82* (0.41)	0.87** (0.37)	0.88** (0.30)	1.10** (0.28)
Age of democracy	0.02*** (0.00)	0.01*** (0.00)	0.00 (0.00)	0.00 (0.00)	0.01+ (0.00)
<i>Output factors</i>					
Corruption			-0.47*** (0.11)	-0.46** (0.12)	-0.47*** (0.12)
Social protection expenditure			0.04 (0.03)	0.04 (0.03)	0.06* (0.03)
Income equality (Gini index)			-0.02 (0.02)	-0.01 (0.25)	-0.10 (0.22)
<i>Macro-level control variables</i>					
Unemployment rate				-0.01 (0.04)	0.01 (0.04)
Inflation rate				0.05 (0.10)	0.11+ (0.06)
<i>Individual level control variables</i>					
Age	-0.01*** (0.00)	-0.004*** (0.00)	-0.004*** (0.00)	-0.004*** (0.00)	-0.005*** (0.00)
Gender	-0.02 (0.02)	-0.03 (0.02)	-0.03 (0.02)	-0.03 (0.03)	-0.02 (0.02)
Highest level of education	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)
Political interest	0.42*** (0.01)	0.44*** (0.01)	0.44*** (0.02)	0.44*** (0.02)	0.42*** (0.01)
Satisfaction with life	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)	0.21*** (0.01)
Constant	1.18***	-2.57	1.06	0.99	2.24
Variance individual level	5.19	5.30	5.30	5.30	5.19
Variance macro-level	0.36	0.22	0.11	0.10	0.11
Number of individuals	43,105	39,459	39,459	39,459	43,105
Number of countries	26	23	23	23	26

Notes: b = coefficient, SE = standard error, +p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001

Sources: Boix, Miller & Rosato, 2013; Bormann & Golder, 2013; ESS, 2018; OECD, 2019; Transparency International, 2019; Transparency International, 2020; Eurostat, 2022; Jolly et al., 2022; World Bank, 2022 and own calculations