Technocratic attitudes in liberal democracies

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Abstract

The rise of complex societal puzzles in the last decade, like the Covid-19 crisis, simultaneously gave rise to the discussion about the role of experts in the political decision-making process. This quantitative research contributes to this discussion and concerns the technocratic attitudes among citizens of liberal democracies. First, the literature review sets out different views on representation, characteristics of technocrats, circumstances of increase in technocratic attitudes, and the difference between democratic technocrats and autocratic technocrats. Using multiple regression analysis on new survey data collected during the Covid-19 crisis, this research determines which citizens are more likely to have technocratic feelings. This research determines whether satisfaction with party democracy, political efficacy, elitism, ideological self-placement, and European Union support determine how technocratic a citizen is. The results show that satisfaction with party democracy stands in a positive relationship with the level of technocratic attitudes of a citizen. On top of that, this research finds higher education, European Union support, considering to be part of the elite and being right-wing oriented, also increases the chance of a higher level of technocratic attitudes in citizens. Using logistic regression analysis, this study establishes the differences between democratic technocrats and autocratic technocrats. Citizens who support party democracy, and or citizens who have a higher income are more likely to be democratic technocrats. Citizens who show higher satisfaction with the government while not supporting democracy, and or are higher educated, and or are more politically right-wing oriented are more likely to be autocratic technocrats.

Keywords: technocracy, liberal democracy, crisis, Covid-19 crisis, autocratic attitudes, technocratic attitudes, democratic attitudes, multiple regression analysis, logistic regression analysis

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Chapter 1: Introduction

The outbreak of the Covid-19 crisis nourished an ongoing debate about the quality of democracy in liberal democracies (Freedom House, 2020). Professor Arjen Boin, a Dutch expert in the field of crisis management, states that "during a crisis, people want to have the idea that the government knows what it is doing" (Vlooswijk, 2020, n.p.)[1]. This may indicate that people feel the need for more experts in government during a crisis, and the Covid-19 pandemic thus nourished the technocratic feelings of citizens.

It comes as no surprise then that in times with complex societal problems, debates about technocracy often arise (Bertsou and Caramani, 2020b). Cambridge Dictionary (2022, n.p.)[2] refers to technocracy as "a government or social system that is controlled or influenced by experts in science or technology", thus technocracy is a form of governing a country. Technocrats govern by using experts, instead of chosen representatives, in political decision-making. As society has had a rise of complex societal puzzles in the last decade, the role of experts in political decision-making increasingly is a topic of discussion among political scientists (Lavezzelo, Ramiro & Fernández-Vázquez, 2021a). With citizens developing a mistrust in party government to answer today's challenges of society, like the Covid-19 crisis, economic crises, and migration crises, the longing for experts in political decision-making has been nourished (ibid.).

Technocracy is usually presumed to be an autocratic form of governing. "Autocracy refers to a government in which political power is concentrated in the hands of a single person, or group of people, and whose decisions are not subject to external control, legal or popular" (Windholz, 2020, p. 97). Ganuza and Font (2020) change the view of technocracy through the findings of their research. Ganuza and Font (2020) state that the increase in technocratic attitudes amongst citizens of liberal democracies does not imply a decrease in support for party democracy, although technocracy is associated with autocracy by political scientists. Demand for more experts in political decision-making amongst citizens does not always mean that citizens are becoming less democratic. This finding is interesting for the way political scientists look at the increasing demand for experts in government, because technocratic citizens, thus, do not need to be autocratic at the same time. Technocracy and democracy may go hand in hand. Research needs to be done on which characteristics determine whether citizens belong to the *democratic technocrats* or the *autocratic technocrats*. This is why this research focuses on the following main question;

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[1]www.volkskrant.nl/wetenschap/zeven-experts-kraken-de-coronacommunicatie-van-het-kabinet-en-zeggen-hoe-het-beter-kan~b1d5d389/

[2]dictionary.cambridge.org/dictionary/english/technocracy

To what extent can characteristics of citizens in liberal democracies determine whether they are technocratic and to what extent can these characteristics determine whether citizens are autocratic technocrats or democratic technocrats?

To establish a difference between *autocratic technocrats* and *democratic technocrats*, this research first needs to uncover which characteristics of citizens in liberal democracies determine their level of technocratic attitudes. Much research about what characteristics of citizens determine how technocratic they are, has already been done. Based on previous findings, this research will determine whether satisfaction with party democracy, political efficacy, elitism, ideological self-placement, and European Union support determine how technocratic a citizen of a liberal democracy is. What makes it interesting to look at the relationship between these characteristics of citizens and technocratic attitudes amongst citizens, although some researchers have already done this (Putman, 1977; Bertsou & Caramani, 2020b; Heyne & Lobo, 2021; Bertsou & Pastorella, 2021; Lavezzelo, Ramiro & Fernández-Vázquez, 2021; Chiru & Enyedi, 2022), is that this research uses survey data that was collected during the Covid-19 crisis. As stated above, citizens are more likely to develop technocratic attitudes in times of crisis. This thesis will therefore research whether the expectations concerning technocratic attitudes among citizens remain the same when using data that was collected during a crisis. On top of that, Heyne and Lobo (2021) state that political scientists have not assured yet if technocratic citizens are a distinct group with certain unique features (Heyne & Lobo, 2021). Far more empirical research is needed on this topic (Merler, 2021).

The second goal of this thesis is to determine whether a distinction can be made between *autocratic technocrats* and *democratic technocrats* and what characteristics of citizens increase the likelihood of being one or the other. On top of that, this research tries to make a specific prediction about the influence of satisfaction with party democracy and ideological self-placement on being an *autocratic technocrat* or a *democratic technocrat*.

This research is not just important for the addition it makes to the political science literature, it is also relevant for society in general. The fear of technocratic attitudes amongst citizens and the use of experts in party democracy, because of the resistance towards autocracy, can be taken away if the research states a difference can be made between *autocratic technocrats* and *democratic technocrats*. The increasing use of experts in political decision-making does not have to mean that liberal democracies are becoming less democratic. It could also mean that contemporary political puzzles are getting too complex to only be looked at by chosen representatives.

To form an answer to the main question, this research makes use of new survey data collected during the spring of 2022, so during the Covid-19 crisis. The YouGov (2022) survey, conducted in Germany, the United Kingdom, Spain, and Poland, focused on asking their respondents questions about democratic attitudes. This research uses the quantitative methodologies, multiple regression analysis, and logistic regression analysis, to establish which characteristics of citizens determine their

level of technocratic attitudes and whether a distinction can be made between *autocratic technocrats* and *democratic technocrats*. By statistically testing several hypotheses, an answer to the main question will be formed.

The research is structured as follows. Including the Introduction, which is the first chapter, this thesis contains five chapters. In the second chapter, the Theoretical Framework, the existing literature in reference to the subjects of this study will be set out. The Theoretical Framework also includes the eight hypotheses, which are derived from the existing literature, that will be tested in this research. The third chapter, which is called Data and Methods, will provide detailed information about the data, the used variables that test the hypothesis, and the methods. The used methods, multiple regression analysis, and logistic regression analysis will be explained in this chapter. In the final chapter, Conclusion and Discussion, this research will form an answer to the main question. This chapter will also point out the limitations and shortcomings of this research and will make suggestions for further research.

Chapter 2: Theoretical framework

This chapter sets out different relevant concepts and theories regarding the subject of this research. Firstly, the chapter will present the current different views on political representation, existing in political science literature. Secondly, this chapter will state which citizens are in favor of technocracy and in which circumstances their feelings towards technocracy might change. Thirdly, this chapter will set out the theory of Ganuza and Font (2020) about *democratic technocrats* and *autocratic technocrats*. The literature review leads to the eight hypotheses that will be tested in this research to form an answer to the main question.

2.1 Different visions on representation

The Latin word "representare" can be defined as "a delegated action on behalf of someone else" (Urbinati, 2011; Zwan, Lubbers & Eisinga, 2019, p. 248). There are many different views on representation. Caramani (2017) presents two extreme forms of representation. On the one side, there is the form of representation based on the delegate model. In this delegate model, the representatives act on grounds of a mandate. This model focuses on the responsiveness of the representatives and how much they act according to the citizens' preferences. On the other end, the trustee model of representation can be found. According to this model, representatives act independently from a mandate. Citizens give governors their mandate to handle for them, because they don't have the expertise and time to make political decisions. This model is mostly based on competence and trust and less on responsiveness.

There are different views of representative democracy. Ad hoc, the main views on representative democracy in political science literature consist of party democracy, populism, stealth democracy, and technocracy. This chapter will firstly describe these four different views in detail. The main characteristics of all four forms of representation will be clarified in this chapter. Secondly, these different views on representation will all be placed on the spectrum of the trustee- and delegate model. This model says something about the expectation of the role the representatives need to take on. Caramani (2017) states that the scope of authorization, so the acting on behalf of others, can be interpreted more or less restrictively. The trustee- and delegate model is of great relevance in the current debates about representation amongst political scientists (Caramani, 2017).

2.1.1 Party democracy

The current form of democracy in Western countries can be described as representative democracy. Representative democracy depends on political parties and several functions these parties fulfill, such as structuring a link between citizens and representatives, and the function of governing responsibly and competently (Caramani, 2017). This is why representative democracy could also be called party

democracy. Party democracy lives up to its name; in this particular system representation is being channeled through parties, the government is being formed by parties, and accountability is assured through parties (Mair, 2002). So in a party democracy, political parties represent the preferences of the citizens they govern (Caramani, 2017).

Although party democracy can take on diverse and broad definitions, party democracy is consistently based on a few features. According to Dahl (1956), these features include "the possibility of legitimate opposition, the representation of plurality by intermediary agencies, the supply of distinguishable aggregative ideologies and proposals by political actors, the competition for leader selection, and the institutionalization of checks and balances".

Urbinati (2011) presents four main characteristics of representative democracy. First of all, in a representative democracy, the sovereignty of the citizens is expressed through the electorally chosen representatives. In addition, the relationship between the voters and the representatives is based on a free mandate, which means the elected are no longer bound to the wishes of the electorate after being elected. Thirdly, in a representative democracy, the responsiveness to the citizens by representatives is to some measure ensured by electoral mechanisms. This means the representatives satisfactorily speak and act in the name of the people. Lastly, in a representative democracy, there is universal franchise, which is a guardian of the important political equality. In a representative democracy, authority and legitimacy rely on consent between citizens and the representatives, rather than the direct presence of every citizen in the country's public decision-making.

Party democracy stands in contrast to populism and technocracy. Populism and technocracy can be seen as critiques of party democracy (Bertsou & Caramani, 2020b). Populists have a monolithic perspective of the people, which means there is one unitary consensus amongst citizens. They both have a non-pluralistic view, which means they believe in an external common good for a given society (Caramani, 2017). Technocrats share an elitist view towards politics. Technocrats see expertise, unchecked by political representatives, as the best way to approach political puzzles (Bertsou & Caramani, 2020b).

To summarize the literature for this research, party democrats do not believe in one common good for the society they govern. They have a pluralistic view of society, where cleavages, deep divides in society, structure politics (Caramani, 2017). The people, with contrasting opinions, are represented through political parties. The representatives get a mandate from the electorate to govern, but are, at the same time, responsible for responsiveness towards the citizens to some extent. This means party democracy can be placed in the middle of the trustee- and delegate model.

2.1.2 Populism

After the Cold War, the international terrorist attacks, and the 2008 financial crisis, parties and citizens became more polarized about new issues. This polarization stimulated the rise of populist parties (Dalton, 2021). Urbinati (2019) likewise states that the success of populist parties could be explained

by the growth of social and economic inequalities and the growth of a worldwide oligarchy; a privileged group of elites that have a lot of power.

Populists want to replace the party democracy with a populist democracy (Urbinati, 2019). The term "populism" is hard to define. Political scientists do not seem to agree on the definition of this concept. Populism is not an ideology or a specific political regime. It is a representative process that can take on various forms (ibid.). It is an alternative vision of representation, which can be, as stated before, contrasted with party democracy. In this research, the definition for populism of Caramani will be used. According to Caramani (2017, p. 55), populism is defined as "a form of representation claiming that political action must be guided by the unconstrained will of the people". The will of the people is one unitary will of society. The definition of democracy, for Dahl (2020) and Urbinati (2019), ensures political pluralism. Populism threatens this criterion of political pluralism, because as stated above, populists support the idea of a unitary, general, common interest of a given society (Caramani, 2017, p. 60).

Populism makes use of descriptive representation, which means the electoral responsiveness from the representatives must be at its highest (Caramani, 2017). Descriptive representation means "governmental bodies should roughly correspond to, if not perfectly mirror, the demographic and socioeconomic composition of society" (Caramani, 2017, p. 56). On top of that, the representatives must identify the general interest through the will of the people. The inclusiveness of the people is a very important aspect of the populist way of representation. Populists constantly mobilize the people, either institutionally or via noninstitutional channels. As responsiveness is very important in the populist's system, one can state that populists act according to the delegate, also known as the mandate model. Populists obtain legitimacy by basing policy on the preferences of the people, and therefore on the affirmation of people's will (ibid.).

To summarize, populists believe there is one common good for a given society. They do not have a pluralistic view of society, like the party democrats. This system focuses on the responsiveness of the representatives towards the citizens. The representatives need to take the will of the people into account during the decision-making process. Following the will of the people legitimizes the system, according to populists (Caramani, 2017). Populists realize optimal responsiveness through descriptive representation, which thus means the representatives resemble the electorate (Pitkin, 1967). To conclude, in the ideal type of populism, populists act according to the delegate model (Caramani, 2017).

2.1.3 Stealth democracy

Hibbing and Theiss-Morse (2002) did research on how American citizens would like to see democracy function. Hibbing and Theiss-Morse (2002) state that citizens prefer empathetic politicians who are not self-interested. Most people don't expect constant responsiveness from the representatives and do not want to be required to participate in the political decision-making process. So the conclusion of the

study of Hibbing and Theiss-Morse (2002) is that more citizen involvement in politics is not always the answer to better a political system. Citizens tend to be indifferent when it comes to political decision-making. They want the politicians, the experts, to understand what the people want, without being involved and without political participation. Stealth democracy is a system that could meet the desires of these citizens. Stealth democracy is a way to represent the people, where citizens do not have much to do with politics in daily life. This form of representation supports the findings of Hibbing and Theiss-Morse (2002). Stealth democracy is a form of representation where the people are involved in politics as little as possible, because they don't care enough about politics to be concerned with political decision-making themselves (ibid.). Most citizens want democratic features to exist, but do not want to deal with these features on a daily basis (ibid.). Stealth democracy is a little contradictory, because citizens want a more people-orientated democracy while being involved less. Ganuza and Font (2020, p. 521) describe stealth democracy as "a thinly-veiled desire by governments to avoid ideological conflict and situate politics in the domain of impartial and neutral analysis". According to Hibbing and Theiss-Morse (2002), citizens only want democracy to be visible and hold government accountable on occasions that they view as extraordinary, and which make them want to be politically involved. They want the opportunity to be there, for when they feel like they need it, but until then they expect unobtrusive accountability from their governors. Just like populists, stealth democrats are frustrated with politicians and political outputs, but unlike populists, they are not anti-elitists (Bertsou & Caramani, 2020b). In this way, they lean more towards technocracy, where the elite, the experts, govern.

To summarize, this form of representation is mostly based on the trustee side of the trustee-delegate model. Only on rare occasions do citizens expect to get involved in politics, which means politicians get trusted to handle in the name of the citizens without the interference between politicians and citizens the rest of the time.

2.1.4 Technocracy

The last form of representation being discussed in this research is technocracy. Technocracy is a form of representation which makes use of experts. Where stealth democrats still make use of democratic procedures on rare occasions, citizens do not play a role in the political decision-making process in technocracy. This political system is based on the trustee model (Caramani, 2017). To repeat, the trustee model rarely makes use of political responsiveness and is mostly based on trust in the governors. Citizens give their, in this case expert, governors their mandate to act in their name. According to Caramani (2017, p. 55), technocracy is defined as "a form of representation stressing the prominence of expertise in the identification and implementation of objective solutions to societal problems", which at the same time implies that objective problems exist. In technocracy, political power is exercised through political elites who are neutral, effective, have competence, and are experts on a certain topic (Bertsou & Caramani, 2020b). These competences, besides the responsible

trusteeship, are the source of legitimacy of this form of representation (Bertsou & Caramani, 2020b). Just like populists, technocrats also believe in the idea of a unitary, general, common interest of a given society (Caramani, 2017, p. 60). Technocrats use rationality to define the common good of the society and to come up with the means to achieve this goal (Caramani, 2017). Rational speculation and scientific procedures establish the general interest of society in a technocracy. They make use of value-free and objective criteria during the political decision-making process (Centeno, 1993). As this form of representation is based on the trustee model, citizens have to trust the political actors, the experts, to make rational choices in favor of the general interest of society (Caramani, 2017). The selected experts can be trusted, as they were selected based on their competences. The experts can handle how they think is best for the country. Technocracy is elitist. This means that the experts, making the political decisions, differ from ordinary people, in the view of technocrats. The experts are elite because of their "expertise, superior academic credentials, intellect and know-how" (Bertsou & Caramani, 2020b, p.7).

Technocrats critique party democracy because of two reasons (Bertsou & Caramani, 2020b). They say party democracy has to rely on popular demand too much, which results in politicians only thinking about short-term responsiveness instead of long-term societal issues. The second critique technocrats form towards party democracy states parties only represent parts of society, sectional interests, and particular ideologies, while politicians should, according to technocrats, think about the society as a whole with one common good (Bertsou & Caramani 2020b).

Centeno (1993) states one should see technocracy as a methodology, rather than an ideology. Technocracy is one of many methods to come up with solutions to political issues. Technocrats claim not to be influenced by an ideology, because they are rational as a cause of their expertise. You could however question if being rational, without being influenced by some form of ideology, is possible in the real world. You could, however, see technocracy as an ideology of method. Technocrats believe that the optimal, for technocrats rational, solution can be achieved through a specific methodology. For technocrats, this methodology is the assignment of experts who make the political decisions. Technocrats believe the expertise of scientists leads them to the one, just, rational approach to political puzzles. "Technocracy is based on the superiority of expertise and the scientific approach to the social world" (Bertsou & Caramani, 2020b, p. 7). So, technocrats believe there is only one scientific approach to political decision-making.

"Technocratic attitudes will stand in a close but, at the same time, conflicting relationship with populist ones" (Bertsou & Caramani, 2020b, p. 7). Where populists believe politicians should be led by the common will of the people, without the intervention of elites and without restricting pluralistic procedures, technocrats believe in delegating political decision-making to unelected experts, even if this means ignoring the will of the people (Bertsou & Caramani, 2020b). They, however, both do believe in a unitary common good for the non-pluralistic society (Bertsou & Caramani, 2020b).

Technocracy can take on many different forms. The system can be technocratic to many different degrees. Examples of how technocracy can be found in a political system can go from advisory positions for experts, to the appointment of an independent technocratic prime minister, appointing an expert executive, or even entire cabinets or political systems consisting of just experts (Bertsou & Caramani, 2020b).

To summarize, technocrats believe in a common good for a given society and have a non-pluralistic view of society, just like the populists. However, where the populists focus on the will of the people and responsiveness, the technocrats focus on the rational speculation of experts (Caramani, 2017). Representatives are chosen on the basis of expertise instead of on descriptiveness like in the populist system. One can place a technocratic system on the trustee side of the trustee-delegate model, because the experts get all the power to govern. They do not need to be responsive towards the citizens. They need to handle political problems rationally and how they think is best for society.

2.2 Who is in favor of technocracy?

Bertsou and Caramani (2020b) state that mass surveys, for example, wave six of the World Values Survey, suggest a majority of citizens in many different countries would prefer experts, rather than politicians, in government. These world surveys from 2010 to 2014 find that 80% of Romanian and Polish citizens are in favor of being governed by experts and more than 50% of citizens in Western democracies prefer experts over other political actors in the decision-making process. The question used in this survey was "Would you say it is a very good, fairly good, fairly bad or very bad way of governing this country? Having experts, not government, make decisions according to what they think is best for the country." (Bertsou & Caramani, 2020b, p. 5).

Populist attitudes were defined and measured in many different empirical studies (Bertsou & Caramani, 2020b). Far less research has been done on technocratic attitudes up to now. The political science literature, until now, knows considerably less about the impact of technocratic practices on satisfaction with democracy and political trust (Merler, 2021). There is little information available about how citizens in favor of technocracy behave and what they believe. It has not been assured yet if technocratic citizens share a set of unique characteristics which distinguishes them from citizens who do not support technocracy (Heyne & Lobo, 2021). Technocracy is, just like populism, a thin-centered ideology (ibid.). This means technocracy can be combined with different, thin and full, political ideologies (Mudde, 2004). Technocracy can thus be paired with many different political backgrounds. The same applies to the individual level, where technocracy can be paired with many different political attitudes amongst citizens (Heyne & Lobo, 2021). Much more empirical research has to be done on technocratic attitudes in citizens and what encourages citizens to be, or become, more technocratic (Merler, 2021).

Putnam (1977) assumes that citizens who support technocratic governance are apolitical, skeptical, and doubt politicians and political institutions. They reject ideology, openness, equality, and

political conflict. Technocracy thus is a rejection of party democracy. Bertsou and Caramani (2020b) tried to measure technocratic attitudes among citizens through three dimensions, namely elitism, anti-politics, and expertise. The elitist dimension refers to the knowledge class, which is selected through expertise, intellect, know-how, and academic skills. In technocracy, this elitist class of experts makes the political decisions. The anti-politics dimension refers to the critique of technocrats on the party democracy system which focuses on short-term policies, sectional interests, and ideologies, which makes politics inefficient and overresponsive to short-term demands. The expertise dimension refers to the expertise of the experts which is the right way to solve political puzzles according to technocrats (Bertsou & Caramani, 2020b; Heyne & Lobo, 2021).

Citizens who have low trust in the current political system are more likely to support a technocratic system than people who have higher trust in politics (Bertsou & Carmani, 2020b). People with higher trust in the political system and the parliament are more inclined to support party democracy. Technocrats do, however, have higher levels of political trust than populists. This confirms the assumption that citizens with technocratic attitudes prefer an elite-driven decision-making process, instead of a mass-driven decision-making process (ibid.). Similarly, Bertsou and Pastorella (2017) find that citizens with weaker democratic attitudes and less trust in the institutions of party democracy are more likely to support technocratic governance. The weaker political trust among technocracy supporters has an influence on the voting behavior of citizens with technocratic attitudes (Heyne & Lobo, 2021). Technocratic attitudes among citizens and their attitudes towards party democracy thus stand in a negative relation towards each other (Bertsou & Pastorella, 2017).

Heyne and Lobo (2021) find that technocracy supporters are more likely to abstain from voting, vote blank, or vote for a radical, anti-system, or populist party. This also implies that supporters of a technocratic system and supporters of a populist system may partly overlap. Chiru and Enyedi (2022) find a similar result, where voters for government parties withstand the idea of a technocratic government. Heyne and Lobo (2021) however also identify a group of technocracy supporters who do vote for mainstream parties and are in favor of the status quo of party democracy and the European Union as a technocratic institution. They prefer a more expertise-based decision-making process in party democracy. These findings again show that technocracy supporters do not belong to a homogenous group, which supports the thin ideology expectation.

Bertsou and Pastorella (2021) find, by means of a quantitative analysis of the European Value Survey of 2008, that support for the European Union and the level of technocratic attitudes amongst citizens are positively related. According to them (ibid.), the European Union is perceived as a technocratic institution among citizens. Voters see the European Union as an institution which acts behind the scene and which has an influence on the appointment of national technocratic actors (ibid.). This implies that when citizens support the European Union, which is already perceived as a technocratic institution, they simultaneously support technocracy.

Chiru and Enyedi (2022) state that citizens with low political efficacy are more in favor of a government with experts in it. These citizens feel like their opinions are not heard and their actions cannot make a difference in the decision-making process. When politicians don't care about the needs of the citizens, citizens are more likely to disapprove of government and embrace alternative forms of government, like technocracy. On top of that, people who have a negative self-reflection considering their position in representative democracy, are more likely to support experts in government. "A preference for independent expertise entails a belief that the people are unable to select worthy decision-makers through the current democratic system" (Bertsou & Pastorella, 2017, p. 433). People with low political efficacy have low trust in themselves to select suitable representatives. Therefore people with low political efficacy tend to support technocracy.

There are some other individual characteristics that have an influence on the level of technocratic attitudes in citizens. Different researchers come to the conclusion that education has an influence on the level of technocratic attitudes in citizens (Bertsou & Carani, 2020, Chiru & Enyedi, 2022; Lavezzelo, Ramiro & Fernández-Vázquez, 2021a). Education and the level of technocratic attitudes stand in a positive relationship to each other. This means that the more one is educated, the more likely they are to be more technocratic. This is, however, contradictory to the previous theory of the negative relationship between political efficacy and support for technocracy. The positive relation between education and technocracy support could be explained by the theory that higher educated citizens usually belong to the more elitist groups of society. Chiru and Enyedi (2022) and Lavezzelo, Ramiro, and Fernández-Vázquez (2021a) both find that citizens who are better-off financially and have a higher social capital are more inclined to support technocratic governance. Another characteristic that can influence the level of technocratic attitudes is age. Technocratic attitudes and age are negatively related to each other (Bertsou & Pastorella, 2021). The older a person is, the more likely this person is to have a stronger party identification. People who were socialized under the circumstances of strong party ties are less likely to support political decision-making that challenges this kind of representative democracy (ibid.). Lastly, although technocracy is not connected to a certain ideology, right-wing leaning citizens are more likely to support technocratic governance (Bertsou & Pastorella, 2021 & Chiru & Enyedi, 2022, Lavezzelo, Ramiro & Fernández-Vázquez, 2021a). Bertsou and Pastorella (2021) give the association of right-wing leaning citizens with orthodox versions of free-market capitalism as a reason for the connection between the right wing and technocratic citizens. On top of that, both right-wing leaning citizens and technocrats focus on productive efficiency. The left wing focuses, in contrast to the right wing, more on direct political involvement for citizens (Chiru & Enyedi, 2022). This is another reason why right-wing leaning citizens are more prone towards technocracy.

This literature study leads to the first hypotheses of this research, which are about who supports technocracy in the first place;

H1.The higher satisfaction towards the current political system, so towards party democracy, is, the lower technocratic attitudes are.

H2. The lower the political efficacy of respondents, the higher their technocratic attitudes are.

H3. The more a respondent thinks of themselves as being part of the elite, the stronger their technocratic attitudes are.

H4. The more respondents associate themselves with the political right-wing ideology, the higher their technocratic attitudes are.

H5. The higher the support of a respondent for the European Union, the higher their technocratic attitudes are.

2.3 When are people in favor of technocracy?

Technocratic cabinets have been implemented in several countries, in the face of approaching crises. Examples of European technocratic cabinets are the Italian government of Mario Monti in 2011, the Greek government of Lukas Papademos, also in 2011, the Bajnai government in Hungary in 2009, and the Ciolos government in Romania in 2016 (Bertsou & Caramani, 2020b).

The Eurozone crisis had a big impact on European democracies, mainly on peripheral European countries, where the economic recession resulted in a financial and a political crisis (Heyne & Lobo, 2021). During the Eurozone crisis, several technocratic governments were appointed in different countries (Merler, 2021). In these countries, technocratic governance became more common and as mentioned above, full technocratic governments were appointed in Italy and Greece (ibid.). Cyprus, Ireland, Greece, Portugal, and Spain gave financial control to supranational technocratic bodies, which then for them made economic policies to overcome the financial crisis. Also, international institutions like the IMF gained more supranational power as a result of the financial crisis (Heyne & Lobo, 2021). Bertsou and Caramani (2020a) called this the process of "technocratization", where technocrats make constraining policy choices and remove the choice element between alternative party programs in representative democracy.

Merler (2021) shows that the appointment of the Italian technocratic government in 2011 was a result of an economic and political crisis. The appointment of this government resulted in an increase in citizens' satisfaction with the political system. The technocratic government was able to effectively resolve the crisis, which had a positive effect on the input and output legitimacy trade-off. Technocracy generally lacks input and process legitimacy, according to political scientists, but it can gain legitimacy through faster outputs (Heyne & Lobo, 2021). Research on the output legitimacy side shows that, according to the perception of citizens, a technocratic government is seen as more capable of solving a crisis. The improvement of output legitimacy triggers the appointment of a technocratic government during crisis situations (ibid.).

The public debate about introducing technocratic elements in democracies is likely to arise in times of crisis (Bertsou & Caramani, 2020b). So, also the Covid-19 pandemic gave rise to the debate

about the role of experts in government again (Lavezzelo, Ramiro & Fernández-Vázquez, 2021b). As people understood the importance of experts in the Covid-19 decision-making process, the pandemic, at the same time, gave rise to the generation of positive attitudes towards technocratic practices. Based on the Spanish case, Lavezzelo, Ramiro, and Fernández-Vázquez (2021b) empirically show that the support for policies based on expertise was stimulated by the presence of a complex new problem, the Covid-19 pandemic. This complex problem was, according to the view of citizens, too challenging to handle within the standard margins of the party democracy (ibid.). Lavezzolo, Ramiro, and Fernández-Vázquez (2021b) present two reasons why crises might encourage the rise of the role of experts in government. The first reason is that citizens think experts are able to make unconstrained and unbiased political decisions without having a long-lasting discussion. Secondly, people think experts are capable of forming an objective judgment towards the situation and make decisions without the interference of interest groups (ibid.). Lavezzolo, Ramiro, and Fernández-Vázquez (2021b) empirically prove that citizens, in times of crisis, choose independent experts over party politicians to govern. In the case of the Covid-19 crisis, citizens specifically prefer experts with expertise in public health (ibid.).

2.4 Autocratic or democratic technocracy

Technocracy comes in many different degrees. This also implies that citizens might support different forms of technocracy. A preference for experts in government does not immediately mean that one fully is against party democracy. In today's complex society, expertise plays an increasing role in political decision-making. Nevertheless, the presence of more experts in government does not directly imply the absence of democratic representation. Expertise is just increasingly used in the execution of government tasks (Ganuza & Font, 2020).

A great number of citizens support the idea of politics with experts, because of the knowledge and technical skills they can bring to government (Ganuza & Font, 2020). Most citizens, however, tend to prefer an advisory role for the experts. The great demand for experts in political decision-making is not at odds with party democracy. The use of experts in the political decision-making process is not always paradoxical to representative democracy (ibid.). The group that does support experts in government, in the research of Ganuza and Font (2020) consisting of young university students, wants to combine the system of experts with democratic procedures. About half of their sample supports experts deciding on important issues. This group grows even bigger when Ganuza and Font (2020) rephrase the statement about experts making decisions, to experts consulting on decisions.

The research of Ganuza and Font (2020) implies support towards technocracy amongst citizens does not always mean a declining support for party democracy. Amongst the groups they observed none rejected the idea of a democratically elected government, not even the supporters of

technocracy. This supports the idea of the existence of multiple degrees of technocracy. Those who are in favor of technocracy, do not always fully neglect the idea of party democracy. Moderate supporters of technocracy just want more experts in an advisory role, within party democracy. The extreme technocrats lean more towards full technocracy, which is autocratic. So, in this research, a distinction will be made between *democratic technocrats* and *autocratic technocrats*.

Based on the literature on *democratic technocrats* and *autocratic technocrats* this research aims to analyze if a distinction between *democratic technocrats* and *autocratic technocrats* can be made. The sixth hypothesis of this research therefore reads;

H6. A distinction can be made between democratic technocrats and autocratic technocrats.

Looking at the expected determinants of technocratic attitudes among citizens, satisfaction with party democracy, political efficacy, elitism, ideological self-placement, and European Union support, this thesis set up two more specific hypotheses about the differences between *democratic technocrats* and *autocratic technocrats*. These two hypotheses are two initial ideas about the differences between *democratic technocrats* and *autocratic technocrats*. As to be expected, this research presumes citizens who are satisfied with party democracy to be more likely to be *democratic technocrats*. Therefore, the first specific hypothesis about the differences between *democratic technocrats* and *autocratic technocrats*, and the seventh hypothesis of this study, reads;

H7. Citizens who are technocratic and are satisfied with party democracy are more likely to be democratic technocrats than autocratic technocrats.

The second specific hypothesis makes a prediction about the influence of ideological self-placement on being a *democratic technocrat* or an *autocratic technocrat*, based on existing literature. Erhardt, Wamsler, and Freitag (2020) state that citizens who are more right-wing oriented on the political spectrum or have extremist views on the left-right scale in general are less likely to be supportive of democracy. Halmai (2019) finds that right-wing populists are more likely to support autocratic regimes than left-wing populists. On top of the political right-wing being related to autocratic attitudes, as stated above, citizens who are politically more right wing oriented, are more likely to be technocratic. Based on these literature findings, this research therefore expects citizens who are politically more right wing oriented, to be more likely to be *autocratic* technocrats. As a result of these literature findings. The eighth and last hypothesis of this thesis reads;

H8. Citizens who are technocratic and associate themselves with the political right-wing ideology are more likely to be autocratic technocrats than democratic technocrats.

Chapter 3: Data and Methods

This chapter sets out the data and methodology that is used to test the hypotheses of this research. This quantitative research, based on relatively new survey data, makes use of ordinary least squares regression analysis and logistic regression analysis to make a prediction about the eight hypotheses that were composed on the basis of the literature study in the previous chapter. The first five hypotheses will be tested through the method of an ordinary least squares regression analysis. The last three hypotheses of this research will be tested through logistic regression analysis. To be specific, this research uses multiple linear regression to make a prediction about the first five hypotheses, as all models include multiple variables. First of all, this chapter will clarify the used dataset, the dependent, and the independent variables. Secondly, the used methodologies to test the hypotheses will be explained in more detail.

3.1 Data

The hypotheses, stated in the theoretical framework, of this study will be tested using relatively new data from the YouGov survey (2022), conducted in Germany, the United Kingdom, Spain, and Poland. The survey took place during the spring of 2022 and was mainly about democratic attitudes. The sample consists of approximately 2000 adults representative of the national population per country. This data is especially useful for this research, because multiple questions about technocratic and elitist attitudes were included in the survey. Unfortunately, no hypothesis about the change in technocratic attitudes over time could be included in this study. Over-time data, so data collected before, during, and after the Covid-19 crisis, was not available during the writing of this study yet. This resulted in not being able to test if technocratic attitudes change as a result of the crisis. Interesting is, however, that the data collected by YouGov (2022), was collected during the covid-19 crisis. The results of this study, thus, will still be able to tell something about technocratic attitudes during a crisis. It can, however, not directly say anything about the difference in technocratic attitudes between crisis and no crisis times. The first five hypotheses, however, are based on previous research conducted before the Covid-19 crisis. This research tests if these previous findings align with the findings of this research that uses data that was collected during the Covid-19 crisis.

In the next part of this chapter, it will be explained which survey questions, so which variables, were used to test the hypotheses of this research.

3.1.1 Determining the dependent variables

3.1.1.1 Technocratic attitudes

In this research, the dependent variable is technocratic attitudes, for the first five hypotheses. Based on the literature, the research examined eight items that could imply technocratic attitudes, namely the technocratic and the elitist questions and statements.

To measure the abstract concept of technocracy, this research did a factor analysis on a total of eight items. Based on the literature the following statements were selected for the factor analysis, where the first four items measure elitist attitudes and the last four measure technocratic attitudes;

1. Politicians should lead the people, not follow the people.
2. Today the opinions of ordinary people are already taken too much into account, at the expense of the general and long-term interest.
3. It is good that ordinary citizens do not determine policies, leaving it to people who really understand it.
4. Political leaders should make decisions according to their best judgment, not according to the will of the people.
5. Our country would be governed better if important decisions were left up to independent experts.
6. Our society is so complex that important societal decisions should be made by professionals from outside politics.
7. Social problems should be addressed based on scientific evidence, not ideological preferences.
8. The leaders of my country should be like managers and fix what does not work in society

The respondents could respond to the statements above with answers where 1 means strongly disagree and 7 means strongly agree.

The factor analysis determines how many dimensions the concept of technocracy consists of and if all the eight items in fact measure technocracy amongst citizens. This research uses the method of "factors in principal axis factoring" to measure if the eight items vary together on one dimension. If this is the case, it can be indicated that the eight items can be merged together to measure the underlying concept of technocratic attitudes together. These eight items, a collection of variables, are called factors. The factor analysis explains the interrelationships among the eight variables (UCLA, n.d.).

The factor analysis on the eight items reduces the items into two factors, where one factor really clearly consists of the elitist statements and the other factor consists of technocratic questions (the results of the complete factor analysis can be found in appendix 2). Because the factor analysis makes a clear distinction between the technocratic and the elitist factor, this research will only use the

four technocratic questions for the dependent variable, technocratic attitudes amongst citizens, as this is what the research is actually interested in. The factor consists of the following items, which are ranked from high to low when it comes to explaining variance:

1. Our country would be governed better if important decisions were left up to independent experts.
2. Our society is so complex that important societal decisions should be made by professionals from outside politics.
3. Social problems should be addressed based on scientific evidence, not ideological preferences.
4. The leaders of my country should be like managers and fix what does not work in society

The eigenvalue of the technocratic factor is 2,340. This factor explains almost 60% of the total variance. The extracted communalities were above 0,2 for all four items, which indicates no items should be removed from the factor analysis and all contribute enough to the factors.

To test the quality of the scale, the reliability test was done. This test gives a Cronbach's alpha of 0,763, which is high enough to say it is a good scale. The test also shows that removing any item would reduce Cronbach's alpha.

To conclude, the dependent variable, technocratic attitudes amongst citizens, will be measured through the mean of the four technocratic variables. The score of the technocratic attitudes variable can vary from one to seven. This research chooses to use the mean of the four items, because this way the scale will stay the same and the results can be interpreted clearly. Hence, higher values indicate more technocratic attitudes.

3.1.1.2 Autocratic technocrats and democratic technocrats

The YouGov survey (2022) asks its respondents about changing the political system during a situation of crisis. Based on the answers to this question, this research can determine the dependent variable to test the last three hypotheses. The used question to test these hypotheses asked the respondents of the survey to select one of the following the statements that came closest to their opinion:

1. Democracy is always preferable to any other kind of government.
2. Under some circumstances, it can be acceptable to suspend democracy.

This question can determine whether the respondents are willing to give up democracy under some circumstances. This research assumes that people who are willing to give up democracy under some circumstances hold autocratic attitudes. People who state that democracy is always preferable to any other kind of government are assumed to be fully democratic.

To be able to make a distinction between *democratic technocrats* and *autocratic technocrats*, this research created two new dummy variables as followed. This study assumes respondents that

score 4,9 or higher on the technocratic attitudes variable are technocrats. A respondent is seen as technocratic when scoring of 4,9 or higher, because these respondents score considerably above average on the technocratic attitudes variable. On top of that, respondents that selected "democracy is always preferable to any other kind of government" to be closest to their opinion are assumed to be democratic, and respondents that selected "under some circumstances, it can be acceptable to suspend democracy" are assumed to be autocratic. Two dummy variables on the basis of this information were created by merging the respondents with high technocratic attitudes with the answers to the statement selection. One where *autocratic technocrats* stand in relation to the *democratic technocrats* and vice versa. The two dependent variables to test these hypotheses are thus categorical variables, which results in the methodology of logistic regression analysis to test the last three hypotheses.

3.1.2 Determining the independent variables

The used independent variables differ depending on the different hypotheses. Yet, all models for the first five hypotheses include two control variables, namely gender and age. In the variable gender, the score of 1 means male and the score 2 means female. The survey contains respondents from the ages 18 to 92. In the next part, the independent variables will be explained in detail.

3.1.2.1 Satisfaction towards party democracy

In the first hypothesis "the higher satisfaction towards the current political system, so towards party democracy is, the lower technocratic attitudes are" will be tested by regressing the independent variable "satisfaction with party democracy" in a model with the dependent variable "technocratic attitudes". Satisfaction towards the current political system will be tested through a combination of the answers to the following question: "on the whole how satisfied are you with the following? using the following 1-7 scale, where 1 indicates very dissatisfied and 7 indicates very satisfied". The answers to the following statements are used for the first hypothesis:

1. The way democracy works in your country.
2. The way the government is doing its job.

All respondents of the YouGov survey (2022) live in a country where party democracy is the working political system. This is why these statements can be used to specifically measure the satisfaction towards party democracy.

3.1.2.2 Political efficacy

The second hypothesis reads "the lower the political efficacy of respondents, the higher their technocratic attitudes are". This hypothesis will be tested with the help of the independent variable political efficacy. Political efficacy, the feeling of being able to understand and influence politics, was

not explicitly measured in the used dataset. In this research, political efficacy will therefore be measured through the combination of the variables education and political interest, as education and political interest are closely related to political efficacy (Craig & Maggiotto, 1982). In the dataset, the scale of political interest goes from 1 to 5, where 1 means not at all interested and 5 means very interested.

The level of education is measured differently in all four countries[3]. Because of the severe differences in the measurement of the level of education between the four countries, the education variable was recoded in such a way that the variable became comparable between the respondents. The answers of the respondents were all placed into a new scale where the categories are low, medium, and highly educated (see appendix 3 for recoding and frequencies). The category low education consists of the respondents with no education to the respondents who solely completed high school. The category medium education consists of vocational education and comparable education forms. The category high education consists of respondents who completed their bachelor's degree at a university of applied sciences or higher. The answers "I don't know", "other", and "prefer not to say" were not included in the recoded variable. Because the answers of all the respondents are now comparable, an overall education variable could be created. This variable, however, is a categorical variable and should be approached differently from the other used variables in this research. To observe the effect of the categorical education variable on technocratic attitudes, dummy variables were created and added to the multiple regression analysis.

3.1.2.3 Considering yourself as part of the elite

The third hypothesis is "the more the respondents consider themselves to be part of the elite, the higher their technocratic attitudes are". The independent variable here is considering yourself to be part of the elite. If someone thinks of themselves as being part of the elite, was not measured directly in this dataset, as the subjective question was not posed. Therefore, if someone belongs to the elite of society will be objectively measured through a combination of the variables income and education. The variable "educational level" will thus be used for both the independent variables "political

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[3] The respondents could give the following answers:
Germany: I did not complete any formal education, early childhood education, primary education, lower secondary education, upper secondary education, post-secondary/non-tertiary education, short-cycle tertiary education, bachelors or equivalent level degree, master or equivalent level degree, and lastly doctoral or equivalent level degree. United Kingdom: no formal qualifications, youth training certificate/skillseekers, recognised trade apprenticeship completed, clerical and commercial, city and guilds certificate, city and guilds certificate advanced, ONC, CSE grades 2-5, CSE grade 1/GCE O level/GCSE/school certificate, Scottish ordinary/lower certificate, GCE A level or higher certificate, Nursing qualification, teaching qualification, university diploma. university/CNAA first degree, university/CNAA higher degree, and other technical/professional/higher qualification. Spain: no formal education, basic school education, secondary school education/school graduate, high school graduate, professional school graduate level 2, university studies not finished, university 3 years bachelor graduate, university 5 years bachelor graduate, master degree, professional school graduate level 1, PhD, and university 4 years bachelor graduate. Poland: primary/gymnasium, high school/college, vocational, university, and PhD or higher scientific degree.

efficacy" and "subjective elitism", because education is significantly related to both political efficacy and elitism. On top of that, the literature review states education stands in a positive relationship with technocratic attitudes. By including education in both "political efficacy" and "income" this research can test whether this positive relationship is a result of elitism, as the positive relationship is not expected considering the hypothesis about political efficacy.

Income is, just like education, measured in different ways in the four different countries[4]. The income per household is measured in the currency of the country, so in Euros in Germany and Spain, in Pounds in the United Kingdom, and in Polish złoty in Poland. On top of that, in the United Kingdom, the survey asks about the gross income of the household, but in all the other countries the questionnaire asks about the net income of the household. As the possibility of answers differentiates between different countries, this research created a new scale where the answers are placed in low, medium, and high household income (see appendix 4 for recoding and frequencies). To determine whether a respondent will be placed into the category low, medium, or high income, the median income of the country was taken into account. This research made its best effort to do the following; incomes below the median income of the country were placed into the category low. Incomes around the median income of the country were placed into the medium income category. Lastly, incomes far above the median income were placed into the high income category. Just like the education variable, the income variable is a categorical variable. So again, to observe the effect of the categorical income variable on technocratic attitudes, dummy variables were created and added to the multiple regression analysis.

3.1.2.4 Ideological self-placement

The following hypothesis reads "the more respondents associate themselves with the political right-wing ideology, the higher their technocratic attitudes are". The independent variable here is the self-placement of a respondent on the political-ideological scale that goes from left to right. The YouGov survey (2022) directly asks the respondents to place themselves on this scale through the following question: "In politics, a distinction is often made between "left" and "right". Where would you place yourself on the scale below, where 0 means left and 10 means right?". Hence, this variable will be used to predict the relation between ideological self-placement and technocratic attitudes.

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[4] The respondents could give the following answers:

Germany : under 500, 500-1000, 1000-1500, 1500-2000, 2000-2500, 2500-3000, 3000-3500, 3500-4000, 4000-4500, 5000-10000, 10000 and more, Prefer not to say.

Spain: no income, less than or equal to 300, 301-600, 601-900, 901-1200, 2101-1800, 1801-2400, 2401-3000, 3001-4500, 4501-6000, more than 6000, I prefer not to answer, I don't know.

Poland: less than 2000, 2001-3000, 3001-4000, 4001-6000, 6001-8000, 8001 or more, Don't know, Prefer not to say.

UK: under 5000, 5000-9999, 10000-14999, 15000-19999, 20000-24999, 30000-34999, 35000-39999, 40000-44999, 50000-59999, 60000-69999, 70000-99999, 100000-149999, 150000 and over, Don't know, Prefer not to answer.

3.1.2.5 European Union support

The fifth and last hypothesis that will be tested with multiple regression analysis is "the higher the support of a respondent for the European Union, the higher their technocratic attitudes are". The YouGov survey (20220) only asked one question regarding the European Union. This question reads "Some people feel that European unification should go further. Others think that European unification has already gone too far. Where would you place yourself on a scale from 0 to 10, where 0 means that European unification should go further and 10 means that it has already gone too far?". To be able to test the fifth hypothesis, this research assumes support for European unification equals support for the European Union. This is why the answers to this question measure the independent variable in this hypothesis, which is support for the European Union.

3.1.3 Descriptives of the variables and robustness checks

Before running the multiple regression analysis and the logistic regression analysis, the descriptive statistics of the variables were checked, to determine whether the variables were usable for the analyses. All variables are usable after checking for normal distribution, linearity, and multicollinearity (see appendix 1 for multicollinearity table). On top of that, a robustness check will be carried out by adding country dummies to an overall model. This will be done, because the independence between the observations was affected as a result of conducting the survey in four different countries. The observed variables in this research are thus clustered in four countries, namely Germany, Poland, Spain, and the United Kingdom, but the effect of the clustering will be checked for by adding country dummies. Table 3.1 shows the descriptive statistics for the independent variables, the dependent variables, and the control variables.

Table 3. 1: Descriptive statistics

	N	Mean	Standard deviation	Minimum	Maximum
Independent variables					
Satisfaction democracy	7791	3.807	1.783	1	7
Satisfaction government	7885	3.2691	1.879	1	7
Education	7920	2.223	.758	1	3
Education mid	2974				
Education high	3357				
Political interest	8000	3.480	1.200	1	5
Income	7149	2.0615	.756	1	3
Income mid	3035				
Income high	227				
Ideological self-placement	7238	4.811	2.375	0	10
European unification	7245	4.706	2.967	0	10
Dependent variable					
Technocratic attitudes	8016	3.709	1.434	1	7
Democratic technocrats	1373				
Autocratic technocrats	335				
Control variables					
Age	8152	47.96	15.982	18	92
Gender	8152	1.528	.499	1	2

3.2 Methods

As stated above, to make a prediction about the first five hypotheses, this research makes use of multiple regression analysis. Multiple regression analysis analyzes if a relationship between multiple variables exists. On top of that, this method can establish if the relationship between the variables is a negative or positive relation. In multiple regression analysis, there is always one dependent and multiple independent variables. The goal of multiple regression analysis is to formulate a linear equation (Field, 2017). The last three hypotheses of this research will be tested through the use of logistic regression analysis, which is a technique for modeling categorical dependent variables (DeMaris, 1995). The next section states how the hypotheses of this research will be tested and when the hypotheses will be confirmed.

3.2.1 Satisfaction towards democracy

To test the first hypothesis, a multiple regression analysis will be conducted. Firstly, this research will examine if the predictor variables for this hypothesis, which are "the way democracy works in your country" and "the way the government is doing its job", add value to the explained variance in contrast to a model without predictor variables. Secondly, this research will look at the coefficients of the model to form an answer to the hypothesis. The first hypothesis raises an expectation of a negative relationship between the variables "technocratic attitudes" and "satisfaction towards party democracy". This means, based on the literature, negative coefficients are expected to be found through the method of the multiple regression analysis. When both predictor variables show a significant negative effect, this first hypothesis is confirmed.

3.2.2 Political efficacy

To test the second hypothesis, again, a multiple regression analysis will be done. First of all, this research will examine if the predictor variables, which here are "education" and "political interest", add value to the explained variance in contrast to a model without predictor variables. Additionally, this research will look at the coefficients of the model to form an answer to this hypothesis. The second hypothesis raises an expectation of a negative relationship between the variables "technocratic attitudes" and "political interest" and "education". For the political interest variable, this means a negative coefficient is expected. The education variable is a categorical variable in this research. This thesis makes use of dummy variables to approach the categorical variables. This means the interpretation differs from the other variables. In the case of education, the dummy variable for high education and medium education will be included in the model and the dummy variable for low education will be the reference category. At minimum, in this model, it is expected that higher educated people are less likely to develop technocratic attitudes than people who do not belong to this category.

3.2.3 Considering yourself as part of the elite

Multiple regression analysis will also be done to test the third hypothesis. Firstly, this research will examine if the predictor variables, which here are "education" and "income", add value to the explained variance in contrast to a model without predictor variables. Additionally, this research will look at the coefficients of the model to form an answer to this hypothesis. The third hypothesis raises an expectation of a positive relationship between the predictor variables and "technocratic attitudes". In this model, both predictor variables are categorical variables. In the case of education, the dummy variable for high education and medium education will be included in the model and the dummy variable for low education will be the reference category. In the case of income, the dummy variable for high income and medium income will be included in the model and the dummy variable for low income will be the reference category. In this model, it is expected that higher educated people are, in contrast to the previous model, more likely to develop technocratic attitudes than people who do not belong to this category. Secondly, in this model, it is expected that people with a higher income are more likely to develop technocratic attitudes than people who do not belong to this category.

3.2.4 Ideological self-placement

The fourth hypothesis, tested through multiple regression analysis, examines if the predictor variable, which in this model is "ideological self-placement", adds value to the explained variance in contrast to a model without the predictor variable. Additionally, this research will look at the coefficient of "ideological self-placement" in the model to form an answer to this hypothesis. Because the scale goes from left to right, a positive coefficient is expected on the basis of the fourth hypothesis. If the results show a significant positive coefficient for "ideological self-placement", the fourth hypothesis is confirmed.

3.2.5 European Union support

The last hypothesis tested through multiple regression analysis is the hypothesis about European Union support. Firstly, this research will examine if the predictor variable, which in this model is "support for European Union unification", adds value to the explained variance in contrast to a model without the predictor variable. Secondly, this research will look at the coefficient of "support for European Union unification" to form an answer to this hypothesis. A negative coefficient is expected on the basis of the fifth hypothesis, as the scale goes from should go further to gone too far. If the results show a significant negative coefficient for the predictor variable, the fifth hypothesis is confirmed.

3.2.6 Overall model

After testing the five hypotheses separately, using multiple regression analysis, a last multiple regression analysis will be conducted including all the independent variables and the control variables. This will show the effect of the independent variables on technocratic attitudes, controlled for each other. Lastly, an overall model including country dummy variables will be done. This will test the effects of the independent variables on technocratic attitudes, controlled for age, gender, and origin. Controlling for the origin is useful, because the respondents are nested in their country of origin. This tests if origin influences the outcome of this research. As stated before, it thus adds an extra robustness check.

3.2.7 *Autocratic technocrats* and *democratic technocrats*

To make a prediction about the sixth, seventh, and eighth hypothesis, this research makes use of logistic regression analysis. To test the sixth hypothesis a logistic regression analysis will be conducted, where *autocratic technocrats* or *democratic autocrats* are the dependent variables and satisfaction towards democracy, satisfaction towards government, education, income, European unification, ideological self-placement, and political interest are the independent variables. Using logistic regression analysis, this study can determine the differences between *autocratic technocrats* and *democratic technocrats*.

On top of that, the logistic regression analysis can tell something about the seventh and eighth hypotheses. First of all, for the seventh hypothesis, a positive effect, so an odds ratio above one, is expected on the variables satisfaction towards democracy and satisfaction towards government for *democratic technocrats*. A negative effect, so an odds ratio below one, is expected on the variables satisfaction towards democracy and satisfaction towards government for *autocratic technocrats*. Secondly, for the eighth hypothesis, a negative effect so an odds ratio below one, is expected on the variable ideological self-placement for *democratic technocrats*. A positive effect, so an odds ratio above one, is expected on the variable ideological self-placement for *autocratic technocrats*. When finding these odds ratios, the seventh and the eighth hypotheses of this thesis can be confirmed.

Chapter 4: Results

To test the hypotheses, statistical tests were performed. As mentioned in the Data and Methods chapter, these models consist of multiple regression analyses and logistic regression analyses. In the first five tests "technocratic attitudes" is the dependent variable, and control variables "gender" and "age" are included. The independent variables vary depending on the interest of the hypothesis, however, an overall model is also included, where all the independent variables are tested together in one multiple regression analysis. On top of that, a second overall model includes dummy variables for the different countries, to state if nesting is of influence in the model.

To test the last three hypotheses, two logistic analyses were conducted, one where democratic technocrats was the dependent variable and one where autocratic technocrats was the dependent variable.

4.1 Satisfaction towards party democracy

The first model of the statistical results tries to make a prediction about the first hypothesis. As stated in the previous chapter, a multiple regression analysis, including the variables "the way democracy works in your country", "the way the government is doing its job", and the two control variables age and gender, was carried out. The results of this analysis show that a model solely including the control variables explains an extraordinary low percentage, namely 0,02%, of the total variance, whereas adding the two predictor variables raises this percentage to 9,3% so the predictor variables, "the way democracy works in your country" and "the way the government is doing its job" explain an additional 9,1% of the total variance in technocratic attitudes, when controlled for age and gender. The results additionally show that the model including the predictor variables and the control variables is a statistically significant predictor of technocratic attitudes, where p is <.001.

Looking at the coefficients for this model, the control variable gender, and the two predictor variables "the way democracy works in your country" and "the way the government is doing its job", make a unique and significant contribution to the model (see table 4.1). "The way democracy works in your country" has the largest significant unique contribution with a coefficient of .135. "The way the government is doing its job" has a significant contribution of .121, and lastly gender has a significant contribution of -.143, which means men are more likely to develop technocratic attitudes than women.

Looking back at the first hypothesis, a negative relationship between the predictor variables and technocratic attitudes was expected. The model, however, finds significant positive coefficients for the predictor variables, which indicates a positive relationship between the variables "the way democracy works in your country" and "the way the government is doing its job" and technocratic attitudes amongst citizens. The first hypothesis of this research can thus not be accepted, despite the significant results, because positive coefficients were found instead of negative coefficients. These results thus state that, a citizen who supports the government and or democracy is more likely to

develop technocratic attitudes. An explanation for the positive relationship between satisfaction with party democracy and technocratic attitudes could be that the respondents already perceive their democratic leaders as technocratic. This could be a result of the Covid-19 crisis. Satisfaction with their political work could then induce more technocratic attitudes. As stated in the second chapter, previous research by Heyne and Lobo (2021) also identified a group of technocracy supporters who do vote for mainstream parties and are in favor of the status quo of party democracy. The finding of this study is thus somewhat in line with their study.

Table 4. 1: Effect of satisfaction towards party democracy on technocratic attitudes

	Model A	**Model B**
	Unstandardized coefficients	Unstandardized coefficients
Independent variables		
Satisfaction democracy		.135*** (.012)
Satisfaction government		.121*** (.012)
Control variables		
Age	.001 (.001)	-.001 (.001)
Gender	-.121*** (.033)	-.143*** (.031)
Constant	3.829*** (.072)	3.05*** (.075)
N respondents	7710	7710
R-squared respondents	.002	.093

* P < 0.05, ** P < 0.01, *** P < 0.001

4.2 Political efficacy

The second model of the statistical results tries to make a prediction about the second hypothesis. To test the second hypothesis of this research, again, a multiple regression analysis was conducted. This model researches the influence of political efficacy on technocratic attitudes. This time the multiple regression analysis includes the predictor variables political interest and education, and the control variables gender and age. Logically, the results of this analysis again show that a model solely including the control variables explains a low percentage of 0,2% of the total variance. Adding the two predictor variables political interest and education raises this percentage to 0,8%. The predictor variables only explain an additional 0,6% of the total variance, when controlled for age and gender, which is not a big change. The results, however, additionally show that the model including the predictor variables and the control variables is a statistically significant predictor of technocratic attitudes, where p is <.001.

Looking at the coefficients for this model, the control variable gender, age, and the predictor variable "education", make a unique and significant contribution to the model (see table 4.2). Looking

at the coefficients of the model including the predictor variables, the predictor "education" has the largest significant unique contribution.

First of all the dummy variables made for education will be interpreted. The significant effect of -.123 for the category medium education states that the score on technocratic attitudes is .123 lower for people who belong to the medium education category than for people that do not belong to this category. On top of that, the results show that the score on technocratic attitudes is .117 higher for people that belong to the high education category than for people that do not belong to this category. Again, this effect is significant. Based on these results, it can be stated that one with higher educational accomplishments is more likely to have technocratic attitudes than someone with lower educational accomplishments. The results do not show a significant effect between political interest and technocratic attitudes. Lastly, gender has a significant contribution of -.124 in this model, which, again, means men are more likely to develop technocratic attitudes than women.

The second hypothesis is rejected as a result of the insignificant effect of political interest and the positive effect of education on technocratic attitudes in this model. Still interesting, however, is the significant effect found for education. Someone with higher education is more likely to have technocratic attitudes than someone with lower educational accomplishments. This may indicate that education is connected to elitism, and therefore stands in a positive relationship towards technocratic attitudes. The relationship between elitism and technocratic attitudes will be tested next.

Table 4. 2: The effect of political efficacy on technocratic attitudes[5]

	Model A	Model B
	Unstandardized coefficients	Unstandardized coefficients
Independent variables		
Education mid		-.123** (.046)
Education high		.117** (.045)
Political interest		-.028 (.014)
Control variables		
Age	.002 (.001)	-.002 (.001)
Gender	-.124*** (.033)	-.129*** (.033)
Constant	3.815*** (.073)	3.908*** (.096)
N respondents	7704	7704
R-squared	.002	.008

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

4.3 Considering yourself as part of the elite

The third model of the statistical results tries to make a prediction about the third hypothesis. To test the third hypothesis of this research, again, a multiple regression analysis was conducted. This analysis tests the influence of considering yourself as part of the elite on technocratic attitudes. The third multiple regression analysis includes the predictor variables education and income and the control variables gender and age. The results of this analysis show that a model solely including the control variables explains a still extremely low percentage of the total variance, namely 0,3%. Adding the two

[5] Reference category is education low

predictor variables income and education raises this percentage to 0,9%. The predictor variables explain an additional 0,6% of the total variance, when controlled for age and gender, which is still a very small amount of the total variance. The results, however, additionally show that the model including the predictor variables and the control variables is a statistically significant predictor of technocratic attitudes, where p is <.001.

Looking at the coefficients for this model, the control variable gender, and the predictor variables medium education and high income, make a unique and significant contribution to the model (see table 4.3). The significant effect of -.173 for the category medium education states that the score on technocratic attitudes is .173 lower for people who belong to the medium education category than for people that do not belong to this category. There is no significant effect for the higher educated in this model. The other significant effect this model finds is the effect of high income on technocratic attitudes. The significant effect of .117 for the category high income states that the score on technocratic attitudes is .117 higher for people who belong to the high income category than for people that do not belong to this category. Lastly, gender has a significant contribution of -.133 in this model. So, again, men are more likely to develop technocratic attitudes.

The third hypothesis can only partly be accepted on the basis of this model. It can be stated that people who belong to the medium educated category are less likely to develop technocratic attitudes than people who do not belong to this category. On top of that, it can be stated that people with a higher income are more likely to develop technocratic attitudes than people who do not belong to the higher income category. This is in line with the expectations of the hypothesis.

Table 4. 3: The effect of considering yourself being part of the elite on technocratic attitudes[6]

	Model A	**Model B**
	Unstandardized coefficients	Unstandardized coefficients
Independent variables		
Education mid		-.173*** (.049)
Education high		.036 (.049)
Income mid		.085 (.044)
Income high		.117* (.048)
Control variables		
Age	.001 (.001)	-.001 (.001)
Gender	-.147*** (.035)	-.133*** (.035)
Constant	3.911*** (.078)	3.867*** (.096)
N respondents	6826	6826
R-squared	.003	.009

* P < 0.05, ** P < 0.01, *** P < 0.001

4.4 Ideological self-placement

The fourth model of the statistical results tries to make a prediction about the fourth hypothesis. To test this hypothesis, a multiple regression analysis including the variable "ideological self-placement", and the two control variables age and gender, was carried out. The results of this analysis show that a

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[6] Reference categories are education low and income low

model solely including the control variables, again, explains 0,02% of the total variance, whereas adding the two predictor variables raises this percentage to 1,6%. The predictor variable, ideological self-placement explains an additional 1,4% of the total variance, when controlled for age and gender. The results additionally show that the model including the predictor variables and the control variables is a statistically significant predictor of technocratic attitudes, where p is <.001.

Looking at the coefficients for this model, the control variable gender and the predictor variable ideological self-placement, make a unique and significant contribution to the model (see table 4.4). The variable that is interesting for this hypothesis, the ideological self-placement, shows a significant positive coefficient of .072. This is in line with the expectations the hypothesis set before the analysis, because this means that if you are more right-wing politically oriented, you have stronger technocratic attitudes. To conclude, on the basis of this analysis the fourth hypothesis can be accepted.

Table 4. 4: The effect of ideological self-placement on technocratic attitudes

	Model A	Model B
	Unstandardized coefficients	Unstandardized coefficients
Independent variables		
Ideological self-placement		.072*** (.007)
Control variables		
Age	.001 (.001)	-.00 (.001)
Gender	-.124*** (.033)	-.096* (.033)
Constant	3.885*** (.074)	3.545*** (.081)
N respondents	7190	7190
R-squared	.002	.016

* P < 0.05, ** P < 0.01, *** P < 0.001

4.5 European Union support

The fifth hypothesis of this research was again tested through multiple regression analysis. The model includes the control variables gender and age, and the predictor variable European unification. The results show that a model solely including the control variables explains 0,01% of the total variance. After adding the predictor variable to the model, the model explains 0.02% of the total explained variance. Looking at the coefficients, the results show that the coefficient for European unification is not significant and thus does contribute to the model (see table 4.5). To conclude, the hypothesis "support for the European Union on the individual level stands in a positive relation towards technocratic attitudes" can be rejected based on this analysis. This analysis can not confirm that people who would like European unification to go further, also have more technocratic attitudes.

Table 4. 5: The effect of position towards European unification on technocratic attitudes

	Model A	Model B
	Unstandardized coefficients	Unstandardized coefficients
Independent variables		
European unification		.005 (.006)
Control variables		
Age	.000 (.001)	.000 (.001)
Gender	-.110*** (.034)	-.110*** (.034)
Constant	3.872*** (.075)	3.854*** (.078)
N respondents	7217	7217
R-squared	.001	.002

* P < 0.05, ** P < 0.01, *** P < 0.001

4.6 Overall model

The overall model shows the effects of the predictor variables on technocratic attitudes, controlled for each other (see table 4.6). Interestingly, the results in model C show that, controlled for satisfaction with government, satisfaction with democracy, education, political interest, income, and ideological self-placement, the effect of European unification is significant. This is interesting, because European unification did not show a significant effect when it was the only predictor variable in the model. The controlling for other variables and the lower N, thus have an effect on the effect of this particular variable. The results show a negative effect, which means that people who are more in favor of European unification, have stronger technocratic attitudes. This is in line with the fifth hypothesis, which expected a negative relationship between European Union support and technocratic attitudes. The fifth hypothesis can thus be accepted on the basis of the overall model. The effects of the other independent variables do not show unexpected differences when controlled for each other. Overall model C shows that the independent variables together explain 10.5% of the total variance.

Model D shows the results of an overall model, like model C, however, this model also includes dummy variables for the countries Germany, the United Kingdom, and Spain in reference to Poland. Controlling for origin does not show unexpected changes in the overall model. Model D shows that the independent variables together explain 11,2% of the total variance.

To summarize, based on the overall model, where the effects of the individual predictor variables are controlled for each other, a few conclusions can be stated. First of all, this research states that satisfaction with party democracy stands is a positive relationship towards technocratic attitudes. During the Covid-19 crisis, the time in which this survey took place, citizens who supported party democracy were more likely to develop technocratic attitudes. Secondly, citizens who are highly educated are more likely to have technocratic attitudes than those who are not. On top of this, people who enjoy a higher income are more likely to have technocratic attitudes than those who do not. In addition, citizens who associate themselves with the right-wing are more likely to have technocratic attitudes. Lastly, citizens who support European unification, and in this research are thus seen as European Union supporters, are more likely to have technocratic attitudes. The individual level

predictors explain about 10% of the variance in technocratic attitudes. This means a large part of the variation in technocratic attitudes is not explained yet and more research is needed.

Table 4. 6: Overall model[7]

	Model C	Model D
	Unstandardized coefficients	Unstandardized coefficients
Independent variables		
Satisfaction democracy	.131*** (.014)	.119*** (.014)
Satisfaction government	.113*** (.013)	.123*** (.013)
Education mid	-.057 (.051)	-.068 (.057)
Education high	.163*** (.051)	.126* (.056)
Political interest	-.032 (.016)	-.023 (.017)
Income mid	.089 (.046)	.076 (.046)
Income high	.101* (.050)	.078 (.050)
Ideological self-placement	.051*** (.008)	.059*** (.008)
European unification	-.024*** (.006)	-.031*** (.007)
Control variables		
Age	-.001 (.001)	-.002*(.001)
Gender	-.131*** (.036)	-.124***(.036)
Germany		.084 (.057)
United Kingdom		.318***(.053)
Spain		.235***(.052)
Constant	2.99*** (.125)	2.880***(.131)
N	5754	5754
R-squared	.105	.112

* P < 0.05, ** P < 0.01, *** P < 0.001

4.7 *Democratic technocrat*s and *autocratic technocrats*

To test the hypothesis of this study about whether differences between *democratic technocrats* and *autocratic technocrats* exist, this research conducted a logistic regression analysis. Nevertheless, before setting out the results of this analysis, the frequencies of the used variables are interesting as well. As previously discussed, the respondents of the survey could select the statement which came closest to their opinion, choosing from the following statements:

1. Democracy is always preferable to any other kind of government.
2. Under some circumstances, it can be acceptable to suspend democracy.

8152 respondents answered this question in the survey. 1538 respondents said that the statement "under some circumstances, it can be acceptable to suspend democracy" came closest to their opinion. The remainder of 6614 respondents, the great majority, however, states that the statement "democracy is always preferable to any other kind of government" comes closest to their opinion. To conclude, 81,1% of the respondents think democracy is always preferable to any other kind of government, no matter the circumstances, and 18,9 of the respondents think it is acceptable to suspend democracy under certain circumstances.

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[7] Reference categories are Poland, education low, and income low

Additionally, the descriptives show that 16,9% of the respondents scored a 4,9 or higher on technocratic attitudes, which in this research means 16,9% of the respondents are technocratic and 83,1% of the respondents are not technocratic. To add to this information, 1373 respondents who scored high on technocratic attitudes, that is 4,9 or higher, think democracy is always preferable to any other kind of government. 335 respondents with high technocratic attitudes think under some circumstances, it can be acceptable to suspend democracy. This means about 19,61% of the technocratic respondents think it is acceptable to suspend democracy under some circumstances.

As mentioned in the Data and Methods chapter, two logistic regression analyses were conducted to test the sixth hypothesis, one where "democratic technocrats" was the dependent variable, and one where "autocratic technocrats" was the dependent variable. Table 4.7 shows the results for the analysis where "democratic technocrats" was the dependent variable. The results show that controlling for satisfaction with government, education, political interest, income, ideological self-placement, and European unification, the predicted odds of being a *democratic technocrat* increases by 14,4 percent for every one step increase in satisfaction with democracy. Again, controlled for the other independent variables, the predicted odds of being a *democratic technocrat* increases by 12,2 percent for every one step increase in satisfaction with government. Both effects, so the effects of satisfaction with government and satisfaction with democracy are significant. Controlled for the other independent variables, high income, medium education, and ideological self-placement also show a significant effect in this model. Controlled for the other independent variables, the predicted odds of being a *democratic technocrat* increases by 37,3 percent if you belong to the category high income in contrast to people who do not belong to this category. On top of that, controlled for the other independent variables, the predicted odds of being a *democratic technocrat* increases with 4,9 percent for every step towards being more right-wing ideologically oriented. Lastly, the significant odds ratio of 0,783 for people who are medium educated means people who belong to this category are less likely to be *democratic technocrats*. This is because this odds ratio has a value below one. The effects for the other variables in the model do not show a significant effect.

Table 4. 7: The effect of the independent variables on democratic technocrats

	Unstandardized coefficient	Exp(B)
Satisfaction democracy	.135*** (.028)	1.144
Satisfaction government	.114*** (.025)	1.121
Education mid	-.245* (.100)	.783
Education high	-.016 (.096)	.984
Political interest	.002 (.032)	1.002
Income mid	.159 (.093)	1.173
Income high	.317*** (.099)	1.373
Ideological self-placement	.048** (.016)	1.049
European unification	-.023 (.013)	.978
Constant	-2.701*** (.208)	.067
N	5767	

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

Table 4.8 shows the results for the analysis where "autocratic technocrats" was the dependent variable. Again, controlled for satisfaction with democracy, education, political interest, income, ideological self-placement, and European unification, the predicted odds of being an *autocratic technocrat* significantly increases by 13.3 percent with every increase in satisfaction with government. Also, controlled for the other independent variables, the predicted odds of being a *autocratic technocrat* increases by 64,2 percent if you belong to the category high education in contrast to people who do not belong to this category. The last significant effect in this model is the effect of ideological self-placement, which shows that controlled for the other variables, the predicted odds of being an *autocratic technocrat* significantly increases by 14 percent for every step towards being more right-wing ideologically oriented.

Table 4. 8: The effect of the independent variables on autocratic technocrats

	Unstandardized coefficient	Exp(B)
Satisfaction democracy	-.098 (.053)	.907
Satisfaction government	.125*(.050)	1.133
Education mid	.248 (.212)	1.281
Education high	.496* (.206)	1.642
Political interest	-.026 (.060)	1.036
Income mid	-.153 (.174)	.858
Income high	.036 (.181)	1.036
Ideological self-placement	.131*** (.031)	1.140
European unification	.044 (.024)	1.045
Constant	-4.304*** (.396)	.014
N	5767	

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

To summarize the findings concerning the differences between *democratic technocrats* and *autocratic technocrats*, the most interesting results concern the variables democracy satisfaction, government satisfaction, ideological self-placement, education, and income. First of all, it can be stated that people who are highly educated are more likely to be *autocratic technocrats*. This contrasts the assumption that lower-educated citizens are more likely to be autocratic (Erhardt, Wamsler & Freitag, 2020). Secondly, people who have a high income are more likely to be *democratic technocrats*. Citizens who already earn a lot of money in the current system are more likely to be supportive of the status quo and thus to be supportive of party democracy while also showing technocratic attitudes.

The results regarding satisfaction with democracy and satisfaction with government can say something about the seventh hypothesis. It can be stated that satisfaction with democracy and satisfaction with government show a significant effect for *democratic technocrats*, while satisfaction with democracy does not show a significant effect for *autocratic technocrats*. This is partly in line with the seventh hypothesis of this research, which expected *democratic technocrats* to be more likely to support the current system than *autocratic technocrats*. The results show that *democratic*

technocrats are supportive of democracy, while *autocratic technocrats* are not. However, both *autocratic technocrats* and *democratic technocrats* are supportive of the government. This means the governments may already be perceived as technocratic by citizens and this may be the reason both *autocratic technocrats* and *democratic technocrats* support the government, but only *democratic technocrats* support democracy. The seventh hypothesis is thus party supported by these results.

The eighth hypothesis expected that people who identify themselves with the political right-wing are more likely to be *autocratic technocrats*. As found in the linear regression model, identifying yourself with the political right wing increases the chance of being technocratic. Somewhat in line with this finding, both *autocratic technocrats* and *democratic technocrats* show a positive odds ratio for ideological self-placement. However, the effect is much stronger for *autocratic democrats*. Based on these numbers, it can carefully be stated that citizens who show technocratic attitudes and who associate themselves with the political right-wing are more likely to be *autocratic technocrats*.

Chapter 5: Conclusion and Discussion

The last chapter of this research aims to form an answer to the main question of this study, namely "to what extent can characteristics of citizens in liberal democracies determine whether they are technocratic and to what extent can these characteristics determine whether citizens are autocratic technocrats or democratic technocrats?". Secondly, this chapter acknowledges the shortcomings and limitations of the research. Finally, this chapter sets out various suggestions for further research.

5.1 Conclusions

First of all, this research was interested in the question of which characteristics of citizens determine their level of technocratic attitudes. This research tested whether satisfaction with party democracy, political efficacy, elitism, ideological self-placement, and European Union support determine how technocratic a citizen of a liberal democracy is. This was done by using data that was collected during the Covid-19 crisis, which made the results considerably more interesting. Secondly, this study tested whether a distinction between *autocratic technocrats* and *democratic technocrats* could be established, and what the differences in characteristics between the two different kinds of technocrats were.

5.1.1 Who is in favor of technocracy

The first and maybe most interesting finding when answering the sub-question "who is in favor of technocracy" is the finding regarding citizens who support party democracy. The multiple regression analysis done in this research, using survey data from YouGov (2022), establishes a positive relationship between supporting party democracy and having technocratic attitudes. This means the more citizens support party democracy, the stronger their technocratic attitudes are. The unexpected finding of a positive, instead of negative, relationship between support for party democracy and technocratic attitudes could indicate that citizens of liberal democracies already perceive their political system as technocratic and, or, as elitist. This could be a result of the Covid-19 crisis, as the survey took place during the crisis. This could be a first indicator that the Covid-19 crisis caused higher technocratic attitudes among the citizens of Germany, Poland, Spain, and the United Kingdom. On top of that, support for party democracy explains most of the total variance of technocratic attitudes and shows the biggest significant coefficient. The positive relationship between support for party democracy and technocratic attitudes is thus an important finding of this study.

In this study, political efficacy has been measured with the use of education and political interest and elitism has been measured through the combination of education and income. The results show that education and technocratic attitudes stand in a positive relationship with each other. The higher the education of a citizen, the stronger their technocratic feelings. Additionally, income also stands in a positive relationship with technocratic attitudes, which was expected in this research. Citizens who earn a high income are more likely to have technocratic attitudes than those who do not.

When looking at the relationship between political interest and technocratic attitudes, no significant effect was found. To conclude, this research establishes a definite positive relationship between considering yourself as part of the elite and technocratic attitudes, because a positive relationship between education and income and technocratic attitudes was found.

This study found another determinant for the level of technocratic attitudes of a citizen. That is, ideological self-placement is of influence on the level of technocratic attitudes of citizens. This study finds that the more right-wing politically oriented someone is, the stronger their technocratic attitudes are.

Lastly, an effect between European Union support and technocratic attitudes was found in this study. The full model found that people who were in favor of European unification are more technocratic. This study states, on the basis of this finding, that people who support the European Union are more likely to develop technocratic attitudes.

To conclude, this research supports the previous findings of positive relationships between education and technocratic attitudes, elitism and technocratic attitudes, being more right-wing oriented and technocratic attitudes, and European Union support and technocratic attitudes. However, this study has contrasting results, compared to previous studies, when it comes to the relationship between support for party democracy and technocratic attitudes.

5.1.2 *Democratic technocrats* and *autocratic technocrats*

The findings of this study show a distinction can be made between *autocratic technocrats* and *democratic technocrats*. Where some findings are in line with what one can expect or are explainable, other findings need more research.

First of all, this study finds that the higher the satisfaction towards party democracy, so the satisfaction towards democracy and government, the higher the chance is of being a *democratic technocrat*. This finding means that if someone is pleased with the current system, party democracy, while also showing high technocratic attitudes, someone is likely to be a *democratic technocrat*. On top of that, the higher someone's income is, the higher the chance is that they are a *democratic technocrat*. So, if someone earns more money, and at the same time shows high technocratic attitudes, the chance is high that they are a *democratic technocrat*. The most straightforward explanation for this finding would be that the current system is already complimenting the way of life of this citizen. The system, as it is right now, is working out very well for them, as they make a lot of money in it. They, thus, support the current form of governing, while also showing technocratic attitudes, which makes them *democratic technocrats*. Additionally, the findings of this research show that someone who is more politically right-wing oriented has a higher chance of being a *democratic technocrat*.

However, the findings also state that someone who is more politically right-wing oriented has a higher chance of being an *autocratic democrat*. The effect is substantially higher for *autocratic technocrats*, which is why this research states the chance of being a *autocratic technocrat* increases

when one is politically more right-wing oriented. The findings additionally state that citizens who are more satisfied with government are more likely to be *autocratic technocrats*. The negative effect of satisfaction with democracy on the chance of being an *autocratic technocrat* was not significant. The findings concerning the effect of satisfaction with government on the chance of being an *autocratic technocrat* may indicate that citizens already perceive the government as technocratic, but are not satisfied with democracy as the governing system. This might be why citizens who are satisfied with the government and show high technocratic attitudes are more likely to be *autocratic technocrats*. The last finding of this research states people who enjoyed higher education and show high technocratic attitudes are more likely to be *autocratic technocrats*. This, however, is in contrast with the assumption that lower-educated citizens are more likely to be autocratic (Erhardt, Wamsler & Freitag, 2020).

5.1.3 Main question

To conclude this research, the main findings of this study will be summarized and with that the main question, which was "to what extent can characteristics of citizens in liberal democracies determine whether they are technocratic and to what extent can these characteristics determine whether citizens are autocratic technocrats or democratic technocrats?", will be answered. This research states that a citizen with the characteristic of a positive attitude towards party democracy is more likely to be technocratic. This may have been caused by the timing of the survey. The survey took place during the Covid-19 crisis. During this crisis technocratic institutions gained more power (Freedom House, 2020). This could result in citizens perceiving their political system as technocratic. Supporting this system then logically results in supporting technocracy. On top of that, this study reports that someone with a higher education has a higher chance of being technocratic. Also, this research find that someone who earns a high income is more likely to have technocratic attitudes. Penultimately, the results of this research state that someone who is supportive of the European Union is more likely to be technocratic. Again, this may be the case, because the European Union may already be perceived as technocratic by citizens. Lastly, this research can say that someone who is more politically right-wing oriented is more likely to be technocratic. The characteristic of a positive attitude towards party democracy can mainly be found in *democratic technocrats*. Additionally, citizens who have a high income are also more likely to be *democratic technocrats*. People who are higher educated are more likely to be *autocratic technocrats*. Additionally, citizens who are politically right-wing oriented are more likely to be *autocratic technocrats*. Lastly, people who support the government, but not democracy, are more likely to be *autocratic technocrats*.

5.2 Discussion

The discussion of this chapter will firstly determine the limitations and shortcomings of this research. After explaining the limitations and shortcomings of the study, the discussion will make suggestions for further research.

5.2.1 Limitations and shortcomings

An interesting finding of the literature study was the finding that citizens develop more technocratic attitudes during crises. It would have been a great addition to this study about technocratic feelings of citizens during a crisis, to research if a difference in the level of technocratic attitudes could be established as a result of the Covid-19 crisis. As this research took place partly during the Covid-19 crisis and partly in the aftermath of the Covid-19 crisis, no overtime data was available yet to study the overtime development of technocratic attitudes among citizens, before, during, and after the Covid-19 crisis, so the question of change in technocratic attitudes could unfortunately not be studied.

A limitation of the used data was that there was not a variable that specifically measured European Union support among citizens. The only variable that asked something about the European Union, asked if European unification should go further or has already gone too far. To ask a respondent if European unification should go further or has already gone too far is not the same as asking a respondent how much they support the European Union in general. Support for expansion of the European Union does not measure the support for the European Union at this exact moment. One could be a supporter of the European Union, but still disagree with expanding the European Union. The validity of measuring European Union support through this question is thus somewhat poor. This could also explain the insignificant results in the fifth model doing a multiple regression with only European unification as the predictor variable and the unsignificant results in the two logistic regression models.

Last of all, as mentioned in the Data and Methods chapter, education and income were measured in very different ways in the four different countries. To make the answers of all respondents comparable, this research put the answers into three categories, namely low, medium, and high. Then this research made dummy variables for these categories, because the rearrangement made these variables categorical. This made the answers of the respondents easier, but less specific to interpret. On top of that, the results could only say something about a category, in contrast to not belonging to this category.

5.2.2 Suggestions for further research

As stated above, one of the recommendations for further research is research on the change in the level of technocratic attitudes of citizens in liberal democracies as a result of the Covid-19 crisis. As previous literature states, the level of technocratic attitudes of citizens often changes in times of crisis. When overtime data becomes available, it would be interesting to measure if the Covid-19 crisis

changed the level of technocratic attitudes among citizens, and if so, if this change is permanent or if it bounces back to the level of technocratic attitudes as it was before the Covid-19 crisis.

The second recommendation this research would like to make for further research concerns the relationship between support for party democracy and technocratic attitudes. This research finds a positive relationship between support for party democracy and technocratic attitudes, which was unexpected. This research states that there might be a possibility that citizens of liberal democracies already perceive their political system as technocratic or elitist. Also, this study thinks this might be a result of the Covid-19 crisis. This might explain the positive relationship between support for party democracy and technocratic attitudes, but further research on this topic is needed. Further research should determine if the current party system is seen as technocratic or elitist by citizens, and if so, why this is the case.

The third recommendation of this study is to further research if citizens perceive the European Union as technocratic and if European Union support stands in a positive relationship with technocratic attitudes. Different data than the used data in this research is needed to test these hypotheses, because the used data could only measure if support for European unification stands in relation towards technocratic attitudes. However, it is an interesting literature finding and it deserves a closer look in future research.

The fourth recommendation concerns some predictors determining whether you are a *democratic technocrat* or an *autocratic technocrat*. Some of these predictors deserve a closer look in future research. First of all, further research should determine whether ideological self-placement can determine both *autocratic technocrats* and *democratic technocrats* and why this is the case. Maybe technocrats are always right-wing oriented and being autocratic or democratic does not have an influence on this. Secondly, this research finds higher educated citizens are more likely to be *autocratic technocrats*. Further research could look at why this might be the case, because this stands in contrast to the assumption that the lower educated are more likely to be autocratic. Lastly, the support for government and the support for democracy deserve a closer look in future research. It needs to be distinguished why government support is related to autocratic attitudes. This way it can be determined why citizens who support the government are more likely to be *autocratic technocrats*.

Finally, this research explains about 10% of the total variance in technocratic attitudes among citizens in liberal democracies. A great part of this variance is thus not discovered yet. Future research must look into other predictor variables that could explain the variance in technocratic attitudes.

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Appendix 1

Table 1: multicollinearity

	Education mid	Education high	Income mid	Income high	Political interest	European unification	Ideological self-placement	Democracy satisfaction	Government satisfaction
Education mid	1	-.665***	.025*	-.079***	-.075***	.001	.039***	-.046***	-.029*
Education high		1	-.015	`.184***	.121***	`-.085***	-.054***	-.015	-.042***
Income mid			1	-.587***	.000	-.023**	-.015	-.011	-.008
Income high				1	.076***	-.050***	.004	.009	-.019
Political interest					1	-.044***	-.019	.001	-.007
European unification						1	.341***	.097***	.142***
Ideological self-placement							1	.160***	.138***
Democracy satisfaction								1	.698***
Government satisfaction									1

* P < 0.05, ** P < 0.01, *** P < 0.001

Appendix 2

Table 2: Descriptive statistic of the variables analyzed in a factor analysis for technocratic attitudes

	N	Mean	Standard deviation	Minimum	Maximum
Important decisions left to experts	6656	5.00	1.651	1	7
Professionals from outside politics	6656	4.840	1.614	1	7
Decisions based on scientific evidence	6656	5.457	1.448	1	7
Leaders should act like managers	6656	5.635	1.378	1	7
Lead the people not follow the people	6656	4.080	1.826	1	7
Opinions taken too much into account	6656	3.434	1.829	1	7
Policy decisions by people who understand	6656	4.045	1.809	1	7
Best judgment instead of will of people	6656	3.357	1.826	1	7

Table 3: KMO and Barlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.766
Bartlett's Test of Sphericity	Chi-square	14441,867
	df	28
	Sig.	.000

Table 4: Communalities

	Initial	Extraction
Lead the people not follow the people	.359	.468
Opinions taken too much into account	.350	.458
Policy decisions by people who understand	.363	.482
Best judgment instead of will of people	.392	.538
Important decisions left to experts	.448	.602
Professionals from outside politics	.434	.556
Decisions based on scientific evidence	.273	.350
Leaders should act like managers	.260	.314

Table 5: Total variance

Factor	Total	Initial Eigenvalues % of variance	Cumulative %
1	2.691	33.632	33.632
2	2.107	26.343	59.975

Table 6: Factor matrix

	Factor	
	1	2
Policy decisions by people who understand	.590	-.365
Lead the people not follow the people	.580	-.363
Opinions taken too much into account	.558	-.383
Professionals from outside politics	.533	.521
Best judgment instead of will of people	.532	`-.505
Decisions based on scientific evidence	.436	.400
Important decisions left to experts	.521	.572
Leaders should act like managers	.385	.407

Table 7: Rotated factor matrix

	Factor	
	1	2
Best judgment instead of will of people	.731	-.044
Policy decisions by people who understand	.687	.101
Lead the people not follow the people	.678	.096
Opinions taken too much into account	.673	.066
Important decisions left to experts	.028	.775
Professionals from outside politics	.072	.742
Decisions based on scientific evidence	.076	.587
Leaders should act like managers	.032	.560

Table 8: Descriptive statistics for technocratic variables:

	N	Mean	Standard deviation	Minimum	Maximum
Important decisions left to experts	7019	5.015	1.650	1	7
Professionals from outside politics	7019	4.850	1.612	1	7
Decisions based on scientific evidence	7019	5.464	1.447	1	7
Leaders should act like managers	7019	5.642	1.380	1	7

Table 9: KMO and Barlett's test for technocratic variables

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.737
Bartlett's Test of Sphericity	Chi-square	7220.680
	df	6
	Sig.	.000

Table 10: Communalities for technocratic variables

	Initial	Extraction
Important decisions left to experts	.447	.607
Professionals from outside politics	.432	.562
Decisions based on scientific evidence	.270	.348
Leaders should act like managers	.242	.306

Table 11: Total variance explained by technocratic variables

Factor	Total	Initial Eigenvalues % of variance	Cumulative %
1	2.340	58.489	58.489

Table 12: Factor matrix

	Factor
	1
Important decisions left to experts	.779
Professionals from outside politics	.750
Decisions based on scientific evidence	.590
Leaders should act like managers	.553

Appendix 3

Table 13: Frequencies education

	N	Mean	Standard deviation	Minimum	Maximum
Education Germany	2071	6.069	2.040	1	10
Education UK	2017	12.622	5.002	1	20
Education Spain	2030	8.050	10.810	1	98
Education Poland	2034	2.964	1.070	1	6
Education recode Germany	2071	1.775	.866	1	3
Education recode UK	1941	2.396	.693	1	3
Education recode Spain	1874	2.357	.692	1	3
Education recode Poland	2034	2.392	.544	1	3
Total education	7920	2.223	.758	1	3

Table 14: Recoding of the education variable for Germany

Category	Original possible answers for the German respondents
Low	I did not complete any formal education, early childhood education, primary education, lower secondary education, upper secondary education
Medium	Post-secondary/non-tertiary education, short-cycle tertiary education
High	Bachelors or equivalent level degree, master or equivalent level degree, and lastly doctoral or equivalent level degree

Table 15: Recoding of the education variable for the United Kingdom

Category	Original possible answers for the German respondents
Low	No formal qualifications, youth training certificate/skillseekers, recognised trade apprenticeship completed, clerical and commercial, city and guilds certificate
Medium	City and guilds certificate advanced, ONC, CSE grades 2-5, CSE grade 1/GCE O level/GCSE/school certificate, Scottish ordinary/lower certificate, GCE A level or higher certificate
High	Nursing qualification, teaching qualification, university diploma, university/CNAA first degree, university/CNAA higher degree, and other technical/professional/higher qualification.

Table 16: Recoding of the education variable for Spain

Category	Original possible answers for the German respondents
Low	No formal education, basic school education, secondary school education/school graduate, High school graduate
Medium	professional school graduate level 2, university studies not finished
High	University 3 years bachelor graduate, university 5 years bachelor graduate, master degree, professional school graduate level 1, PhD, and university 4 years bachelor graduate

Table 17: Recoding of the education variable for Poland

Category	Original possible answers for the German respondents
Low	primary/gymnasium
Medium	high school/college, vocational
High	university, and PhD or higher scientific degree

Appendix 4

Table 18: Frequencies income

	N	Mean	Standard deviation	Minimum	Maximum
Income Germany	2071	144.092	295.750	1	777
Income UK	2017	10.148	5.283	1	17
Income Spain	2030	21.494	33.298	1	96
Income Poland	2034	4.261	2.007	1	8
Income recode Germany	1700	1.857	.746	1	3
Income recode UK	2017	2.128	.795	1	3
Income recode Spain	1687	2.187	.672	1	3
Income recode Poland	1745	2.063	.758	1	3
Total Income	7149	2.062	.756	1	3

Table 19: Recoding of the income variable for Germany

Category	Original possible answers for the German respondents
Low	Under 500, 500-1000, 1000-1500, 1500-2000
Medium	2000-2500, 2500-3000, 3000-3500, 3500-4000
High	4000-4500, 5000-10000, 10000 and more

Table 20: Recoding of the income variable for the United Kingdom

Category	Original possible answers for the German respondents
Low	Under 5000, 5000-9999, 10000-14999, 15000-19999, 20000-24999
Medium	25000-29999, 30000-34999, 35000-39999, 40000-44999, 45000-49999, 50000-59999, 60000-69999
High	70000-99999, 100000-149999, 150000 and over

Table 21: Recoding of the income variable for the Spain

Category	Original possible answers for the German respondents
Low	no income, less than or equal to 300, 301-600, 601-900, 901-1200
Medium	2101-1800, 1801-2400, 2401-3000
High	3001-4500, 4501-6000, more than 6000

Table 22: Recoding of the income variable for the Poland

Category	Original possible answers for the German respondents
Low	less than 2000, 2001-3000
Medium	3001-4000, 4001-6000
High	6001-8000, 8001 or more